Jay F. Young
Principal Environmental Engineer

March 17, 1997

VIA FEDERAL EXPRESS

California EPA
Department of Toxic Substances Control
700 Heinz Avenue
Suite 200
Berkeley, CA 94710-2737

Attn: Ms. Monica Gan

Re: Bay Area Drum Site Request for Information

Dear Ms. Gan:

Enclosed, please find NL's response to the Department's December 9, 1996 Request for Information regarding the Bay Area Drum Site. If you have any questions regarding this matter please call me or NL's National Environmental Counsel, Mr. Marcus Martin. Mr. Martin can be reached at 303-592-3189.

Sincerely,

Jay Young

cc: Marcus Martin, Esq.

NL Industries, Inc.
Corporate Environmental Services
P.O. Box 1090, Hightstown, N.J. 08520 Tel. (609) 443-2407
Telecopier (609) 443-2374

Bay Area Drum Information Request

Responses to Questions

1. Provide all information relating to your hazardous substances management practices for all hazardous substances including any petroleum refinery products, that were used, generated, stored, treated, disposed of, or otherwise handled in or at your facility for the years 1948 -1987. The description of hazardous substances management practices should include:

A. For all hazardous substances, including any petroleum refinery products, obtained for your facility's operations in drums, identify:

- The nature of the hazardous substances in the drum
- The number of drums obtained per month
- The type and capacity of each drum
- The disposition of the drums after the hazardous substances were used
- The residual level left in each drum after the hazardous substances were used
- The methods used to determine the residual levels in each drum.

B. For all hazardous substances, including any petroleum refinery products, stored in drums at your facility, identify:

- The nature of the hazardous substances contained in the drum
- The number of drums stored per month
- The type and capacity of each drum
- The disposition of the drums after the substance was used
- The residual left in each drum after the hazardous substances was used
- The methods used to determine the residual levels in each drum.

C. For all hazardous substances, including any petroleum refinery products, disposed of in drums by your facility at the Site, identify:

- The nature of the hazardous substances contained in the drum
- The number of drums disposed of per month
- The type and capacity of each drum
- The disposition of the drums after the hazardous substances were disposed of
- The residual levels left in each drum after the hazardous substances were disposed of
- The methods used to determine the residual levels in each drum.

D. For all drums that once contained hazardous substances, including an petroleum refinery products, that were sent from our facility to the Site and that you assert contained no hazardous substances when they left your facility, identify:

- The nature of the hazardous substances originally contained in each drum
- The number of drums disposed of per month
- The type and capacity of each drum
- The disposition of the drums after the hazardous substances were disposed of
- The method used to remove all residual hazardous substances from the drum
- The method used to determine that no hazardous substances remained in the drum.

Response: After a diligent search NL has found no information describing the handling of hazardous substances at the facility. Information including disposal estimates is included in Exhibit 1.

NL has found in its files three vouchers identifying the purchase of drums by NL's Vernon California Plant from Myers Drum Co located at 5400 So. Soto Street in Los Angeles. These vouchers appear to account for the purchase and delivery of 62 drums during the year 1978. See Exhibit 2.

NL continues it's search for responsive information and reserves the right to supplement this response.

2. Identify all persons who have knowledge or information about the generation, use, storage, treatment, disposal, or other handling of hazardous substances at your facility. If you have reasons to believe that there may be persons able to provide a more detailed or complete response to any question contained herein, or who may be able to provide additional responsive documents, identify such persons and the additional information or documents they may have.

Response: The San Francisco paint plant operated under NL ownership from about 1928 to 1971. Because the facility was shut down in about 1971, NL currently has no employees who have knowledge of the generation, use, storage, treatment, disposal or handling of substances at the San Francisco facility. Former employees who may have information are as follows:

Richard Marklin
Western Division Paint Division Manager
FX-6 Personal Privacy

Harry M. Brennan
Varnish Plant Superintendent
FX-6 Personal Privacy

Carl F. Moore
Western Region Plant Engineer
FX-6 Personal Privacy

John G. Trager
Purchasing Agent, Pacific Branch
FX-6 Personal Privacy

NL is attempting to identify other former employees of the San Francisco facility. If successful, NL will supplement its response to this information request.

3. Describe the legal organization of Dutch Boy, Inc., (e.g. corporation, limited partnership) including:

- A history of the organizational structure
- A listing of all current and past subsidiaries and operations and parent corporations
- Corporate officers, names, titles and responsibilities for each corporate entity
- Dates of incorporation and dissolution for each corporate entity
- Dates of any name changes of the corporate entities
- Copies of articles of incorporation, partnership documents, or other organic documents for each corporate entity.

Attach all copies of any documentation of requested information to your response to this letter.

Response: NL has found no information identifying the existence of Dutch Boy, Inc.. Nor has NL located to date any information which describes a Dutch Boy organization. The Dutch Boy Trade Mark was a label applied to paints and other materials manufactured at various locations throughout the United States by the National Lead Company predecessor to NL Industries, Inc. The earliest use of the Dutch Boy Trade Mark is believed to have been sometime between 1904 and 1906. The National Lead Company was incorporated in 1891. On April 15, 1971, NL filed a "Certificate of Amendment of Certificate of Organization of [the] National Lead Company". At that time National Lead Company began doing business as NL Industries, Inc. Information regarding the history of Dutch Boy products, organization and manufacturing facilities and information which describes the history and growth of National Lead and NL Industries, Inc. is included in Exhibit 3.

4. Provide the net assets of your company and annual revenues of your company for each of the last five years. Attach financial statements, audits and other documents that support these figures.

Response: Net assets and other financial parameters are described in the attached annual

reports for years 1991 through 1995. See Exhibit 4.

5. Provide a descriptive list of all insurance policies held by your company currently and during any period of your operations during which drums were sent from your facility to the Site that may provide coverage for liability stemming from our disposal of hazardous substances. The description should include:

- The effective date(s) of the policy
- The policy number
- The name and address of the insurance company
- The amount of coverage under the policy

Attach copies of all such policies to your response to this letter.

Response: NL believes this request exceeds the scope of DTSC's authority under applicable law.

6. Provide any known information on property condition, operations, chemical usage, and releases to the environment by other parties that you may be aware of at the Site. Also provide all information on any other person who may have sent hazardous substances to the Site.

Response: After a diligent search, NL has found no information which would describe the operations chemical usage and releases at the Bay Area Drum Site.

7. Document each person and all files and records reviewed to answer the above questions.

Response: NL has searched its Corporate Environmental Files located in Hightstown, New Jersey. In addition, NL has conducted a search of its archived Corporate files files in Houston, Texas, and it's contract archived file manager, Pierce Leahy also located in Houston Texas. NL has consulted with its National Environmental Counsel Bartlit Beck Herman Palenchar & Scott, its outside contract counsel, Kirkland & Ellis, and its Vice President and General Counsel for Rheox (an NL subsidiary) in efforts to locate information potentially responsive to these requests. Individuals contacted in the search for responsive information include:

Ms. Lisa Broomas
Secretary to NL's General Counsel
and File Manager
Two Greenspoint Plaza
16825 Northchase Drive, Suite 1200
Houston, Texas 77060

Mr. John Hager
Dresser Industries, Inc.
File Manager of Contract Archived File Storage
at Pierce Leahy Inc.
Sam Houston, Parkway
Houston, Texas 77038

Marcus Martin, Esq.
Bartlit Beck Herman Palenchar & Scott
(NL National Environmental Counsel)
511 Sixteenth Street Suite 700
Denver, Colorado 08202

James Schink, Esq.
Kirkland & Ellis
(NL Contract Counsel)
200 East Randolph Drive
Chicago, IL

William Bronner
Rheox Inc.
Wyckoffs Mill Road
Hightstown, New Jersey 08520

8. Identify the person(s) answering questions on your behalf.

Jay Young
NL Industries, Inc.
Principal Environmental Engineer
Wyckoffs Mill Rd.
Hightstown, New Jersey 08520

Exhibits

Exhibit 1

CONFIDENTIAL

MEMORANDUM

To: File

FROM: Barry L. Sams

DATE: August 21, 1992

SUBJ: Harry M. Brennan
Bay Area Drum Site

On August 19, 1992 I interviewed Harry M. Brennen to develop an understanding of the NL San Francisco (SF) paint division operations. Harry was employed by NL from 1935 to 1970. He started with NL as a chemist in a laboratory. During most of his career, he was a superintendent at the paint, varnish or lacquer departments in SF. Harry was at Perth Amboy in 1946-1947 when that paint plant opened. Harry is [redacted] years old and somewhat senile. Harry now lives at [redacted]

Harry thought NL used Bedini since about the WWII period until the SF operations shut down in 1970. Upon inquiry, Harry advised the only other drum reconditioner NL possibly used was Myers. Harry knew Ernie Bedini personally. He thought the drum reconditioning would have been awarded competitively but doubted if there was ever a contract with Bedini. Harry estimated that Bedini picked up a load of dirty varnish drums every week to ten days with approximately 50 drums per load. Following Harry's estimate I showed him the estimate from the Nicholas report (108 drums x 360 days x 12 years), Harry disagreed with the Nicholas report. He estimated the truck held a total of 47-50 drums, (stacked 3 drums high) and the pick ups were perhaps weekly.

Plant operations were 5 days/week (part of the varnish plant operated 3 shifts). In some years the whole plant would shut down for the Christmas/New Years holiday season, perhaps 1 or 2 weeks. The drums that were sent out were mostly varnish or resin drums.

Harry was not aware of any NL operations at Main Street. Harry saw the Bedini site in the Bayview area (BAD Site is in the Bayview area) in 1970. He could not recall anything unique about the site. He thinks the Bedini business was only cleaning and repairing drums.

Harry was not familiar with the names Jack Hamilton or David Cannon. A competitor of NL who may have used the site was Fuller. The only other person (beyond Moore & Marklin) which Harry though might be helpful was the former purchasing manager John Trager.

cc: J. D. Smith
BLS/psc/bls-4101

STATE OF CALIFORNIA)
ss:.
COUNTY OF SAN MATEO)

AFFIDAVIT OF HARRY M. BRENNAN

Harry M. Brennan, being duly sworn, hereby deposes and says:

1. I was employed by the National Lead Company ("National Lead") from 1935 to 1970.

2. I worked at the San Francisco paint and varnish plant located on 24th Street from 1935 to 1970 with the exception of about a one year period in 1946 - 1947.

3. From 1947 until closure of the 24th Street plant in 1970, I was the varnish plant superintendent. As the superintendent, part of my job responsibilities involved periodically arranging for the reconditioning of used varnish or resin drums. Either my foreman or myself would do this.

4. The only drum reconditioner used by the 24th Street plant was Bedini/Myers.

5. Typically, Bedini/Myers would pick up drums every seven to ten days. I estimate that their truck held a maximum of forty-seven to fifty drums. The drums were stacked three layers high on their truck.

6. The plant production schedule was five days a week. In some years the plant closed one or two weeks for the Christmas/New Years holiday season.

7. I have reviewed portions of the Nicholls Investigative Agency, Inc. July 1, 1992 interview of a Jack Hamilton. Some of the statements therein are inaccurate.

8. National Lead did not have a lacquer plant on Main Street, San Francisco.

9. Hamilton estimated that National Lead sent 466,560 drums (108 drums x 360 days x 12 years) to Bedini/Myers from 1958-1970. It is my opinion that Mr. Hamilton's estimate is wrong.

10. I estimate that Bedini/Myers made a pick up from National Lead's 24th Street plant every seven to ten days or approximately forty-one times a year, allowing for a two week holiday shut down, over a twelve year period. Thus, Bedini/Myers picked up drums from National Lead approximately four hundred ninety-two times. Since each truckload held about forty-seven to fifty drums, the total number of drums collected was approximately 23,862.

11. I believe that my estimate is the maximum number of drums collected by Bedini/Myers from National Lead.

_____ _____

Date Harry M. Brennan

Sworn to me this _____ day of September, 1992.

_____

Notary Public

My Commission expires on _____, 19

1

Barry L. Sams
Principal Environmental Engineer

VIA FACSIMILE

October 30, 1992

Nicholas W. van Aelstyn
Heller, Ehrman, White & McAuliffe
333 Bush Street
San Francisco, California 94104-2878

Re: Bay Area Drum Site

Dear Mr. van Alestyn:

During the October 28, 1992 conference call, PRPs were requested to direct potential questions for former employees of the Bay Area Drum Site to you. During the upcoming re-interview of David Cannon, and/or Jack Hamilton, we should ascertain how many work days there were in a work week. My concern stems from the July 1, 1992 Jack Hamilton interview wherein he indicated picking up drums 50 weeks a year from Dutch Boy. As you may recall from my correspondence of September 22, 1992, there is uncertainty as to how may pick up days that corresponds to on an annualized basis.

Sincerely,

Barry L. Sams

BLS/6017

bcc: J.D. Smith

NL Industries, Inc.
Corporate Environmental Services
P.O. Box 1090, Hightstown, N.J. 08520 Tel. (609) 443-2410
Telecopier (609) 443-2374

Barry L. Sams
Principal Environmental Engineer

September 22, 1992

Nicholas W. van Aelstyn
Heller, Ehrman, White & McAuliffe
333 Bush Street
San Francisco, California 94104-2878

Re: Bay Area Drum Site
Notes of Hamilton Interview

Dear Mr. van Aelstyn:

I have reviewed a photocopy of the hand written July 1, 1992 Jack Hamilton interview notes prepared by the Nicholls Agency, and the typed report which Nicholls submitted on July 3, 1992. Set forth herein are my comments.

In the July 3, 1992 report, Nicholls calculated the number of barrels picked up from National Lead by Bedini/Myers as follows; 108 drums x 360 days x 12 years = 466,560 drums. As set forth below, Nicholls' calculation of the number of barrels from National Lead, based on extrapolations of Mr. Hamilton's statements, contains mathematical errors. This letter corrects the miscalculations so that the number of barrels attributed to National Lead by Hamilton can be corrected for the upcoming interim assessment. Although we strongly dispute the substance of Hamilton's statement, at this time, we will restrict our comments to correction of the arithmetic, reserving for a later time a substantive critique.

NL Industries, Inc.
Corporate Environmental Services
P.O. Box 1090, Hightstown, N.J. 08520 Tel. (609) 443-2410
Telecopier (609) 443-2374

Issue	Nicholls Report 7/3/92	Hamilton Interview Notes 7/3/92	Comments
Time Period	12 years	1958-1965	The time period Hamilton defined is 7 years, not 12 years.
Frequency of drum pick up	360 days/yr	50 weeks a year	Hamilton did not say he made pick ups 360 days/year. The plant operated approximately 50 weeks a year, 5 days/week or 250 days/year.
Size of load	Full load a day (108 drums)	108 Drums	The basis for the statement "Full" is unknown.

Conservatively applying the statements attributed to Jack Hamilton in the 7/1/92 notes, the calculated number of drums from National Lead is as follows; 108 drums x 250 days x 7 years = 189,000 drums.

I would appreciate your prompt attention in correcting Column 6 "Jack Hamilton Estimates" of the table titled "Indication of Bay Area Drums PRP Generator Volumes".

Sincerely,

Barry L. Sams/dm

Barry L. Sams

BLS/dm/5020

HELLER, EHRMAN, WHITE & McAULIFFE
ATTORNEYS
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

333 BUSH STREET · SAN FRANCISCO, CALIFORNIA 94104-2878
CABLE HELPOW · TELEX 184-996 · FACSIMILE (415) 772-6268
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PALO ALTO, CALIFORNIA 94301-1908
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601 SOUTH FIGUEROA STREET
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1300 S.W. FIFTH AVENUE
PORTLAND, OREGON 97201-5696
FACSIMILE (503) 241-0950
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701 FIFTH AVENUE
SEATTLE, WASHINGTON 98104-7098
FACSIMILE (206) 447-0849
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1201 PACIFIC AVENUE
TACOMA, WASHINGTON 98402-4308
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TELEPHONE (206) 572-6666

550 WEST 7TH AVENUE
ANCHORAGE, ALASKA 99501-3571
FACSIMILE (907) 277-1920
TELEPHONE (907) 277-1900

WRITER'S DIRECT DIAL NUMBER
(415) 772-6566

September 23, 1992

19431-0001

CONFIDENTIAL COMMUNICATION -- This communication is protected by the attorney work product and attorney-client privileges and is not to be released for any purpose, including discovery.

Barry L. Sams
Principal Environmental Engineer
Corporate Environmental Services
NL Industries, Inc.
P.O Box 1090
Hightstown, NJ 08520

RECEIVED
SEP 29

Bay Area Drum Site, San Francisco

Dear Mr. Sams:

I am in receipt of your letter dated September 22, 1992, containing your comments regarding the July 3, 1992 Nicholls Investigative Agency ("NIA") report on the first Jack Hamilton interview and the handwritten July 1, 1992 NIA interview notes. I believe that much of the second of your three comments can be incorporated into the calculations for the upcoming Group assessment, but feel that the other two would require a departure from policies adopted by the Group at the September 14 Allocation Meeting.

With regard to your second comment concerning the frequency of drum pick-ups, I believe that "fifty weeks a year" is the proper variable and not "360 days/year." This appears to be one of the many minor errors contained in the NIA report; 50

weeks contain 350 days, not 360 days. After your last phone call on this subject, I directed a legal assistant to double-check all of the NIA figures, and found that many contained errors in arithmetic. Corrections have been made and incorporated into the revised volumetric matrix. However, I do not believe that using a five day week instead of a seven day week would also constitute a mere correction of arithmetic. The NIA report consistently employs a 365 day year, and I do not feel that I have a mandate from the Group to depart from this.

I believe that your other two comments would require similar departures from the NIA documents as they have been construed by the Group thus far. With regard to your first comment concerning the time periods, I believe that the NIA report explains the discrepancy between the seven and twelve year periods that you note. The first full paragraph on page 2 of the report explains that the estimates for the first group of generators were given for the Bedini period (1958-1965), but remained the same during the Myers period (1965-1970):

> Hamilton supplied the following information relative to the customers of BEDINI/MEYERS (1958-1970). Hamilton stated that the clients of BEDINI stayed as clients for MEYERS so the totals remained the same. [**NOTE: Those customers which did have differing volumes are noted on each individual account.**] [Bracketed passage in bold original.]

In light of this paragraph, I feel that a change in the time periods for Hamilton's first group of generators, which includes NL Industries, would require a policy decision by the Group which has not been made.

With regard to the your third comment concerning the size of the loads, I believe that one may reasonably infer from both the NIA report and the NIA notes that the basis for the statement "full" is that 108 drums constituted a full truckload. 108 is the number used throughout the report and the notes to indicate one load, and therefore appears to be equivalent to the term "one full load." As you noted in your comments, this does not affect the calculations.

In light of the above, I believe that the calculated number of drums estimated by Jack Hamilton to have been sent to the Site should be calculated as follows:

108 drums x 350 days x 12 years = 453,600 drums.

The above figure will be used in the next assessment. I do not dispute that both the Jack Hamilton estimates and the NIA calculations may include errors and may be subject to differing interpretations. However, absent a direct mandate from the Group, I believe that common counsel lacks the authority to construe the NIA documents in a manner that would be inconsistent with prior constructions. Such issues are to be addressed by the Group's Allocation Subcommittee, which is the appropriate forum in which to challenge the weaknesses in the existing databases. Whatever changes the Subcommittee decides upon will be incorporated into the next assessment. In the meantime, the Group has decided to utilize the existing construction of the documents for the current assessment.

I hope that this letter responds to all of your concerns. Please do not hesitate to call me if I can answer any further questions.

Very truly yours,

Nicholas W. van Aelstyn

Nicholas W. van Aelstyn

CONFIDENTIAL

MEMORANDUM

To: File

FROM: Barry L. Sams

DATE: August 21, 1992

SUBJ: Richard J. Marklin
Bay Area Drum Site

On August 18, 1992 I interviewed Richard J. Marklin to develop an understanding of the former NL Western Region Paint Division and the San Francisco (SF) operations. Richard started with NL in 1942, in about 1976 upon the sale of the division he became an ELT Inc. employee. He retired from ELT about 2 months before it was acquired by Sherwin-Williams. Richard now lives at FX-6 Personal Privacy FX-6 Personal Privacy I found Richard to be in good health and helpful.

Richard became the Western Region Paint Division production manager in approximately 1968. He is familiar with numerous former NL sites. He mentioned the Portland Warehouse, the Seattle plant (was purchased in the 1950's) and the Los Angeles (LA) paint plant which was built in 1946. Richard managed the LA plant from 1963 to approximately 1968. He had also been in the Chicago, Perth Amboy and Philadelphia plants and seemed aware of their history, management structure and operations. Bill Bronner had spoken with Richard during the Synanon litigation.

NL bought the SF 24th Street plant in approximately 1926 from Basshueter. The 24th Street facility stopped production in 1970 or 1971 at which time all equipment, paint, etc. was removed. Production needs were transferred to Seattle (which shut down in the late 1970's or early 1980's) and LA. Offices remained at the SF site for about 6 months after production stopped. Richard estimated the SF production had been 3 million gallons per year. The end product was shipped from the site in containers ranging in size from less than a pint to 50 gallons. The 24th Street facility was essentially comprised of 2 departments, the paint department, and a varnish/vehicles department.

Richard had never heard of NL having operations on "Main Street". Due to the explosive nature of lacquer NL produced the lacquer at a nearby SF facility located at the corner of Marin and Kansas. The Marin site also served to warehouse the production from 24th Street facility.

Upon inquiry Richard indicated that a Mr. Brennan had worked for him until he retired him in about 1969 or 1970. Harry M. Brennan was the supervisor of the 24th St. varnish department. Richard indicated Harry Brennan is retired and living south of SF Richard was also familiar with a Mr. Crowen. Mr. William Crowen was a union employee who worked at the Marin lacquer plant and reported to Harry Brennan.

Upon inquiry Richard indicated that drums were used at the

site and then sent out for reconditioning to Bedini. He said they used a lot of drums for interdepartmental transfers of varnish to the paint department at 24th Street. After a drum was used it was generally sent out for cleaning, due to a variety of concerns including grades of materials in the drums, "skins" which could form in a drum etc. When I showed Richard the drum quantity estimate from the Jack Hamilton interview (108 drums x 360 days x 12 years) he indicated it did not seem unreasonable. Richard thought that Bedini was sometimes in the plant more than once a day picking up drums. Richard never saw the Bedini site but thought it was close by. He showed me on a map the section of the city where he thought the Bedini site was, and it corresponded to the Bay Area Drum Site. Richard thought he may have heard of the Myers Drum Company but was unsure. Upon inquiry Richard indicated that the former NL purchasing manager John G.Trager, now retired in La Habra, CA may recall more details. When the SF operations shut down, purchasing records may have been transferred to LA. Old SF pictures and other memorabilia went to Walter Shult (sp) in West Caldwell, NJ.

Richard was not sure if anyone other than Bedini was used for drum reconditioning. He speculated that the drum cleaning was competitively bid. He indicated there was always difficulty in balancing the Bedini account for the number of drums sent out vs. the number of reconditioned drums returned. NL sold Bedini black drum paint which he used in the reconditioning process.

I showed Richard the May 29, 1992 PRP list distributed by Joseph Armao and asked Richard if he could think of any other paint and varnish companies which might have used the BAD site. Richard suggested Fuller O'Brian, a company still in operation.

Richard had never heard of Jack Hamilton or David Cannon who were reportedly former operations/owners at the BAD site, nor had he heard of Romic (one of the larger PRP's).

cc: J.D. Smith
BLS/psc/4100

CONFIDENTIAL

MEMORANDUM

To: File

FROM: Barry L. Sams

DATE: August 21, 1992

SUBJ: Carl F. Moore
Bay Area Drum Site

On August 19, 1992 I interviewed Carl F. Moore to develop an understanding of the NL San Francisco (SF) paint division operations. Carl was employed by NL from 1945 to 1970, for most of his career he was the Western Region Plant Engineer. Carl now lives at [redacted] FX-6 Personal Privacy I found Carl to be in fair health and helpful.

Carl indicated Bedini use to pick up drums from NL once a day, typically 100 to 115 drums at a time, 5 or 6 days a week. Generally the drums were the open top type. Carl did not ever recall Sunday work at the plant. Carl was very familiar with the SF facility at 24th but never heard of a Main Street facility. Carl pointed out that there had been an NL warehouse and lacquer plant on Marin Street. We leased the lacquer plant to Thomson until the mid 1950's. Most of the drums generated would have been from the 24th Street plant. Carl never visited the Bedini site.

Another one of our competitors who may have used Bedini was Fuller. Fuller made paints, varnishes and white lead (NL produced white lead at its Oakland Plant). Fuller has since been sold.

Carl expected that we probably shipped and received about an equal number of drums to Bedini.

BLS/psc/4102
cc J.D. Smith

MEMORANDUM

CONFIDENTIAL

TO: File

FROM: Barry L. Sams

DATE: September 10, 1992

SUBJ: John G. Trager
Bay Area Drum Site

On September 9, 1992, I conducted a telephone interview of John G. Trager to develop an understanding of the former NL San Francisco (SF) paint division operation. John started with NL in 1937, in about 1976 upon the sale of the division, he became an ELT Inc. employee. John returned in 1979. From 1937 until December 1970, he worked out of the 24th Street SF Facility. In December 1970, he was transferred to Los Angeles. In SF he was an assistant purchasing agent from 1937 to 1946, in 1946 he became the purchasing manager for the Pacific Branch. John now lives in La Habra, CA FX-6 Personal Privacy.

John had not heard of NL having a facility on Main Street, SF. The lacquer plant on Marin maybe employed 6-8 people and the warehouse about 6 people. He thought the operations were on a one shift basis at Marin. John provided four names of companys with which NL conducted drum business. California Cooperage, located in south SF, from whom NL probably purchased second hand drums. Rheem who sold NL new drums. Myers in Oakland which NL used intermittently. NL bought 5 gallon pails from Myers, Myers did some drum cleaning for NL. Bedini brothers were located in Hunters Point (the BAD Site is in the Hunters Point area). John only know of one Bedini site. A former General Paint purchasing manager, Knox Price had established the business at the end of WWII, which Bedini bought. John thought there were three Bedini brothers, and he knew Joe Bedini personally. Sometimes one of the Bedini brothers would personally drive the truck for the drum pick up. The drums sent out for reconditioning were generally varnish or resin drums of the 50 gallon size. Thinner drums had a deposit on them, and thus were not sent out for reconditioning. The varnish plant would have generated about 95% of the drums sent out for reconditioning.

John estimated that a shipment of drums consisted of 80-100 drums. Drums were stacked 2 or 3 drums high on a stake truck which was less than thirty feet in length. Drum pick up occurred every one to three days, and varied based on the plant production. John indicated they would not have ever picked up drums on Sunday, and doubted if Saturday pick up occurred either. Ordinarily, the plant did not work on Saturday. The plant may have shut down for 2 or 3 days around Christmas.

Upon inquiry, John indicated some familiarity with the names of Jack Hamilton and David Cannon, he thought that perhaps they were truck drivers.

John thought Bedini kept "loose financial records". Joe Bedini was audited by the IRS for reporting "low profits". John had seen the Bedini site on multiple occasions. He noted nothing unusual in appearance at the site. He did not know how Bedini would handle wastes which may have been generated in the process of reconditioning drums.

cc: Janet D. Smith

OAKLAND
(415) 652-6847
LOS ANGELES
(213) 581-6141
PORTLAND
(503) 255-0553
TUCSON
(602) 624-2585

MYERS DRUM COMPANY

SUBSIDIARY OF KAISER STEEL CORPORATION

REMIT TO:

MYERS DRUM CO. P. O. BOX 37375 SAN FRANCISCO, CALIF. 94137

INVOICE NO.	PAGE
L38788	1

CUSTOMER NO.	INVOICE DATE
11000	3/07/78

SOLD TO
N.L. INDUSTRIES
2700 SOUTH INDIANA

LOS ANGELES, CA 90023

SHIP TO
SAME
SAME

CUSTOMER REFERENCE	SHIP VIA	DATE SHIPPED	ORDER NO.	SLS. NO.	FREIGHT			
4513	WILL CALL	3/06/78	6891	29	PREPAID	X	COLLECT	

PRODUCT CODE	DESCRIPTION	U/M	QUANTITY		AMOUNT
99 83213	RECONDITIONED USED DRUMS ON 55 GAL	EA	12	12.250	147.00
				Calif Tax	8.82

RECEIVED
MAR 13 1978
ACCOUNTS PAYABLE
NL INDUSTRIES, INC.

TERMS:
THE CASH DISCOUNT SHOWN AT THE RIGHT WHERE APPLICABLE MAY BE TAKEN ON INVOICES ISSUED BETWEEN THE 1ST AND 15TH IF PAID BY 25TH OF THAT MONTH, AND ON INVOICES ISSUED BETWEEN 16TH AND 31ST IF PAID BY THE 10TH OF THE FOLLOWING MONTH

.00

TOTAL 155.82 ~~147.00~~

PAY THIS AMOUN

ORIGINAL

SALE SUBJECT TO CONDITIONS ON REVERSE

This instrument confirms the terms and conditions of sale of the products described on the face hereof. In the event Buyer's purchase order states terms additional to or different from these Conditions of Sale, then this instrument shall be deemed a notification of objection to such additional and/or different terms, or in the event such purchase order expressly limits acceptance to its terms then this instrument shall be deemed a rejection of Buyer's offer to purchase, and in either such event this instrument shall constitute an offer to sell which may be accepted only in accordance with its terms and without modification, addition or alteration. Buyer's acceptance of delivery of the products described on the face hereof shall be deemed an acceptance hereof and a contract shall be formed only upon the within Conditions of Sale.

A. PRICE; PAYMENT.

1. The prices stated herein are subject to adjustment to Seller's schedule of prices in effect at the time of each shipment.

2. Prices specified do not include sales, excise, or other taxes payable on account of this transaction, and all taxes now in effect and/or hereafter levied, which are applicable to this transaction, are in addition to such prices and shall be paid by Buyer.

3. Payments shall be made in cash thirty days from date of delivery of products sold hereunder, unless otherwise expressly provided on the face hereof. All orders and contracts are subject to approval of Seller's Credit Department and Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. If Buyer fails to comply with any terms of payment, Seller reserves the right to withhold further deliveries or terminate the agreement of sale upon written notice and any unpaid amount shall thereupon become due.

4. If payment is not made according to the terms stated herein, interest will be charged on any overdue portion at the highest lawful rate.

B. MANUFACTURING; WARRANTY.

1. Seller expressly warrants title and that its new products (single trip) comply with the U. S. Department of Transportation specification number, if any, embossed upon the particular product in effect on the date said product is manufactured. If linings are supplied with new products, Seller warrants such linings will be comparable in quality with and applied in the same manner as the sample tested and approved by Buyer. With respect to used products reconditioned by Seller, Seller warrants only that the products meet Seller's testing procedures and reconditioning workmanship standard in the industry. All other used products are sold "as is where is". Except for such express warranties, Seller makes no warranty of any kind whatsoever, express or implied, and all warranties of merchantability, fitness for a particular purpose, and other warranties of whatever kind, are hereby disclaimed by Seller and excluded.

2. Seller assumes no liability for any failure of Buyer's specification to meet Buyer's requirements. Seller makes no guarantee and assumes no liability with respect to the content of any labeling data and Buyer is solely responsible for the accuracy and adequacy thereof to meet Buyer's requirements or to comply with any general or specific laws or regulations pertaining to labeling of the products sold hereunder.

C. DELIVERY AND SHIPMENT.

1. Where delivery is by means of common carrier or is effected by Buyer, all risk of loss, damage and all incidents of title and ownership shall pass to Buyer upon delivery at Seller's plant. Except as provided above, risk of loss, damage and all incidents of title and ownership shall pass from Seller to Buyer at the destination designated on the face hereof.

2. In order to secure Buyer's performance until payment in full is received, Seller retains: (i) the right at any time to identify the products to the contract; (ii) the rights to divert or stop in transit; (iii) the right to resell, and (iv) a purchase money security interest as defined in Cal. Commercial Code No. 9107 in the products described herein and the proceeds or products thereof.

3. To avoid congestion and delays in loading, the mode of transportation and routing of shipments shall be selected by Seller.

D. GENERAL LIABILITY.

In no event shall Seller be liable for failure or delay in performance or delivery when such failure or delay results from or in connection with strikes, lockouts, boycotts or other labor troubles of any kind; participation by Seller or an affiliate of Seller at the request or urging of any government or governmental corporation, agency or bureau in any plan, policy or program of general public interest respecting priorities, allocations, limitations or other restraints which affect manufacture of steel or steel products or delivery hereunder; or any other cause or occurrence beyond Seller's control, including, but not limited to, riots, wars (declared or undeclared), acts of the public enemy, fires, inclement weather, earthquakes, or other acts of God, damage, destruction or breakdowns of any kind of Seller's equipment or facilities necessary for performance hereunder arising from any cause whatsoever; delays or failures of usual sources of supply of materials, equipment or transportation; shortage of transportation facilities or equipment, shortage of labor, fuel or other materials; any present or future laws, orders, regulations, directives of policies enacted, adopted, instituted or sponsored by any government or governmental corporation, agency or bureau effecting mandatory restrictions, limitations, priorities, allotments, allocations, prorations or substitutions which delay, restrict or prevent the manufacture or delivery of steel or steel products, or otherwise affect performance hereunder; or any other cause or occurrence beyond Seller's control delaying, restricting or preventing Seller's performance hereunder, whether or not like or similar to the causes or occurrences specifically enumerated above.

E. CLAIMS.

1. Except for breach of the express warranties specified in Article D above, Seller shall not under any circumstances be liable on account of any imperfection, deviation from specifications, standard tolerances, improper workmanship, or other defect impairing the quality, value, or suitability for any purpose of any product sold hereunder whether caused by Seller's negligence or otherwise. Seller's liability under the sale contemplated hereby, or under any term, warranty or representation in connection therewith, or the manufacture or delivery of any products covered hereby, whether based upon Seller's negligence or otherwise, shall in no event exceed the purchase price of the particular product. In no event shall Seller be liable for consequential, special or contingent damages.

2. Buyer shall fully specify all claimed defects or nonconformity by written notice to Seller promptly after Buyer's receipt of the products, and Buyer shall give Seller an opportunity to investigate. Products claimed to be defective shall not be returned without Seller's written consent.

F. MISCELLANEOUS CONDITIONS.

1. The waiver by Seller of any term, provision or condition herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition, or provision, nor shall it be deemed a waiver of any conditions in any subsequent order.

2. This instrument confirms the sole and entire agreement between Buyer and Seller and none of the terms and conditions contained herein may be added to, deleted, modified or altered except by a written instrument signed by Seller. There are no oral understandings, representations or agreements relative to this instrument which are not fully expressed herein.

3. The laws of the State of California shall govern the validity, interpretation and enforcement hereof.

(Rev. 11-23-71)

Sams → J.D. Smith

NICHOLLS
INVESTIGATIVE AGENCY, INC.

41 Sutter Street
Suite 1230
San Francisco, CA 94104

CA 800.640.1611
USA 800.472.2345
Fax 800.253.0246

Fax Transmission

DATE: 9/11/92 TIME: 10:00 ☒ A.M. ☐ P.M. NUMBER OF PAGES (INCLUDING COVER): 24

TO: Nicholas Van Aelstyn FROM: Glenna Griffen

CO. NAME Heller Ehrman et al. VERIFYING NO. above

FAX NO. 415-772-6268 FAX NO. above

SUBJECT B.A.D.

Please Deliver Immediately!

THE INFORMATION CONTAINED IN THIS FACSIMILE TRANSMISSION IS CONFIDENTIAL, AND MAY BE LEGALLY PRIVILEGED, LEGALLY PROTECTED ATTORNEY WORK-PRODUCT, OR MAY BE INSIDE INFORMATION. THE INFORMATION IS INTENDED ONLY FOR THE USE OF THE RECIPIENT(S) NAMED ABOVE. IF YOU HAVE RECEIVED THIS INFORMATION IN ERROR, PLEASE IMMEDIATELY NOTIFY US BY TELEPHONE TO ARRANGE FOR RETURN OF ALL DOCUMENTS. ANY UNAUTHORIZED DISCLOSURE, COPYING, DISTRIBUTION, OR THE TAKING OF ANY ACTION IN RELIANCE ON THE CONTENTS OF THIS INFORMATION IS STRICTLY PROHIBITED AND MAY BE UNLAWFUL.

12:00 7/1/92 JACK HAMILTON →
Employment History

Hamilton
Bedini Nov. 1958 - Driver >

1965 Meyers bought > Driver

1970 Bedini > Driver

1972 Left Drum Pedaler

1980 BAD Cannon & Hamilton

1987

ONLY
" Chaining - ~~[illegible]~~ for rust removal

①

TOPS FORM
7524

Litho in U.S.A.

PPP's

*1958 - 1965 Bedini > NATIONAL LOAD

I DUTCH BOY PAINT 24TH ST Varnish Plant
Main Lacquer Plant

1 Load Day / 1 load every

108 Drums - Varnish greatest

50 Weeks a year / Sup. MR. Brennan -
Sup @ LACQUER - MR. CROWE

II. BRAUNT KNECHT & HIEMAN (Van Water & Rogers)
16TH Street in S.F. → Brisbane

1 or 2 loads a week - full loads
Sup: NORM RHODES in
Brisbane

III. PENNZOIL - ALAMEDA
1 LOAD WEEK - FULL LOADS / Sup:?

IV - GAMBEN Chemical - S.S.F. - Jim Andreius
Every 2 week p/u 50, Drop off 50

V - KLIX Chemical - S.S.F. - Mr. Hayden or
MEL

2-3 week 50 Drums.

TOPS FORM
7524

Litho in U.S.A.

Industrial Chemical - S.F. Martin, owner
80/90 2-3 weeks.

MACLAC (SAME AS RJ McLENNAN) Bill Murphy or McLENNAN
2 WKS 80/90

* Penninsula Oil - Ruben or Walt
1-1½ WKS 108/120 (switched to 1962/63

* Shell Oil Co - S.F. (Jobber of Shell
50 ~~wg~~ 2 MOS

* HOCKWOLD Chemical - ~~[illegible]~~ S.F / 16TH ST -
moved to Brisbane
108/A MOS.

* DEWEY & ALMY Chemical - San Leandro (DAVIS ST.
100 eng 6 weeks/

* DUPONT - SSF
100 eng 6 weeks.

* Mare Island Naval Shipyard -
100 Drums a month / Supply Depot

* Meyers Metal - S.F.
Raychem - Menlo Park
Western Chemical - SF → Burlingame
100 Drums eng 2 mos.

TOPS FORM 7524
Litho in U.S.A.

~~Bank account is low~~

WILLARD PRODUCTS. - RWC
50 @ MONTH

LOCKHEED AIRCRAFT -
on bid basis
1000 - 2000 / over 2-3 mos. period
pretty consistently

McClellan AFB
2000 / 6 MOS 2 @ year

Hamilton AFB -
2000 / 6 MOS 2 @ year

Hunters Point
same as above.

Travis - same

Aerojet / SACTO
2000 / 6 MOS.

ROCKY & READY ISLAND - (NAVAL) Alameda
2000 / 6 MOS.

TOPS FORM
7524

Litho in U.S.A.

SEP-11-1992 12:20 FROM

Jim - Foreman

* Chem - Central / - Same as CENTRAL SOLVENT Bob Denine - Sup
1 load a week @ end of 1965 / 120 per week
108 2/3 weeks /

~~Industrial Chemical - SSF~~
~~1 load / 3 weeks~~

* Organic Coating (now D.J. Simpson) - SSF
1 load (80) every 6 weeks. Don Simpson or " Quinn

* Place on Linden Ave - Dairy time frame of Meyers
(General Printing, Inc.) > made ink →
240 / 2 mos.

* Diamond Shamrock - RWCITY - Tom RAMALEY Dick WELLS
Full Load / 50 @ week /

Pedaler - A.C. BRANDEIS, would sometimes pick-up and sell to Bedini

* EUREKA CHEMICAL - 16TH → SSF
1 LOAD / 2 MOS. MR. Jones

TOPS FORM 7524

Litho in U.S.A.

* McKesson Chemical
1 load 6 week "Bol"

1965-1970 - MEYER'S -

* Fuller-O'Brien - SSF (
Semi-loads, sometimes 2 loads a week (at one a week)
240/ (Two bol-Tails 130/120)

* Van Waters - Rogers - Norm Rose or Les.
2 loads week / 130-132

Dupont - Low Vol.
100/ 6 WEEKS

HOUGHTON OIL Co. (main Co. back east) → SSF.
1 LOAD WEEK / 132 - Meyer only)

Industrial Chem - SF ✓ Martin
Mare Island - ✓
Raychem - M Park 50 drums / 2 weeks. ✓
MALLAC ✓
Hockwell, Brisbane - ✓
OLYMPIA OIL - SSF - LINDEN ALE
50 / 2 WEEKS

TOPS FORM
7524

Litho in U.S.A.

1970 - 1980 / Redini also

"STITCH" - Foreman

Glidden -
2 loads a week / 200 each

Spencer - Kellog - San Carlos Bob
1 load / 132 a week

Kelly Moore - San Carlos
50 / week

Mare Island
2000 birds / 6 mos.

Lockheed - same

Diamond Shamrock
50 drums a week /

Ashland Chemical -
Load a week / 130-132

Industrial Chemical
1 load every 2 mos. / 130-132

TOPS FORM
7524

Litho in U.S.A.

Bour - Cooperage
Ted Gladden prior
to Bedini

TOPS FORM
7524

Litho in U.S.A.

SEP-11-1992 12:22 FROM

During [illegible]

FORD MOTOR COMPANY MUPITAS
120/LOADS Open Top under
[illegible] in bids
2000 eng / 2-3 mos.

During 65-70 Meyers had 25 Drivers
← TOM ROSE - now a peddler has a
waste hauler's license
Mike SUTTON -
GEORGE WARD
GREGORY
GEORGE SORIGE (Brother of another
Sorige Drum / Bucket)

Anecdotal

TOPS FORM
7524

Litho in U.S.A.

Fireworks Factory → was the prior company →?

*Union Oil - Hamilton, not sure -

Great Western Chemical - Bedini (Wagnine did more business w/ them)

BAD 1980-84 / Bedini once/three /

Alondeda Moved Air / more from here than anywhere else
5000 / Air fuel, thinner,

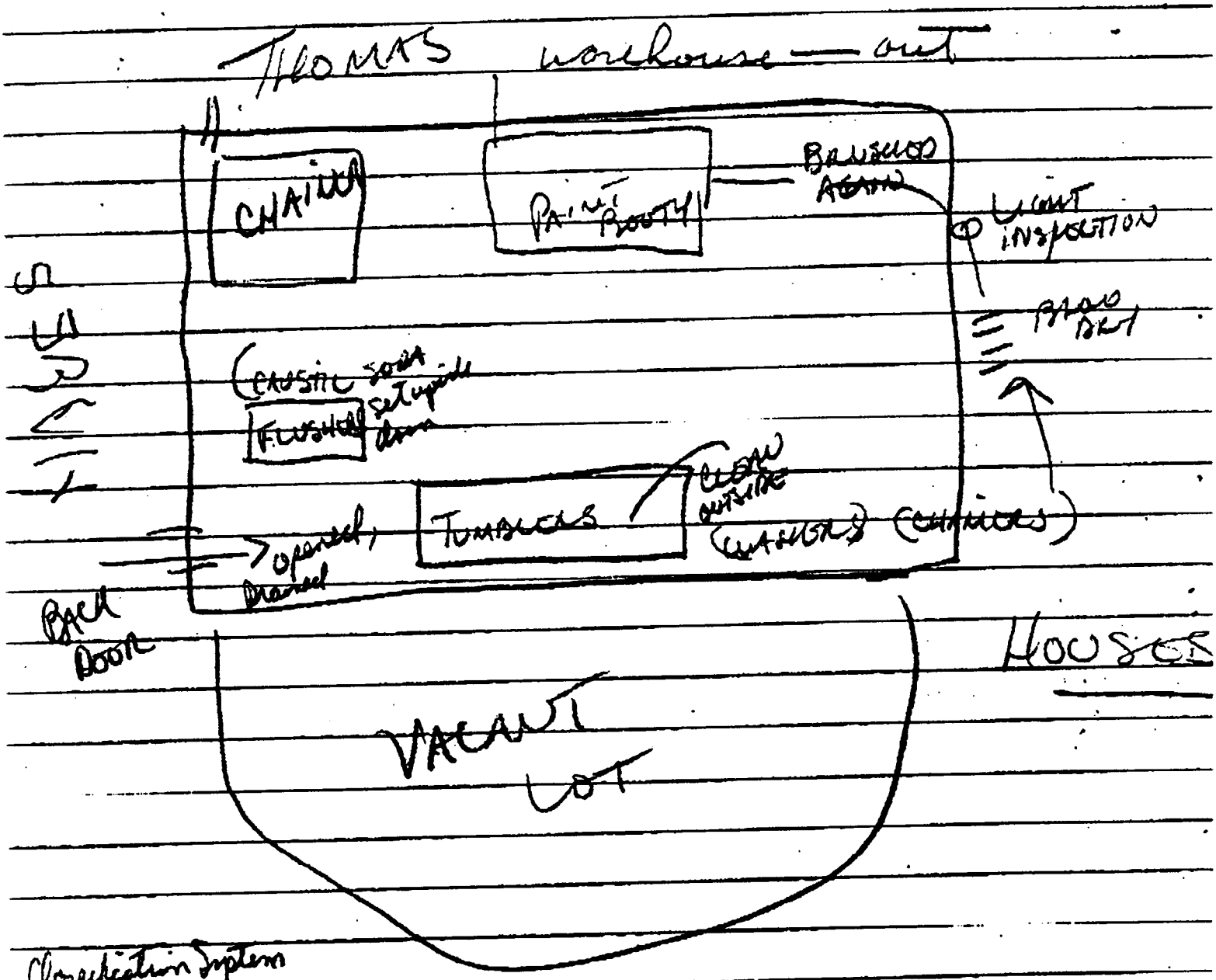
Mather AFB -
1000 / LOT

70-80

65-70 (meyers)

TOPS FORM
7524

Litho in U.S.A.



Classification System

#1 –

#2 – Chaining was only done on barrels that were rusted.

#3 –

TOPS FORM 7524

Made in U.S.A.

(Printers) 72-80/as Broker
Stelchatron & Smith - Second ST. SF
40-50/WK

City & County of SF - Maint Yarr 1200 Harrison
20/30 @ mos. Harry GLENO
(auto/paint man)
D'Angelo & Sons - Ellis St. - Bill Snow
20 drums / @ 3 weeks

SF AR
PSA - Art McKinney
30/40 drums @ 2 mos
Delta - " "
TWA - Joe Dempsey
Western Airlines "CHET"
United -

Eureka Fluid Works - Embalming Fluid - 15TH ST/SF
40-50/@ 3 mos

SF General Hosp. Alan Tillman
20/30 @ 3 mos

Kellogs - San Leandro Jess LUCA LEDUE
150 @ 4/5 mos.

Continental Can (Kaiser) - Union City

TOPS FORM 7524

Litho in U.S.A.

* Miracle Auto Paints - SSF Al Swain
30 drums @ 2 mos

* Tap Plastics - ① San Leandro -> ② SALTO
prior 150 @ 1-1.5 mos. (2-3 yrs) 150/ @ 1-1.5 MOS
↳ poss. another name - JIMCO?

* Todd Shipyard
50 drums @ 6 mos Grover DAVID

* -> AAA SHIPYARD
~~AAA Machine Shop~~ - (Al Engels ~~the~~ old place
on pier) 100-150 @ 3/4 mos.

Regents of Univ of Calif: ① E.C. Masterson
- Lawrence Berkeley Lab - ② Tom FUNG
- @ Campus / STOREROOM - ③ JOHN TRUJILLO
A.C. BRANDEIS 72-83 ↓ 50 @ 3 MOS
HAD 65-72

CALWOOD DOOR - NOVATO
72 -> 150 @ 4 MOS.

Stanford Univ. - Chemistry Dept. R.C. HANSON
30-40 @ 3 weeks.

TOPS FORM
7524

Litho in U.S.A.

CARNATION Co. /
7 LOADS @ 152 TOTAL

ITT Continental Baking - BRYANT ST. SF
30/40 @ 1-2 weeks.

GREYHOUND - 7TH ST. maint yard
80 @ 3 mos -

TOPS FORM
7524

Litho in U.S.A.

* River Bank - out of Modesto - Norse?
Industries - made Shells
1972-78

Grease drums - open
240 a load / 1 a month

Inc. 80-84
Benet Oil - Salto -

58-65 65-70

* Plex Chemical - SF - now in Union City
50/1½-2 weeks

Standard Oil Co. (recons 16 gua SD) - primarily inbound
none coming out

* Castro Oil / 16th & 3rd
75/Mos - 1½ Mos.

* Willard Products - Penninsula
25/30 @ 2 Mos

TOPS FORM 7924

* Pioneer Soap - SF.
75-80/@ 2 Mos.

TRANSPORTERS -
- A. C. BRANDEIS - now decid (1972)
- Exxon drums come in (name not known)
58-65 every 6 mos 60-80.

WAYNIRE
Fred Schwartz - local guy -
ED HOWDY SHELL - lived in Marin County

Kelly. Pickering Chemical - Meyer ?

Laurence Livermore Lab - 80-83 BAD
500 - 1000 Drums -

Solvent Service - Yes - Meyer & Bedini - low vol

Donaldson 72-83 - Bedini didn't have.
25 Drums / @ 2 mos

Carmonce Chemical (C. L. DUNCAN) - in Bedini time
(off Hochmuth) 40-50 / @ 2 mos 58-65

TOPS FORM
7524

Litho in U.S.A.

Hewlett-Packard - Bedini - low) couple loads
- 1972 - 78 loads / ~~[illegible]~~ 50/60 @ 2 weeks

Intel - low vol. during Mezzes.

Interstate Oil - Sacto - ANDY? Tony ANDREWS
200 LOAD / Drug back 1 + 1½ mos

Quaker State - not prior to 1980

United Air Lines -

All oil drums were residual oils; military facilities had most

Reichold - Mezzes 65-70
132 @ week

*Reynolds Metal Co. → Harold HOLLENSHEAD
HOLLEN SHEAD
Bedini (1972 - 3/4 LOADS)
→ 1972 → Vaquiss) 1 load avg 8-10 weeks /
→ now Continental Can Co.

*Kaiser Aluminum -
Most were open-heads, went to L.A. for refurb -
10% stayed here - 90% went to L.A.
150 @ 1 mos.

TOPS FORM 7524 1000 in 3 days

Litho in U.S.A.

174 is on open Top

Only drums you wash are soap, oil, /
washed some poly drums/

Bedini time, used burns and blasters - burned on site (Meyers removed it!) So, open heads weren't done after that.

Syntex U.S.A. Was Hamilton's client 72-83 - LARRY FRANK
80 drums @ 2 mos. / 50% went to
LA / 30% to BAD

U.C. Med Center - Bedini is BAD
- VERY SMALL - 3 LOADS/ 60

W. R. GRACE - Bedini
DEWY-ALMY CHEMICAL

W. R. MEADOWS - Bedini had / same volume as BAD
after 70-78

TOPS FORM
7524

Litho in U.S.A.

Far West Corp. (in Richmond needs to
speak up Common) across from Golden Gate
Fields - in Meyers Lane

TOPS FORM
7524

Litho in U.S.A.

Schlage Lock: 58-65
50 @ 3 mos.

Misc File:

① BRUCE BRAUNFELD 320-333 11TH ST. SF 94103
626-2498

② Plant in Pittsburgh (as per exit)
pos. DOW - 240 4/5 LOADS TOTAL

③ LIBBY, McNEIL, LIBBY is Tomato Paste

④ INMOT PAINT
Michael BAILON — PO Box 158 SAMOA

⑤ Louisianna Pacific Corp ~~Sacramento~~ Ca. 9556
~~480~~ Drums 72-78

DORWARD & Sons Company. - Marine Terminals
PT. RICHMOND

⑥ Dorwood & Sons.
152 10 LOADS

TOPS FORM 7524

Litho in U.S.A.

* General Motors — also big w/ Meyers
(LUCITE PAINTS)

H+H Ship - also had

LYTTON Industries - Early Bedini
100 / 2 loads

Plastic Mart - Oakland - Bedini picked up during Meyers Time.

Dees Candies - Bedini picked up

Shasta Beverages - (Hayward)
Early Bedini

Wells Fargo Bank - SF main
10-15 @ time / 5-6 times | Bedini prior to Meyers.

Western Omega - Union City DALE KORNBLITH
80 100 / 5 LOADS 489-8111 72-78

[illegible]

TOPS FORM
7524

Litho in U.S.A.

Steve Morrill was exec w/ Chevron Oil Co.
> investor w/ Wagmine

TOPS FORM
7524

Line in U.S.A.

Viddlers

Evans / Tonis / Ron BATISTONI (Ernies nephew)

~~Mary Davis /~~

~~Freita Smith~~

~~" Coleman~~

TOPS FORM
7524

Litho in U.S.A.

TOTAL P.24

Exhibit 2

ACCOUNTING DEPT.

PURCHASE ORDER / REQUISITION

No. 24518

VENDOR: Myers Drums
5400 So. Soto
LA
581-6141 - Mark

SHIP TO: ~~K[illegible]~~

E.D.A.

TAXABLE	F.O.B. (DESTINATION UNLESS SPECIFIED)	PREPAID	ORDER PLACED WITH VENDOR BY	DATE	DELIVERY REQUIRED
✓					3/6/78
RESALE	SHIP VIA Will Call/OT	COLLECT	Sm	3-3-78	TERMS

QUANTITY RECEIVED	QUANTITY ORDERED	DESCRIPTION	PRICE	DISCOUNT
	12 ea	55 gal DRUMS - LIDS with ring/sealer	12.25 ea	
		Clean used drums		
	for	Alumin dross -		

DELIVER MATERIAL TO: REFINING

COST CENTER TO BE CHARGED: 170

MATERIAL TO BE USED FOR (CHECK ONE)	REPAIR	REPLACEMENT	STOCK	NEW ADDITION
		✓		

09-80-170-45310-3900

		DATE
REQUESTED BY:		/ /
APPROVED BY:	K M Reeter	3/2/78
RECEIVED BY:		/ /

FROM **MYERS DRUM COMPANY** At Vernon, Calif.

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

THIS BILL OF LADING NUMBER MUST APPEAR ON ALL W/B'S AND F/B'S

SHIPPER'S NO. & B/L NO. J 38788

SALES ORDER NO.	CUSTOMER ORDER NO.	INVOICE DATE
LA-6891	24518	

CONSIGNED TO NL Inds.
2700 S. Indiana

DESTINATION LA., CA.

DATE SHIPPED 3/6/78

CAR INITIALS will call

SHIPPED VIA

CAR NO.

PREPAID ☐ COLLECT ☐

lading. If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Myers Drum Company

(Signature of consignor.)

Received $

to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced: $

If charges are to be prepaid, write or stamp here, "To be Prepaid."

UNITS	PRODUCT DESCRIPTION	WT. SUB. TO COR.	CLASS OR RATE	✓
	55 GAL. OIL DRUMS, USED			
12	55 GAL. OPEN TOP DRUMS, USED blk/white, gask inst bolt rings			

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

MYERS DRUM COMPANY, Shipper

office address of shipper, 6549 SAN PABLO AVE., OAKLAND, CALIF.

2

AGENT MUST DETACH AND RETAIN THIS SHIPPING ORDER AND MUST SIGN THE ORIGINAL BILL OF LADING

MI-8364

Accounts Payable Entry Form

NL Metals

DATE A/P EATCH NO.

MAR 24 1978 0 7 2

METAL DIV. - WESTERN DIV

Cd. Id.	Trans	Sp. Hd.	Vendor Number	Reference Or Invoice Number	Due Date Mo.	Due Date Day	Due Date Yr.	Gross Amount Or Prepaid Check No.
1	5	6	7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22	23 24	25 26	27	28 29 30 31 32 33 34 35 36
2	1	E	232055	L38788	03	28	78	15582

Location Codes Div.	Location Codes Loc.	Cost Center Dept.	Cost Center Sub. Dept.	General Ledger Account	Sub Account	Qty Y.D	Quantity/Description	Distributed Amounts Debit Amount	Distributed Amounts Credit Amount
37 38	39 40	41 42 43	44 45 46	47 48 49 50 51	52 53 54 55	56 57	58 59 60 61 62 63 64 65 66 67 68 69 70 71	72 73 74 75 76 77 78 79 80	72 73 74 75 76 77 78 79 80
0 9	80	1710		4553110	3900			15582	

OAKLAND
(415) 652-6847
LOS ANGELES
(213) 581-6141
PORTLAND
(503) 255-0553
TUCSON
(602) 624-2585

MYERS DRUM COMPANY

SUBSIDIARY OF KAISER STEEL CORPORATION

REMIT TO:

MYERS DRUM CO. P. O. BOX 37375 SAN FRANCISCO, CALIF. 94137

INVOICE NO.	PAGE
L46162	1

CUSTOMER NO.	INVOICE DATE
11000	10/16/78

SOLD TO
N.L. INDS.
2700 S. INDIANA
LOS ANGELES, CA 90052

SHIP TO
SAME
SAME

CUSTOMER REFERENCE	SHIP VIA	DATE SHIPPED	ORDER NO.	SLS. NO.	FREIGHT			
6648	MYERS TRUCK	10/09/78	6162	13	PREPAID	X	COLLECT	

RODUCT CODE	DESCRIPTION	U/M	QUANTITY		AMOUNT
11 81233	OH LUBRICANT DRUMS	EA	50	7.400	370.00
13 81292	DELIVERY CHARGES	EA	50	.150	7.50

RECEIVED
OCT 23 1978
ACCOUNTS PAYABLE
NL INDUSTRIES, INC.

6162

TERMS:
THE CASH DISCOUNT SHOWN AT THE RIGHT WHERE APPLICABLE MAY BE TAKEN ON INVOICES ISSUED BETWEEN THE 1ST AND 15TH IF PAID BY 25TH OF THAT MONTH, AND ON INVOICES ISSUED BETWEEN 16TH AND 31ST IF PAID BY THE 10TH OF THE FOLLOWING MONTH

1.85

TOTAL 377.50
-185
375.65
PAY THIS AMOUNT

ORIGINAL

SALE SUBJECT TO CONDITIONS ON REVERSE

This instrument confirms the terms and conditions of sale of the products described on the face hereof. In the event Buyer's purchase order states terms additional to or different from these Conditions of Sale, then this instrument shall be deemed a notification of objection to such additional and/or different terms, or in the event such purchase order expressly limits acceptance to its terms then this instrument shall be deemed a rejection of Buyer's offer to purchase, and in either such event this instrument shall constitute an offer to sell which may be accepted only in accordance with its terms and without modification, addition or alteration. Buyer's acceptance of delivery of the products described on the face hereof shall be deemed an acceptance hereof and a contract shall be formed only upon the within Conditions of Sale.

A. PRICE; PAYMENT.

1. The prices stated herein are subject to adjustment to Seller's schedule of prices in effect at the time of each shipment.

2. Prices specified do not include sales, excise, or other taxes payable on account of this transaction, and all taxes now in effect and/or hereafter levied, which are applicable to this transaction, are in addition to such prices and shall be paid by Buyer.

3. Payments shall be made in cash thirty days from date of delivery of products sold hereunder, unless otherwise expressly provided on the face hereof. All orders and contracts are subject to approval of Seller's Credit Department and Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. If Buyer fails to comply with any terms of payment, Seller reserves the right to withhold further deliveries or terminate the agreement of sale upon written notice and any unpaid amount shall thereupon become due.

4. If payment is not made according to the terms stated herein, interest will be charged on any overdue portion at the highest lawful rate.

B. MANUFACTURING; WARRANTY.

1. Seller expressly warrants title and that its new products (single trip) comply with the U. S. Department of Transportation specification number, if any, embossed upon the particular product in effect on the date said product is manufactured. If linings are supplied with new products, Seller warrants such linings will be comparable in quality with and applied in the same manner as the sample tested and approved by Buyer. With respect to used products reconditioned by Seller, Seller warrants only that the products meet Seller's testing procedures and reconditioning workmanship standard in the industry. All other used products are sold "as is where is". Except for such express warranties, Seller makes no warrenty of any kind whatsoever, express or implied, and all warranties of merchantability, fitness for a particular purpose, and other warranties of whatever kind, are hereby disclaimed by Seller and excluded.

2. Seller assumes no liability for any failure of Buyer's specification to meet Buyer's requirements. Seller makes no guarantee and assumes no liability with respect to the content of any labeling data and Buyer is solely responsible for the accuracy and adequacy thereof to meet Buyer's requirements or to comply with any general or specific laws or regulations pertaining to labeling of the products sold hereunder.

C. DELIVERY AND SHIPMENT.

1. Where delivery is by means of common carrier or is effected by Buyer, all risk of loss, damage and all incidents of title and ownership shall pass to Buyer upon delivery at Seller's plant. Except as provided above, risk of loss, damage and all incidents of title and ownership shall pass from Seller to Buyer at the destination designated on the face hereof.

2. In order to secure Buyer's performance until payment in full is received, Seller retains: (i) the right at any time to identify the products to the contract; (ii) the rights to divert or stop in transit; (iii) the right to resell, and (iv) a purchase money security interest as defined in Cal. Commercial Code No. 9107 in the products described herein and the proceeds or products thereof.

3. To avoid congestion and delays in loading, the mode of transportation and routing of shipments shall be selected by Seller.

D. GENERAL LIABILITY.

In no event shall Seller be liable for failure or delay in performance or delivery when such failure or delay results from or in connection with strikes, lockouts, boycotts or other labor troubles of any kind; participation by Seller or an affiliate of Seller at the request or urging of any government or governmental corporation, agency or bureau in any plan, policy or program of general public interest respecting priorities, allocations, limitations or other restraints which affect manufacture of steel or steel products or delivery hereunder; or any other cause or occurrence beyond Seller's control, including, but not limited to, riots, wars (declared or undeclared), acts of the public enemy, fires, inclement weather, earthquakes, or other acts of God, damage, destruction or breakdowns of any kind of Seller's equipment or facilities necessary for performance hereunder arising from any cause whatsoever; delays or failures of usual sources of supply of materials, equipment or transportation; shortage of transportation facilities or equipment, shortage of labor, fuel or other materials; any present or future laws, orders, regulations, directives of policies enacted, adopted, instituted or sponsored by any government or governmental corporation, agency or bureau effecting mandatory restrictions, limitations, priorities, allotments, allocations, prorations or substitutions which delay, restrict or prevent the manufacture or delivery of steel or steel products, or otherwise affect performance hereunder; or any other cause or occurrence beyond Seller's control delaying, restricting or preventing Seller's performance hereunder, whether or not like or similar to the causes or occurrences specifically enumerated above.

E. CLAIMS.

1. Except for breach of the express warranties specified in Article D above, Seller shall not under any circumstances be liable on account of any imperfection, deviation from specifications, standard tolerances, improper workmanship, or other defect impairing the quality, value, or suitability for any purpose of any product sold hereunder whether caused by Seller's negligence or otherwise. Seller's liability under the sale contemplated hereby, or under any term, warranty or representation in connection therewith, or the manufacture or delivery of any products covered hereby, whether based upon Seller's negligence or otherwise, shall in no event exceed the purchase price of the particular product. In no event shall Seller be liable for consequential, special or contingent damages.

2. Buyer shall fully specify all claimed defects or nonconformity by written notice to Seller promptly after Buyer's receipt of the products, and Buyer shall give Seller an opportunity to investigate. Products claimed to be defective shall not be returned without Seller's written consent.

F. MISCELLANEOUS CONDITIONS.

1. The waiver by Seller of any term, provision or condition herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition, or provision, nor shall it be deemed a waiver of any conditions in any subsequent order.

2. This instrument confirms the sole and entire agreement between Buyer and Seller and none of the terms and conditions contained herein may be added to, deleted, modified or altered except by a written instrument signed by Seller. There are no oral understandings, representations or agreements relative to this instrument which are not fully expressed herein.

3. The laws of the State of California shall govern the validity, interpretation and enforcement hereof.

ACCOUNTING DEPT.

PURCHASE ORDER / REQUISITION

No. 26648

VENDOR: Myers Drum
5400 So Soto
Vernon
Jim

SHIP TO:

E.D.A. 10-6-78

TAXABLE	F.O.B. (DESTINATION UNLESS SPECIFIED)	PREPAID	ORDER PLACED WITH VENDOR BY	DATE	DELIVERY REQUIRED
RESALE	SHIP VIA: their truck	COLLECT	Jim	9-27-78	TERMS

QUANTITY RECEIVED	QUANTITY ORDERED	DESCRIPTION	PRICE	DISCOUNT
	50	16 Gals. 20 Gauge Black Drums	7.40	
			+ .15	delic Chg
		w/Lids		
		For Packing Tin Shots		
		$377.50		

DELIVER MATERIAL TO: MM

COST CENTER TO BE CHARGED: 211

MATERIAL TO BE USED FOR (CHECK ONE)	REPAIR	REPLACEMENT	STOCK	NEW ADDITION
		✓		

REQUESTED BY: Joe D. Cahnay — DATE 9/27/78

APPROVED BY: [illegible] — 9/27/78

RECEIVED BY: / /

THIS SHIPPING ORDER or in Carbon, and retained by the Agent.

RECEIVE, subject to the classifications and tariffs in effect on the date of the issue of this shipping order,

FROM MYERS DRUM COMPANY At Vernon, Calif.

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

THIS BILL OF LADING NUMBER MUST APPEAR ON ALL W/B'S AND F/B'S

SHIPPER'S NO. & B/L NO. L2 - 46162

SALES ORDER NO. V-6162

CUSTOMER ORDER NO. 26548

INVOICE DATE

CONSIGNED TO N L INDS

DESTINATION 2700 S INDIANA L.A., CA

DATE SHIPPED 10/9

CARRIER OUR TRUCK

CAR NO.

Time in

Time out

PREPAID ☐ COLLECT ☐

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Myers Drum Company

(Signature of consignor.)

Received $

to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced: $

If charges are to be prepaid, write or stamp here, "To be Prepaid."

UNITS	PRODUCT DESCRIPTION	WT. SUB. TO COR.	CLASS OR RATE	✓
50	NEW DRUM 16 gal., 20 ga., LUG GREASE, FLOWED, BLACK			

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

MYERS DRUM COMPANY, Shipper

Per

Permanent post-office address of shipper, 6649 SAN PABLO AVE., OAKLAND, CALIF.

2

AGENT MUST REVIEW AND RETAIN THIS SHIPPING ORDER AND MUST SIGN THE ORIGINAL BILL OF LADING

MI-8364

Accounts Payable Entry Form

NL Metals

R. WOODS
OCT 25 1978

DATE A/P BATCH NO.

OCT 26 1978 261

METAL DIV. - WESTERN 909

Cd. Id.	Ins	Sp. Hd.	Vendor Number	Reference Or Invoice Number	Due Date Mo.	Due Date Day	Due Date Yr.	Gross Amount Or Prepaid Check No.
1	5	6	7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22	23 24	25 26	27	28 29 30 31 32 33 34 35 36
2	1		232055	4461602	10	26	8	375 65

Location Codes Div.	Location Codes Loc.	Cost Center Dept.	Cost Center Sub. Dept.	General Ledger Account	Sub Account	O I T N Y D	Quantity/Description	Distributed Amounts Debit Amount	Distributed Amounts Credit Amount
37 38	39 40	41 42 43	44 45 46	47 48 49 50 51	52 53 54 55 56 57	58	59 60 61 62 63 64 65 66 67 68 69 70 71	72 73 74 75 76 77 78 79 80	72 73 74 75 76 77 78 79 80
0 9	80	211	350	45310	3590			375 65	

AR 10/25/78

OAKLAND
(415) 652-6847
LOS ANGELES
(213) 581-6141
PORTLAND
(503) 255-0553
TUCSON
(602) 624-2585

MYERS DRUM COMPANY

SUBSIDIARY OF KAISER STEEL CORPORATION

REMIT TO:

MYERS DRUM CO. P. O. BOX 37375 SAN FRANCISCO, CALIF. 94137

INVOICE NO.	PAGE
L38456	1

CUSTOMER NO.	INVOICE DATE
11000	2/14/78

SOLD TO
N L INDUSTRIES
2700 S INDIANA

LOS ANGELES,CA 90023

SHIP TO
SAME
SAME

CUSTOMER REFERENCE	SHIP VIA	DATE SHIPPED	ORDER NO.	SLS. NO.	FREIGHT			
246	WILL CALL	2/09/78	6186	29	PREPAID	X	COLLECT	

ODUCT CODE	DESCRIPTION	U/M	QUANTITY		AMOUNT
9 83213	RECONDITIONED USED DRUMS 0H55GAL	EA	10	12.250	122.50

RECEIVED
ACCOUNTS PAYABLE
NL INDUSTRIES, INC.

TERMS:
THE CASH DISCOUNT SHOWN AT THE RIGHT WHERE APPLICABLE MAY BE TAKEN ON INVOICES ISSUED BETWEEN THE 1ST AND 15TH IF PAID BY 25TH OF THAT MONTH, AND ON INVOICES ISSUED BETWEEN 16TH AND 31ST IF PAID BY THE 10TH OF THE FOLLOWING MONTH

.00

TOTAL 122.50

PAY THIS AMOUNT

GINAL

SALE SUBJECT TO CONDITIONS ON REVERSE

This instrument confirms the terms and conditions of sale of the products described on the face hereof. In the event Buyer's purchase order states terms additional to or different from these Conditions of Sale, then this instrument shall be deemed a notification of objection to such additional and/or different terms, or in the event such purchase order expressly limits acceptance to its terms then this instrument shall be deemed a rejection of Buyer's offer to purchase, and in either such event this instrument shall constitute an offer to sell which may be accepted only in accordance with its terms and without modification, addition or alteration. Buyer's acceptance of delivery of the products described on the face hereof shall be deemed an acceptance hereof and a contract shall be formed only upon the within Conditions of Sale.

A. PRICE; PAYMENT.

1. The prices stated herein are subject to adjustment to Seller's schedule of prices in effect at the time of each shipment.

2. Prices specified do not include sales, excise, or other taxes payable on account of this transaction, and all taxes now in effect and/or hereafter levied, which are applicable to this transaction, are in addition to such prices and shall be paid by Buyer.

3. Payments shall be made in cash thirty days from date of delivery of products sold hereunder, unless otherwise expressly provided on the face hereof. All orders and contracts are subject to approval of Seller's Credit Department and Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. If Buyer fails to comply with any terms of payment, Seller reserves the right to withhold further deliveries or terminate the agreement of sale upon written notice and any unpaid amount shall thereupon become due.

4. If payment is not made according to the terms stated herein, interest will be charged on any overdue portion at the highest lawful rate.

B. MANUFACTURING; WARRANTY.

1. Seller expressly warrants title and that its new products (single trip) comply with the U. S. Department of Transportation specification number, if any, embossed upon the particular product in effect on the date said product is manufactured. If linings are supplied with new products, Seller warrants such linings will be comparable in quality with and applied in the same manner as the sample tested and approved by Buyer. With respect to used products reconditioned by Seller, Seller warrants only that the products meet Seller's testing procedures and reconditioning workmanship standard in the industry. All other used products are sold "as is where is". Except for such express warranties, Seller makes no warranty of any kind whatsoever, express or implied, and all warranties of merchantability, fitness for a particular purpose, and other warranties of whatever kind, are hereby disclaimed by Seller and excluded.

2. Seller assumes no liability for any failure of Buyer's specification to meet Buyer's requirements. Seller makes no guarantee and assumes no liability with respect to the content of any labeling data and Buyer is solely responsible for the accuracy and adequacy thereof to meet Buyer's requirements or to comply with any general or specific laws or regulations pertaining to labeling of the products sold hereunder.

C. DELIVERY AND SHIPMENT.

1. Where delivery is by means of common carrier or is effected by Buyer, all risk of loss, damage and all incidents of title and ownership shall pass to Buyer upon delivery at Seller's plant. Except as provided above, risk of loss, damage and all incidents of title and ownership shall pass from Seller to Buyer at the destination designated on the face hereof.

2. In order to secure Buyer's performance until payment in full is received, Seller retains: (i) the right at any time to identify the products to the contract; (ii) the rights to divert or stop in transit; (iii) the right to resell, and (iv) a purchase money security interest as defined in Cal. Commercial Code No. 9107 in the products described herein and the proceeds or products thereof.

3. To avoid congestion and delays in loading, the mode of transportation and routing of shipments shall be selected by Seller.

D. GENERAL LIABILITY.

In no event shall Seller be liable for failure or delay in performance or delivery when such failure or delay results from or in connection with strikes, lockouts, boycotts, or other labor troubles of any kind; participation by Seller or an affiliate of Seller at the request or urging of any government or governmental corporation, agency or bureau in any plan, policy or program of general public interest respecting priorities, allocations, limitations or other restraints which affect manufacture of steel or steel products or delivery hereunder; or any other cause or occurrence beyond Seller's control, including, but not limited to, riots, wars (declared or undeclared), acts of the public enemy, fires, inclement weather, earthquakes, or other acts of God, damage, destruction or breakdowns of any kind of Seller's equipment or facilities necessary for performance hereunder arising from any cause whatsoever; delays or failures of usual sources of supply of materials, equipment or transportation; shortage of transportation facilities or equipment, shortage of labor, fuel or other materials; any present or future laws, orders, regulations, directives of policies enacted, adopted, instituted or sponsored by any government or governmental corporation, agency or bureau effecting mandatory restrictions, limitations, priorities, allotments, allocations, prorations or substitutions which delay, restrict or prevent the manufacture or delivery of steel or steel products, or otherwise affect performance hereunder; or any other cause or occurrence beyond Seller's control delaying, restricting or preventing Seller's performance hereunder, whether or not like or similar to the causes or occurrences specifically enumerated above.

E. CLAIMS.

1. Except for breach of the express warranties specified in Article D above, Seller shall not under any circumstances be liable on account of any imperfection, deviation from specifications, standard tolerances, improper workmanship, or other defect impairing the quality, value, or suitability for any purpose of any product sold hereunder whether caused by Seller's negligence or otherwise. Seller's liability under the sale contemplated hereby, or under any term, warranty or representation in connection therewith, or the manufacture or delivery of any products covered hereby, whether based upon Seller's negligence or otherwise, shall in no event exceed the purchase price of the particular product. In no event shall Seller be liable for consequential, special or contingent damages.

2. Buyer shall fully specify all claimed defects or nonconformity by written notice to Seller promptly after Buyer's receipt of the products, and Buyer shall give Seller an opportunity to investigate. Products claimed to be defective shall not be returned without Seller's written consent.

F. MISCELLANEOUS CONDITIONS.

1. The waiver by Seller of any term, provision or condition herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition, or provision, nor shall it be deemed a waiver of any conditions in any subsequent order.

2. This instrument confirms the sole and entire agreement between Buyer and Seller and none of the terms and conditions contained herein may be added to, deleted, modified or altered except by a written instrument signed by Seller. There are no oral understandings, representations or agreements relative to this instrument which are not fully expressed herein.

3. The laws of the State of California shall govern the validity, interpretation and enforcement hereof.

ACCOUNTING DEPT.

PURCHASE ORDER / REQUISITION

No. 24246

VENDOR: Meyers Drum Co
5400 South Soto
Los angeles, California 90058
Steve Stull 581-6141

SHIP TO:

E.D.A. N/C

TAXABLE	F.O.B. (DESTINATION UNLESS SPECIFIED)	PREPAID	ORDER PLACED WITH VENDOR BY	DATE	DELIVERY REQUIRED
✓					
RESALE	SHIP VIA: Our Truck	COLLECT	Ainsy	2-6-78	TERMS

QUANTITY RECEIVED	QUANTITY ORDERED	DESCRIPTION	PRICE	DISCOUNT
	10	Drums with Covers and bolt Rings	12.25	

DELIVER MATERIAL TO: 170

COST CENTER TO BE CHARGED: 170

MATERIAL TO BE USED FOR (CHECK ONE)	REPAIR	REPLACEMENT	STOCK	NEW EDITION
				X

REQUESTED BY: [signature] DATE 2/6/78

APPROVED BY: Philip M Freeman 2/6/78

RECEIVED BY: / /

THIS RECEIVED FROM

MYERS DRUM COMPANY At Vernon, Calif.

Subject to the classifications and tariffs in effect on the date hereof, the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

THIS BILL OF LADING NUMBER MUST APPEAR ON ALL W/B'S AND F/B'S

SHIPPER'S NO. & B/L NO. J 38456

SALES ORDER NO. LA 6186

CUSTOMER ORDER NO. 24246

INVOICE DATE

CONSIGNED TO N.L. INDS

DESTINATION 2700 S. INDIANA
L.A., CA 90023

DATE SHIPPED 2/9/78

CAR INITIALS WILL CALL

SHIPPED VIA

CAR NO.

PREPAID ☐ COLLECT ☐

ditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Myers Drum Company

(Signature of consignor.)

Received $ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced: $

If charges are to be prepaid, write or stamp here, "To be Prepaid."

UNITS	PRODUCT DESCRIPTION	WT. SUB. TO COR.	CLASS OR RATE	✓
	55 GAL. OIL DRUMS, USED			
10	55 GAL. OPEN TOP DRUMS, USED BLACK & WHITE, GASKETS INSTALLED, BOLT RINGS.			

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

MYERS DRUM COMPANY, Shipper

Per

Permanent post-office address of shipper, 6549 SAN PABLO AVE., OAKLAND, CALIF.

2

AGENT MUST DETACH AND RETAIN THIS SHIPPING ORDER AND MUST SIGN THE ORIGINAL BILL OF LADING

MI-8364

Accounts Payable Entry Form

NL Metals

DATE A/P BATCH NO.

FEB 23 1978 068

METAL DIV. - WESTERN 909

Cd. Id.	Trans	Sp. Hd.	Vendor Number	Reference Or Invoice Number	Due Date Mo.	Due Date Day	Due Date Yr.	Gross Amount Or Prepaid Check No.
1	5	6	7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22	23 24	25 26	27	28 29 30 31 32 33 34 35 36
2	1		232055	4 384456	03	06	8	122.50

Location Codes Div.	Location Codes Loc.	Cost Center Dept.	Cost Center Sub. Dept.	General Ledger Account	Sub Account	Qty Y.D	Quantity/Description	Distributed Amounts Debit Amount	Distributed Amounts Credit Amount
37 38	39 40	41 42 43	44 45 46	47 48 49 50 51	52 53 54 55 56 57	58	59 60 61 62 63 64 65 66 67 68 69 70 71	72 73 74 75 76 77 78 79 80	72 73 74 75 76 77 78 79 80
09	80	170	350	45310	3590			122.50	

Exhibit 3

KAPLAN FILES #13

SYNANON V. FOXCROFT

OBTAINED AT ARTRA 6/7/85

Dutch Boy Paint salesman manual

PAINT MANUAL
DUTCH BOY

#13

KAPLAN, STUART M
SYNANON V. FOXCROFT - DOCS.
OBTAINED AT ARTRA 6/7/85

KAPLAN, STUART M.
Synanon v. Foxcroft - Docs.
Obtained at ARTRA 6/7/85

IMPORTANT

THIS MANUAL is the property of the Paint Sales Department, National Lead Company, 111 Broadway, New York City 6, and is assigned to you as assistance in your work as a Dutch Boy Salesman. Please do not allow it to be in the possession of any other individual at any time.

If you leave the services of the Company, you must return this Manual intact to your Branch Manager before final settlement of your affairs can be made.

No. 157 ASSIGNED TO Mr. P. J. Andrews

Modern packaging

Nominated for packaging's Hall of Fame. Story on Page 120

April 1949

Dutch Boy

Reprinted from the April 1949 Issue of MODERN PACKAGING
Copyrighted. All rights reserved.

Courtesy of National Lead Company

FOURTH OF A SERIES

Dutch Boy

"Bright as the 'Dutch Boy's' bright blue cap . . . sparkling as the sun on his golden hair . . . lasting as his cheery smile . . ." Thus begins an ad, extolling the virtues of Dutch Boy ready-mixed paints, appearing in current issues of national consumer magazines. Thus does the National Lead Co., after 42 years, continue to capitalize on the winning personality of one of America's most famous, most durable and most heavily promoted trademarks.

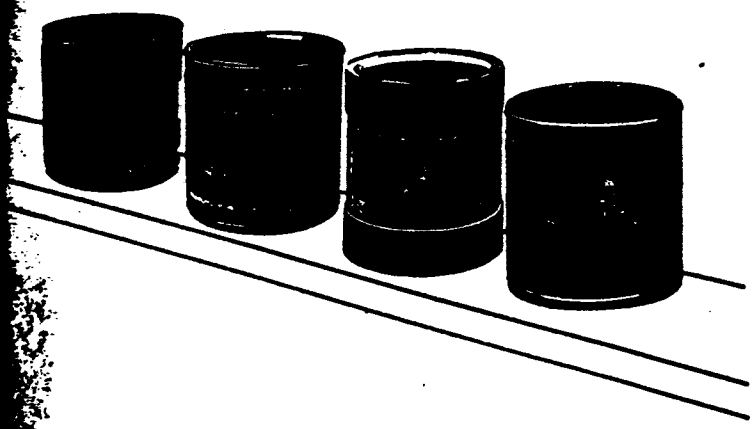
The apple-cheeked, bobbed-hair Dutch Boy is more than a symbol. Specifically charged with the job in 1907, he succeeded in welding together some 20 heterogeneous trade names. These were local and sectional brands inherited when National Lead Co. was formed by bringing together a number of manufacturers of white lead doing business in different sections of the country. Overcoming local pride and deep-rooted tradition (one member of the National Lead family had been doing business in an Eastern city continuously since 1772), he gradually submerged all local names to one strong national brand and contributed materially to the building of a $320,000,000 annual business.*

The original Dutch Boy—created on canvas by the famed protrait painter Lawrence Carmichael Earle in 1907—looks down today, from his gold frame, over the long board of directors' table in National Lead Co.'s headquarters in downtown Manhattan. There is an unsubstantiated story that directors customarily face the painting and bow ever so slightly before sitting down to go over the latest profit reports.

So valuable is the painting considered that it is never permitted to be removed from its place of honor on the wall; lithographers and printers charged with reproduction of the trademark must haul in their equipment and do the work in the spot. It is, in fact, a painting of considerable artistic merit, often compared, in serious critiques, to Gainsborough's "Blue Boy" and other famous "boy" portraits.

* 1948 sales of National Lead Co., including paint, lead and related products; from the Annual Report dated March 10, 1949.

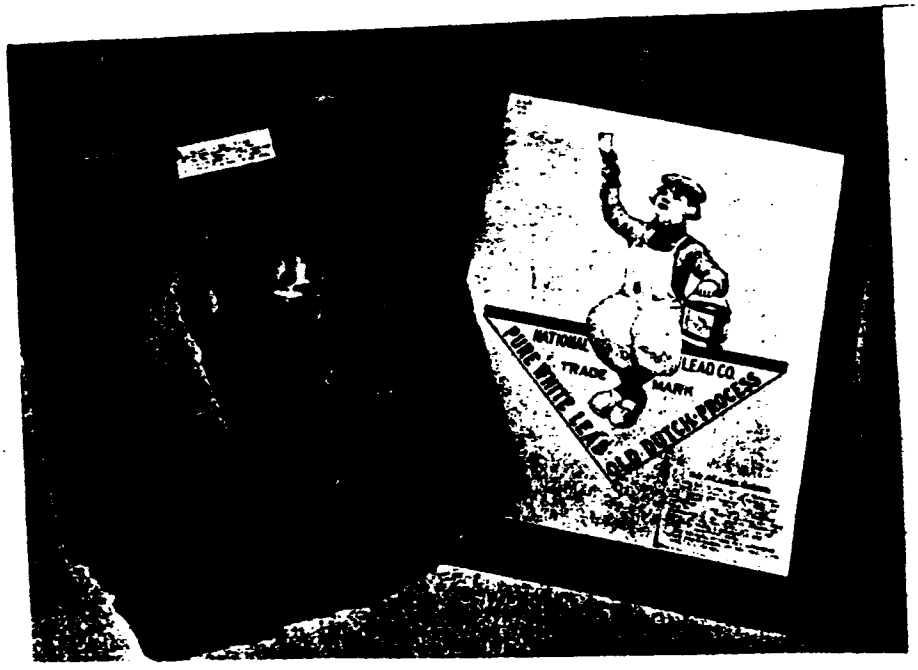
DUTCH BOY packaging has progressed through the years from the oak keg to the steel keg (pioneered by National Lead Co.) and finally to the colorful consumer line, of which the new Wonsover interior paint is a typical example. For 42 years the Dutch Boy has been the identifying feature of all of National Lead Co.'s paints.



On the strength of the great fame and success of its trademark, the Dutch Boy package was a unanimous nominee for this Hall of Fame series. But beyond that, the principle of uniting diverse brands under a single powerful trademark is as good today as it was in 1907; the conditions which led to this solution are conditions still frequently encountered and the detailed story of Dutch Boy is full of valuable tips for today's packagers.

How it began

Incorporated in 1891, the National Lead Co. found itself by 1907 marketing 21 different brands of white lead—all substantially the same product. Each of



EARLIEST EXAMPLE of the Dutch Boy trademark is this 1907 oak keg, holding 100 lbs. of white lead. The masterful portrait by George Carmichael Earle (see cover illustration) was painted for the purpose in that year and the first label was a metal plate on the wood keg above.

CONCEPTION of the now-famous trademark is found in these rough sketches done in 1904 to 1906. Framed sketch at right was actually adopted as trademark and used in advertising in 1906; it served as the basis for the oil painting by Earle in 1907.

these brands was popular in some section of the country, but none was sold nationally.

The dawn of the twentieth century had marked a distinct trend to national marketing, backed by national advertising. The basic purpose of the National Lead Co.'s formation was to unify and extend the marketing of white lead. Lucius A. Cole, second president of the company (1896–1910), saw the possibilities of national advertising, but was handicapped by the profusion of brand names he had to promote. To advertise each separately in the locality where it was marketed was both costly and inefficient. To advertise all 21 brand names together, nationally, would be unwieldy and might only lead to confusion in consumers' minds. To drop the local brands precipitately, in favor of a single national brand, was unthinkable, because it would sacrifice the prestige built up individually by each brand—some going back over 100 years at that time.

President Cole and his long-time famous advertising manager, O. C. Harn, thereupon conceived the idea of a dominant trademark which would be common to all 21 brands without loss of their individual trade names and distinguishing features.

The Dutch Boy was adopted primarily because at the time of his conception as a trademark, most white lead was manufactured by a Dutch process which had been standard for centuries. The Dutch were famous for the quality of their paints and for the spic-and-span whiteness of their buildings. Holland was a quaint, romantic country and pictures of the wooden-shoed natives fascinated school children then as they do today. Putting the boy, with his wooden keg and brush, in the attitude of a house painter, gave animation to the subject, tied him up with the product and suggested that the quality of the paint was so good that even a child could use it. Finally—what may or may not have been foreseen at the time—a character in quaint, traditional dress could survive unchanged for generations, whereas a more topical figure would have to be changed frequently to keep in step with styles.

BLUE AND WHITE LABEL, with prominent full-color figure of the boy, distinguishes the new consumer line of exterior and interior paints, which were introduced late in 1941. Despite the familiarity of the trademark, Dutch Boy paints had not previously been merchandised direct to consumers. The quart, gallon and five-gallon cans with paper labels were a new departure and Designer Georges Wilmet was retained to do a thoroughly modern job for them.

ORANGE AND BLACK colors, lithographed in most cases directly on the metal containers, have since 1916 marked the master-painter products. Not as showy as the consumer packages, these containers nevertheless provide excellent brand identification. The steel keg for white lead, which National Lead Co. pioneered, was a notable packaging development of 1909.

Mr. Harn gave specifications of his idea to a Dutch artist named Rudolph Yook, an employee of the George Batten Co., advertising agency, who drew some pencil sketches used at first only as ad illustrations several years prior to 1907. One of Mr. Yook's sketches was actually formulated into a trademark which, adopted by the board of directors in 1906, was never actually used on a package. This sketch (shown in an accompanying illustration) was comparatively crude, but it did show a Dutch boy in exactly the same pose and much the same costume as today. Mr. Cole suggested that this sketch be turned into really fine art as a permanent trademark for all National Lead products. He authorized Mr. Harn to commission the finest portrait painter available and the job was turned over to Lawrence Carmichael Earle.

Details of the painting's execution were disclosed by chance, long after Mr. Earle's death in 1921, when the "Dutch Boy" model—who turned out to be a New Jersey Irish lad named Michael Brady—was discovered working as a cartoonist for the *Brooklyn Eagle*. Mr. Brady told how, as a boy of 9, he was playing near his home in Montclair, N. J., when Mr. Earle passed by, studied him, talked with him and employed him as a model. Twenty-four years later, when a photograph of Mr. Brady in his 30s was reproduced in *The Dutch Boy Painter*, National Lead house organ, his resemblance to the painting was still striking—an expressive face suggesting a combination of mischievousness and seriousness of purpose, which, as that of the Dutch Boy, has endeared itself to millions.

Legend has it that Artist Earle paid off his model in ice cream sodas, but Mr. Brady (now dead), insisted that he was paid every day at the rate of $2 an hour, which he promptly spent on candy and soda—resulting, before the painting was finished—in a Gargantuan stomach ache. Mr. Earle worked in the studio of his friend, George Inness, not far from the Brady home in Montclair. Meticulous as to detail, Mr. Earle bought young Brady wooden shoes, blue overalls and cap, and had him wear them for several days at play so they would acquire a "lived in" look.

An amusing sidelight on the story came to light last year in a letter written from Los Gatos, Calif., by Lawrence H. Earle, son of the artist, requesting an enlargement of the original Dutch Boy and saying:

"My father painted the Dutch Boy in Montclair, N. J., when I was a kid and when the little local newsboy he used for a model quit the job I took over, donned the sabots, the wig and the costume and posed, at 50 cents a sitting, while my buddies were out playing sandlot baseball so that Dad could finish the commission. I therefore have a claim to being the original Dutch Boy . . . The wooden shoes I wore (sabots) were brought to me from Sweden by our old cook, Christine, on her return from a visit to her old home and I used to wear them to school, much to the delight of my schoolmates and the distress of my teachers.

"As I remember it, it was in mid-summer when I posed, hot as Hades, and I was most uncomfortable, but the 50 cents was a potent inducement and I stuck it out."

THREE CHOICES were offered by designer when consumer label was introduced in 1941. Center version was chosen as the most effective and workable arrangement of various elements.

The gay, lovable personality of the boy that Mr. Earle's talented brush reproduced on canvas—and that lithographers, engravers and printers subsequently reproduced in advertising and on labels—immediately caught the public's fancy. Although at first used on packages merely as an adjunct to the local brand name, popular fancy and the power of national advertising soon put the prestige of the Dutch Boy trademark in the ascendancy over the various local trademarks. As soon as this was obvious, steps were taken to subordinate the local brands to the Dutch Boy. Local trademarks were relegated to the lids of white lead kegs and the Dutch Boy name and illustration were used prominently on the sides of the kegs. Today the Dutch Boy has completely replaced all local paint brands and has made secure his place as one of America's most acceptable trademarks.

In fact, as National Lead Co. has grown and expanded into metals and many diverse products, the Dutch Boy has become a symbol for many products entirely unrelated to paint. His familiar figure and the company name are virtually inseparable.

It was soon discovered that the facial expression and quaint costume of the Dutch Boy so impressed themselves on the public that he could be readily recognized in postures other than the familiar trademark position, with paint brush at work. Unlike most trademarks, he has over the years been used in advertising and promotion in hundreds—perhaps thousands—of different poses. Whether painting a house, waving his cap, playing baseball or standing on his head, he is instantly identifiable as the National Lead Co. trademark and his warm, honest personality inspires confidence in his wares.

History of packaging

It is a tribute to National Lead Co.'s advertising and promotion that, although polls for years have shown the Dutch Boy to be among the trademarks best known to

consumers in every walk of life, he had never appeared as a dominant figure on a consumer package until a few years ago, when the company introduced nationally the first in its line of ready-mixed paints in sizes designed for direct consumer purchase. Mixed paints have been marketed on the West Coast by National Lead Co.'s Pacific Coast branch for about 20 years.

In fact, until about 10 years ago, he had never appeared in full color on a paper label, on a nationally distributed product, for the larger sizes of bulk paints and paint products supplied to master painters—which previously comprised the company's entire paint line—do not lend themselves to that type of labeling.

Until 1941, the intensive consumer advertising and promotion of Dutch Boy painting materials had been aimed principally at building prestige for the name and influencing consumers to specify the brand when contracting for painting work. When National Lead decided to move into the house-paint market nationally, its trademark was ready-made and its acceptance assured.

Although white lead kegs are usually not thought of as a merchandising package, National Lead has repeatedly shown originality and a strong merchandising sense in their handling. Up until 1909 the paint package had been much the same as it was in the Middle Ages: a stout oaken keg, such as the Dutch Boy carries in the trademark illustration. In fact, the new trademark, shortly after its adoption in 1907, was first applied by National Lead branches to just such a wooden keg.

In 1909, however, coincident with early promotion of the new trademark, National Lead announced the solution of another packaging problem on which it had long been working: the first successful metal white lead keg. Metal packages had been attempted by rival companies for some time and painters were clamoring for the improvement, but the early versions were expensive and had a bad habit of splitting at the seams when filled with 50 or 100 lbs. of white lead.

National Lead Co. engineers worked out a process of drawing seamless containers from a single sheet of steel, and built and equipped their own factory to supply them—at no extra cost. The new steel kegs came in sizes to hold 12½, 25, 50 and 100 lbs. of lead. The smaller sizes had sloping sides and were fitted with bails. The 100-lb. size, designed to be moved by rolling, had parallel sides.

The steel containers (still referred to in the paint industry as "kegs") were finished in a dull, gunmetal black. On the side of the keg was found the new Dutch Boy trademark and under it an oblong label guaranteeing purity and full net weight of contents.

The steel kegs were a great improvement and an instant hit. They kept the white lead in perfect condition (with no soaking of oil into wood and consequent hardening of the lead paste around the edges), allowed every bit of the pigment to be removed, were smaller and lighter and made excellent paint pails.

These packages remained essentially the same until 1916, when the company realized that it needed better brand identification. If the small trademark happened to be turned away from the viewer, the package was not distinguishable from that of any other brand. Therefore, pioneering a thoroughly modern principle, National Lead applied orange stripes, top and bottom, all around the container and, in addition to the trademark on the face, put the words "Dutch Boy White Lead" in two lines of bold orange block letters on two sides. The April, 1916, issue of *The Dutch Boy Painter* demonstrated to painters how, in addition to having distinctive orange and black colors, this package could be recognized by its lettering when viewed from any angle.

No further basic change was required until 1943, when, like all paint manufacturers, National Lead was forced to find a wartime substitute for steel. The containing of heavy, penetrative white lead was one of the toughest assignments for wartime paper packaging. National Lead Co. worked it out—with a heavy, all-fibre drum holding up to 100 lbs. of lead. The product, however, has now been switched back to the all-metal container.

With the recent introduction of the consumer line of blended, ready-to-use paints, the Dutch Boy paint packages now comprise two distinct groups.

The master painters' products (white and red lead, linseed oil, driers, colors and other paint materials) still follow the simple orange and black color scheme adopted in 1916, although with modernization of details. Paper labels are not ordinarily used in this group; the labeling is generally lithographed directly on the metal containers which, in 25-, 50-, and 100-lb. sizes, are still produced in the company's own plant.

PROMOTION of the trademark has taken many forms over many years. Typical are the statuette counter display (center); the bronze paperweight souvenir (lower right); the children's paint book (upper right), a feature for many years; the 1919 Christmas card; the old "wet paint" sign.

Introduction of the consumer line (1-qt. to 5-gal. sizes) required more complete and more colorful labeling and the company therefore turned to conventional paper-labeled cans and pails. The blue and white label which distinguishes this line was designed by Georges Wilmet. From three sketches presented by Mr. Wilmet, the present label (see cover) was chosen as giving the most straightforward presentation of the priceless trademark and name, the type of paint and white space for imprinting of number and color.

Success of the new label is attested to by the fact that it has been retained, with a mere change of wording, as the consumer line has expanded from straight house paint to include sash and trim, porch and deck and primer types. It is used also for the new "Wonsover," a single-coat, oil wall paint which marks Dutch Boy's entry into the interior-paint field on a national basis.

Advertising and promotion

Behind every successful product and package lies an advertising and promotion story. The lesson is particularly clear in the case of Dutch Boy products which, without intensive and continuous efforts to popularize the trademark figure among the general public, could scarcely have attained anything like the volume they represent today.

Yet, judging from available figures, the direct advertising expenditure on Dutch Boy has not been exceptional. Tables compiled from American Newspaper Publishers Assn. figures show that from 1939 to 1947, inclusive, national advertising of this brand in magazines, newspapers and radio totaled only $1,694,944—an average of $166,105 a year. The bulk of this was spent in magazines.

Naturally with products largely adapted to master painter's use, an important part of Dutch Boy advertising was also directed to trade papers. Even now, despite a line of paint products which appeal to consumers as well as painters, a large portion of National Lead Co.'s advertising goes to trade publications. However, as far back as 1909, top-notch consumer magazines appeared on the advertising schedule. A 1909 issue of *The Dutch Boy Painter* reproduces a double-truck from the *Saturday Evening Post*, which, it says, "has received much favorable comment."

In addition to national advertising, the company has consistently supported dealers' local advertising. But the really unusual and effective media of Dutch Boy promotion have been:

1. Supplying of samples, souvenirs, costumes, statuettes, signs, calendars, window displays and every other conceivable means of popularizing the Dutch Boy.
2. Continuous publication for 41 years of *The Dutch Boy Painter* (one of industry's oldest house organs), constantly exhorting the trade to the most effective use of this promotion of the trademark.

Nobody knows how many millions of lithographed reproductions of the Earle painting have been passed out; at one time the framed picture was as familiar in the parlor as "God Bless Our Home." Thousands of homes and offices still have souvenir figures in the form of paperweights, statuettes, etc.

The appeal was particularly strong to children and the company has never overlooked the opportunity to plant the trademark image in young and receptive minds. One of the most successful promotions for many years was a children's paint book containing paper chips of paint from which the pictures (including, of course, several Dutch Boys) could be colored. A coupon in the book invited parents to write in for a booklet on house painting.

The company still will loan a Dutch Boy costume—cap, wig, shirt, overalls and wooden shoes—to any person who writes in and asks for it for any reasonable purpose, and the little painter has graced thousands of parades and masquerades.

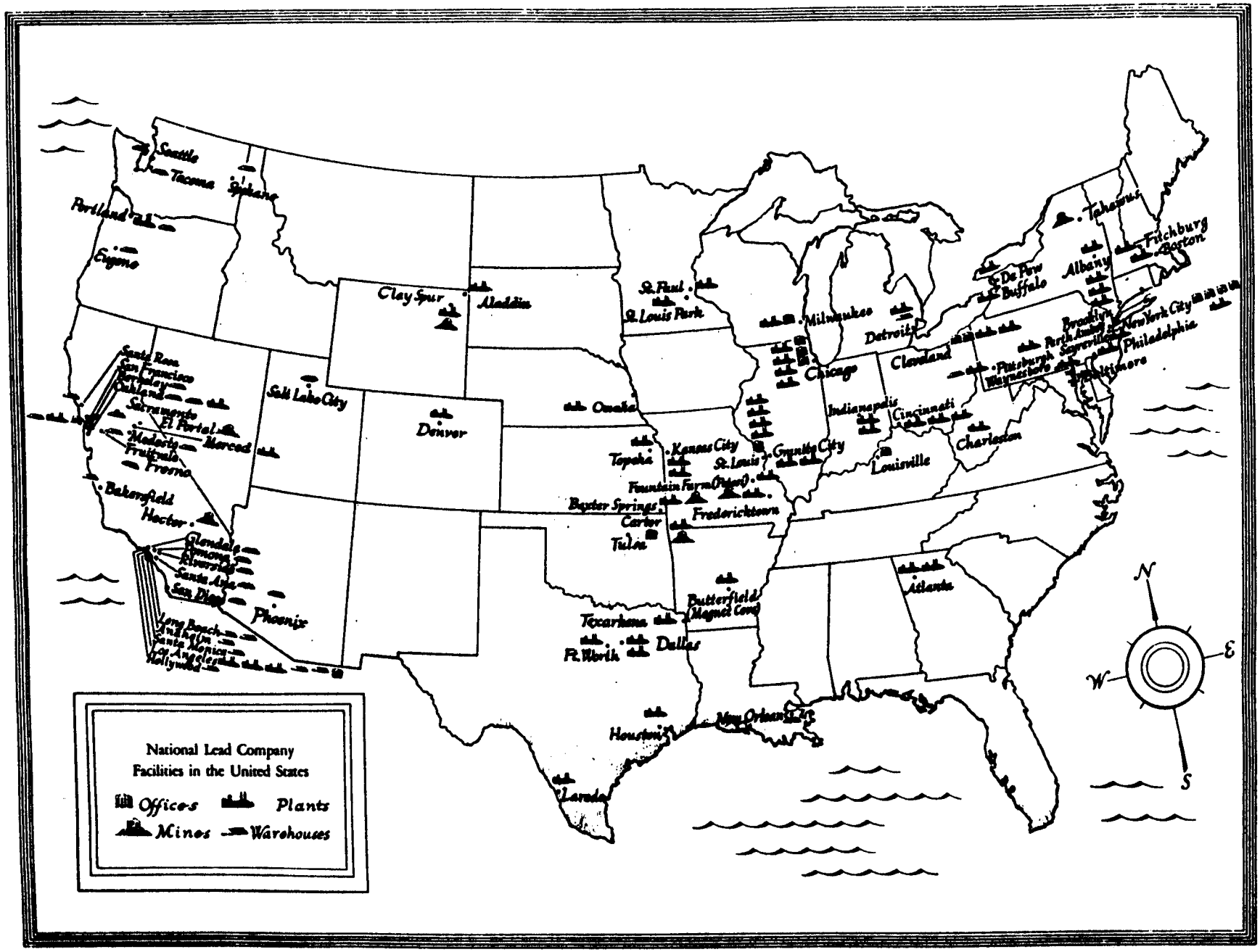
National Lead Co. has given the world a lesson in trademark development and prestige building, and the wisdom of its conception is a contributing factor to the continuous growth of net sales—from $80,000,000 in 1939 to more than $320,000,000 in 1948.

THE DUTCH BOY TRADE-MARK

(Registered in U.S. Pat. Off.)

The original portrait of the Dutch Boy, reproduced above, was painted in 1907 by Lawrence Carmichael Earle. Mr. Earle, who died in 1921, was a distinguished portrait and character painter. His Dutch Boy is admired by art critics as a boy portrait of unusual merit.

To the American buying public, the Dutch Boy is a familiar figure. He appears in the national advertising and on many of the products of National Lead Company . . . a symbol of quality and reliability.


National Lead Company
Facilities in the United States
Offices
Plants
Mines
Warehouses
Seattle
Tacoma
Spokane
Portland
Eugene
Santa Rosa
San Francisco
Berkeley
Oakland
Sacramento
El Portal
Modesto
Merced
Fruitvale
Fresno
Bakersfield
Hector
Glendale
Pomona
Riverside
Santa Ana
San Diego
Phoenix
Long Beach
Anaheim
Santa Monica
Los Angeles
Hollywood
Salt Lake City
Clay Spur
Aladdin
Denver
Omaha
St. Paul
St. Louis Park
Topeka
Kansas City
Fountain Farm (Potosi)
Baxter Springs
Carter
Tulsa
Fredericktown
St. Louis
Granite City
Milwaukee
Chicago
Detroit
Indianapolis
Cincinnati
Louisville
Cleveland
Charleston
Buffalo
De Pew
Albany
Tahawus
Fitchburg
Boston
Brooklyn
Perth Amboy
Sayreville
New York City
Philadelphia
Pittsburgh
Waynesboro
Baltimore
Atlanta
Texarkana
Ft. Worth
Dallas
Butterfield (Magnet Cove)
Houston
New Orleans
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INTRODUCTION

SALESMANSHIP is one of the greatest and most important of the professions. Every man who succeeds in his line is almost invariably a first-class salesman.

This is true of many professions, as well as those engaged in the business of selling products or services—all must be salesmen to win success.

There are many factors that make for successful selling, but among the most essential are a thorough knowledge of one's company and its products and services. With such information well in mind, it is then equally important to know the product needs of each type of prospect and how to meet them with our products.

It was with the best interests of our salesmen constantly before us that we prepared this Manual. It is our sincere belief that we have developed information and suggestions of the greatest possible assistance to our field representatives. Additions, of course, will be made as the demand arises or the necessary information is developed.

All the information in this Manual has been carefully checked by the proper authorities—those responsible for Company policies, sales, advertising, manufacturing, laboratory activities, technical questions and, in fact, all phases of our problems.

This Manual provides the salesman with some of the necessary working tools, such as background information about National Lead Company and its policies; technical data on pigments and vehicles, competitive as well as our own; sales policies; a discussion of prospective customers and their needs; and suggestions as to what is expected of a successful salesman.

There is much of interest and value in this edition of the Manual, even to the Old Timer. Whether experienced or new to the job, every salesman will profit by giving the material most careful study.

It is also suggested that an occasional review of the Manual information which is most pertinent to the job would be helpful to the salesman.

Still another policy followed by successful salesmen is to have not only the Manual but the supplementary sales and technical material constantly at hand for ready reference in making contacts. The latter material should be organized and indexed in a handy brief case or folder for quick and easy reference during an interview.

It has been observed that every successful salesman is constantly asking for selling aids and it is our belief that he will welcome this Manual and the Company's literature as useful and helpful selling tools.

PART I

THE COMPANY

OUR COMPANY—*Its Past, Present and Future*

OUR COMPANY—*Its Far-Flung Interests*

OUR RESEARCH LABORATORIES

OUR PRODUCTION DEPARTMENT

OUR PAST PRESIDENTS

HEADQUARTERS EXECUTIVES *You Should Know*

ABOUT EXECUTIVES WITH WHOM YOU WORK

OUR COMPANY . . .

ITS PAST, PRESENT AND FUTURE

The average employee of National Lead Company knows vaguely that he works for a company with far flung interests, with a widely diversified line of products, of financial stability and with a reputation for integrity and honest dealing.

This at first blush would seem to be sufficient to cause the most cynical employee to feel a sense of personal pride in his company and in his job. But such is not always the case.

No employee is satisfied with generalities. He wants to know definitely the "whyfors and wherefors" of the component parts of National Lead Company, its resources, its products, its policies—everything that has contributed to the present-day leadership of our company in its field.

Even its history is of vital interest and importance to the intelligent, wide-awake employee. And by "history" we do not mean dates of incorporation and the like, but instead the humble "beginnings" that are so closely identified with the early struggles of American industry, the successful effort to bring order out of chaos that existed in the white lead industry during the early nineties, the steps taken to broaden the company's markets and keep it abreast of industrial progress—facts that make clear how National Lead Company weathered America's many financial storms and brought our Company to its present-day greatness.

It is the purpose of this chapter and Supplement No. 1 to give such information in sufficient detail to make every Dutch Boy salesman feel not only a pride in his company but a sense of security that will free him to concentrate on his job to the best of his abilities.

Complete knowledge of a salesman's company is as essential to his well-being, poise and self-confidence as is complete knowledge of his Company's products and services.

LEADING A LEADING INDUSTRY

The story of National Lead Company is not unlike that of other large American corporations which were organized late in the Nineteenth Century. It was formed as a combination of small white lead manufacturing units which had found that union meant strength in a period of rapid industrial expansion.

That this was a wise move is borne out by the fact that ever since its incorporation in December, 1891, National Lead Company has maintained leadership in what has become one of the country's most important industries—the lead industry—the products of which today probably have as great a diversity of use as those of any other American industry.

"Lead, the Precious Metal" is the well-deserved title of a book bv O. C. Harn, former Advertising Manager of National Lead Company. In this book, which, by the way, is mighty interesting reading, you will find refutation of the widely mistaken idea that lead is used only in lead pipe and a few other products which are obviously made of the metal. It is not even generally known that white lead is nothing but pure metallic lead, corroded and processed.

Products Widely Diversified

The lead industry, in fact, has made great strides in diversification of products since the Nineties when National Lead Company was launched. And what is of special interest to us, is that our Company always has been among the leaders in product development and merchandising. A brief consideration of some of the many uses of lead and its compounds cannot fail to impress all of us as to the metal's importance in our modern way of life.

We might still be cranking our automobiles and using gas lights on them if it were not for the peculiar electro-chemical properties of lead and its oxides utilized in storage batteries. This same kind of battery propels submarines under water and electrifies airplanes in the skies, lights and air-conditions railway cars, is used in telephone communication, provides emergency power in utility plants and lights miners' lamps.

The corrosion resistance of lead, together with its flexibility, accounts for its broad use as sheathing for power and telephone cable, underground and strung on poles, on land and on ships at sea. In this case, a seamless lead sheath is extruded around the insulated conductors which form a core.

Lead Resists Acids

Sulphuric acid and other corrosive chemicals are essential in the production of thousands of modern necessities and conveniences, from high explosives to rayon, from synthetic rubber and gasoline to fertilizers for the farm and garden. Equipment and pipe lines made of or lined with lead, which resists the fiery attack of these corrosives, make possible the economical production of many of these modern chemical wonders.

The protective qualities, malleability and flexibility of lead foil are largely responsible for its wide use in packaging products that need protection from moisture and light.

Lead as an alloying element is found in bronze bearings and babbits and, as the principal ingredient of lead-base bearing alloys, has reduced costs and removed our dependence on imported tin for this purpose. These alloys are found in all kinds of vehicles on land, sea and in the air, and wherever machinery is used. Even more universal in use are the soft solders, which are alloys of lead and tin usually, but may be alloys of lead and other metals.

Important to X-Ray and Atomic Energy

The x-ray is vitally important to medicine and is rapidly assuming equal industrial importance as a means of detecting hidden flaws in products. Except in cases where the voltage is a million or more the high density and atomic weight of lead make it the most efficient material economically to confine these rays to the places where they are useful and to protect operators against their harmful effects. Lead is likewise the best protection against radium. Lead bricks and sheet lead are used extensively in atomic energy plants to provide protection against dangerous rays.

Red lead paint is a standard protection for modern steel structures of many kinds and white lead is the basic paint pigment used in the protection and beautification of our homes.

Tetraethyl lead in gasoline has been a major factor in making possible the tremendous power of our airplane and automobile engines, while litharge is used to remove corrosive sulphur from motor fuel, which otherwise would shorten the life of these engines. Litharge and red lead are ingredients in synthetic rubber.

Use of lead and lead-alloy coatings to prolong the life of iron and steel is a development. They are being used on a variety of steel products from telephone pole-line hardware to sheets for duct work. Lead coated steel is ideal for products that must be formed because the lead acts as a lubricant in the dies. Lead added as an ingredient in steel is another development that has improved the machining properties of steel greatly, speeding production and increasing the life of tools astonishingly. Lead is also added to brass and aluminum alloys for the same reason.

Unusual Uses in Construction

In all sorts of building construction, lead has its part in the plumbing and water distribution systems and electrical installations. Sheet lead is used, too, for roofing, flashing and other waterproofing on many structures, including refrigerator room linings on ships. Lead is sometimes used for its non-sparking properties alone. Floors in plants where explosive substances are manufactured offer a good example. It is also used to insulate against vibration both under building and machinery foundations.

The plastic industry makes extensive use of lead as molds. These are made by several processes, including die-casting and dipping steel patterns into molten lead, the lead solidifying on the steel. Molds are used once and remelted.

Pulverized metallic lead is added to grease for heavy duty machinery. It provides lubrication at heavy loads and prevents the grease from being thrown off open gears at high rates of revolution.

Probably one of the least known uses of lead is in the manufacture of the highest grade glassware, lenses and in glazing pottery.

Lead Goes To War

All of the foregoing are wartime as well as peacetime uses, but here are a few that are of a little more direct value in a war. Bullet cores make use of lead's density and ease of fabrication. Lead provides the necessary ballistic characteristics, stability in flight, to small arms ammunition, that is, up to .50 calibre. It is used in ammunition for rifles, carbines, pistols, machine guns, submachine guns and other small arms. The lead is first extruded as rod, cut into short lengths, swaged to the approximate shape of the bullet core and then pressed into the jacket. Pure lead and antimonial lead containing up to 2½% antimony are employed.

Lead enters into ammunition in many other ways. Lead azide, a chemical compound of lead and nitrogen, is used as a detonator in explosives. Antimonial lead die-castings form the bodies of practice bombs, and frangible bullets made of lead powder and thermosetting plastics are used to train bomber gunners in actual firing at attacking planes. Lead gaskets are used in certain types of shells. Lead counterweights are employed in torpedo mechanisms.

Lead, for its weight alone, finds many war uses in addition to torpedo mechanisms. It is employed for counter-weights in many kinds of guns, large and small. Submarine and other naval vessels employ it for ballast. It is used to provide perfect balance in airplanes and gliders and in that case is usually applied in the form of strip. Depending upon shape and other conditions counter-weights are generally either cast, or extruded and cut to size.

Lead Used in Most Industries

There are numerous other uses of lead not included in the preceding discussion but, coupled with the fact that there is scarcely an American industry of any importance which does not use the metal in one form or another, the evidence is sufficient to give us a feeling of stability and a justifiable pride in an industry of which we of National Lead Company are such an important part.

NATIONAL LEAD COMPANY—ITS ACHIEVEMENTS

So much for the importance of the lead industry and the prominent role we play in it, but let's examine some of the reasons why National Lead Company with its beginnings in pre-Revolutionary times in the East and in Pioneer Days in the Frontier States, has made a record of achievement and courageous planning that few American companies even less venerable can match.

Faced Many Problems

During the first decade after incorporation, much of the management's efforts were devoted to the improvement of the existing properties, to the increase and betterment of production facilities and to the elimination of uneconomical units. This resulted in a reduction of operating costs and was financed entirely out of earnings or with the proceeds of property sold.

Diversified Products

Comparatively soon after the turn of the Twentieth Century, National Lead Company launched a program of expansion and diversification of products. This became a fixed policy of our company and has been brought to its present high state of effectiveness through research in our Laboratories, purchase of patents and through ownership of all or part of the capital stock

of other companies. An examination of the list of products at the back of this Manual will show how widely the policy of diversifying our products has been developed.

It was during the early 1900's that the Company acquired the United Lead Company, manufacturers of metallic lead and lead alloy products, thus broadening this field. In the same period was purchased the entire capital stock of Carter White Lead. This made available a new and quicker white lead process. Also added to the fold were the Magnus Metal Company, the United States Cartridge Company and Heath & Milligan, a concern making mixed paints and varnishes. The latter two companies were sold later.

Entered New Markets

New modern plants were erected in Chicago, Cincinnati, Philadelphia, Pittsburgh and St. Louis to replace eleven outmoded factories in these same cities. The National Lead Company of California was organized to take over manufacturing properties near San Francisco and our West Coast business was launched. Later this was further extended to include Morris P. Kirk & Sons, makers of metallic lead products, and the Bass-Hueter Company, mixed paint and varnish manufacturers. The latter products are now sold under the Dutch Boy trademark.

This policy of adding fields of operation and of experimenting with new products has continued throughout the years. It is a method that has always been conservatively exercised, however, and with minor exceptions the various companies have been so developed that they have added substantial profits to the Company's earnings.

Established Financial Stability

The resulting diversification of products has also aided the management to ride out successfully the various periods of poor business that have affected the United States since National Lead Company was incorporated. For example, in the 1931 Annual report there was a listing of the losses of various departments of the Company over business of the previous year. They ranged as high as 44% yet the average was only 17%, a direct advantage of not having all our "eggs in one basket." The Company's financing has, of course, kept pace with its expansion in holdings. In 1891 the authorized capital stock was $30,000,000. This was increased in 1905 to $50,000,000 and in 1927 to $100,000,000. Reserves have been built up and maintained to protect the interests of the Company and its employees.

The soundness of these policies, backed by conservative but effective merchandising, is best proven by the record of sales and profits, which, except during depression years, have advanced steadily.

New Products in Line with Experience

Among the more important products that have been added to the Company's line since its beginning in 1891 are titanium pigments, paints, special paint oils, special castor oils, traps, bends, valves and fittings, bearings, bearing metals, printers' metals, tellurium lead products, barytes products and brass bearings.

It should be noted that all these products are either made, wholly or in part, from lead or else they can be classified in a marketing sense as belonging to fields already served by some division of our Company. In this way full advantage has always been taken of our management's knowledge of a given market and the financial risks of venturing into the completely unknown have been largely eliminated.

Research an Important Factor

Research is another important activity of the Company that was started about a year after its incorporation and which has also had a great deal to do with product diversification. To research may be credited the development of new products as well as the improvement of existing products in all divisions of our activities. And progress through research is continually going on. Since 1892, when the late Dr. G. W. Thompson became Chief Chemist of the Company and

founded our General Laboratories, several millions have been spent in research to good purpose. Our Laboratories in Brooklyn, which in 1906 had grown to a staff of six employees, now employ over 100, and their work is supplemented throughout the Company by many other plant and division laboratories. Research has ever been a constantly growing force in the Company and an effective hedge against being left behind in the fast-moving procession of the day.

Kept Abreast of Industrial Development

The field now served by National Lead Company is greatly broadened since the Nineties when white lead was the chief product manufactured. From the narrow outlet represented by the limited paint market of that day it has spread to practically every major field including railroad, automobile, agriculture, rubber, glass, chemical, electrical and airplane manufacture. Some of those activities were, of course, unknown in 1891. Others were just in their early stages. So it can be said that the Company has grown with the country. It has kept abreast of the great industrial development during the period of its existence, retaining its important place financially and productively among the leaders of the day.

Stock Ownership Unique

Such is the National Lead Company today. Its owners may well be proud. And who are these owners?

Back in 1891 it could be said that fewer than 130 individuals represented the stock ownership of the original companies. Over the years, this small number has multiplied many times so that today there are upwards of 18,000 owners of National Lead Company.

The interesting fact about this group is not the number. Some concerns have stockholders running into the hundreds of thousands. But of the approximately 12,000 holders of National Lead Company's common stock about 65% are owners of 100 shares or less and the same is true of nearly 90% of the preferred stockholders. Another interesting fact is that approximately 47% of the total stockholders are women who own about one million shares of stock, including the preferred.

There is also a high representation of preferred stock holdings for trusts and estates due, naturally, to the investment rather than the speculative nature of the stock. Another healthy sign is that the employees of the Company, and particularly the rank and file, are well represented in the stockholding body.

Personnel Policies Progressive

The Company's policy toward employees has been one of the most enlightened among industrial concerns. Even back during the Company's beginning, in an era when little attention was paid to this phase of business management, there was a definite policy of fair treatment.

At first this took the form of safeguarding the workers' health. In this the Company was always ahead of statutory requirements. At considerable expense, factories were renovated to incorporate such improvements as showers, well-equipped washrooms, restaurants where good food could be purchased at low prices, rest rooms and separate lockers for the workmen. Other safety factors such as respirators and goggles were furnished and suction equipment for eliminating dust was installed. The Company was among the first in employing plant physicians.

But there is also a feeling for what might be termed the mental well-being of the employee, giving him the peace of mind and sense of security that makes for loyalty, efficiency and clear thinking.

Adopted Retirement Plan

As early as 1912 the Company established a formal pension system for taking care of the employees who had or were beginning to reach the retirement age. This system was continued with various revisions of detail until 1937, when the present Retirement Annuity Plan was started with the approval of the Company's stockholders.

Under this plan all employees thirty-five years of age and over may contribute toward the purchase of an annuity payable at the age of sixty-five. The Company, however, contributes two-thirds of the cost, thus giving the employees the annuity at a very low rate.

Also allowed for in this plan is credit for service prior to 1937 whereby the employee is to be paid at the rate of 1% of salary or wages received during 1936 multiplied by the number of years of service prior to 1937. This, of course, starts at the retirement date and is paid concurrently with the amount due under the Retirement Annuity.

Offered Welfare Plans

Since 1914 the Company has also carried life insurance for employees. In the words of the annual report of that year, "The intent of your Board of Directors is to convey the idea that our relation to those comprising our official family is not ended when the day's work is done or life's work is over, but extends to those dependent upon them." The present insurance plan offers employees a greater amount of insurance at less cost than that of practically any other large American Corporation.

At various times in the Company's history employees have been offered the opportunity of purchasing stock on a three-year payment basis. This was done to encourage thrift and also give the employee a sense of ownership in the company he served. These offerings were always well subscribed and that they had their desired effect is indicated in the present high percentage of employee stockholders. Stock can be purchased today on an installment basis by applying to the Treasurer of the Company through the respective Branch Manager.

The Profit Sharing Plan, launched in 1945, is an important addition to the Company's policy of continually giving consideration to the welfare of its employees.

Recognized Long Service

In 1940 there was inaugurated another recognition by the Company of the loyalty of its employees. Each employee who has completed twenty-five years in the service of the Company or its subsidiaries receives a suitably engraved gold watch to commemorate the occasion.

At the original presentation three hundred and ninety-eight watches were given out. Thirty-three of these were to employees who had served from forty to fifty years and three were over fifty years.

In October of 1940 the management announced that employees entering the U. S. Military Service, either as volunteers or in accordance with the National Guard Mobilization Act or the Selective Service Act, would receive reinstatement in the Retirement Annuity and Past Service Pension Plan when reemployed and also, while in service, the maintenance of insurance protection for one year. About 83 per cent of the returning veterans gave evidence of their loyalty to the Company by re-entering its employ upon being discharged from the armed forces of World War II.

In normal times the Company employs about ten thousand men and women in its various branches and subsidiaries. Of these there are over forty-five per cent who are thirty-five years of age and over, which is an indication of the low labor turnover which the Company has always enjoyed.

Directors Elected from Employees

Included among the employee group are the directors of the Company, all of whom are or have been connected with the Company's business as working executives of its various divisions. This has a two-fold advantage. An intimate working knowledge of our business gained through the marketing, financial and personnel problems of the division each represents. This, we believe, is rather a unique situation with a corporation of our size. So many times the directors represent outside interests rather than the direct business of the Company they manage. However, since its earliest days, National Lead Company has been run by the men in the Company. Their future was intimately bound up with the Company's future, a condition which has certainly helped to foster solidity and integrity.

The sound and forward-looking policies that have brought the Company through troublous times in the past are still alive today. They are not and never have been policies that change with every shift in the economic wind. But they are, as always, administered by resourceful men who have learned to adapt them to changing conditions.

In looking forward to the future, the Company is just as conscious as ever of the trust of its stockholders and the loyalty of its employees.

Company Met War-Time Demands

Since its incorporation National Lead Company's role in America's wars has been one of vital necessity to the prosecution of the undertakings.

This has been true especially during World Wars I and II. Thanks to the nature and diversity of its peace-time goods and services, National Lead Company has been able to join in each historic undertaking and to shoulder a share of the burden—not only in its familiar role as a manufacturer of essential metal and paint products, but also in numerous other fields of activity vital to the success of the war program.

For World War I

For instance, in World War I our Government needed more tin than was possible to import from England, to which country most of the ore from the Bolivian mines was shipped for smelting. National Lead Company, at the request of the Government, met the crisis by building and operating successfully a tin smelter of adequate capacity. Our Company also expanded materially the ammunition factories of the U. S. Cartridge Company, a then partially owned subsidiary. These projects were, of course, in addition to a greatly increased production of several metal, paint and pigment products of vital necessity to the war efforts.

For World War II

The same expanded demand for many of our peace-time products was met early in World War II and, at the request of the Government, our Company also assumed the responsibility for several special projects of great importance to the success of the war program.

Long before Pearl Harbor, America's mining industry was changing over from a peace to a war basis. The Government encouraged reworking long-abandoned ore deposits and the development of new mines to reduce imports and lighten the shipping burden. National Lead Company made several valuable contributions along these lines.

Developed Mining

A noteworthy example was the MacIntyre Development, a large mining project in the heart of New York State's Adirondack Mts. Begun in May 1941, and completed one year later, this mine produced annually several hundred thousand tons of ilmenite, a titanium-containing ore previously imported from India, as well as an even larger amount of magnetite iron ore, an essential to the nation's steel industry in its effort to meet war-swollen demands.

The Company also made important additions to the nation's stock piles of needed war metals by more intensive working of our lead and zinc mines in Missouri, Kansas and Oklahoma.

Salvaged Metal

As one of the country's largest peace-time buyers and processors of non-ferrous secondary metals, National Lead Company assisted the Government in the fullest exploitation of America's scrap resources salvaging tin, antimony, lead and zinc in our metal-recovery plants. Starting in 1942, our Company acted as agent for the Metal Reserve Company in the purchase and processing of non-ferrous metals from various sources.

OTHER WHITE HIDING PIGMENTS

Titanium Pigments

Titanium dioxide (TiO_2), although known as early as 1790, did not become important commercially as a pigment until the 1920's.

Titanium pigments are made in different types and grades. Those known as "pure pigments" may vary in hiding power, whiteness, chalking resistance, etc., due to differences in crystal structure and from the addition of very small quantities of certain chemicals. A group of composite types are also available. They consist of mixtures of 30 percent titanium dioxide with 70 percent of either barium sulphate, calcium sulphate or magnesium silicate.

Titanium pigments are characterized by high brightness and whiteness. The straight titanium pigments are very opaque and have the highest hiding power of any of the white pigments. The effective hiding power of titanium oxide in paints depends on the manner in which it is used, i.e., type of paint, concentration of pigment, etc. The introduction of titanium dioxide furnished the paint industry with a pigment that was five to seven times stronger in hiding power than the more common white pigments. The hiding power of titanium dioxide is sufficiently high, so that when used in composite pigments to an extent of 30%, the resulting pigments have greater hiding power than other white pigments with the exception of pure zinc sulphide.

Titanium dioxide is unreactive chemically and resistant to attack by acids and alkalies, and to discoloration by gases. For the same reason titanium dioxide does not react chemically with paint vehicles. This means that the pure untreated types, of which the original characteristics have not been changed by the addition of chemicals, do not form soaps with the oil in exterior paints. Titanium dioxide in combination with zinc oxide imparts self-cleaning properties to an exterior house paint.

The high opacity, brightness and whiteness, as well as the non-reactivity, of titanium pigments have led to their wide use in interior and exterior paints and enamels, paper, rubber, ink, oil cloth, rayon, linoleum, plastic and other products. They also are used in ceramics and welding rod coatings for their chemical properties rather than their physical characteristics.

Zinc Oxide

Zinc oxide is one of the oldest white opaque pigments and is made by two processes. In one process, known as the French process, metallic zinc is heated in a special furnace and vaporized. The zinc vapor on contact with air forms the zinc oxide. In the other process, known as The American process, zinc oxide is made directly from zinc ore by roasting a mixture of ore and coal in a special furnace. French process zinc oxide particles are rounded or spherical. American process zinc oxide is available with either rounded or acicular particles predominating.

In the paint industry zinc oxide is used chiefly in white and light colored exterior house paint in combination with titanium dioxide and white lead. Zinc oxide provides a cleaning action in the mixed pigment paints so that the paint sheds accumulated dirt. About 10 to 20 per cent zinc oxide in the pigment portion will provide this cleaning action. Larger amounts of zinc oxide are to be avoided because of the tendency of zinc oxide to cause cracking and scaling. Zinc oxide is a basic pigment and reacts with most paint vehicles. If the zinc oxide content of paint is high or if the vehicle is especially reactive with zinc oxide, the excessive amount of reactive products formed cause the film to be hard and inelastic which results in cracking and scaling on exposure to the weather. Small percentages (5 to 10%) are also used in white industrial coatings to prevent yellowing.

Leaded Zinc Oxide

Leaded zinc oxide is a white pigment which is composed of basic lead sulphate and zinc oxide. It is made either directly from a lead and zinc containing ore by a process similar to the American zinc oxide process or by mechanically blending zinc oxide and basic lead sulphate pigments. The pigment produced by the first mentioned process is termed "cofumed" and by the latter process "blended."

The lead zinc ores as they are mined are best suited to producing a pigment containing about 35% basic lead sulphate and about 65% zinc oxide. The 35% grade of leaded zinc oxide is therefore sold in greatest quantities. However, a 5% grade and a 50% grade are commercially available.

Practically the entire production of leaded zinc oxide is used in exterior house paints as a source of both lead and zinc pigments where low cost is of primary importance.

Zinc Sulfide Pigments

Lithopone is the oldest and most widely used zinc sulfide pigment. It is composed of about 28% zinc sulfide and 72% barium sulfate. It is made by forming these compounds by the interaction of zinc sulfate and barium sulfide solutions. When the two solutions are combined the insoluble zinc sulfide and barium sulfate are precipitated together.

Lithopone is used in interior oil and emulsion paints and in enamels. Its use in exterior paint is limited to the cheaper grades as it does not have good weathering properties. The use of lithopone in interior paints is decreasing constantly with the increased use of titanium pigments.

The production of pure zinc sulfide as a pigment was a later development. It is a very opaque pigment and has greater hiding power than any of the white pigments except titanium oxide. Pure zinc sulfide is used in interior paints and enamels.

Zinc sulfide barium pigment and zinc sulfide magnesium pigment contain about 50% zinc sulfide. The zinc sulfide barium pigment is made by chiefly adding zinc sulfide to Lithopone and is used in interior paints. Zinc sulfide magnesium pigment is made by blending zinc sulfide and selected magnesium silicate and is used to some extent in the cheaper grades of exterior paints.

Antimony Oxide

Antimony oxide, Sb_2O_3, is a white pigment which is used chiefly in white and light colored industrial coatings to increase the durability of the coating, particularly to decrease chalking. Antimony oxide is also used in fire-retarding coatings in combination with chloride compounds. Under heat, antimony chloride is formed which tends to retard combustion.

WHITE BASIC LEAD SULFATE

Commercial white basic lead sulfate is a pigment used widely in mixed pigment paints. It is known also as "basic sulfate white lead" and "sublimed white lead."

The commercial product is not a single compound; it is a composition of basic lead sulfate and uncombined, or free, normal lead sulfate. The various grades are distinguished both by method of manufacture and the lead monoxide (PbO) content.

White basic lead sulfate is made by fume processes and also by a chemical process.

Two Fume Processes

In one fume process, lead sulfide ore (galena) is subjected to a high temperature in an oxidizing atmosphere. In another process, molten lead is sprayed into a jet of ignited fuel gas in the presence of sulfur dioxide gas. In both processes the basic lead sulfate is formed in furnaces as a fume, which is drawn through a cooling system to a bag room, where it is collected.

Chemical Process

In the chemical process, metallic lead is first atomized. The finely divided, partially oxidized lead is then mixed with water. Sulfuric acid is then added to form white basic lead sulfate.

Depend on Method of Manufacture

The physical and chemical properties of white basic lead sulfate depend upon the method of manufacture and the PbO content of the pigment. The chemical process basic lead sulfate is higher in PbO content, whiter, higher in hiding power and produces thicker paints than the fume process basic lead sulfates. It has needle-like, or acicular, particles.

Compared with basic lead carbonate, white basic lead sulfate has a lower specific gravity and therefore a higher bulking value. The typical chemical composition is as follows:

	Fume Type	Chemical Type
Lead sulfate ($PbSO_4$)	85%	72%
Lead monoxide (PbO)	15%	28%

Physical Properties

Physical properties of white basic lead sulfate, of both general types, are as follows:

	Fume Type	Chemical Type
Specific Gravity	6.3	6.4
Bulking Values		
Pounds per solid gallon	52	53
Oil Absorption	9–12	14
Tinting Strength*	85–100	130
Hiding Power (Sq. ft. per lb.)	10–13	16

IN EXTERIOR PAINTS

Practically all of the commercial white basic lead sulfate made is used, in combination with other pigments, in prepared exterior paints. In most instances, it is used only as part of the lead pigment portion, the balance being white lead carbonate.

*Based on standard sample Dutch White Lead 100.

When used in paints, white basic lead sulfate exhibits properties somewhat similar to those of white lead carbonate. It is not as effective, however, as may be deduced from its inability to produce a single pigment paint suitable for exterior use.

Effect on Films

The paint films produced with white basic lead sulfate are softer, and chalk more readily and more heavily than those produced with white lead. This means that although dirt is shed more readily by the basic lead sulfate film, the tint retention is poorer, and the durability is lower.

The lead monoxide content of basic lead sulfate is an important index of its quality, since it indicates the relative proportions of basic lead sulfate and normal lead sulfate. The latter has little value as a pigment and should be kept at a minimum. The chemical process is preferred to the fume processes because it permits production of white basic lead sulfate with a lead monoxide content of 25 to 28 per cent at which the most satisfactory pigment properties are exhibited.

RED LEAD

Red lead is a brilliant orange red pigment used widely in metal protective paints. It is an oxide of lead and its chemical formula is Pb_3O_4 (4 parts of oxygen to 3 parts of lead). Technically, it may be called trilead tetroxide.

Commercial red lead contains some litharge, or lead monoxide (PbO), and is generally graded according to the "true red lead," or Pb_3O_4 content. Thus there are four grades—85%, 95%, 97% and 98% red lead, all of which are used commercially for various purposes.

Red Lead is made by heating litharge (PbO) in a furnace at a temperature of from 900° to 950° Fahrenheit. Within this temperature range the litharge takes on additional oxygen from the air and becomes red lead. The reaction starts at a rapid rate, but as the litharge acquires a layer of red lead, its active surface is decreased and the reaction slows down. It takes about 24 hours to make the 85% grade, but a longer time—48 hours or more—is required for the higher grades.

The kind of litharge used influences the oil absorption, paint thickening power, particle size and other properties of the red lead produced. Red lead of higher oil absorption and paint thickening power is obtained when fume litharge is used. This type is called fume red lead.

Character and Properties

The essential properties and functions of a metal protective primer that will provide maximum protection are: (1) the inclusion of a constituent which inhibits and stifles corrosion by preventing the reactions causing corrosion; (2) the formation of a continuous film to exclude from the metal the environment which can cause corrosion; (3) the maintenance of flexibility in the film so that it can conform with the stresses set up by temperature changes; and (4) the retention of good bonding properties so that adhesion of the paint film will be maintained, not only initially but for a maximum period of time.

STANDARD OF PROTECTIVE PAINTS

Red lead, used either as a single pigment or combined with other paint pigments, possesses properties which enable it to fulfill the requirements of each one of these specifications. It ranks high as an inhibitor pigment and it also imparts additional qualities to a paint which promote adhesion, toughness, and elasticity in the paint film. In fact, red lead's durability and long service under difficult conditions has become a generally accepted standard of performance for metal protective paints the world over.

Authorities agree that, for the priming coat or coats, a paint should be rust inhibitive if it is to give satisfactory performance.

There have been many tests conducted, both in the field and in the laboratory, to show very definitely and conclusively that red lead is an inhibitive pigment and its presence, therefore, imparts important protective qualities to a paint for metal.

Forms Tough Films That Adhere

When mixed with linseed oil or other suitable paint vehicles red lead has the ability to form tough, elastic and tenacious paint films which remain on the metal, as a closely adhering, unbroken coating for a long period of time. This is due in large measure to the fact that the red lead reacts with the fatty acids in the vehicle, forming lead soaps which strengthen both the paint film and the bond between the film and the surface.

Another factor that contributes to the excellent rust inhibitive properties of red lead is its alkaline nature which creates an alkaline environment over the metal surface on which the red lead paint is used. It is well known that iron and steel do not corrode in an alkaline environment.

The oxidizing properties of red lead also influence its ability to inhibit corrosion.

Red lead is readily mixed with linseed oil and other paint vehicles. Paints made with it, according to generally accepted formulas, show excellent brushing qualities.

Fume Red Lead

Fine particle size is another characteristic of red lead. Fume red lead is even finer in particle size than regular furnace red lead. It shows somewhat higher oil absorption, and has greater paint-thickening power; in other words, it is particularly suitable for use when it is desired to prepare a full-bodied paint with a minimum amount of pigment.

The bright orange red color of red lead has led some individuals to inquire concerning its suitability for use as a finishing coat, or as the base for deeper reds such as brick red. Red lead upon exposure tends to fade rather quickly, because the surface of the film carbonates, due to reaction with the carbon dioxide and moisture in the air. The carbonate is white, and this in many instances makes it unsuitable to use red lead as a finishing *color*, though it does not detract in the least from the durability and protective value of the film.

TYPES AND PHYSICAL PROPERTIES OF RED LEAD

Type Red Lead	*% True Red Lead Pb_3O_4*	*Lbs. Per Solid Gallon*	*Oil Absorption*
85% Regular	85–87	75.0	5.0–7.0
95% Regular	95–96	74.0	5.0–7.0
95% Fumed	95–96	74.0	7.0–9.0
97% Regular	97–98	74.0	5.0–7.0
97% Fumed	97–98	74.0	7.0–9.0
98% Regular	98–98.7	73.5	5.0–7.0
98% Fumed	98–98.7	73.5	7.0–9.0

The 85% grade of red lead should be kept in dry form. It should not be mixed with the paint vehicle until just before the paint is to be used. The 95% grade, mixed into paste with raw linseed oil, can be stored for about a month before it begins to harden. When paste is to be stored for longer periods of time, it should be made with the 97% or 98% grades.

USES

Approximately a third of all the red lead manufactured is used in metal protective paints, either alone or in combination with other pigments. It is available in three forms; dry, paste and paint.

For many years the only vehicle used with red lead was linseed oil—raw, boiled or a combination of the two. Concurrent with the development of synthetic resin vehicles, however, special quick drying red lead paints were formulated and have given excellent results.

Engineers usually specify the composition of red lead-linseed oil paint on the basis of the number of pounds of dry red lead used with one gallon of linseed oil. Standard high quality red lead-linseed oil paint contains 33 pounds of red lead to the gallon of oil. This has given excellent results for many years and is still being used to a considerable extent. However, even lighter paints have been found thoroughly satisfactory for use on structural steel.

Quick Drying Red Lead

Quick drying red lead paints are in considerable demand for marine painting and also for certain industrial operations where time is a vital factor. Alkyd resin and phenolic resin varnish, properly selected so as to avoid excessive reaction with the red lead, may be used in the vehicles of such paints. Only the more highly oxidized red leads—the 97% or the 98% grades—should be used for such paints.

ORANGE MINERAL

Orange mineral is identical with red lead in composition. However, it is somewhat brighter in color and finer in texture.

The manufacture of orange mineral differs from the manufacture of red lead in only one respect. Whereas, in the latter instance the process starts with litharge, the manufacture of orange mineral starts with basic carbonate white lead. White lead is roasted or calcined in a reverberatory furnace, where it releases water and carbon dioxide and takes on oxygen, yielding a red lead of high Pb_3O_4 content—95% or more.

Character and Qualities

Orange mineral is very similar in character and qualities to red lead. Its outstanding quality is its color, which is a very clear orange red, and is very uniform. Orange mineral is finer in pigment particle size than ordinary red lead, though some regular type red lead equals it in this respect.

HOW USED

Orange mineral is used principally in the manufacture of vermilions and printing inks. Its excellent tone, high degree of purity of color, fineness, fluffiness and high degree of oxidation make it particularly desirable for these purposes.

ZINC CHROMATE (ZINC YELLOW)

Zinc chromate (zinc yellow) is a greenish yellow pigment that is most frequently used as a corrosion inhibitive ingredient in the manufacture of metal protective paint primers.

It is made by mixing a solution of potassium dichromate with a soluble zinc compound, such as zinc sulphate or zinc chloride. The mixing in a tank equipped with an agitator continues for about twelve hours when zinc chromate is formed. After several washings to reduce the soluble sulphates or chlorides to a minimum, the resulting solution is filtered, dried and ground, whereupon the zinc chromate is ready for the market in dry form.

Physical Properties

The particle size of zinc chromate is very small and among its other physical properties are the following:

Specific Gravity	3.4
Bulking Value	
Pounds per solid gallon	29
Color	Greenish Yellow
Color Retention	Excellent
Tinting Strength	Poor

USES

When used in the manufacture of metal protective paint primers, zinc chromate is usually combined with other pigments, such as iron oxide and silicates.

Zinc Chromate's effectiveness as a corrosion inhibitive pigment is due, primarily, to its soluble chromate compounds which result in the formation of a protective film on the surface of the metal. It is usually mixed with a resin type vehicle rather than straight linseed oil. This is necessary because zinc chromate needs the added control in its rate of solubility that is provided by a resin type vehicle.

Zinc chromate is also used in the formulation of bright green sash and trim paints, which are mixtures of zinc yellow and a blue pigment.

BLUE BASIC LEAD SULFATE

Blue basic lead sulfate, sometimes called "blue lead" or "sublimed blue lead," is a slate gray pigment obtained by heating lead ore in special furnaces which are a development of the Scotch hearth furnace used to produce metallic lead.

Blue basic lead sulfate is composed of a mixture of basic lead sulfate, lead sulfide, lead sulfite and carbon. It may also contain a small percentage of zinc oxide. The slate gray color is derived from the lead sulfide and carbon content. The product may vary in composition due to differences in the ore from which it is made.

Properties

Blue basic lead sulfate chemically inhibits corrosion and is an anti-corrosive pigment. In this regard, however, it is less effective than red lead. Blue basic lead sulfate has good paint making properties in that it grinds and mixes well with linseed oil and other paint vehicles. It is of fine particle size and has good hiding power.

The physical properties of blue basic lead sulfate representative of overage production are shown in the following table.

Color	Slate Gray
Bulking Value	
Pounds per solid gallon	34
Oil Absorption	
Pounds of oil per 100 pounds pigment	9.0

USES

The use of blue basic lead sulfate is almost entirely limited to structural metal priming paints, particularly the lower priced gray primers. It does not hold its gray color sufficiently well to be satisfactory for use in finish coat paints. Blue basic lead sulfate has higher bulking properties and sells for less per pound than red lead, which make it a lower cost inhibitive pigment. However, the amount of blue basic lead sulphate used is only about one tenth the amount of red lead used for metal protective paints.

DRYING OILS

As is well known, paints and varnishes are fluid materials. They are used to provide protection and/or decoration to innumerable objects. Applied in thin coats and exposed to the atmosphere, they undergo changes which cause them to solidify to the extent where they form "dry" films. This transformation from "wet" coat to "dry" films is called drying. Drying may be due to different causes. In general it results either from evaporation or from chemical conversion while in many cases a combination of both takes place.

Drying by evaporation is simple. It occurs when solutions are used, for instance a resin solution such as shellac and alcohol. Applied in thin coats and exposed to the atmosphere, the alcohol will evaporate and deposit the solid resin as a dry film.

Drying by chemical conversion is more complex. However, the reaction which may be considered as contributing most to the desired effect is one of oxidation. This occurs when liquid materials are used which have the ability to absorb oxygen from the atmosphere and in so doing are transformed into a solid state producing "dry" films.

Products which possess the characteristic of being able to absorb oxygen are commonly called drying oils. Of these there are many different types varying in drying, as well as in other properties.

IN PAINT AND VARNISH INDUSTRY

Drying oils may be vegetable oils or fish oils. Their use in the paint and varnish industry is extensive. Each individual type has particular characteristics which are not limited to variations in drying capacity.

These special properties are important because oil does not only function as an agent to convert a "wet" coat into a "dry" film but it also may contribute specific qualities to a film to meet definite requirements.

In general oils are a combination of glycerine and fatty acids. Glycerine is a somewhat thick, sweet tasting, colorless liquid. It has a variety of uses and is employed in manufacture of cosmetics, medicines, plastics, explosives. Fatty acids are substances which when combined with lye or any other such material will make soap, including the ordinary laundry variety.

The differences in performance of the oils depend greatly on the types of combined fatty acid they contain and the proportion of each kind present. The acids vary a great deal in their ability and capacity to absorb oxygen.

Subjected to Many Tests

In order to identity an oil or to examine its qualities for particular purposes, many physical and chemical tests have been devised. They include such determinations as specific gravity, color, viscosity, acid number, iodine number and a host of others.

Of these the iodine number is probably the most widely known constant. It represents the result of a test designed to obtain some insight into an oil's drying power. Since oils dry mainly by oxidation, the amount of oxygen which an oil takes up might be interpreted as a measure of its ability to dry. To simplify and speed up matters in laboratory tests, oxygen is replaced with iodine. Hence "Iodine Number," which expresses the number of miligrams of iodine absorbed by one gram of oil. Although the result of such a test can provide valuable information, one should never judge the quality of an oil by this constant alone.

In addition to tests on oils, methods to examine the character of resulting films have been developed. They include gloss, hardness, flexibility and many other determinations.

OILS GROUPED AND THEIR USES

The combined results of years of testing and experimentation seem to justify the grouping of vegetable and fish oils into three categories:

Drying Oils
Semi-Drying Oils
Non-Drying Oils

The drying oils may be divided into

Hard Drying Oils
Soft Drying Oils

The paint and varnish industry is interested in the hard and the soft oils and also in the semi-drying oils.

The hard oils dry to a hard film. They are used mainly in varnishes and in enamel vehicles. In most cases these oils also show good water and alkali resistance which makes them particularly suitable in industrial finishes for use on iceboxes, automobiles, etc.

Soft oils produce a softer film than the hard oils. They are consequently more flexible. For that reason they are useful in making coatings for materials which are subject to substantial expansion and contraction. Moreover, this type of oil shows good resistance against the normal influence of the atmosphere, particularly in combination with some reactive pigments. Naturally the oils in this group are widely used in house paint.

The semi-drying oils, as the designation implies, take a long time to dry. They also form soft films. However, they do find a place in the industry. Their slow drying is due to their composition. The proportion of high oxygen absorbing constituents is low. This offers the advantage that they are less subject to yellowing. Moreover, some of the oils in this group are obtainable at reasonable prices.

Here follows a more detailed description of the best known and most used varieties of drying oils.

LINSEED OIL

The oil which is most widely used for making paints and varnishes, particularly the former, is linseed oil.

Linseed oil is a vegetable oil obtained from the seeds of the flax plant. Flax is grown in many parts of the world. The largest sources of supply in the order of their importance are:

South America (Argentina and Uruguay)
North America (U. S. A. and Canada)
Russia
India

There are many other places which produce smaller quantities. Since there are so many countries with such great variations in crop conditions, and since differences in demand may be considerable, it is understandable that prices are subject to sudden and substantial fluctuations. This places flaxseed and linseed oil among the most speculative of commodities.

The oil is separated from the seed in hydraulic presses, or in expellers and more recently by solvent extraction. The product is yellow in color and of characteristic taste and odor.

Linseed oil is one of the better known drying oils which in its raw state can be used in paint. In other words, *raw linseed oil* has good film forming properties. It belongs to the soft drying oils and consequently produces flexible films.

May Be Treated

Raw linseed oil may be refined and otherwise treated. This is done to accentuate one or more of its particular characteristics, to instill properties it does not possess in its raw state and in general to adapt it to meet specific requirements.

Raw linseed oil dries in from 72 to 96 hours. Although the addition of pigment, notably reactive lead pigments, will speed up the drying process substantially, drying agents are generally used with all drying oils, including linseed oil. These drying accelerators consist of metal compounds, mostly lead, cobalt and manganese derivatives. They are dissolved in a volatile solvent and marketed as *"liquid driers."*

Boiled

In order to simplify matters for the user, particularly the painter who mixes his own paint and to meet consumer preference in some parts of the country, linseed oils to which driers have been added are available. These products are known as *"boiled oils."* They are made by dissolving metallic drying compounds directly in the oil at elevated temperatures.

Bleached

Raw linseed oil may be subjected to a number of refining processes. The simplest is the bleaching earth treatment. This results in *bleached oils* which are very pale in color, a desirable property for making both varnishes and white and light tinted paints.

Acid Refined

Linseed oil may be treated with acid. These *acid refined oils* possess excellent wetting qualities. They are particularly useful in the paint factory as this property helps to reduce the mixing and grinding time of many paint products. Moreover, in paints in combination with reactive pigments, acid refined oils have a tendency to produce larger quantities of soap which may be beneficial to the performance of a paint film.

Alkali Refined

Linseed oil may also be treated with alkali. *Alkali refined oils* are practically neutral. When subjected to high heat treatments they can be converted into excellent products. For that reason they are very popular in the varnish industry.

Naturally these refining processes may be applied with variations. Moreover, an oil can be treated chemically in addition to being bleached. Under those circumstances it is understandable that many different types of refined oil are available.

Needs Pigment

A linseed oil film by itself is not too resistant under atmospheric influences. However, the length of its useful life may be extended or its durability increased by either adding reactive pigments or by effecting changes in the chemical structure of the oil.

The use of pigments in the making of paint and the performance of this latter product are discussed elsewhere in this Manual. The changing of an oil's chemical structure may be the result of treatments to which it has been subjected.

Heat Bodied

When linseed oil is heated at fairly high temperatures for any length of time *heat bodied oils* are produced. In the process an increase in viscosity is effected, that is to say they have taken on body. This is due to the chemical changes resulting from the treatment.

Heat bodied oils possess good durability; they also have better wetting qualities and improved flow and gloss as compared to raw linseed oil. Moreover, due to their heavy body, they do not readily penetrate porous surfaces and so provide sealing and minimize absorption of subsequent coats.

Heat bodied oils are extensively used in varnishes. They are combined with resins in different proportions so that the desired properties such as hardness, gloss, durability, etc., are obtained. The resin hardens the oil but it is also true that the oil plasticizes the resin.

This, of course, also depends on the exact type of raw material used. The resin oil solution is further dissolved in a volatile thinner, resulting in a varnish. Special paint and enamel vehicles are made in very much the same way.

New Processes

In recent years new processes have been found or are in a fairly advanced stage of development which promise to make the oil adaptable for many other uses.

For instance, chemical conversion called conjugation permits the production of a type of linseed oil which could be reasonably classed in the lower brackets of the group of hard drying oils.

Moreover, methods are being developed whereby the glycerine in an oil may be removed and replaced with products of a similar chemical character but possessing different qualities. This opens up a wide range of possibilities of which the future importance cannot yet be predicted to its fullest extent.

From the foregoing it is quite obvious that linseed oil is a most flexible raw material. It can be adapted for many uses, and as it is usually readily available, it is understandably a most popular material in the paint and varnish industry.

TUNG OIL

Tung Oil, also known as China Wood Oil, is a vegetable oil obtained from the nuts of the tung tree. This tree, of which there are many varieties, is native to China and Japan. A number of years ago it was imported into our own country where it now grows in some of the Southern states.

The main sources of supply are of course the Asiatic countries, but care in its production have made the American variety of wood oil of greater uniformity and more reliable quality.

Raw wood oil is an amber colored liquid. At reduced temperatures (around freezing point) it solidifies into a yellow wax-like material. Cooking the oil at about 500° F. destroys this property.

Properly treated tung oil belongs in the class of hard drying oils. It rapidly forms hard films which show excellent water and alkali resistance. For that reason it is used extensively in quick drying finishes such as furniture varnishes, floor paints and in some types of baking enamels.

Incidentally tung oil offers an example where an "iodine number" might be misleading, as referred to previously. Notwithstanding the fact that wood oil dries extremely fast its iodine number is relatively low.

SOYBEAN OIL

Soybean oil is extracted from soybeans. The soy plant is grown in many parts of the world including the United States, where each year a substantial acreage is given over to it.

Soybean oil belongs to the semi-drying oils. In paint it cannot be used as the only oil of the vehicle. However, it can be successfully blended with more rapid drying types.

Soybean oil films possess good resistance to yellowing. With the development of new refining process it shows promise of more extensive use and a more prominent place in the paint and varnish industry.

DEHYDRATED CASTOR OIL

Raw castor oil, which is extracted from the castor bean, is a non-drying oil. However, its chemical composition permits its conversion into a drying oil, which is dehydrated castor oil.

This oil is very pale and belongs in the group of soft drying oils. As far as its other qualities are concerned it may be classified in between tung oil and linseed oil.

Because of its good color it is especially suitable for making pale varnishes and widely used in white enamel vehicles.

PAINT THINNERS

In all types of paint and enamel, liquids that evaporate after the film is applied are often used to reduce the consistency without changing the predetermined proportions of pigment and non-volatile vehicle. These volatile liquids are commonly called "paint thinners."

The most important function of the thinner in a paint is to regulate the brushing or spraying consistency without affecting the composition of the finished film. In the priming coat on new work and the first coat on repaint work, the thinner performs an additional function—it assists in the penetration of the oil vehicle and insures better mechanical anchorage of the paint film.

TURPENTINE

There are four types of turpentine: gum spirits of turpentine, steam distilled wood turpentine, sulfate wood turpentine and destructively distilled turpentine.

Gum spirits and steam distilled wood turpentine are produced in greatest quantities and are used by the consumers of paints and enamels. They are sold in paint stores in bulk or in sealed cans. Gum spirits of turpentine is produced by distillation of the crude gum obtained from pine trees. Steam distilled wood turpentine is made from pine wood, which is subjected to live steam in a digestor.

Sulfate wood turpentine, used to a very limited extent in paints, is obtained in the preparation of wood pulp by alkaline treatment. The pulp is boiled with a mixture of various chemical compounds and the steam evolved contains turpentine and other compounds.

Destructively distilled wood turpentine, obtained by the direct destructive distillation of pine and fir wood has a pungent, penetrating odor that limits its use in paints.

PETROLEUM SPIRITS

"Petroleum spirits" is the general name applied to the various types of volatile petroleum products used in the paint industry. The two types most widely used are mineral spirits and V.M. and P. naphtha (varnish makers' and painters' naphtha). Mineral spirits has a rate of evaporation similar to turpentine. It is widely used in the manufacture of house paints and is also carried by stores for consumer use. V.M. and P. naphtha is more volatile than mineral spirits, and is used by the manufacturer of paint and varnish, rather than by the painter.

The manufacture of these products is a highly specialized procedure involving distillation and refining. Petroleum contains various mixtures of hydrocarbons which are first separated according to boiling point into the five main groups. The low boiling point thinners naturally evaporate first. As the temperature is raised gradually, the higher boiling point hydrocarbons evaporate. Ingenious equipment makes it possible to control, very critically, the separation of the different portions.

Petroleum spirits of various types are available in considerable variety, and can be obtained from most manufacturers to meet specifications submitted by the consumer.

RESINS

The word "resin" is used as a group name for a multitude of organic compounds of complex composition. Since the term "resin" includes a wide variety of materials, such as varnish resins, plastics and rubbers, a simple definition covering the entire range can not be given.

Resins most useful in the protective coating industry in general answer the following descriptions.

Varnish resins are transparent or translucent solids or semisolids, usually yellowish to brown in color. Many of them soften and melt when heated and, with a few exceptions, they are soluble in oil or volatile organic liquids (solvents).

Resins may be of natural origin or artificially synthesized (built up). The natural products may originate from tree exudation as in the case of Kauri gum and ordinary gum resin. Others, such as shellac, find their origin in insect secretion. Also some natural resins have been formed by plant decomposition of which some types of asphaltum are examples. Many different types are found in each of these classes.

The synthetic resins cover an even wider field than the natural materials and as time goes on they are becoming more numerous with further development.

The most generally known synthetic resins are phenolics, which include Bakelites. They are, to a considerable extent, condensation products of phenol and formaldehyde. Other much used synthetic resins are the alkyds which are reaction products of glycerine and phthalic anhydride.

Resins are combined with oils and volatile solvents to produce varnishes or enamel vehicles. The use of natural resins was prompted by a desire for better gloss and greater hardness than could be obtained with oil alone.

The synthetics more recently developed also provide faster drying and generally better durability to enamel and varnish films.

There are great variations in the different resins in their ability to impart certain specific properties. Their value and usefulness depend on their solubility, color, hardness, chemical resistance and numerous other characteristics.

To the painter, the phenolics and the alkyds are of greatest interest. The use of phenolics has markedly increased the durability of spar varnishes. The alkyds have made it possible to produce improved architectural enamels and trim paints. In addition, synthetic resins find wide application in industrial finishes, such as those used on automobiles, refrigerators and other manufactured products.

SUPPLEMENT ONE

THE FOUNDERS—*A Tribute*

THE FOUNDERS

A Tribute

In the first chapter of this Manual we concentrated on the policies that have made our Company great in peace and war times and that have been responsible for maintaining its leadership in the lead industry. But of interest and significance are the humble "beginnings."

As in the biography of any great man, credit is given to his parentage and antecedents for many of his qualities of greatness, so should this Manual pay tribute to the rugged individualists who founded National Lead Company. The companies which they brought into the newly founded national organization were, many of them, pioneers in white lead manufacture in their respective communities. Several could lay claim to upwards of a half century of successful white lead business, and the history of one of the founding companies stems back to Revolutionary days.

When incorporated in 1891, with W. P. Thompson as its first President, National Lead Company included about 25 concerns, the most important and strongest of which had their headquarters in nine large cities—Boston, Buffalo, Chicago, Cincinnati, Cleveland, New York, Philadelphia, Pittsburgh and St. Louis.

The historical sketches on the following pages are confined mainly to founding companies about which we have been able to locate interesting material. The order in which they appear was determined by the age of the founding companies in the respective cities.

PHILADELPHIA

Back to Revolutionary Days

While still the brilliant British red-coats swaggered through the streets of Colonial Philadelphia and shortly before the first Continental Congress met in Carpenter's Hall, a certain young gentleman, one Mordecai Lewis, was duly taken into the firm of Neave and Harmon, changing its name to Neave, Harmon and Lewis—importers of white lead, red lead and other merchandise. That was in 1772.

This was the first step in the creation of the business which now bears the name of John T. Lewis & Bros. Company—our Philadelphia Branch—a business that expanded beyond the dreams of its founders.

Thus was established in business the founder of a family of able executives who have not only guided the destinies of the Lewis Company but have had an important part in the development of National Lead Company.

Has Oldest Bank Account

In addition to its being the oldest of the founding companies of National Lead Company, John T. Lewis & Bros. Co. has another claim to longevity honors in its possession of the oldest bank account in the oldest bank in the United States. The account was opened January 16, 1781, in the bank of North America, which was chartered by an Act of Congress only nine days previously, and has been kept open continuously since then.

By 1781, the year the British Commander, Lord Cornwallis, surrendered and the Colonies became an independent nation, Mordecai Lewis assumed full control of the firm, changing its name to Mordecai Lewis & Company.

An interesting memento of the times is an original bill dated May 1, 1787, which discloses the sale of "twelve hundred-weight of ground white lead" to the Pennsylvania Hospital at 90 shillings per hundred weight or 21½ cents per pound.

When Mordecai Lewis died in 1799 the business was carried on under the old name by his sons, Mordecai and Samuel Neave Lewis. In 1806 they formed a partnership, M. & S. N. Lewis, who acted as independent selling agents for Mordecai Lewis & Company.

White lead and oxides were first manufactured in 1820 and shortly afterwards linseed oil and colors, setting a rigorous standard for purity that has never been lowered since.

John T. Lewis Incorporated

It was in 1856 that John T. Lewis, grandson of Mordecai Lewis, consolidated the Mordecai Lewis and M. & S. Lewis concerns under the firm name of John T. Lewis and Brothers, which in 1888 was incorporated.

Edward F. Beale, son-in-law of John T. Lewis, entered the Company in 1875 and was elected President in 1889. Financial control passed to National Lead Company when it was organized in 1891 and Mr. Beale was elected as a member of its first Board of Directors.

The other founding company located in Philadelphia was the Western White Lead Company, about which little is known today.

NEW YORK

First Incorporation and a Mystery

The Brooklyn White Lead Company, one of the four strong New York companies that helped found National Lead Company, was incorporated in 1825, thus becoming the first white lead business in the United States to take advantage of this form of organization. But probably its most important claim on our interest is based on the unique characters who were among the incorporators. Even a mystery is disclosed in the lives of two of the founders. All were men of prominence in their day, public spirited and strong individualists.

The venture which led to the formation of the Brooklyn White Lead Company originated about 1800 when two chemistry professors, Dr. Federal Vanderbergh of Albany, N. Y. and Dr. Josiah Noyes of Clinton, N. Y., began experimenting in the manufacture of white lead and chemicals.

By 1823 the experimental work had included actual manufacturing of white lead in a small way and it was on June 13 of that year when a co-partnership agreement was signed by Augustus Graham, David Leavitt and Elijah Humphreys with Josiah Noyes & Company. Two years later Augustus Graham and Mr. Leavitt bought out their associates in the Noyes firm and incorporated under the name of The Brooklyn White Lead Company, with an authorized capital of $100,000 of which only $52,800 was issued. David Leavitt was elected president, a position he held until his death in 1879.

Failure of the company's efforts to manufacture a product equal in quality to the white lead imported from England, this country's chief source of supply at that time, finally moved August Graham to study English methods first hand. He went there in 1832 and got the information he sought while employed as a workman in one of the best factories in England. Upon his return to America the English methods were adopted, to the immediate improvement in the company's white lead and its profits.

Outdid Damon and Pythias

Among the most interesting of the strong personalities who founded the Brooklyn White Lead Company were John B. and Augustus Graham, whose successful and honorable careers were made unique with mystery, romance and a business and personal relationship that outdid that of Damon and Pythias. The "brothers" Graham were not related and their names were not Graham. John Graham was born John Bell somewhere in the North of Ireland in 1784 and came to America at

Editor Sells White Lead Interest

Mr. Charless had founded "The Missouri Gazette" in 1808, a weekly newspaper that was the first to be published west of the Mississippi River. He sold his interest in the white lead business to Mr. Blow in 1844. The Blow Factory was unfortunately in the path of the great fire of 1849, with the following results as reported in the Fire Department records:

> "The extensive white lead, castor and linseed oil and vinegar manufactory of Henry T. Blow, on the corner of Tenth Street and Clark Avenue, was almost entirely consumed. The loss was $100,000; insured for $48,000."

Mr. Blow rebuilt the plant in 1850 and the company was reorganized taking the name of Collier Works, apparently because George Collier, although not actively engaged in manufacturing, furnished most of the capital.

Collier Incorporated

The Collier White Lead and Oil Company was incorporated on September 1, 1851, with a capital stock of $150,000, to carry on the business of "manufacturing, buying and selling of white lead, red lead, litharge, castor oil, linseed oil and vinegar."

Mr. Blow was President until 1861, when he resigned and Colonel Thomas Richeson succeeded him in the office. During his connection of many years with the Collier Works, Colonel Richeson invented and put into use many improvements which lowered the cost of manufacturing.

The annual production of the Collier Works about 1883 was 4,000 tons of white-lead-in-oil, 100 tons of red lead, 100 tons of litharge, 100,000 gallons of linseed oil and 100,000 gallons of castor oil.

In 1881 fire again brought serious damage to the Collier Works, causing a loss of $167,250 on May 28 and $85,825 on September 21. However, the destroyed buildings were rebuilt and the business was flourishing when the Collier White Lead and Oil Company was incorporated in the National Lead Company in 1891.

St. Louis Lead and Oil Launched

The next member of the St. Louis group of National Lead founding Companies to organize was the St. Louis Lead and Oil Company, which took over the business in the State of Missouri, with a capital stock of $300,000. The charter contained this interesting clause:

> "This corporation shall pay into the State Treasury one per cent per annum on all net earnings for use of Soldiers' Orphans Home Fund."

In an advertisement in the 1865 edition of the St. Louis Directory, the newly organized company announced the purchase of the O'Fallon business, listed the products they had for sale and stated that "having facilities unsurpassed by any company in the United States, we solicit the patronage of wholesale cash buyers."

In the Spring of 1865 a plant was erected at a cost of about $200,000 on the site of the O'Fallon Plant. The plant produced white lead, litharge, linseed oil, castor oil and cotton-seed oil. Its annual consumption of raw materials in 1880 was 1,000 tons of pig lead, 50,000 bushels of castor beans, 100,000 bushels of flaxseed and 40,000 bushels of cotton-seed.

In 1892 a new plant was erected at the site of our present factory, 5548 Manchester Avenue, and the property at Second Street and Cass Avenue was sold in 1893 to the Pennsylvania Railroad for $200,000. In 1911 manufacturing was concentrated in the then greatly enlarged and modernized Manchester Avenue plant and later discontinued in both the Southern and Collier Works.

The St. Louis Lead and Oil Company supplied one of the first elected directors of National Lead Company—George O. Carpenter, who later became Vice President of our Company.

Southern in St. Louis and Chicago

In 1862 Henry Platt and Robert Thornburgh formed a partnership to engage in the retail drug business, abandoning the line shortly afterwards to merchandise paint, oil and glass.

In 1865 the firm built a white lead factory at Main and Lombard Streets under the name of Platt, Thornburgh and Company. Two years later it was incorporated as the Southern White Lead and Color Company with a capital stock of $120,000 for the purpose of manufacturing white lead, red lead, litharge, castor oil, linseed oil and acids, and the grinding and mixing of oils, paints and colors.

Among the executive officers of the newly incorporated company were names destined to become well known in the paint industry. William H. Gregg was elected President; Henry S. Platt, Vice President; F. W. Rockwell, Secretary; James Johnston, Superintendent. Mr. Rockwell was elected Second Vice President of National Lead Company on the day of its incorporation and years later Mr. Gregg's son, Norris B. Gregg, held a Vice Presidency until his death. Fletcher W. Rockwell was born in St. Louis when his father was Secretary of the Southern Company and was elected President of National Lead Company on January 12, 1938.

On February 9, 1876, the State Legislature granted a change in the name to the "Southern White Lead Company."

About 1880 the consumption of lead was 1,200 tons annually.

In 1887 the McBirney and Johnston White Lead Company of Chicago was absorbed by the Southern White Lead Company and from that time on the Company sold lead from both factories under the Southern Company brands.

Manufacturing in the company's factory was discontinued in 1912 when the city of St. Louis took the Southern corroding yards for a bridge site.

Missouri Lead Company Organized

The Missouri Lead and Oil Company was incorporated on March 2, 1872 with William H. Thompson as President and who was destined to become another St. Louis man to be elected to membership on the first Board of Directors of National Lead Company.

All records examined failed to give any information as to the location and capacity of their manufacturing plant. Their business address was 421-425 Main Street.

William H. Thompson resigned the Presidency in 1884 and the Missouri Lead and Oil Company was absorbed by National Lead Company in 1891. The Missouri Company brand was used for many years.

CHICAGO

Branch Included Two Founders

When National Lead Company was incorporated in 1891, there were two Chicago concerns listed as founding companies; namely, the D. B. Shipman White Lead Company and the Southern White Lead Company.

Mention of Mr. Shipman's election to National Lead Company's first Board of Directors is the only historical item that could be dug up about these two founding companies. However, we do know that the Chicago Branch from its inception has supplied able executives and strong members of the Board of Directors and has contributed substantially to the continued success of National Lead Company.

PITTSBURGH

Forming National Lead & Oil Co. of Penna.

According to available records, Pittsburgh had a white lead factory as early as 1813, operated by Anthony Beelen with J. J. Boudier, a Frenchman and owner of a laboratory, as his superintendent.

Through the years many white lead manufacturing ventures were launched, but it was not until 1849 that there was established the forerunner of one of the successful companies which became the founders of the National Lead & Oil Company of Pennsylvania, our Pittsburgh Branch. This was B. A. Fahnestock & Company, a wholesale drug house that also manufactured and sold white lead and which eventually became the Fahnestock White Lead Company. It is recorded that in the year 1849 this firm's white lead sales amounted to $65,000 and that 500 tons of lead, 1,820 barrels of vinegar and 15,000 gallons of linseed oil were consumed.

Became Industry Leader

Simon Beymer, destined to be one of the outstanding figures in the early days of the Pittsburgh white lead industry, came to that city in 1852 and took employment with B. A. Fahnestock & Company. Five years later he became a partner of B. L. Fahnestock and in 1867 he organized the white lead manufacturing firm of Beymer, Bauman & Company. Upon the death of Reuben F. Bauman in 1885, Mr. Beymer bought the estate's interest and organized the Beymer-Bauman Lead Company, of which he was President and his son, Hervey W. Beymer, Manager.

The Fahnestock White Lead Company, which, as has been mentioned, had its roots in B. A. Fahnestock & Company, was organized and incorporated in 1872 by B. L. Fahnestock, Benj. F. Vandecort and Benj. S. Fahnestock. It was operated successfully until its sale to National Lead & Oil Company of Pennsylvania in 1891.

It was in 1884 that the Davis-Chambers Lead Company purchased the white lead factories and properties of Barclay Preston, but nothing else historically is known about this founding company.

Supplied First President

While we lack historical data on the Armstrong-McKelvy Lead & Oil Company other than that it was organized by John H. McKelvy and Thomas M. Armstrong we do know that this founding company had the distinction of supplying the first President of the National Lead & Oil Company of Pennsylvania (our Pittsburgh Branch). This was Mr. McKelvy and he also was elected as one of the first directors of National Lead Company. He was succeeded by Charles F. Wells, Sr.

Another strong Pittsburgh man who came to National Lead Company in its early days was W. N. Taylor. He had been Vice President of the Scottdale Iron & Steel Company until elected President of the Davis Lead Company in 1904, which office he held until the concern was purchased by National Lead Company in 1907. It was then that Mr. Taylor headed the Pittsburgh Branch and became a Director of National Lead Company.

Pittsburgh supplied another member of the first Board of Directors of National Lead Company—Simon Beymer.

CLEVELAND

J. H. Morley Heads Business

The J. H. Morley Lead Company of Cleveland was incorporated May 20, 1887, purchasing the white lead manufacturing business, including buildings and real estate, of J. H. Morley & Company for $200,000, which represented the entire capital stock of the new corporation.

The J. H. Morley & Company were the successors of Morley & Cary, a firm organized in 1862. Mr. Morley and his associates obviously had had considerable experience in the white lead business, if we are to judge from the success with which the concern was operated before and after it was absorbed by National Lead Company. The Minutes of a Directors' meeting in 1890, for instance, disclose a dividend of 10% which, while not of "melon cutting" size common to the times, was an indication of substantial business.

J. R. Morley was elected the first President of the newly incorporated business, but resigned in six months and was succeeded by J. H. Morley. The latter continued to head the concern for several years after it became the Cleveland Branch of National Lead Company.

A Family Project

J. R. Morley Lead Company was a family project, J. H. Morley owning 875 shares and F. H. Morley, C. H. Morley and J. R. Morley owning 200 shares between them, or a total of 1,075 of a total capitalization of 2,000 shares. The officers until C. H. Morley died in 1889 were: J. H. Morley, President; C. H. Morley, Vice President; and F. H. Morley, Secretary and Treasurer.

There are interesting salary items in the Minutes of the Corporation. In 1887 the President received $5,000 and the same salary was accorded to F. H. Morley, Secretary and Treasurer. Two years later the President's salary remained the same, but the Directors voted $2,100 to the Vice President and Treasurer and $2,200 to the Secretary.

OUR FIRST BOARD OF DIRECTORS

In the preceding historical sketches of our founding companies mention was made of practically all the white lead pioneers who as officers and directors of the newly incorporated National Lead Company faced the numerous problems of this enormous combination. As a further tribute to these rugged individualists who so ably launched our Company on its road to success and as an added note of interest, our first officers and directors and their respective home cities are listed below:

OFFICERS

W. P. Thompson, President, New York
A. T. Goshorn, First Vice President, Cincinnati
F. W. Rockwell, Second Vice President, St. Louis
Chas. Davison, Secretary, New York

DIRECTORS

E. F. Beale, Philadelphia
Simon Beymer, Pittsburgh
George O. Carpenter, St. Louis
R. R. Colgate, New York
J. H. McKelvy, Pittsburgh
R. P. Rowe, New York
D. B. Shipman, Chicago
A. P. Thompson, Buffalo
W. H. Thompson, St. Louis

SUPPLEMENT TWO

PRODUCT LIST

PRODUCTS

SOLD AND MANUFACTURED BY NATIONAL LEAD COMPANY AND ITS BRANCHES, DIVISIONS AND AFFILIATED COMPANIES

Occasionally our salesmen are asked whether National Lead Company manufactures certain products, other than paint and, if so, where can information and prices be gotten.

Such inquiries can be answered easily by reference to the product list on the following pages.

The inquiry should be passed along to the nearest office selling the product, either by the salesman or the prospect, whichever the latter prefers.

Such service has its good-will value, as well as serving the best interests of the Company.

HOW TO USE

It will be observed that the products are classified into the following five groups and in each case are arranged alphabetically:

METAL PRODUCTS
PAINT PRODUCTS
DRY PIGMENT PRODUCTS
OIL PRODUCTS
MISCELLANEOUS PRODUCTS

When a product is located, the next step is to note the numeral or numerals adjacent to it in the column headed "By Whom Sold." Then turn to the "Key" for the name and address of the office or offices handling the product under consideration. The same procedure, of course, applies in the case of the "By Whom Made" column.

KEY FOR CHECKING WHO MAKES AND SELLS PRODUCTS LISTED

A. National Lead Company (Headquarters) 111 Broadway, New York, N. Y.

NATIONAL LEAD COMPANY BRANCHES

1. **Atlantic** National Lead Company ..... 111 Broadway, New York, N. Y.
2. **Baltimore** National Lead Company ..... 214 Henrietta Street, Baltimore, Md.
3. **Boston** National Lead Co. of Mass. ..... 800 Albany Street, Boston, Mass.
4. **Buffalo** National Lead Company ..... 116 Oak Street, Buffalo, N. Y.
5. **Chicago** National Lead Company ..... 900 West 18th Street, Chicago, Ill.
   - Detroit ..... 1627 West Fort Street, Detroit, Mich.
   - Milwaukee ..... 744 North Fourth Street, Milwaukee, Wis.
6. **Cincinnati** National Lead Company ..... 659 Freeman Avenue, Cincinnati, Ohio
   - Atlanta ..... Bishop Street, Atlanta, Ga.
   - Louisville ..... 1320 Heyburn Building, Louisville, Ky.
7. **Cleveland** National Lead Company ..... 1213 West Third Street, Cleveland, Ohio
8. **Pacific Coast** National Lead Company ..... 2240—24th Street, San Francisco, Calif.
   - Los Angeles ..... 932 Wilson Street, Los Angeles, Calif.
   - Portland ..... 1211 N.W. Glisan Street, Portland, Ore.
   - Seattle ..... 973 John Street, Seattle, Wash.
   - Spokane ..... N. 908 Howard Street, Spokane, Wash.
   - Tacoma ..... 1013 A Street, Tacoma, Wash.
9. **Philadelphia** John T. Lewis & Bros. Co. ..... Widener Building, Philadelphia, Pa.
10. **Pittsburgh** National Lead Co. of Pa. ..... 1376 River Avenue, Pittsburgh, Pa.
11. **St. Louis** National Lead Company ..... 722 Chestnut Street, St. Louis, Mo.
    - Dallas ..... 959 Terminal Street, Dallas, Texas
    - Kansas City ..... 1406 West 13th Street, Kansas City, Mo.
    - New Orleans ..... 516 Tchoupitoulas Street, New Orleans, La.
    - Omaha ..... 2810 A Street, Omaha, Neb.
    - St. Paul ..... 102 West Fairfield Avenue, St. Paul, Minn.

AFFILIATED COMPANIES AND DIVISIONS

12. American Bearing Corporation ..... 429 So. Harding Street, Indianapolis, Ind.
13. American Lead Corporation ..... 1600 East 21st Street, Indianapolis, Ind.
14. Blatchford Co., E. W. (Branch) ..... 63 Park Row, New York, N. Y.
15. Canada Metal Company, Ltd. ..... 721 Eastern Avenue, Toronto, Canada
16. Combined Metals Reduction Co. ..... Stockton, Utah
    (No N. L. ownership)
17. Evans Lead Corporation ..... Charleston, West Virginia
18. Kirk & Son, Inc., Morris P. ..... 2717 South Indiana Street, Los Angeles, Calif.
19. Magnus Metal Corporation ..... 721 Railway Exchange Building, Chicago, Ill.
    - New York ..... 111 Broadway, New York, N. Y.
20. Master Metals, Inc. ..... 2850 West Third Street, Cleveland, Ohio
21. National Lead Company, S/A ..... Avenida Presidente Roque Saenz Pena 567, Buenos Aires, Arg., S.A.
22. Titanium Pigment Corporation ..... 111 Broadway, New York, N. Y.
    - Boston ..... 34 Midway Street, Boston, Mass.
    - Chicago ..... 104 S. Michigan Avenue, Chicago, Ill.
    - Cleveland ..... Room 617, Penton Building, 1213 West 3rd Street, Cleveland, Ohio
    - Los Angeles ..... 2475 Enterprise Street, Los Angeles, Calif.
    - Philadelphia ..... Widener Building, Philadelphia, Pa.
    - San Francisco ..... 350 Townsend Street, San Francisco, Calif.
    - St. Louis ..... Carondelet Station, St. Louis, Mo.
23. Titanium Division, National Lead Company ..... 111 Broadway, New York, N. Y.

For information about the Baker Castor Oil Company, the Baroid Sales Division and the DeLore Division, see Page 10. Products identifying the lines handled by these organizations are also included under the product group headings.

METAL PRODUCTS

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Acid Concentrating Plants (Simonson-Mantius Vacuum Process)		
Chamber Acid	1	1
Sludge Acid	1	1
Spent Acid	1	1
Acid Separating Plants (Simonson-Mantius Vacuum Process)		
Sludge Acid	1	1
Alloys, Die Casting		
Lead	1-2-4-5-6-7-9-10-11-13-15-18-20	1-2-4-5-6-7-9-10-11-13-15-18-20
Tin	1-2-4-5-6-7-9-10-11-13-15-18	1-2-4-5-6-7-9-10-11-13-15-18
Zinc	1-4-5-6-7-10-11-15-18	1-5-7-11-15-18
Alloys, Slush Mold Casting	1-5-7-9-10-13-15-18-21	1-5-7-13-15-18-21
Alloys, For Aircraft Industry (See Kirksite)		
Aluminum Alloy Ingot	18	18
Aluminum Ingot	18	18
Antimonial Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-5-6-7-9-10-11-13-18-20-21
Babbitt Metals		
Dutch Boy Trademarked	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-21
Others—any formula	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-13-18-20-21
Satco Ingot	19	
Bar Tin	1-2-3-4-5-6-7-9-10-11-14-15-18-21	1-2-3-4-5-6-7-9-10-11-18-21
Bars, Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-15-18-20-21
Battery Grid Metal	1-2-3-5-6-11-12-15-18-20-21	1-2-3-4-5-6-11-12-18-20-21
Battery Straps	1-2-6-9-11-21	1-6-11-21
Bearings		
Armature	11	11
Bronze		
Finished	19	19
Rough	15-19	15-19
Bronze Backed, Babbitt Lined	12-19	12-19
Die-Cast	11-15-19	11-19
Journal	19	19
Satco Lined	12-19	12
Bends		
Flanged	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-10-11-15-21
Hardlead	1-2-3-4-5-6-7-9-10-11-15-21	10-11-15-21
Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-10-11-15-21
Reducing	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-10-11-15-21
Blatchford Base (Printers)	5-14	
Block Tin Pipe	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-7-9-10-11-15-21
Britannia Metal	1-2-4-5-6-7-9-10-11-15-21	1-9-11-21
Bullet Core Bar Lead	1-2-3-4-5-6-7-9-10-11-15-18-20-21	1-2-3-5-6-7-9-10-11-15-18-21
Burning Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-15-21
Bushings, Rough and Finished	19	19
Caulking Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21
Cames, Lead		
Antique	1-2-4-5-7-10-11-15	1-11-15
Plain	1-2-4-5-6-7-9-10-11-15	1-2-4-5-6-7-9-10-11-15
Reinforced	1-2-4-6-7-9-10-11-15	1-7-11-15
Rustic	1-4-6-7-10-11	1-11
Smooth Faced	1-2-4-6-7-10-11	1-2-7-10-11
Casket Trimming Metal	1-2-5-6-7-9-10-11-13-15-18-20-21	1-2-5-6-7-11-13-15-18-20-21
Castings, Non-Ferrous, Rough and Finished	19	19
Chemical Apparatus, Special Lead Lined	1-5-15-21	1-5-15-21

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Cinch Anchors (See Expansion Bolts)		
Clock Weights	1-3-6	1-3-6
Cocks		
Bibb	1-21	1-21
Hardlead	1-15-21	1-15-21
Plug	1-15-21	1-15-21
Coils		
Lead Covered Copper	1-21	1-21
Lead Lined	15-21	15-21
Special Built-Up, Lead	1	1
Copper Aluminum Hardener	18	18
Counterweights	1-2-3-5-6-7-9-10-11-20-21	1-2-3-6-7-9-10-11-20-21
Discs for Collapsible Tubes		
Antimonial Lead	1	1
Tin Coated	1	1
Electro Cases	1-11-18	1-11
Expansion Bolts		
Cinch Anchors	1	1
Cinch Cylinders	1	1
Cinch Lead Screw Anchors	1	1
Ferrules, Combination	1-2-4-5-6-7-9-10-11-15-21	2-5-6-10-11-15-21
Fittings		
Flanged or Screwed	1-9-15-21	1-15-21
Hardlead Flanged	1-9-15-21	1-15-21
Lead Lined	9-15	15
Lead Lined Soil Pipe	1-9	1
Tin Lined	1-9	1
Flux	5-7-14-21	5-14-21
Fuse Wire	2-3-4-5-7-10-11-15-21	2-3-5-7-10-15-21
Gaskets		
Composition	1-2-3-7-10-11-15	1-2-10-11-15
Lead	1-2-4-5-6-7-9-10-11-15-21	1-2-5-7-9-10-11-15-21
Tin	1-2-5-7-9-15	1-2-5-7-15
Guards, Metal (Bearers)	1-5-10	1-5
Hammer Metal	1-2-3-4-5-6-7-9-10-11-13-15-18	1-2-3-5-7-9-10-11-13-15-18
Hammers		
Babbitt	1-2-4-6-7-10-11-15-18	1-2-4-7-10-11-15-18
Lead	1-2-4-6-7-10-11-15-18	1-2-4-7-10-11-15-18
Hardening Lead	1-2-3-4-5-6-7-10-11-15-21	1-2-3-4-5-10-11-15-21
Homogeneous Bonded Lead Lined Equipment		
Agitators	1-15-21	1-15
Digestors	1-15	1-15
Drums	1-15	1-15
Mixing Equipment	1-15-21	1-15-21
Plating Equipment	15	15
Tank Cars	1-15	1-15
Tanks—Others to Specification	1-15-21	1-15-21
Hoyt's No. 11 Babbitt Metal	1-2-4-5-7-10-11-15-18-21	1-7-10-11-15-21
Impellers	1	1
Impression Lead, Hoyt's		
Plain	1-2-5-6-7-10-11-18-21	1-11-21
Ready to Mould	1-2-5-6-7-10-11-18	1-11
Tin Coated	1-2-5-6-7-8-10-11-15-18	1-11
Ingot Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-11-13-15-18-20-21
Key Leads	1-2-3-5-6-7-9-10-15	1-2-3-5-9-10-15
Kirksite "A" Alloy		
"A" Wire	1-2-3-4-5-6-7-9-10-11-15-18	1-5-11-15-18
Kettle-Koater	1-2-3-4-5-6-7-9-10-11-15-18	
Pig	1-2-3-4-5-6-7-9-10-11-15-18	1-5-7-11-15-18
Rolled	1-2-3-4-5-6-7-9-10-11-15-18	

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Lead Angles	1-2-3-6-7-10-11	1-2-3-10-11
Lead Anodes	1-2-4-5-6-7-9-10-11-15-21	1-2-5-7-9-10-11-15-21
Lead Balls	1-2-4-6-7-10-11-15-21	1-11-15-21
Lead Construction	1-21	1-21
Lead Counterweights	1-2-3-4-6-7-9-10-11-20-21	1-2-3-6-7-9-10-11-19-21
Lead Covered Equipment		
Copper	1-5-21	1-5-21
Non-Ferrous Alloy Pipes	5-6	5-6
Steel	1-5	1-5
Lead Discs	1-2-3-4-5-6-7-9-10-11-21	1-2-3-5-6-7-9-10-11-21
Lead Headed Nails	4-6-9-10	
Lead Lined Chemical Equipment		
Autoclaves	1-5-9-15-21	1-5-9-15-21
Stills	1-5-9-15-21	1-5-9-15-21
Sulphonators	1-5-9-15	1-5-9-15
Lead Plates	1-2-4-6-7-9-10-11-15-21	1-2-6-7-9-10-11-15-21
Lead, Pulverized	1-2-3-4-5-6-7-9-10-11-18-21	1-2-5-18-21
Lead Sinkers	1-2-3-5-6-7-10-11	2-3-5-11
Lead Sleeving	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-9-10-11-15-21
Lead Spacers	1-2-4-5-6-7-9-10-11	1-2-3-5-9-10-11
Lead Wire	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-9-10-11-15-18-21
Lead Wool	1-2-3-4-5-6-7-9-10-11-15-18-21	1-5-15-21
Mold Metal, Rubber	1-9	1-9
Music Plates	1-2-5-6-7-10-11-18	1-11
Needle Metal	1-2-9-11-15-21	1-9-11-15-21
Net Leads	1-3-5-6-9-11-15	1-3-5-9-15
Nickel-Bronze	11-15	11-15
Organ Pipe Metal	1-3-5-6-7-10-11-15-21	1-3-5-11-15-21
Ornaments, Lead	1-3-15	1-15
Pewter	1-2-4-5-6-7-10-11-18	1-11
Phosphor Bronze Castings	15	15
Phosphor Tin	1-4-5-6-7-11-15-21	1-11-15-21
Pig Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-3-13-15-18-20-21
Pig Tin	1-2-3-4-5-6-7-9-10-13-15-18-21	1-3-13-15-18
Pinking Blocks	11	11
Pipe		
Block Tin	1-2-3-4-5-6-7-9-10-11-15-18-21	1-5-7-9-10-11-15-21
Brass, Lead Lined	1	1
Brass-Lined Steel	1	1
Brass, Tin Lined	1	1
Copper Lined Steel	1	1
Lead		
Antimonial	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-10-11-15-21
Chemical	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-10-11-15-21
Common	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-10-11-15-21
Composition	1-2-3-5-7-9-10-11-15-21	1-2-3-5-7-10-11-15-21
Tellurium	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-10-11-15-21
Lead, Tin Lined	1-3-15	1-3-15
Soil, Lead Lined	1	1
Steel	1	1
Steel, Lead Lined	1-15-21	1-15-21
Steel, Tin Lined	1	1
Printers Metals (See Type Metals)		
Pulverized Tin	1-2-3-4-5-6-7-9-10-11-18-21	1-2-5-21
Pumps		
Hardlead Centrifugal Acid	1	1
Lead Vertical Acid	1	1
Tin Lined Hardlead Centrifugal Acid	1	1
Reducers (Lead)	1-2-3-4-5-6-7-9-10-11-15-21	10

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Ribbon		
Composition	1-2-3-7-9-10-11	1-2-3-7-9-10-11
Lead	1-2-3-4-6-7-9-10-11-15-18-21	1-2-3-4-6-7-9-10-11-15-21
Tin	1-2-4-6-7-9-10-11-15-18	1-2-7-9-10-11-15
Roof Flanges	1-2-3-4-5-6-7-9-10-11-15-18	3-5-11-15
Roofing Sheets, Hardlead	1-2-3-4-5-6-7-9-10-11-15	1-3-11-15
Sash Weights, Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-15-21
Screens, Perforated Lead Plates	1-3-6-7-9-10-11	1-9-11
Screws, Brass Trap	1-5-6-7-10-11-15-21	15-21
Sheet Lead		
Antimonial	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-11-15-21
Chemical	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-7-10-11-15-21
Common	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-10-11-15-21
Composition	1-3-5-7-9-10-11-21	1-3-5-11-21
Crawlproof	1-4-6-7-9-10-11-15	1-10-11-15
Tellurium	1-2-3-4-5-6-7-9-10-11-21	1-2-3-5-6-7-11-21
Sheet Roofing Metal, Hardlead	1-2-3-4-6-7-9-10-11-15	1-3-11-15
Sheet Tin	1-2-3-4-5-6-7-9-10-11-15-18	1-5-11-15
Shot, Lead (All Sizes)	1-2-3-4-6-7-9-10-11-18-21	1-11
Shrapnel Balls	1-5-6-7-10-11-15	1-11-15
Simonson-Mantius Acid Recovery Plants	1	1
Sink Drains	1-3-7-10-11-15	1-3-11-15
Soil Pipe—Lead	1-3-6-7-9-10-11	1-3-6-7-9-10-11
Solder		
Acid Core	1-2-3-4-5-6-7-9-10-11-18	1-9
Bar (All Sizes)	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-3-4-5-6-7-9-10-11-13-15-18-21
Cake	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-9-10-11-15-21
Capping Bar	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Drop	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-5-6-9-11-15-21
Fusible Bar	1-2-3-4-5-6-7-9-10-11-15-18	1-2-3-5-6-7-9-10-11-15
Fusible Wire	1-2-3-4-6-7-9-10-11-15-18	1-2-3-7-9-10-15
Hard	1-3-4-7-10-11-18-21	1-3-7-10-11-20
Ingot	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-3-4-5-6-7-9-10-11-13-15-18-21
Meter Bar	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-3-5-6-7-9-10-11-13-15-18-21
Paste	21	21
Pig	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21
Pulverized	1-2-3-4-5-6-7-9-10-11-15-18-21	1-5-15-18-21
Radiator Bar	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Ribbon or Tape	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-5-7-9-10-11-15-18-21
Rosin Core	1-2-3-4-5-6-7-9-10-11-18-21	1-9-21
Segment (Cut Wire)	1-3-4-5-6-7-9-10-11-18-21	1-5-6-9-11-21
Sheets	1-3-4-5-6-7-10-11-15-21	1-5-11-15-21
Slabs	1-2-3-5-6-7-9-10-11-15-18-21	1-2-4-5-6-7-9-10-11-15-21
Tinners' Bar	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-6-7-9-10-11-15-18-21
Triangular Bar	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-4-5-6-7-9-10-11-15-18-21
Wire	1-2-3-4-6-7-9-10-11-15-18-21	1-2-3-4-6-7-9-10-11-15-18-21
Sounding Weights, Lead	1-2-3-4-6-7-9-11-15-18	3-9-11-15
Special Aeroplane Body Pattern Alloys (See Kirksite)		
Special Apparatus	1	1
Spelter	1-2-4-6-7-10-11-15-18-21	1-18
Stamping Metal	1-3-5-6-7-9-11-18	1-3-7-11
Strip Tin	1-2-3-5-6-7-9-10-11-18	1-2-5-7-9-10-11
Tank Connections		
Lead Covered	1-15-21	1-15-21
Lead Lined	1-15-21	1-15-21
Tanks		
Homogeneous Lead	1-15-21	1-15-21
Tin Covered	1-21	1-21
Tin Lined	1-5-15-21	1-5-15-21
Tape, Lead	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-5-6-7-9-10-11-15-21

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Tellurium Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-6-9-10-15-21
Tempering Lead	1-2-3-4-5-6-7-9-10-11-21	1-2-4-5-9-10-11-21
Tin Anodes	1-2-4-5-6-7-9-11	1-2-5-7-9-11
Tin Bars	1-2-3-4-6-7-9-10-11-13-15-18-21	1-2-3-4-6-7-9-10-11-13-15-18-21
Tin Pipe	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-7-9-10-11-15-21
Tin Wire	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-9-10-11-15-18-21
Tinning Compound	1-3-4-5-6-7-9-10-11-15-18-21	1-2-5-15-18-21
Tint Plates	1-5-6-7-11	1-2-11
Traps, Lead	1-2-3-4-5-6-7-9-11-15-21	1-2-3-5-6-11-15-21
Tubes		
Lead	1-2-3-4-6-7-9-10-18-21	1-2-3-4-6-7-9-10-21
Lead Covered	1	1
Lead Lined	1-3	1-3
Tin	1-2-3-6-7-9-18	1-2-3-7-9
Tin Covered Brass	1-4	1
Tin Covered Copper	1	1
Tin Covered Steel	1	1
Tin Lined Brass	1	1
Tin Lined Copper	1	1
Tin Lined Steel	1	1
Tubing		
Antimonial	1-2-3-4-5-6-7-9-10-11-15	1-2-3-5-6-7-9-10-11-15
Block Tin	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-7-9-10-11-15-21
Composition	1-2-3-5-6-7-9-10-11-21	1-2-3-5-7-9-10-11-21
Hardlead	1-2-3-4-6-7-9-10-11-21	1-2-3-6-7-9-10-11-21
Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-9-10-11-15-21
Tellurium	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-9-10-11-15-21
Type Metals		
Autoplate	1-2-5-6-7-14-18-21	1-2-5-7-11-13-18-21
Electrotype	1-2-5-6-7-11-13-14-15-18-21	1-2-5-6-7-11-13-15-18-21
Intertype	1-2-6-7-9-10-11-13-14-15-18-21	1-2-7-9-10-11-13-15-18-21
Linotype	1-2-5-6-7-9-10-11-13-14-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Monotype	1-2-5-6-7-9-10-11-13-14-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Stereotype	1-2-5-6-7-9-10-11-13-14-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Typograph	1-2-7-10-11-13-14-18	1-2-7-10-11-13-18
Valves		
Lead Lined Acid	1-21	1-21
Tin Lined Acid	1	1
United Hardlead	1-15-21	1-15-21
Washers, Lead	1-2-3-4-5-6-7-9-10-11-18-21	1-2-5-9-10-21
Wedge Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-15-21
Wire		
"A" Wire (See Kirksite)		
Iron, Lead Coated	1-9	1-9
Lead	1-2-3-4-5-6-7-9-10-11-18-21	1-2-3-4-5-6-7-9-10-11-18-21
Solder	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-9-10-11-15-18-21
Tin	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-9-10-11-15-18-21
Zinc		
Special High Grade	1-3-4-5-7-10-11-15-16-18	1-16
High Grade	4-5-7-10-11-15-16-18	16
Prime Western	1-2-4-5-6-7-10-11-15-18-21	1-18
Zinc Base Alloys		
Die Casting	1-5-7-10-11-15-18	1-5-7-11-15-18
Gravity Casting	7-10-11-15-18	7-11-15-18
Kirksite	1-2-4-5-6-7-9-10-11-15-18	1-5-7-11-15-18
Slush Casting	1-5-7-9-10-11-15-18-21	1-5-7-11-15-18-21

PRODUCTS	BY WHOM SOLD	BY WHOM MADE

PAINT PRODUCTS

Colors-in-Oil (Full Line)	1-3-4-5-6-7-8-9-10-11-21	8-9
Painting Equipment		
Brushes, Ladders, etc.	8 (Sold only by Pacific Coast Branch)	
Putty	8-9	9
Ready Mixed Paints		
Enamels	8-21	8
House Paints (Exterior and Interior)	1-3-4-5-6-7-8-9-10-11	1-5-8
Industrial Paints	8-21	8
Lacquers	8-21	8
Sundries	8-21	8
Varnishes	8-21	8
Red Lead—Paints		
Liquid Red Lead No. 1—No. 5		1-8-9-11
(Black Finish Coat)—Marine		1-8-9-11
Metal Primer No. 050		8-9-11
Quick Drying		9-11
Semi Quick-Drying	1-3-4-5-6-7-8-9-10-11	1-8-9-11
No. 25		1-8-9-11
Paste in Oil		1-8
Wall Primer	1-3-4-5-6-7-8-9-10-11	
White Lead		
Paints—Pure White Lead		
Exterior Primer	1-3-4-5-6-7-8-9-10-11	8-9-11
Outside White	1-3-4-5-6-7-8-9-10-11	1-5-8
White Lead in Oil		
Heavy Paste	1-3-4-5-6-7-8-9-10-11-21	1-5-8-9-11
Soft Paste	1-3-4-5-6-7-8-9-10-11-21	1-5-8-9-11
Pulp	1-5	1-5

DRY PIGMENT PRODUCTS

Barium Sulphate	See Baroid Sales Division & DeLore Division	Page 10
Barytes	See Baroid Sales Division & DeLore Division	Page 10
Blanc Fixe	See DeLore Division	Page 10
Calcium Carbonate	See DeLore Division	Page 10
Extender Pigments	See DeLore Division	Page 10
Fillers	See DeLore Division	Page 10
Lead Silicates		
Bisilicate	1-6-7-10-17	17
Monosilicate		
Litharge		
Color Makers		1-5-8-9-11-17-18
Fumed		11-17
Glass Makers		1-8-9-11-17-18
Insecticide	1-3-4-5-6-7-8-9-10-11-17-18	1-8-9-11-17-18
Oil Refiners		1-8-9-11-17-18
Regular		1-8-9-11-17-18
Storage Battery Oxides	1-3-4-5-6-7-8-9-10-11-17-18-21	1-8-9-11-17-18
Varnish Makers	1-3-4-5-6-7-8-9-10-11-17-18-21	1-8-9-11-17-18
Mineral Primers	See DeLore Division	Page 10
Orange Mineral	1-3-4-5-6-7-8-9-10-11-17	1-9-11-17
Red Lead		
Barton		1-9-11-18
Fumed		11-17
Furnace		1-8-9-11-17-18
Glass Makers	1-3-4-5-6-7-8-9-10-11-21	1-8-9-11-17-18
Regular		1-8-9-11-17-18
Storage Battery		1-8-9-11-17-18

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Titanium Pigments		
"Titanox"—A (Anatase)	22	23
"Titanox"—RA (Rutile)	22	23
"Titanox"—B 30 (Barium Pigment)	22	23
"Titanox"—C (Anatase—Calcium Pigment)	22	23
"Titanox"—RC (Rutile—Calcium Pigment)	22	23
"Titanox"—L (Lead Titanate)	22	23
Titanium Sulphate Cake	22	23
White Lead		
Basic Lead Carbonates		
Carter and HTS	1-3-4-5-6-7-8-9-10-11-21	1-5-8
No. 111		8-9-11
No. 333		8-9-11
Basic Lead Silicate		
45X	1-3-4-5-6-7-9-10-11	9
Basic Lead Sulphates		
Blue	1-3-4-5-6-7-9-10-11	
Dutch Boy (White)	1-3-4-5-6-7-9-10-11	11
Whiting	8-21	See DeLore Division Page 10

OIL PRODUCTS

Castor Oil, its derivatives and specialties	See Baker Castor Oil Co.	Page 10
Flatting Oil	1-3-4-5-6-7-8-9-10-11-21	1-8
Lead Mixing Oil	1-3-4-5-6-7-8-9-10-11	1-8
Linseed Oils		
Blown	1-5-6-9	1-5-9
Boiled	1-3-4-5-6-7-8-9-10-11	1-5-9
Dutch	1-4-5-6-9	1-9
Heat Bodied	1-5-6-9	1-9
Raw	1-3-4-5-6-7-8-9-10-11	1-9
Refined	1-5-6-9	1-9
Refrigerated	1-5-6-9	1-9
Special Processed	1-5-6-9	1-9
Liquid Drier	1-4-5-6-7-8-9-10-11	1

MISCELLANEOUS PRODUCTS

Copperas (Iron Sulphate)	23	23
Copper Sulphate	18	18
Hyposulphite of Lead (black and white)	1-9	9
Lead Acetate	1-6	
Lead Formate	A	9
Linseed Meal	1-9	1-9
MacIntyre Magnetite (Iron Ore)	23	23
Molspray	1-6	1
Oil Well Drilling Muds and Materials	See Baroid Sales Division	Page 10
Plumb-O-Sil (Precipitated Lead Silicate)	A	9
Pyrites Cinders	23	23
Sodium Sulphide—60% Flaked and Solid	23	23
Sulphuric Acid	23	23
Tribase (Tribasic Lead Silicate)	A	9
Zinc Chloride Solution (Chromated Solution)	18	18
Zinc Sulphate		
Solution	18	18
Flake	18	18

BAKER CASTOR OIL COMPANY

120 Broadway, New York, N. Y.

Products: The following list does not include all the castor oils, their derivatives and specialties, manufactured and sold by The Baker Castor Oil Company, but does cover their main lines:

Baker's Castor Oil
- Baker's AA Cold Pressed
- Baker's Crystal "O" Cold Pressed
- Baker's No. 3 Castor Oil

Baker's Castung Oils (Dehydrated Castor Oils for Varnishes and Lacquers)
- No. 103
- No. 403-101—G to H Body
- No. 403-101—Z and Z3 Body
- No. 504—U to V Body
- No. 504—Z3 Body

Baker's Processed Oils (Solvents and Plasticizers for Nitro Cellulose Esters and Ethers)
Baker's P Line Alkyl Ricinoleates (To impart flexibility to pyroxolin compounds)
Baker's AN Series (For plasticizing water finishes—glue, casein, shellac)
Baker's Ricinoleic Acids (Raw Materials for Alkyd Resins)

BAROID SALES DIVISION

NATIONAL LEAD COMPANY

830 Ducommun Street, Los Angeles, Calif.
1113 Second National Bank Building, Houston, Texas
502 Tulsa Building, Tulsa, Okla.

Products: The following list is representative of the products handled by this Division:

- Anhydrox
- Aquagel
- Baroid
- Baroco
- Barium Sulphate
- Barytes
- Bentonite
- Fibertex
- Glass Makers Barite
- Impermex
- Micatex
- Smentox
- Stabilite
- Zeogel

DE LORE DIVISION

NATIONAL LEAD COMPANY

Carondelet, St. Louis, Missouri

Products: The following list is representative of the products handled by this Division:

- Barium Sulphate
- Barytes (Refined Water Ground)
  - Foam-A
  - Baryta-White
- Blanc Fixe
- Calcium Carbonate
- Extender Pigments
- Fillers
- Mineral Primers
- Whiting
  - Verablanc
  - C-C-O-White

Physical Properties

Certain physical properties of white lead are shown in the following table:

Bulking Values	
Pounds per solid gallon	56 to 57
% Light Reflection	92
Oil Absorption	8 to 15
*Tinting Strength	100 to 220
Hiding Power	
Sq. Ft. per lb. over black	15 to 23

WHITE LEAD IN PAINT

As is well known white lead is used extensively in paint, particularly in exterior house paint. Usually this type of paint is a mixture of pigment which is solid and of linseed oil which, of course, is liquid. The drying of a paint takes place when the liquid portion solidifies. This is caused by chemical changes, mostly oxidation, which are induced by the atmosphere. However, this oxidation reaction does not just stop when the paint is dry but keeps on going. Continued oxidation of any organic material such as linseed oil eventually causes it to break down.

Films consisting of linseed oil alone fail quite rapidly. In fact, it is not possible to make a linseed oil paint of reasonable durability if nothing is done to reduce the rate of destruction to which the oil is subject.

In order to retard the failure of the oil, white lead is used. White lead is reactive, that is to say, it combines with linseed oil forming more stable compounds, thus delaying the destruction of the oil.

Some of these compounds are lead soaps which, in addition, serve other purposes. They possess a unique particle structure and consist of a series of radiating rods growing from a central core. They are flexible and interlaced in a paint film, they provide strength and flexibility as well as adhesion.

Another result of white lead's affinity for linseed oil is that they mix very readily. This is important in the paint factory where it contributes to the ease of making paint.

White Lead's Contributions to Paint

White lead also possesses substantial hiding power and excellent whiteness. The fact of the matter is that white lead adds more desirable qualities required in a good paint than any other white pigment can provide. The properties which white lead contributes to a paint may be summed up as follows:

1. Mixing and grinding ease
2. Package stability
3. Hiding
4. Brushability
5. Leveling
6. Drying action
7. Whiteness
8. Film strength
9. Flexibility
10. Tint retention
11. Adhesion
12. Gloss
13. Weather resistance
14. Fool-proofness

All these qualities add up to what may be termed "fool-proofness," a contribution of major importance to paint. Moreover, it explains why white lead is the only white pigment which by itself, with a suitable vehicle, will produce a paint of outstanding quality.

Other Uses

White lead is used for other purposes. They include the manufacture of pottery, colors, caulking compounds, putty, heavy duty greases and special adhesives and cements.

*Based on standard sample Dutch White Lead 100

COLORED PIGMENTS

The colored pigments used in paints may be divided into two classes, natural pigments and chemical pigments. The natural pigments are produced by processing colored crude ores and this consists of grinding to reduce particle size, drying to remove moisture and in some cases calcining to dehydrate and oxidize the ores. The chemical pigments are made by combining chemicals to form the desired pigments.

The following table lists the more common colored pigments, shows whether they are natural or chemical and indicates the manufacturing process used to produce them.

ORANGE		
Chrome Orange C	Chemical	Precipitation of basic lead chromate.
Orange Mineral	Chemical	Roasting white lead or litharge.
RED		
Indian Red	Chemical	Calcining ferrous sulfate.
Red Iron Oxide	Chemical	Precipitation of iron hydroxide and calcining.
Toluidine	Chemical	Precipitation of organic coal-tar compounds.
Venetian Red	Chemical	Co-precipitation of hydrated iron oxide and calcium sulfate, followed by calcining.
BLACK		
Bone Black or Drop Black	Chemical	Burning bones.
Carbon Black	Chemical	Burning gas.
Iron Ixoide Black	Natural	Grinding magnetite.
Graphite	Chemical	Heating coke to high temperature.
Lampblack	Chemical	Burning oil.
Precipitated Black Oxide	Chemical	Precipitation of iron oxide followed by oxidation.
BLUE		
Phthalocynine	Chemical	Roasting copper and phthalonitrile.
Prussian	Chemical	Precipitation of ferric ferrocyanide.
Ultramarine	Chemical	Calcining siliceous materials.
GREEN		
Chrome Green	Chemical	Precipitation of chrome yellow with prussian blue.
Chromium Oxide	Chemical	Roasting potassium dichromate.
Phthalocyanine	Chemical	Chlorination of phthalocyanine blue.
YELLOW AND BROWN		
Burnt Sienna	Natural	Calcination of raw sienna.
Burnt Umber	Natural	Calcination of raw umber.
Chrome Yellow	Chemical	Precipitation of lead chromate.
Hydrated Iron Oxide	Chemical	Precipitation of iron hydroxide, followed by oxidation.
Ocher	Natural	Grinding ore lower in iron content.
Raw Sienna	Natural	Grinding ore higher in iron content.
Raw Umber	Natural	Grinding ore containing iron and manganese.
Van Dyke Brown	Chemical	Precipitation of iron hydroxide followed by oxidation.

Colored pigments are sold as dry powders or are ground into paste with linseed oil or some other vehicle. The linseed oil pastes are called "colors in oil." If the color is ground in a Japan varnish, the paste is called "Japan color" or "superfine color."

Colors in oil are used principally by painters for tinting or for making colored paints. Dry colors are used by manufacturers of paints, inks, linoleums, calcimines and other water paints. Japan colors are used by sign painters, and, to a limited extent, by painters for tinting enamels.

Dutch Boy Wonsover

This line of one-coat wall finishes is outstanding in its field:

1. Dutch Boy Wonsover not only gives one-coat coverage but it is a real oil flat paint that can be washed like new.
2. It requires no priming coat. It goes on right over wall board, brick, aged unsized plaster, previously painted wall and woodwork surfaces and even wall-paper and water-mixed paints.
3. Dirt, fingermarks, smudges and even grease can be removed easily. They do not sink into the surface because Dutch Boy Wonsover is a real oil flat paint. Therefore it can be washed again and again with soap or a reliable wall cleaner.
4. Easily applied with either brush, roller or sprayer—flows and levels out to an even, rich-looking flat finish.
5. Sets dust free in a few hours—dries hard overnight.
6. Leaves no unpleasant after-odor.
7. The line includes the more popular present-day tints for interior walls, plus white.

PAINTING TIPS

1. Before painting with Wonsover, loose or scaling particles of the old finish coat should be removed.
2. Cracks should be filled with patching plaster and spot-coated with Wonsover.
3. Finer cracks or bad stains should receive a first coat of Wonsover a day before putting on the final coat.
4. The paint should be stirred thoroughly.
5. For spray application it may be necessary to add a small amount of mineral spirits or turpentine.
6. No glue size should be used on unpainted plaster or wallboard.
7. Freshly plastered surfaces should be allowed to age for a reasonable time in order to avoid "hot spots."
8. Allow about one gallon for each 500 square feet.

WARNING

Dutch Boy Wonsover should not be used on furniture. Neither is it designed as an under-coater for enamel although it is a perfect primer for interior gloss wall paint.

BLACK AND YELLOW LINE

The important items in this line are, of course, Dutch Boy Soft Paste White Lead and Dutch Boy Pure White Lead Paints, the latter including a ready-to-spread Exterior Primer and an Outside White. These are the greater volume and profit producers in the black and yellow line.

The supplementary Dutch Boy products in the line were designed especially to assure the best possible painting jobs with Dutch Boy Soft Paste White Lead. Moreover, these companion products make it possible for the painter who "mixes his own" to handle *any* painting job, exterior or interior, on *any* building material with the few items in the line. To the painter the black and yellow line in his shop means the economy of low inventories and practically no wastage of materials.

To the dealer the stocking of the black and yellow line means that with a small investment he can satisfy *any* painting need of his customers. Moreover, its high rate of turnover and satisfactory markup make the line attractive to the dealer from a profit angle.

In the following pages we will discuss the end-use advantages of each item in the black and yellow line of Dutch Boy products, many of which will be of sales value to the dealer in contacting his customers.

Dutch Boy Soft Paste White Lead

Constant experimental work by our Laboratories and resulting improved manufacturing methods and equipment make it possible for the salesman or dealer to include current improvements among the many end-use advantages of Dutch Boy Soft Paste White Lead:

1. Stepped Up in Whiteness
   a. Whiter white jobs.
   b. Cleaner, truer, tinted jobs.
2. Heavier and Better Body Than Ever
   a. Increased hiding.
   b. Smoother brushing.
   c. Solid, evenly hidden jobs.
3. Convenience
   a. Pours from the keg.
   b. Mixes readily with paint oils and varnishes.
   c. Easily made into paint.
4. All-Purpose
   a. Makes paint for *all* coats on *all* surfaces.
   b. White or easily tinted to exact color wanted.
5. Economy

   Figured by the gallon, by the yard, by the job or in years of service, paint made from Dutch Boy Soft Paste White Lead is high in quality and low in cost.

Dutch Boy Exterior Paint Oil

(LINSEED REPLACEMENT OIL)

Dutch Boy Exterior Paint Oil was developed during the last war to conserve linseed oil needed by the armed forces and for food purposes, but it proved to be so satisfactory when used with white lead for gloss finishes that it was decided to continue marketing it in peace times. The oil is a careful blend of pure linseed oil, mineral spirits and drier—nothing else. Part of the oil is heat-treated or polymerized. Important facts about the product are:

1. Added to paste white lead, it produces a typical white lead and linseed oil paint film—durable and economical.
2. It may be used any place where it has been the practice to use raw or boiled linseed oil in paint—to thin white lead, red lead, other pastes, paints, etc.
3. It is designed to give to paints the same general working properties as those formerly made with straight linseed oil.
4. There is ease of brushing and good hiding.
5. Leveling qualities are as good, if not better, than when paint is made with straight linseed oil.
6. Setting up is a little more rapid due to the higher volatile content but this has the advantage of reducing dirt collection during the drying period.
7. Since the product contains drier, none need be added.
8. Standard white lead painting formulas may be followed except for the finish coat. This requires a little less vehicle and should include a small amount of turpentine.

Dutch Boy Liquid Drier

Advantages in using Dutch Boy Liquid Drier in paints containing raw linseed oil:

1. Best insurance against poor drying tackiness, dirt collection and early chalking.
2. Especially made to avoid surface drying and resulting wrinkling of the paint.
3. Does not curdle or discolor white paint.
4. Economical because one pint to six gallons of white lead and raw linseed oil paint gives the best results.

NOTES

1. No drier needed in white lead mixed into paint with boiled linseed oil or Exterior Paint Oil (Linseed Replacement Oil).
2. No drier needed in Dutch Boy multiple pigment paints.

Dutch Boy Lead Mixing Oil

When used with white lead, Dutch Boy Lead Mixing Oil produces a glossless paint that has a number of advantages that appeal to the applicator and property owner:

1. Produces smooth, velvety, durable flat finish for interior surfaces—plaster, wallboard or woodwork.
2. Produces weatherproof, solid-looking flat finish for exterior surfaces—wood shingles, brick, stucco, concrete or stone.
3. A complete vehicle—nothing need be added.
4. Mixes, tints and applies easily.
5. Can be used for all coats on new plaster or wallboard—it seals as well as decorates.
6. Makes ideal enamel undercoater because of excellent sealing and flowing qualities.
7. Can be stippled to an attractive orange-peel effect.
8. Retains good appearance under repeated washings.
9. When tinted with Dutch Boy Colors-in-Oil, does not wash out or streak under repeated washings.
10. With white lead on exteriors it wears down slowly and evenly by gradual chalking.
11. With its superior spreading rate and durability, Dutch Boy White Lead and Lead Mixing Oil paint is low in cost when figured by the yard, by the job or in years of service.

Dutch Boy Flatting Oil

Among the important uses of Dutch Boy Flatting Oil are:

1. With Dutch Boy White Lead to make a sharp, well-defined, stippling flat paint.
2. This stipple has exceptional beauty of finish and because of its texture and hard matte surface is preferred by craftsman as a ground for decorative painting.
3. Dutch Boy Flatting Oil is used extensively for mixing decorative glazes with Dutch Boy Colors-in-Oil because it requires no varnish protective coat.
4. It mixes readily with oil colors to produce superior wood stains.
5. Dutch Boy Flatting Oil is widely used by painters for thinning interior paints.

Dutch Boy Colors-in-Oil

Here is what consumers get in Dutch Boy Colors-in-Oil:

1. High tinting strength—a little color tints a lot of paint.
2. True tone—they make clean, sharp tints true to shade or tone.
3. Quick-mixing—so soft and finely ground they disperse in paint easily and quickly without streaking.

And here is what they save:

1. Trouble—clear, clean tints.
2. Time—quick-mixing.
3. Money—less color needed.

TIPS FOR USERS

Here are some very practical hints you can pass along to customers who buy Dutch Boy Colors-in-Oil:

French Ochre: A permanent, clear, brownish yellow. Produces attractive red brown or tan tints of good durability.

Raw Sienna: A permanent brownish yellow. Widely used to produce light cream tints and tan shades with a soft green undertone. Used with Chrome Yellows in making distinctive creams. With Raw Umber it produces warm grays. Very effective as a glazing color.

Burnt Sienna: This very permanent red brown color is used principally in glazes and oil stains, such as cherry and mahogany. In tinting, it is used to advantage to impart the warmth lacking in other coloring materials.

Raw Umber: A permanent brownish gray. Used extensively for graying bright tints. Excellent as a glaze for antique finishes. Many users prefer it to lampblack for producing gray tints. It is often used alone or in combination with Raw Sienna to make oyster whites.

Burnt Umber: A permanent reddish brown of gray cast. The permanency of the color makes it ideal for use in exterior stains such as those for shingles. Also used extensively in making pleasing shades of warm browns and grays. A most dependable color for glazing or graining purposes.

Lampblack: The most permanent of all colors. An essential color for making gray shades. Also used in combination with other colors to impart gray effects.

C. P. Chromium Oxide: A grayed yellow green. The most permanent of the green colors. Thinned with the proper vehicle, it is often used alone as a sash and trim color. It is of course used in lighter shades when let down with white for the same general purposes.

C. P. Chrome Greens: Bright, permanent, chemically-pure colors of very high tinting strength. Available in three shades—Light, Medium and Dark. Frequently used alone with a

suitable vehicle to produce sash and trim colors. A wide range of sharp, clear tints are obtainable with these colors.

CHROME GREENS: Reasonably permanent, bright, green colors available in three shades—Light, Medium and Dark. They are used for the same general purpose as the C. P. Chrome Green Colors, although a greater quantity is required to get a given tint.

C. P. CHROME YELLOWS: Bright, permanent, chemically-pure colors of very high tinting strength in three shades—Lemon, Medium and Orange. Most extensively used for tinting purposes. Produce a range of very clean yellow and orange tints of good permanence. The orange shade is often used as a straight decorative color.

PRUSSIAN BLUE: A strong blue most widely used for tinting and glazing. Its permanence is good on interior exposures.

DUTCH BOY BLUE: A clean, bright blue of good permanence. Especially designed to withstand exterior exposure. Used as a tinting color the tints obtained are pleasing blues of greenish cast. So formulated that when reduced with an equal volume of raw linseed oil, finished paint is obtained which is highly desirable for trim and shutters.

BULLETIN RED: A permanent red used extensively for store front signs, either by itself or intermixed with Indian Red or Black. Fairly permanent when used for tinting.

ROSE RED: A rich red intended for producing rose tints with white. Also a warm toner in combination with other colors in making tints.

VENETIAN RED: Very permanent. Used widely as the pigment part of finish coat paints for brick surfaces. An excellent tinting material in combination with other color materials for either interior or exterior paints.

TUSCAN RED: Fairly permanent. Produces soft grayed rose tints with white. Can also be used as a straight color with flat or gloss vehicles.

INDIAN RED: A permanent color. Makes a desirable maroon trim color for exterior use. Develops soft blue red tints when used with white. Used with Bulletin Red to make "India Red."

PART IV

PRACTICAL AND TECHNICAL INFORMATION

EXTERIOR HOUSE PAINT

Adapting Dutch Boy Products to PAINTABLE SURFACES

WHITE LEAD

OTHER WHITE HIDING PIGMENTS

COLORED PIGMENTS

WHITE BASIC LEAD SULFATE

RED LEAD

ORANGE MINERAL

ZINC CHROMATE (*Zinc Yellow*)

BLUE BASIC LEAD SULFATE

DRYING OILS

PAINT THINNERS

RESINS

EXTERIOR HOUSE PAINT

When the word "paint" is mentioned to a layman the chances are that in his mind a picture arises of a tin can containing a semi-viscous material or he thinks of a white or colored shiny surface. This is not a paint man's conception of paint or at least it should not be.

The fact that paint is fluid and put up in cans is incidental and temporary and paint does not perform its function in that form. Although paint is produced as a liquid, this only serves to allow application. It is as a film formed on the surface of an object that paint performs its services as a protective and beautifying agent.

Chemical Changes

Exterior house paint consists of a mixture of pigment which is solid and of drying oil which is liquid. After such a paint has been applied the conversion of the liquid coat into what is known as a dry film is due to chemical changes taking place within the oil and causing its solidification to the extent that a film is obtained. These chemical reactions do not stop after the paint has dried but continue until the film's final destruction. This, as well as the fact that a paint film may be subjected to other influences which may act chemically on the individual constituents of the film, explains the importance of a paint's composition.

Physical Structure

However, a paint film's behavior is not dependent alone on its chemical composition. Its physical structure is of equal importance. It must be borne in mind that a paint film is a three dimensional entity. It has length, width and depth, and occupies a volume. The manner in which the various ingredients are distributed physically and build up a film (in other words, its structure) may have important bearing on its performance. This may be illustrated by drawing comparisons with other more obvious structures. For instance a steel bridge may be weak because of faulty construction. On the other hand a wooden bridge may be strong because of sturdy construction. By the same token a paint film may be resistant notwithstanding the presence of a binder which by itself is easily destroyed, while it is possible to obtain weak films with practically indestructable pigments.

To sum up: a paint film's performance depends on its structure as well as on its composition. These factors are inter-related and therefore cannot be separated in explaining the performance of a film or in predicting its possible behavior.

PAINT FILM REQUIREMENTS

The requirements which a paint film on the exterior of wooden houses has to meet are many and varied. Such a film has to be opaque and smooth. It has to adhere to the surface on which it has been formed. It has to have sufficient thickness to provide adequate protection. In addition it has to have durability and maintain good appearance during its period of service.

In the past, films have been built up with three coats of paint. In the order of their application they provided:

1. Adhesion.
2. Hiding and film thickness.
3. Appearance and film protection.

In recent years paint systems have been developed in which two coats of paint produce a satisfactory film. The first coat of this type of system combines the properties of the first two coats mentioned under the older method of film construction.

TWO-COAT SYSTEM ADVANTAGES

Compared to the older three-coat system the two-coat system offers many advantages, one of the most important of which is its economy, due to the fact that the main cost of a paint job is labor for application. The following discussion will deal exclusively with the two-coat method of film construction.

It is obvious that since the two paint coats serve a different purpose their composition and structure must vary. However, they should be so constituted that they are mutually compatible. In order to formulate paint intelligently it is necessary to consider all factors involved in such a manner that a picture may be developed of the paint film's ultimate physical appearance. Without this it will not be possible to predict its probable behavior and determine its suitability for the purpose for which it is intended. Consideration should be given first to the structure of the film which a paint is required to produce. Then the individual ingredients may be introduced.

STRUCTURE

Since a paint film consists of solid materials (pigments) suspended in the solidified vehicle, the quantities of each of these major constituents to be used in a paint should be determined first. Variations in the proportions of these elements may produce marked differences in the physical appearance of a paint film and also differences in behavior and performance.

To illustrate some of the possibilities which may result, a comparison may be made between paint films containing higher or lower pigment content. In the former, enough pigment may be present so that some of the particles protrude through the surface and produce a flat finish. When the pigment concentration is low the pigment particles may all be covered by the oil content and form a continuous smooth surface producing a glossy finish. Naturally the behavior of films of different pigment concentration may differ substantially on outside exposure and in their resistance to the elements.

The following drawings give some idea of what such films might look like in cross section:

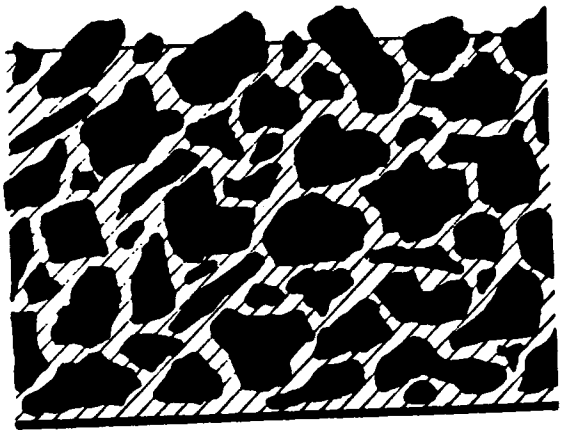


***Figure 1**

Cross Section of Flat Paint Film

Note that pigment content is sufficiently high to permit particles to protrude through the surface of the film and produce a flat finish.

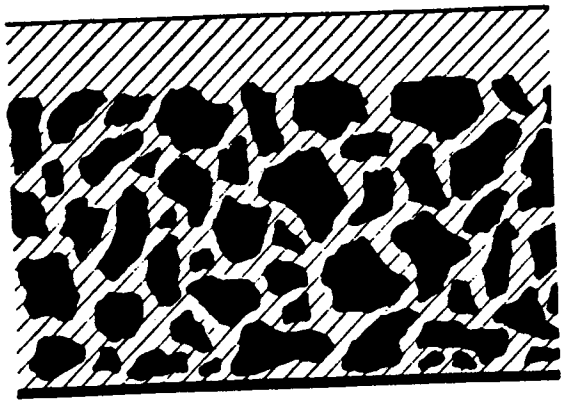


***Figure 2**

Cross Section of Exterior House Paint Film

Note that the lower pigment content allows the oil to cover the particles and form a glossy finish.

*Slanted lines represent oil content and irregular black spots the pigment particles.

In order to be able to draw the foregoing pictures the volume proportions occupied by pigment and vehicle have to be known. Since materials of such great difference in specific gravity are involved, weight figures would not supply the necessary information. For instance, a mixture of half pigment and half vehicle by weight would not give a paint film in which half the volume would be occupied by each. The average specific gravity of pigment is somewhere in the neighborhood of 4.50 and of vehicle *.900. This means that under those conditions 50% pigment by weight would equal only 16⅔% pigment by volume.

PV EXPLAINED

Naturally with each variation in specific gravity of one or more of the ingredients this volume figure would change, notwithstanding the maintenance of equal weight proportions. In order to avoid confusion and to obtain a mental picture of the film which a paint might produce, the proportion of pigment is often expressed in a percentage by volume calculated on the total non-volatile ingredients in a paint. The latter comprise all those materials which remain in the film after the paint has dried. They include the pigment and the non-volatile portion of the vehicle. This figure is designated as PV, indicating a pigment—non-volatile vehicle ratio. For instance, a paint having a PV of 30 means that 30% by volume of its film forming constituents is represented by pigment.

Since the primer of a two coat paint system is to provide among other things film thickness it should form a dense coat and a high pigment volume is required. Moreover, a large volume of pigment in such a paint can be used to obtain a flat or semi-flat finish which produces compatibility with the next coat and provides a good bond so that the two coats of the system may act as one film.

Successful PV's for Primers

The most successful pigment concentration for first coats seems to lie between PV's of 35 and 40. However, it is obvious that such pigment-non-volatile oil mixtures are of rather thick consistency and in order to be able to apply such paints, fairly large proportions of volatile are required to thin the paint to brushing consistency.

For the finish coat the requirements are different. This is the coat which provides the outer surface to a paint film, requiring resistance to the weather or other outside influences. In addition it contributes the beautifying qualities which demand sufficient hiding and most often a pleasing glossy finish.

Successful PV's for Finish Coats

The pigment is responsible for a major portion of these qualities. It provides protection but cannot continue to do so unless it is held in place by the binder, the non-volatile vehicle. A finish coat has to be so constructed that the binder will enable the pigment to perform its function. A larger proportion of vehicle is required, which at the same time produces the glossy finish. However, too large a proportion of oil introduces conditions which are detrimental.

Although the oil keeps the pigment in place the pigment protects the oil. In films with high oil content the pigment has a tendency to recede into the depth of the film and in so doing cannot be in close enough proximity to the surface layer of oil to protect it. A most effective balance in pigment and non-volatile vehicle for finish coats is between the general limits of PV 28 to 31.

*Specific gravity of water is 1.000.

Application of a priming coat followed by a finish coat of the structure described in the foregoing paragraphs will provide a continuous paint film with a solid base, sufficient thickness and a good smooth outer surface.

COMPOSITION

Within the limits set by the structural requirements, specific raw materials are introduced to obtain the desired physical structure and chemical composition of the paint film. These include pigments and vehicles which will be discussed in subsequent paragraphs.

PIGMENT

As hitherto stated a pigment can increase the durability of a vehicle. This increased strength may be due to either physical or chemical action or both.

Physical protection includes the ability of some pigments to shield a vehicle from the intense action of the destructive rays of the sun. This type of protective process is generally associated with colored pigments.

Chemical protection can be provided by those pigments which will react in specific ways with the vehicle and form more resistant compounds.

In white exterior house paint, the action of the pigment which contributes most substantially to the extension of the life of the vehicle is generally of a chemical nature. White pigments may be divided into two groups—reactive and non-reactive. The reactive pigments, by chemical combination, increase considerably the durability of the vehicle, which in outside house paint consists mostly of linseed oil. The reactive pigments include white lead and zinc oxide.

White Lead

In another chapter white lead's chemical reactivity and function in a linseed oil paint have been described. As it reacts with the oil it delays its ultimate destruction and also forms lead soaps which provide adhesion and flexibility to a paint film.

Zinc Oxide

This pigment also reacts with linseed oil forming soaps. These soaps have their own typical characteristics. In particular they are hard and for that reason zinc oxide forms hard and brittle films. Moreover, zinc oxide in a paint film will eventually form water-soluble derivatives which cause so-called "washing."

The non-reactive pigments have other functions to perform.

Titanium Dioxide

Titanium dioxide's most valuable asset is extremely high hiding power. In fact, in a multi-pigment paint, it is used mainly to build up the hiding to the required degree.

As titanium dioxide in its simplest form is entirely non-reactive it is easily subject to chalking. In the presence of zinc oxide which forms water soluble compounds, titanium dioxide provides a paint with so-called self-cleaning properties.

Extender Pigments

This generic name is applied to non-hiding pigments, such as barytes, magnesium silicate (asbestine) and whiting. Most of these are inert although a few are reactive. The reactivity of the latter, however, is very mild and hardly ever is it a consideration for their use.

The function of the extender is principally in filling up available space in the pigment phase to reach the required volume not occupied by the other pigments used. Extender pigments make it possible to do this economically, because their cost is very low. Moreover, extenders may act as plasticizers in the paint film. They usually produce soft films and their presence helps avoid excessive hardness.

The white pigments just mentioned are those generally used in formulating an exterior house paint. It must be added, however, that many modifications in each of these groups are available and that their correct choice may have important bearing on the performance of a paint as well as on that of the paint film.

VEHICLE

A vehicle can be divided into two parts: non-volatile and volatile. The first remains in the paint coat after it has reached the so-called "dry" stage and consequently must possess film-forming properties. The volatile leaves the drying paint by evaporation and is used to impart sufficient fluidity so that the paint may be applied.

Linseed Oil

Linseed oil is the most widely used material as the film-forming ingredient in exterior house paint. It is available in many modifications, each one being chosen for use in paint to meet particular circumstances and requirements.

The different grades of normal viscosity may vary in acid number. Oils of different acid number are selected in order to meet production requirements as well as to control soap formation.

Differences in viscosity are taken advantage of to give a paint body and gloss whenever necessary. Moreover, oils of heavy viscosity do not readily penetrate porous surfaces and can contribute to the sealing qualities of a paint.

Volatile

The most widely known volatile in paint undoubtedly is turpentine. However, it is not the most generally used by the paint manufacturer. Most paints contain so-called mineral spirits as volatile thinners. They are petroleum derivatives which are produced in many grades varying in specific gravity and the speed with which they evaporate. These qualities may influence substantially the application properties of a paint and consequently the fact that so many types are available provides the paint manufacturer with another means of adjusting his products.

FORMULATING PAINT

Formulating a paint consists of the selection of the proper type of raw materials and the proportions in which they shall be used. Naturally many factors have to be considered. In addition to the purpose for which the point is designed, the conditions of application, etc., personal preference enters into the situation most prominently. Moreover, it should be understood that in general all ingredients contribute specific characteristics and the desire to accentuate one particular property in a paint of necessity results in a reduced opportunity to impart other qualities.

For that reason a paint formula of a high grade paint usually represents a compromise in ideas, the purpose being to design a paint which most completely suits the expected requirements. It is understandable that there are so many different paints of varying compositions on the market, since so many factors have to be considered and since opinions on their importance and the manner in which the many requirements may be met vary so widely.

It is always tempting to judge paints from the formulas given on the labels on the cans. However, as hitherto explained, it is impossible to obtain a picture of the structure and composition of the film from the weight figures usually given. Although translation into volume proportions would help, even that does not disclose full information.

The fact of the matter is that no one should ever venture to express an opinion of the quality of a paint while only the general formula is known. Only experts familiar with all details could take a chance at predicting a paint's behavior.

In selling paint, therefore, stress should not be laid so much on its composition as on its known performance, obtained from observation of its behavior under practical conditions.

WHITE LEAD

White lead, or basic lead carbonate, is a white opaque pigment consisting essentially of a double compound of lead carbonate and lead hydroxide. It is made by a number of different processes, in all of which metallic lead is combined with oxygen, carbon dioxide and water to form basic lead carbonate.

The commercial white leads made by the various processes show variations in chemical composition and, consequently, in physical characteristics.

Exposure of metallic lead to the influence of the atmosphere will form some white lead. This may be observed when a lead pipe or a sheet of lead has been out in the weather for some time. A very thin coat of a white substance will have appeared, and this is basic lead carbonate. Since this process of nature is corrosion and not erosion, there is no wearing away of the lead pipe or sheet lead and the action of the oxygen, carbon dioxide and water in the atmosphere on the lead stops as soon as the thin coat of basic lead carbonate is formed. Such coatings have been known to shield lead objects from further changes for centuries, demonstrating the unusual protective qualities of white lead.

Depending on nature to produce white lead, however, would take much too long and prove very costly. The formulation of white lead is speeded up by using acetic acid. In the presence of acetic acid, metallic lead, oxygen and water will form a compound called basic lead acetate which readily reacts with carbon dioxide to produce basic lead carbonate or white lead. Only a small amount of acetic acid is needed as it is not consumed and is not part of the final product. It is released when the basic lead carbonate is formed and thus can take part repeatedly in the reaction.

ALL PROCESSES BASICALLY THE SAME

All processes used for the manufacture of white lead are based on the foregoing principles. The various methods of production show differences in the form of the raw materials, the method of introduction into the process and the equipment employed.

The raw materials required are lead, acetic acid, carbon dioxide and water. The lead used is generally of a highly refined grade known as corroding lead.

The acetic acid used has varied through the ages. Many centuries ago sour wine was employed; later, vinegar was used. Nowadays, refined acetic acid of varying concentrations is used.

Carbon dioxide is formed as a gas when carbon compounds oxidize or burn which may take place under many varying conditions, from rapid combustion to slow fermentation processes. When sour wine or vinegar was used as a source of acetic acid, tan bark supplied the carbon dioxide. At present, carbon dioxide from burning coke is utilized in several manufacturing processes.

Water is present in all of the processes. The acetic acid solution contains water. Where carbon dioxide gas is used which has been generated in a coke fire, the water is added as such or as steam. Finally, in some processes the reaction actually takes place in water.

In the different processes for manufacturing white lead the equipment is adjusted to the form in which the raw materials are introduced and the way the chemical reactions are produced.

Dutch Process

The Dutch Process is one of slow corrosion generally requiring 100 to 120 days. Lead buckles or perforated discs of lead are placed in corroding pots, resting on a narrow ledge or shoulder part way up the inside wall of the pot. In the bottom, a small amount of dilute acetic acid is placed. These pots are placed in rows on a floor covered with spent tanbark which has been wet down thoroughly. Planks are laid on top of the pots and another layer of pots containing buckles

and acetic acid is placed on top of these planks and the procedure is containued until a stack of 10 or more layers has been built up. In these stacks, the fermentation process of the tan-bark supplies the heat and the carbon dioxide. The heat is sufficient to volatize the acetic acid which in conjunction with air and water forms basic lead acetate, which is in turn converted to basic lead carbonate by the action of the carbon dioxide from the tan-bark.

This method of manufacture, as well as the product it produces, was considered standard for many years. However, new processes have been developed, short descriptions of which follow.

Carter Process

In the Carter Process the white lead is formed in large, slowly rotating cylinders. The lead is introduced in the form of fine powder. Carbon dioxide is admitted through the head of the cylinder in the form of gas and a weak solution of acetic acid is sprayed into the cylinder at intervals. As the cylinder revolves, finely divided lead is carried up on the inside wall and rolls to the bottom so that new particles are continually exposed to the action of the corroding agents. Thus, the entire batch reaches a completely corroded state in from 12 to 14 days. In addition to the saving in time the process lends itself better to the exercise of closer control.

Thompson-Stewart Process

Metallic lead is subjected first to an oxidation process. The resulting product, made into a water slurry, is placed in a tank. After treatment with air and carbon dioxide in the presence of small quantities of acetic acid, white lead is precipitated.

This process is National Lead Company's most recent development. It is very fast and permits strict control. The operation is flexible and different types of white lead, each of particular uniformity, can be manufactured in this way.

Euston Process

Metallic lead is melted and run into water where it forms a mossy, spongy mass of "feathered" lead. This spongy lead quickly oxidizes and when lead acetate solution is added, the oxide is dissolved and the basic lead acetate is formed. This lead acetate solution is clarified and treated with carbon dioxide to form basic lead carbonate.

Sperry Process

This is an electrolytic process which is carried out in a concrete cell having a lead anode and iron cathode separated by a porous diaphragm. The lead anode is immersed in sodium acetate solution and the iron cathode in sodium carbonate solution. Under the influence of the current, basic lead carbonate forms near the surface of the lead anode. The solution flows continuously from the anode removing the white lead as it is produced and depositing it in regular settling tanks.

Finishing Processes

After the white lead has been formed by any one of these processes, it must be carefully washed, screened and in some instances, ground. It is then in the form known as white lead water pulp.

The white lead water pulp may be either dried and ground for delivery to the paint maker, ceramic manufacturer or other user as dry white lead, or it may be mixed with linseed oil and made into white lead paste. When linseed oil is added directly to the white lead water pulp, the white lead has such great affinity for the oil that the latter displaces the water. It is not necessary to first dry the white lead to make white lead and oil.

COMPOSITION OF WHITE LEAD

The manufacturing processes in use today for the production of white lead make it possible to produce a number of types varying in physical properties as well as composition. Most commercial white leads have a lead carbonate content within the range of 62 to 70 per cent, well within the limits allowed in Federal and A. S. T. M. specifications.

Boston Lead Company Has Ups and Downs

There is an interesting bit of industrial history back of the name under which our Boston Branch conducted its business from 1928 to December 20, 1945; namely, the National-Boston Lead Company. It is the story of a company that tenaciously retained its corporate name—Boston Lead Company—despite a failure, a reorganization, an amalgamation and the final consolidation with the National Lead Company of Massachusetts.

It was in 1829 that the Boston Lead Company was incorporated, the first white lead business in New England and the second in the United States to adopt that form of organization. There were 25 stockholders subscribing to 52 shares at $1,000 each. From the start the company manufactured lead pipe, sheet lead, red lead, litharge and white lead.

It was in 1863 that the company suffered a disastrous fire, but the directors voted to rebuild.

By 1872 the capital stock had been increased to $500,000 and the company prospered until reverses came in 1878 when it failed. The following July it was reorganized as the Boston Lead Mfg. Company and that same year, J. H. Chadwick, one of its executives, left the Company to organize the Chadwick Lead Works.

National-Boston Organized

Both companies prospered, but in 1901 they consolidated under the name of the Chadwick-Boston Lead Company. The Company was purchased by the United Lead Company, which in 1926 became a subsidiary of National Lead Company. It was not until 1928 that the Chadwick-Boston Lead Company was consolidated with the National Lead Company of Massachusetts under the name of The National-Boston Lead Company. On December 20, 1945 the name of our Boston Branch became officially The National Lead Company of Massachusetts.

From the Boston Lead Company came one of the Directors of National Lead Company—A. H. Broderick, who started with that company in 1876, was President of the Chadwick-Boston Lead Company and upon the latter's consolidation with the National Lead Company of Massachusetts was made Manager, which position he held until his death.

CINCINNATI

Oldest Founders in Midwest

Turning to the white lead manufacturing history of the Middle West, we find that the first of our founding companies to be organized in that section of the country were located in Cincinnati, Ohio. These were the Anchor White Lead Works and the Eckstein White Lead Company, which also have the distinction of being the first *successful* white lead concerns to be established in Cincinnati.

While not one of Cincinnati's pioneer manufacturers, the first successful white lead concern was established in 1828 by Roy MacChandless, a Scotsman who had been connected with the manufacture of white lead in Scotland and Richard Conkling, a Cincinnati painting contractor. Later this concern became the Anchor White Lead Company.

Anchor as a Trademark

The two men formed a co-partnership under the firm name of MacChandless & Conkling. They erected a small factory and lead bins on a site later used for the United States Post Office. They adopted an anchor as their brand and stenciled this trademark on their kegs.

Since there was no tanbark available at that time, the German process of manufacture was employed, corroding in spent manure. The vinegar used in corroding was made by the founders in their own plant from apples and beech shavings. The pig lead was cast into thin sheets in a pan, then rolled in spirals and placed in pots similar to those used in the Dutch process. The sheets were about eighteen inches long and six inches wide. The minimum time of corrosion was about forty days; the maximum sixty days.

Rival Enters Field

MacChandless and Conkling enjoyed their monopoly in the Cincinnati market for about eight years. Then, in 1836, a rival plant was erected by Townsend Hills. This concern later became the Eckstein Company.

During the next thirty years the Hills concern underwent a few changes while its rival underwent many. MacChandless had died in 1838 and the firm carried on under the name of Richard Conkling & Bros. It continued as such until 1842 when a new factory was erected and a new name adopted, Richard Conkling & Company.

In 1856 Conkling sold the business to a Robert Hogue who operated it under his name for about a decade.

Anchor Company Incorporated

In Cincinnati in 1866 the Hogue concern was purchased by A. T. and A. O. Goshorn and became known as Goshorn Bros. Eight years later, the firm was incorporated. Another member of the family, E. C. Goshorn, was taken into the firm and the name Anchor White Lead Company was adopted. In the following year a new factory, larger and with more up-to-date equipment, was erected.

Eckstein Company Incorporated

In 1865 Frederick Eckstein secured an interest in the plant founded in 1836 by Townsend Hills. This firm operated for several years under the name Eckstein, Hills & Company, and was finally incorporated in 1880 as the Eckstein White Lead Company. Three years later a modern plant was erected on the west side of Freeman Avenue between Seventh Street and the C. H. & D. Railroad, now a division of the Baltimore & Ohio Railroad.

When in 1891 the Eckstein White Lead Company became a part of National Lead Company A. T. Goshorn was elected First Vice President of our Company. The Deer Creek plant of the Anchor White Lead Company was purchased at this time, but it was operated for only a year and then closed down, all subsequent manufacturing being concentrated at the Eckstein Freeman Avenue factory.

Goshorn Made Director and Manager

In 1895 E. C. Goshorn was elected a director of National Lead Company in succession to his brother, A. T. Goshorn, and served in that capacity and as manager of the Cincinnati Branch until his death in 1924.

The business of the Cincinnati Branch of National Lead Company increased to the point where expansion was necessary so the erection of larger buildings was begun in 1907 and completed in 1914.

ST. LOUIS

Had Four Strong Founders

Lead and pelts were the two most important articles of barter and commerce for several years after St. Louis was founded in 1764, money not being in common use.

In the 1800's the manufacture of white lead, red lead and other lead products, together with lead mining, became an important industry in the St. Louis area. It was quite natural, therefore, that St. Louis should have produced four of the ten or twelve stronger companies which organized the National Lead Company. They were the Collier, Missouri, Southern and St. Louis Lead and Oil Companies.

The pioneer of our St. Louis founding companies began operations in 1837 on Clark Street, between Ninth and Eleventh, which was later to become the Collier Works. This plant was sold to Joseph Charless and Henry T. Blow in 1842.

Color Matching Lamps

Sash and trim colors and tinted paints are also finished on the second floor. The tinting materials are carefully measured and introduced. Since the exactness of shade of these paints is so very important, the Control Laboratory is equipped with the latest in color matching lamps in order to assure the desired results independent of the amount of daylight available at any time of the day or year.

Incidentally, but importantly, all manufacturing areas in the plants are equipped with the latest in fluorescent lighting.

Filling, Labeling and Packing Streamlined

After a paint batch has been checked and passed by the Control Laboratory, it is allowed to flow down to the first floor for filling, labeling and packing. After the containers are filled, they are transported on a conveyor belt on their sides to the labeling machine. When labeled, the containers are set up on end automatically and continue on the conveyor belt to the packer. The cases are sealed automatically and stacked on pallets for transportation to the warehouse on an electric fork truck.

"Palletizing" Saves Labor

The use of pallets on an electric fork truck is called "palletizing" and is a labor saving device in loading and unloading operations. The pallets look like two platforms, sturdily joined together, with sufficient space between them to permit the entrance of the fork on the electric truck. The truck is counterbalanced to permit carrying three pallets with a load weighing as much as two tons. A powerful elevator arrangement makes possible comparatively high stacking in the warehouse.

Paints the Same From Separate Plants

Paints manufactured in the East are formulated by our Research Laboratories in Brooklyn and then it is up to the Production Department to meet the specifications. A Control Laboratory is located in each factory and testing by the chemists starts with the raw materials before they are unloaded.

No finished batch of paint is released for packaging until it is approved by the Control Laboratory. Raw materials must meet four to six tests and each paint batch is subjected to seven to ten tests. In addition, our paints are under constant observation and testing by operators during each operation in the paint-making process. Moreover, due to central control in New York of both raw materials and finished products, paints from either Chicago or Perth Amboy factories will produce the same results, whether they are in white or color. The same careful control set-up is in force in the Pacific Coast paint factories.

All of which means that our salesmen can be confident that any product turned out under the Dutch Boy trademark is tops in quality.

OUR PAST PRESIDENTS

WILLIAM P. THOMPSON

President—December 8, 1891 to February 3, 1896

Upon the incorporation of National Lead Company on December 8, 1891, William P. Thompson was elected our first President.

Mr. Thompson had previously been an executive of the Standard Oil Company, which concern had helped finance the consolidation—an interest that later was absorbed by National Lead Company.

It was during Mr. Thompson's administration that the management devoted its efforts principally to the maintenance and improvement of the properties and business already acquired; to the increase of manufacturing capacity at plants best adapted to the most economical production and distribution; to the sale or other disposition of plants not so adapted; and to the standardization of methods and processes—all with a view to the reduction of operating costs and all financed out of earnings or out of proceeds of property sold.

Mr. Thompson was President until his death on February 3, 1896.

LUCIUS A. COLE

President—February 20, 1896 to August 25, 1910

Lucius A. Cole was elected the Company's first Treasurer upon its incorporation, which position he held until June 30, 1892, when he was promoted to a Vice-Presidency.

On February 20, 1896 Mr. Cole was elected President and served in that capacity until his death on August 25, 1910.

In addition to carrying on the reorganization policies of the preceding administration, the Company under Mr. Cole took its first important step in expanding its interests in the metal field by purchasing the United Lead Company and the Magnus Metal Company outright and 50 per cent of the capital stock of the United States Cartridge Company.

Other major accomplishments of Mr. Cole's administration were the purchase of the Carter White Lead Company, which added important patented and secret processes to the white lead manufacturing technique of the Company and which increased the business and profits in that product materially; the erection of a plant to manufacture steel kegs to replace the old-fashioned wooden kegs for white lead, red lead and oxides; the organization of National Lead Company of California (now our Pacific Coast Branch) to handle the Company's business West of the Rocky Mountains.

Incidentally but importantly, it was Mr. Cole who suggested that the Dutch Boy, which was created originally for use only as a character to advertise white lead, would make a good Company trademark.

WILLIAM W. LAWRENCE

President—September 15, 1910 to August 29, 1916

When the Sterling White Lead Company of Pittsburgh, Pa., was purchased in 1903, William W. Lawrence, its President, was elected Treasurer of National Lead Company on May 1 of that year. On May 2, 1907, he was made a Vice-President and on September 15, 1910, was elected President.

One of the early acts of Mr. Lawrence's tenure of office was the further expansion of the Company's white lead business by the purchase of the Matheson Lead Company, which concern since then has been dissolved.

However, probably the most notable decisions of his administration were those that interested the Company for the first time in foreign holdings and put us into the mixed paint business in a comparatively small way. These moves were accomplished by the purchase of 50 per cent of the capital stock of Williams Harvey & Co., Ltd. of England, the largest tin smelters in the world, and the acquiring of all the capital stock of the Bass-Hueter Paint Co., Pacific Coast manufacturers of varnishes and mixed paints.

Mr. Lawrence served as President until his death on August 29, 1916.

EDWARD J. CORNISH

President—September 21, 1916 to February 23, 1933
Chairman of the Board—February 23, 1933 to May 3, 1938

Edward J. Cornish entered the white lead business as the attorney for the Carter White Lead Company and on November 10, 1903 became its President. Three years later he negotiated the sale of the Carter Company to National Lead Company and on December 17, 1908 was made Manager of our Chicago Branch and a member of the Company's Board of Directors.

Mr. Cornish was elected President on September 21, 1916 and it was during his term of office that the Company made substantial progress in product diversification and in achieving sound financial standing.

The policy of product diversification has served to cushion loss of business in some fields with improved business in other fields. For example, during the 1930 Depression, the fact that we did not have all our "eggs in one basket" helped the Company materially in weathering the storm.

During Mr. Cornish's administration the Company also expanded its foreign holdings. The National Lead Company of Argentine was organized to develop our business in that important section of South America and to look after the Company's tin and tin smelting interests there. Important investments in foreign enterprises were made in England, France, Norway and Germany.

An example of astuteness just prior to the 1930 Depression was the refusal of the management to meet the demands of some stockholders for increased dividends during years when the Company earned several times the regular dividend on the common stock.

Mr. Cornish explained that the dividend rate should not be increased until the management was convinced that it could be maintained. Moreover, taking his stand practically alone among the business leaders of the day, Mr. Cornish prophesied the 1930 Depression and argued that the reserves being built up from surplus profits would be needed to continue dividends on stocks during the business slump. This promise to the stockholders was kept.

On February 23, 1933, Mr. Cornish resigned the Presidency and was elected Chairman of the Board of Directors, a position that was created for the first time in the history of the Company and which he held until his death on May 3, 1938.

FRED M. CARTER

President—February 23, 1933 to January 12, 1938

When Fred M. Carter was elected President on February 23, 1933, he brought to the position the most varied and broadest experience in the white lead business of any of his predecessors in the office.

On April 1, 1898, Mr. Carter took charge of the advertising and promotion of the Carter White Lead Company, having been induced by his uncle, Levi Carter, Founder and President, to make the change in employment from a middle-western agricultural machinery company.

In 1903 Mr. Carter was made General Manager of the Carter White Lead Company, in 1906 its Vice President and in 1910 its President. In addition to fulfilling his executive responsibilities, Mr. Carter from the first was keenly interested and unusually well-informed on manufacturing, painting and merchandising problems.

On December 21, 1911, Mr. Carter was started on his way to the Presidency of National Lead Company with his election to the Board of Directors. Then came a Vice Presidency on September 15, 1927 and six years later he succeeded E. J. Cornish, when the latter resigned as President to become Chairman of the Board.

As Director, Vice President and President, Mr. Carter was one of the staunchest supporters of research in the Company. It was due largely to his influence that our Laboratories are as well-equipped and ably-manned as they are today. The result has been the improvement of several of our old products and the addition of many new products that have contributed materially to the profits and stability of our Company.

Among several contributions that Mr. Carter's administration made to the welfare and security of the Company's employees was the establishment of an adequate pension system. Under this plan employees contribute a percentage of their salary toward the purchase of an annuity payable at the age of 65. The Company, however, contributes two-thirds of the cost, thus giving the employees the annuity at a very low rate and an adequate income at retirement.

Mr. Carter resigned the Presidency and went into retirement on January 12, 1938.

OUR CHAIRMAN OF THE BOARD

FLETCHER W. ROCKWELL

President—January 12, 1938 to April 17, 1947
Elected Chairman of Board of Directors April 17, 1947

It might be said of Fletcher W. Rockwell, Chairman of the Board of Directors, that he was born and raised in the lead industry, since his father of the same name was one of the founders, original incorporators and a Vice-President of National Lead Company, and also because he has devoted his entire business life to our Company.

Mr. Rockwell's first position of responsibility was assumed in 1896 when he was appointed Superintendent of the Southern White Lead Works in Chicago. Upon the consolidation of the Southern Company with the Shipman White Lead Works of Chicago in 1906 he became General Superintendent of the combined plants.

It was on May 20, 1920 that Mr. Rockwell was brought to New York to serve as Production Manager of the entire Company.

When he was elected to the Board of Directors on March 21, 1926, Mr. Rockwell had devoted 30 years to manufacturing problems, and it was this directorship, augmented by his appointment to the Executive Committee in 1927, that gave him the opportunity to become so well informed as he is today with *all* the activities and problems of the Company

Mr. Rockwell was elected a Vice-President on March 23, 1937 and upon the resignation of Fred M. Carter as President on January 12, 1938, he was chosen to fill the position. He was elevated to the chairmanship of the Board of Directors on April 17, 1947.

Almost from the start of Mr. Rockwell's administration as President the Company was faced with serious wartime problems, all of which were met successfully and patriotically. We can all be proud of the Company's wartime record.

OUR PRESIDENT

JOSEPH A. MARTINO

Elected President April 17, 1947

Probably the most outstanding example in our Company of what an American boy can accomplish through sheer ability alone is exemplified in the business career of our President, Joseph A. Martino.

Starting as an office boy with the United Lead Company, a subsidiary of National Lead Company, on February 24, 1916, when he was a few days short of sixteen years of age, Mr. Martino has since then held positions in our Company of a type and responsibility that have familiarized him with every phase of our business. His starting salary was $5 per week.

It was on January 1, 1927, that Mr. Martino was given his first title, that of Assistant Auditor of the United Lead Company, and about two years later was transferred to National Lead Company as Office Manager of the General Office Accounting Department.

Mr. Martino was made Assistant Comptroller in 1934 and it was while holding this position that in 1944 he was elected a Director and appointed to the Executive Committee. But it was after April 1945, when he was promoted to the Comptrollership, that he made his most rapid advance in positions of responsibility. He was honored with a Vice-Presidency in April 1946, made Executive Vice-President seven months later and elected President on April 17, 1947.

During the years following his transfer to National Lead Company, Mr. Martino served as Secretary of the Metal Sales Committee, Chairman of the Mining Committee, a member of the Manufacturing Committee, Vice-President and Director of the American Bearing Corporation, Director of the Magnus Metal Corporation and Assistant General Manager of the Magnus Bearing Division.

Mr. Martino also worked closely with Executives on various pigment and paint problems. His most important contribution in this phase of our business was Management's acceptance of his recommendation that the Company enter the mixed paint field.

It was due to Mr. Martino's advocacy that we have the profit-sharing plan, which is an important addition to the Company's policy of continually giving consideration to the welfare of its employees.

This background of wide experience and known ability, coupled with the obvious confidence in which he is held by our Board of Directors, make it certain that National Lead Company will continue to prosper under the leadership of Mr. Martino.

HEADQUARTERS EXECUTIVES YOU SHOULD KNOW

(Those Who Influence Paint Sales and Product Policies)

DAVID A. MERSON

Director

Manager of Paints, Oils and Pigment Sales

Sales Manager of Sales Development Department

Shortly after graduating from the Virginia Military Institute with a Bachelor of Science degree in chemical engineering, David A. Merson was employed on February 6, 1923 as a Chemist in our Laboratories.

Prior to his appointment in 1938 as Manager of Oxide Sales, Mr. Merson had had a thorough grounding in the Company's storage battery business, both in the Laboratories and in the field contacting battery manufacturers. The following year he was made Chairman of the Oxide Sales Committee and in 1946 was given the added responsibility of managing the Sales Development Department. This department has put on the market profitably a number of new products developed by our Laboratories.

During World War II Mr. Merson was General Manager of the Magnesium Reduction Company, the plant of which was designed, erected and operated by our Company at Luckey, Ohio, at the request of the Government. The plant was operated without profit as a contribution to the war effort and on February 6, 1944, the Magnesium Reduction Company and its employees were awarded the Army-Navy "E".

It was in 1947 that Mr. Merson was elected a Director of the Company and was appointed Manager of Paints, Oils and Pigment Sales, retaining also the position of Manager of the Sales Development Department. On January 27, 1948 he was elected a member of the Executive Committee.

HARRY C. WILDNER

Comptroller

When Harry C. Wildner was employed by National Lead Company as a traveling auditor on June 8, 1921, he had had several years of experience as a Certified Public Accountant with a number of different firms. His World War I service was with the Coast Artillery.

In 1929 Mr. Wildner was made Manager and Treasurer of the Newton Die Casting Corp., New Haven, Connecticut, a subsidiary of National Lead Company. When that Corporation was sold in 1932 to the Doehler Die Casting Co., he resumed his position as traveling auditor. Six years later he was appointed Assistant Comptroller of National Lead Company.

The years 1938 to 1941 were passed in visiting practically all of the Company's branches in the United States and Canada for the purpose of studying factory operations as well as sales and distribution methods. This background of experience has been applied constructively and helpfully to certain problems of the White Lead Sales Committee, to which Mr. Wildner was appointed in 1944.

It was on April 19, 1946, that Mr. Wildner was promoted to the position of Comptroller of National Lead Company and on January 27, 1947 he was elected a Director of the Company and a member of the Executive Committee.

FRED McCARTHY

Manager of Trade Sales

When Fred McCarthy came to New York from Cincinnati in 1943 to become Manager of Trade Sales and Chairman of the White Lead Sales Committee, he had been thoroughly trained for his new responsibilities by years of experience as a salesman and executive, both during and prior to his employment by National Lead Company.

Mr. McCarthy started his business career with Scripps Howard newspapers and after six years was National Advertising Manager of the Indianapolis Times. Then followed a number of years of employment with Proctor & Gamble's Bulk Products Division during which he was a salesman in several Middle-Western territories and for some time before leaving that Company was in charge of the Division's salestraining and sales promotion in the East.

Mr. McCarthy entered the service of National Lead Company on November 1, 1935, as a salesman for the Cincinnati Branch. After an intensive training course in paint technology in New York and a season of helping conduct painters' meetings, he was appointed Sales Promotion Manager. From then on his abilities were recognized with frequent and important promotions.

On January 1, 1937, Mr. McCarthy was appointed Sales Manager of the Cincinnati Branch. Two years later he was made Assistant Manager and then succeeded William A. Dail as Manager shortly after the latter's death on November 5, 1939.

WILLIAM KNUST

Advertising Manager

The story of William Knust's rise to the position of Advertising Manager of National Lead Company is one of which any American would be proud.

Employed as a stenographer and bookkeeper on October 25, 1909, Mr. Knust diligently and intelligently worked his way through every division of the Advertisement Department, under the competent tutelage of O. C. Harn, Manager. At one time or another he handled the Company's direct-by-mail literature, dealer helps, painter helps, etc., as well as general and trade paper advertising.

For several years prior to its disposal, Mr. Knust was in charge of the advertising campaigns of the United States Cartridge Company.

Upon the resignation of O. C. Harn, Mr. Knust was appointed Advertising Manager of National Lead Company on March 1, 1927. Mr. Knust has devoted a share of his time to advertising and paint association activities. For two years—1932 and 1933,—he was President of Controlled Circulation Audit, Inc., an organization that verifies magazine circulations. He is a member of the Public Relations Committee of the Paint, Varnish and Lacquer Association.

ALEX STEWART

Director of Research

During the years, starting in 1908, when Alex Stewart was working in our Brooklyn Laboratories as a boy, he was so ambitious to become a chemist that he devoted all his Summer vacations to studying his chosen subject. When he left the Laboratories it was to go to college and, after graduation in 1916, to accept his first position as a Chemist with the Wringwalt Linoleum Company, now the Nairn Congoleum Company.

Then followed years of broadening experience, during which Mr. Stewart was in charge of the technical department of the C. L. Constant Company, mining engineers, and was associated with several leading chemists of the country on special research projects.

In 1930 Mr. Stewart returned to the National Lead Laboratories as a research chemist and three years later was put in charge of the new products research and development department. In 1938 he was appointed Director of Research of the parent Company, which position was broadened in 1947 to include responsibility for research for the entire National Lead organization.

Among a number of developments of importance to National Lead Company that are credited to Mr. Stewart are lignin colloids, commonly called expanders and which are used in lead-acid storage batteries; 111 White Lead, an entirely new composition of matter; and acicular basic lead sulfate, the only acicular product of lead.

E. R. ROWLEY

Production Manager

It was September 29, 1933, that E. R. Rowley was employed by National Lead Company, joining the Mechanical Engineering Department of the Chicago Branch. Prior to then and after graduating from the Illinois Institute of Technology with a Bachelor of Science degree in mechanical engineering, he had had three years of experience in his profession, principally with Proctor & Gamble.

On June 1, 1939, Mr. Rowley became Assistant Production Manager of the Company and served in that capacity until he was appointed Plant Manager of the Magnesium Reduction Company, Luckey, Ohio, during its wartime operation by National Lead Company.

In September, 1945, he was made Production Manager of the Chicago Branch and on March 15, 1948, Mr. Rowley was promoted to Production Manager of the Company.

★ EXECUTIVES WITH WHOM YOU WORK ★

PRENTISS S. ORR

JAMES L. CARUTH

W. C. MINSINGER

H. E. MacCLEARY

W. P. PEDIGO

ERIC G. ORLING

RAY C. KRUEGER

DAN B. ROBERTS

HARRY S. IRWIN

H. C. SPECHT

ABOUT EXECUTIVES WITH WHOM YOU WORK

JAMES L. CARUTH

Manager

Years of experience as a paint salesman and executive was the training James L. Caruth brought to the Managership of the Pacific Coast Branch on January 1, 1943. Even his first job after leaving school was valuable experience, since it gave him a first-hand understanding of the problems of a paint store. He was employed by a wholesale and retail paint and wallpaper distributor in San Antonio, Texas for several years and served successively as bookkeeper, office manager, clerk and territory salesman.

Upon receiving his discharge in France after two years overseas service in the Army during World War I, Mr. Caruth had the unusual and valuable experience of serving under Herbert Hoover as Manager of Transportation in the American Relief Administration, covering the Balkan States with headquarters at Bucharest, Rumania.

It was on October 15, 1923 that Mr. Caruth was employed by the Carter White Lead Company as salesman covering Texas. Later his territory was extended to include Oklahoma, Kansas, Alabama, Georgia and Florida.

When National Lead Company absorbed the Carter Sales Force in 1929, Mr. Caruth was transferred to the Chicago Branch with headquarters in Detroit, Michigan. Mr. Caruth's first executive job with the Company was as Assistant Manager of the Cleveland Branch. This promotion came on January 1, 1936, and a year later he was made Branch Manager.

On March 1, 1942, Mr. Caruth was transferred to the Pacific Coast Branch as Assistant Manager and nine months later became Manager.

Mr. Caruth served as President of the Cleveland Paint, Varnish and Lacquer Association during the fiscal year of 1939-1940.

PRENTISS S. ORR

Manager, White Lead and Oxide Department

Starting as an office boy on November 28, 1916, Prentiss S. Orr, Sales Manager of the White Lead and Oxide Department of the Pacific Coast Branch, has devoted practically his entire business career in the service of National Lead Company.

During his first five years with the Company, excepting a year's service in the Navy during the first World War, Mr. Orr held various positions in the San Francisco office. In 1921 he was transferred to the Sales Department, handling white lead and oxide sales in the City and County of San Francisco.

When the Bass-Hueter Paint Company was merged with National Lead Company on April 26, 1930, Mr. Orr was given the additional duties of handling industrial and jobbing paint accounts and battery oxide sales.

Mr. Orr was promoted to the Managership of the White Lead and Oxide Department on September 1, 1945.

Among the honors that have come to Mr. Orr during his connection with our Company are the Presidency of the San Francisco Paint Salesmen's Club during the 1928-1929 fiscal year and election to the Executive Committee of the Golden Gate Paint, Varnish and Lacquer Association in 1945.

W. C. MINSINGER

Manager, Industrial Sales Department

Prior to his employment by National Lead Company as an industrial salesman on January 1, 1943, W. C. Minsinger had had several years of experience in the Portland, Oregon, territory which fitted him eminently for the position of Manager of Industrial Sales, to which he was promoted on July 1, 1947.

The Portland companies which Mr. Minsinger served approximately three years each and in what capacities follows: Union Oil Company, service station salesman and manager; Cress & Co., building material and paint salesman; C. D. M. Paint Company, a partner and salesman of paint for the industrial and painter trade; Rodda Paint Company, in charge of all industrial, Federal and State business.

H. E. MacCLEARY

Manager, Wallpaper and Sundries Department

Prior to his employment by the Pacific Coast Branch of National Lead Company on February 25, 1946, H. E. MacCleary had served for 18 years in various capacities in the Paint Department of E. I. DuPont de Nemours & Co. Probably his most valuable experience with that company was his Managership of Stores, to which position he was appointed in 1940. He was responsible until his resignation on December 31, 1945, for all store expansion programs and operations, including their locations in all sections of the country and seeing to it that they made money during the first year of operation.

It was on May 15, 1946, that Mr. MacCleary was appointed Manager of the Wallpaper and Sundries Department of the Pacific Coast Branch.

W. P. PEDIGO

Supervisor of Dutch Boy Paint Stores

Learning retail store merchandising and salesmanship the hard way for 10 years, had been the experience of W. P. Pedigo, when on February 18, 1929, he was employed as a salesman by the Bass-Hueter Paint Company, then a subsidiary of National Lead Company.

At the age of 17 Mr. Pedigo started his business career with a large general merchandise store in Fresno, California, in the humble capacity of keeping the basement clean, running errands and doing most of the store's odd jobs. In due course he became shipping clerk in the hardware department, floor salesman and buyer of builders' hardware, and in turn head of the crockery, sporting goods and paint departments. It was while he was serving in the latter capacity that Mr. Pedigo accepted a job as salesman with the Bass-Hueter Paint Company.

Mr. Pedigo's first promotion with National Lead Company came December 1, 1933, when he was made Manager of the Fresno Branch. On November 28, 1935, he was transferred to Sacramento as Branch Manager and on August 15, 1938, to Oakland where he was Manager of the Oakland, Berkley, Alameda and Fruitvale Branches. It was on January 1, 1945, that Mr. Pedigo was brought to the main office of the Pacific Coast Branch in San Francisco as Sales Manager of the Central Division. From this position he was promoted on June 1, 1946 to the Supervisorship of the Branch's Dutch Boy Paint Stores.

During his connection with National Lead Company, Mr. Pedigo has served as a member of the Executive Boards of the Builders Exchange and the Master Painters' Association in Fresno and as President and member of the Executive Board of the Oakland Paint, Varnish & Lacquer Association.

ERIC G. ORLING

Sales Manager, Central Division

Following his graduation from Ohio University with a Bachelor of Science degree in Chemistry in 1935, Eric G. Orling launched his career in the paint industry in the Sales Department of Eagle Picher Lead Company. Subsequently he was transferred to the Joplin, Missouri, research laboratories of that company for training in paint, storage battery, oil refining and rubber technology, preparing him as a salesman of lead and zinc pigments in the Southwest territory, with headquarters at Dallas, Texas.

Upon resigning his position with Eagle Picher, Mr. Orling started employment with National Lead Company on June 15, 1938 as a salesman in our Cleveland Branch. Four years later he was appointed Assistant Manager and on October 1, of that year was transferred to the Sales Department of the Pacific Coast Branch.

Receiving a leave of absence on February 22, 1943, Mr. Orling served the U. S. Maritime Commission for about 2½ years as an inspector of paint manufacturing methods in the Los Angeles and San Francisco areas, devoting time also to analyzing and testing paints, oils, chemicals and drugs.

It was on June 1, 1946, shortly after returning from Government service, that Mr. Orling was appointed Sales Manager of the Central Division of the Pacific Coast Branch. He is also Manager of Export Sales for the Branch.

Mr. Orling is a member of the American Chemical Society and is active in the National and Golden Gate Paint, Varnish and Lacquer Associations.

RAY C. KRUEGER

Manager, Seattle Division

Ten years in the sales departments and factories of manufacturers of paint and allied products was the background of experience that Ray C. Krueger, Manager of the Northern Division, brought to his first job as salesman with National Lead Company of California on July 1, 1918. This valuable experience was gained with the Standard Wallpaper Company, American Paint & Dry Color Company and the Pacific Coast Paint Corporation.

Mr. Krueger's first promotion with National Lead Company came on August 1, 1926, when he was put in charge of a warehouse that had been opened in Portland, Oregon. On January 1, 1932, about two years after the Bass-Hueter Paint Company was merged with National Lead Company, he was made Manager of the Portland Branch.

It was on April 15, 1935, that Mr. Krueger was promoted to the Managership of the Northern Division with headquarters at Seattle, Washington.

Mr. Krueger served as President of the Portland Paint, Oil and Varnish Club during the fiscal year of 1931-1932 and as President of the Puget Sound Paint, Varnish and Lacquer Association during the 1937-1938 fiscal year.

DAN D. ROBERTS

Manager, Portland Division

After a short business experience with the Matson Navigation Company, Dan D. Roberts was employed on September 1, 1921, in The San Francisco Order and Pricing Department of the then National Lead Company of California. During the next three years he also handled the duties of their Traffic Department. On April 1, 1925, he was transferred to Portland, Oregon as a salesman.

It was on March 1, 1943 that Mr. Roberts was promoted to Manager of the Portland Division of National Lead Company.

Mr. Roberts served as president of the Portland Paint, Varnish and Lacquer Association in 1940.

HARRY S. IRWIN

Manager, Southern Division

When the Bass-Hueter Paint Company was purchased by National Lead Company in 1916, Harry S. Irwin had been Manager of that subsidiary's Branch in Portland, Oregon, since 1909. Prior to his employment by Bass-Hueter as a salesman in the San Francisco territory during 1908, Mr. Irwin had worked seven years for the Otis Elevator Company, the last two years of which he had served as Manager of their Portland Branch.

On July 25, 1922, Mr. Irwin was appointed the Los Angeles Division Manager of the Bass-Hueter Paint Company, which was still operating as a separate organization. After consolidation with the Pacific Coast Branch he was made Sales Manager of the Company's Southern Division, Los Angeles, in July, 1930. Two years later Mr. Irwin became Manager.

Mr. Irwin was President of the Los Angeles Paint, Varnish and Lacquer Association during the 1933-34 fiscal year and for several years was Chairman of the Membership Committee of the National Association.

K. C. SPECHT

Assistant Manager, Southern Division

When K. C. Specht graduated from the University of California in 1931, having met his expenses by working for the Safeway Stores and the Electrical Products Corporation, he was unable to obtain employment in industry because of the depression. Nothing daunted, he met the situation by opening a gasoline service station, which he operated until he landed employment with National Lead Company as bookkeeper in the Los Angeles Branch.

On March 9, 1936, Mr. Specht was appointed Assistant Purchasing Agent and inside salesman. Three years later he was made an industrial territory salesman.

Mr. Specht was promoted to the Managership of the Industrial Sales Department of the Pacific Coast Branch on July 1, 1944 and three years later was transferred to the Southern Division as Assistant Manager.

SELLING DUTCH BOY PRODUCTS

The Dutch Boy's prestige has sales value that our salesmen should take advantage of at every opportunity.

National advertising for many years has made Dutch Boy known to millions of home owners, painters and other users and specifiers.

Dutch Boy's reputation for high quality has been carefully built up and even more carefully guarded during generations of use.

Thousands upon thousands of long-lasting, good-looking paint jobs testify to why users prefer Dutch Boy.

Such wide consumer acceptance is the basis of convincing sales points that salesmen can use in selling Dutch Boy.

SELLING DUTCH BOY TO DEALERS

Here are a few that are effective in contacting dealers:

1. The Dutch Boy cuts selling time. This is true of any product that has as wide consumer acceptance as Dutch Boy. Time thus saved can be devoted to customer service or sales of other items in the store.
2. The Dutch Boy helps build reputation for quality. Every successful dealer knows that quality merchandise, such as Dutch Boy, is the only sure foundation for a substantial and profitable business.
3. The Dutch Boy assures repeat business. Users of Dutch Boy are satisfied customers and, it naturally follows, are repeat customers. Most dealers consider satisfied customers as their stores' best advertisements, helping immeasurably to increase their business.
4. Dutch Boy attracts trade. It naturally follows that customers drawn to a store by Dutch Boy's popularity are also prospects for other profitable items.
5. The Dutch Boy draws volume business. Most painting contractors favor Dutch Boy and this is volume business—the mainstay of every successful paint store.

SELLING DUTCH BOY TO PAINTERS

Some of the foregoing sales points will also interest painters:

1. The Dutch Boy helps sell paint jobs. When the painter mentions he will use Dutch Boy, it is an important point in his selling effort that gets an immediate favorable response, so wide is Dutch Boy's consumer acceptance.
2. The Dutch Boy helps build reputation for quality. The slogan, "Dutch Boy is good paint's other name" is in the minds of thousands of property owners, so when the painter promises to use Dutch Boy, the prospect is more than half sold on the idea that the job will be a quality job.

The fact is, the Dutch Boy's reputation for quality products is a valuable sales asset in contacting *any* type of prospect.

TWO LINES OF DUTCH BOY PRODUCTS

Dutch Boy paint products are marketed in two separate lines—differing in package design, distribution policy and basic composition.

One line, since its package design is in black and yellow colors and since it includes only white lead, oxides and companion products, is commonly called "the black and yellow line" or "the white lead and oxide line."

The other line, since its package design is in blue and white colors and since it includes only multiple pigment paints, is commonly called "the blue and white line" or "the mixed paint line."

The black and yellow line is permitted a wider distribution than is accorded the blue and white line. However, in each case the selection of outlets must be made with great care to serve the best interests of both dealers and the Company, and in strict conformity with the national distribution policy which is entrusted to your Branch Management to enforce.

SALES POLICIES

In carrying out the national distribution policy, these points should be kept in mind in selling our two paint lines:

1. Dealers selected to handle the blue and white line should also be sold the black and yellow line or at least those items that will put them in a position to meet customer demand.
2. Dealers selected to handle the black and yellow line *only* should not, of course, be sold any items in the blue and white line.
3. Push the sale of our blue and white line of paints at every opportunity. Promote and demonstrate their advantages even to the prospect who continues to prefer white lead, being very careful, however, not to question his judgment in choice of products. If nothing else, this will familiarize the confirmed "white-leader" with the merits of the new line against the time when he may decide to change his type of paint. The same policy applies, of course, to our interior products, both in the black and yellow line and in the Wonsover line of flat wall paints.

In establishing the foregoing sales policy, there is naturally no intention of disparaging white lead in the slightest degree. White lead makes as satisfactory a paint today as it ever did. As always, it can be depended upon for unexcelled working qualities, adhesion, film integrity, and extreme durability. Where it suffers in comparison with modern-day mixed pigment paints is in appearance. These provide vastly greater hiding and also maintain a cleaner, brighter look over the years, which of course accounts for their wide acceptance and large sale.

The fact must not be overlooked that paint technology has advanced by leaps and bounds in the last couple of decades. New materials, new equipment, new processes have been developed. Old materials, old methods have been improved. Specifically, mention might be made of "titanium" (pioneered, incidentally, by National Lead Company). With the advent of titanium di-oxide pigments have come house paints possessing better coverage, whiteness, tint retention and self-cleaning ability. Then there are the newer vehicles, assuring improved sealing, leveling and wearing qualities.

Somewhere along the line, every salesman is bound to run into the question: "Which is better —the Dutch Boy Blended House Paint or white lead and oil?" Considering that we have been advocates of straight white-lead paint for so long, this question is inevitable. There is only one answer, if the question is met fairly and honestly. That answer, emphatically, is, "*the Blended Paint.*" And the reason why is that our multiple pigment paint, in addition to matching white lead's durability and other desirable qualities, outmatches it in the thing property-owners want most—maintenance of fine appearance.

Here are a few of the advantages that may be claimed for *our* multiple pigment exterior paints over single pigment, white lead paint:

1. Produce whiter white jobs, thus meeting the demands of the consumer.
2. Give tinted jobs that hold their color longer.
3. Provide greater hiding power, thus making possible one-coat repaint jobs in some cases. Also give more solid-looking jobs.
4. Produce harder films, thus minimizing dirt collection.
5. Each product in the line is especially designed for a particular purpose; thus is better suited for the job than any all-purpose paint.
6. More "fool-proof"; thus the inexperienced user is less likely to obtain an unsatisfactory job.

In conclusion, it might be pointed out that our new multiple pigment paints serve the best interest of all concerned—the property owner, the painter, the dealer, the salesman, and the Company. The property-owner gets more value for his paint dollar, particularly in appearance. The painter, in giving this greater value, builds his business on a sounder long-term basis. The dealer secures a larger and more profitable volume. Sales, likewise, are larger for the salesman and for the Company. Having a product perfectly in key with the trend of the times, both can look forward to an expanding instead of a shrinking market.

BLUE AND WHITE LINE

The blue and white line is composed of multiple pigment paints in white, tints, and sash and trim colors, for exterior use only; and one-coat flat wall finishes in white and tints.

To the dealer this means that with a comparatively small investment he has a line of the highest quality ready-to-use paints on the market to meet any exterior painting need of his customers, as well as the demand for one-coat interior wall jobs. Moreover, the profit margin is most attractive, turnover is rapid and the products are easy to sell because of the wide consumer acceptance of Dutch Boy.

To the painter who prefers ready-to-use mixed paints, the blue and white line not only meets his exterior paint and one-coat flat wall needs at a reasonable cost, but its use assures him the best possible results and, consequently, satisfied customers. Moreover, the Dutch Boy gets him customer approval when the question comes up as to what brand of products he will use.

When the blue and white line was launched we had and will continue to have certain general advantages, among which are:

1. The prestige of the Dutch Boy with painters, property owners, architects and other users and specifiers of paint products.
2. The outstanding reputation of our Company for integrity and as producers of time-tested, high-quality products.
3. The widely known fact that the Company has had long experience as a manufacturer of paint materials and products.
4. There is never any compromise with quality in the formulation of these paints. As producers of practically all the pigments they contain, we are thoroughly familiar with their characteristics and relative advantages. The blue and white line is therefore engineered without bias to meet the needs of the consumer.
5. The best equipped paint laboratories in the country, staffed by experts with years of experience and the reputation for leadership in advancing paint technology.
6. The latest and most efficient manufacturing equipment, operating on a scale not generally possible in the paint industry.
7. The most modern of control systems, taking full advantage of the type of manufacturing operation and using the latest methods and equipment.

The foregoing not only include some sales points but also assurances that Dutch Boy paints will continue to lead competitive products in quality and results.

Dutch Boy Primer-Undercoater

This product has exceptional merits:

1. Provides dense hiding and an even-sealing first coat on either new exterior wood or old painted surfaces.
2. Dries to a low sheen.
3. Drying time: overnight—can be recoated safely in 48 hours.
4. Ideal primer in two-coat system, using Dutch Boy Bright White or one of our tinted paints as a finish coat.
5. Dutch Boy Primer-Undercoater should always be used as received in the package.
6. Normal spreading rates—500 square feet per gallon on smooth unpainted wood; 600 square feet per gallon over old painted surfaces.

Dutch Boy Bright White

This is a non-tintable outside white paint and possesses outstanding qualities:

1. Gives exceptional hiding.
2. Produces a dazzling white exterior finish that *stays* white.
3. Presents a surface that continually renews itself, permitting rain to wash away dirt, thus keeping its fine appearance.
4. Has great durability, wearing down slowly and evenly to a satisfactory surface for repainting.
5. Especially designed as a white finish coat paint for use over Dutch Boy Primer-Undercoater, either on new unpainted wood or on old painted surfaces.
6. Will produce a satisfactory one-coat job over a previously painted surface that is in good condition.
7. A finish coat paint that should be applied in *white only* and as received in the package.
8. Spreading rate—600 square feet per gallon.

Dutch Boy House Paint in Color

Our line of colored house paints has a number of superior qualities:

1. Formulated to meet the demand for clean, sharp tints of excellent color retention under weather exposure.
2. Produce surfaces that not only look their best when freshly painted but that retain their brightness and cleanliness as time goes on.
3. Especially formulated to assure stability in color and uniformity in appearance.
4. Can be intermixed to produce intermediate tints.
5. Should be used just as mixed in the can over Dutch Boy Primer-Undercoater, which may be tinted to the approximate shade of the respective House Paint with colors-in-oil.
6. The number of tints available cover the range of light shades most commonly used on exterior surfaces.
7. Spreading rate—600 square feet per gallon.

Dutch Boy Sash and Trim Colors

This is not only a high quality line but it has a number of special uses:

1. Colors are true and retain their gloss and brilliancy for a satisfactory time, due to the high quality of the color pigments and paint oils used in their manufacture.
2. Remarkably durable, smooth as enamel and easy to apply.
3. Dry to hard, high-gloss finishes.
4. Can be intermixed to produce any number of intermediate colors, but should not be used as tinting materials in exterior paints.
5. Ideal for exterior use on parts of the home calling for strong colors, such as sash, shutters and doors, as well as for store fronts, fire escapes, fences, railings, signs, decorative metal work, lawn furniture and play equipment.
6. When used on new wood surfaces, the first coat should be Dutch Boy Primer-Undercoater, which may be tinted to a shade of the trim color selected.
7. Before applying to new or old weathered metal surfaces, all rust and scale should be removed and a coat of Dutch Boy Semi Quick-Drying Red Lead paint applied.
8. Should not be thinned, but used just as they come in the can.
9. The line includes the most commonly used colors, plus black and white.
10. Spreading rate—600 square feet per gallon.

Produced Magnesium

In addition to mining and metal-processing activities, National Lead Company contributed to the success of the nation's metal program by constructing and operating a plant for the production of magnesium and its alloys which were needed in the manufacture of aircraft parts, incendiary bombs, tracer bullets and flares. In response to the request of the Defense Plant Corporation of the Government, the plant was built in northern Ohio where there are extensive deposits of dolomite, a magnesium-bearing limestone. Ground was broken in July, 1942, and within four months a pilot plant was in operation. Within less than eight months, the main plant was brought into production.

A Record of Achievement

The genius of our management and the devotion to duty of our employees in meeting the extreme demands of war-time America have been responsible for a record of achievement of which we all may be proud.

THE DUTCH BOY—A BIOGRAPHY

No history of the early days of National Lead Company would be complete without the story of the development of the Dutch Boy Painter trademark.

This famous little fellow was created in 1907 for a definite purpose—to solve a specific merchandising problem. National Lead Company was at that time marketing twenty-one different brands of white lead—Anchor, Armstrong and McKelvy, Collier, Atlantic, Beymer-Bauman, Cornell, Brooklyn, Davis-Chambers, Shipman, Fahnestock, Lewis, Salem, Jewett, Morley, Phoenix (Eckstein), Red Seal Southern, Sterling, Union, Missouri and Bradley. Each of these brands was popular in some section of the country but none was sold nationally.

How best to advertise these brands was the problem. To continue advertising each separately in the locality where it was marketed would have been costly and inefficient. To have advertised them all together nationally would have been impractical because it would have been an unwieldly arrangement and also would have led to a conflict of brands in the minds of the consumers. Nor was it sound procedure to drop the local brands and substitute only one national brand. It would have meant sacrificing the prestige enjoyed by each local brand—a most valuable asset.

Local Brands Tied Together

The solution was the Dutch Boy trademark, which was placed on each package without interfering with the local brand it carried. Thus all the brands were tied together, the prestige of the local brands was retained and the power of national advertising supported all of them by the simple means of featuring the Dutch Boy.

The quality of the product and the power of National Advertising soon put the prestige of the Dutch Boy trademark in the ascendency over the various local trademarks. As soon as this was obvious, steps were taken to subordinate the local brands to the Dutch Boy. Local trademarks were relegated to the lids of white lead kegs and the Dutch Boy name and illustration was used prominently on the sides of the kegs. Today the Dutch Boy has replaced all local brands on the lids as well as on the sides of our white lead kegs.

What is more, the Dutch Boy became so well and favorably known to so many types of trade that he was put to work as a trademark on other National Lead products, both paint and metal.

Development of a Personality

Several factors contributed to the prestige of the Dutch Boy, such as advertising and the quality of the products which he represents, but his own gay, pleasing personality was also responsible for his quick rise to nation-wide popularity and his sustained hold on the buying public. The development of that lovable personality was no accident but was planned carefully and executed by one of the best portrait painters of the day. The story of the creation of the Dutch Boy

and his varied functions is one of the most unique and interesting in the history of American business.

The "daddy" of the Dutch Boy was O. C. Harn, then Advertising Manager of the National Lead Company, who gave specifications of his idea to a Dutch artist named Yook for the first preliminary sketches. The boy was intended at first only as an advertising character but later, when search began for a suitable national trademark, L. A. Cole, then President, suggested that the Dutch Boy Painter be adopted. This was done and one of Yook's pencil sketches was turned over to Lawrence Carmichael Earle, noted portrait painter, with a commission for an oil painting which would give the boy the breath of life. That was in 1907.

"Mike" Brady the Original

An interesting sidelight was that the boy who posed for the portrait was an Irish lad by the name of Michael Brady, a "regular feller" called "Mike" by his playmates and who, incidentally, became a well-known cartoonist.

The original oil painting of the Dutch Boy trademark is kept at Headquarters and is considered so valuable that it has never been loaned to lithographer or printer for reproduction purposes. They must do their work where it is hung.

Animated Trademark

So vivid a personality did the artist create that it was soon discovered the Dutch Boy could be recognized easily in postures other than the familiar trademark position. No matter whether he is depicted painting a house, taking part in various sports or even standing on his head, the Dutch Boy never loses his identity as the trademark of National Lead Company. This is unique in trademark history, the Dutch Boy being one of very few today that is shown in other than trademark position.

The Dutch Boy—Salesman

What is more important to the Company's interests is the fact that the Dutch Boy's warm, honest personality inspires confidence in his wares, which, once justified, increases many fold. He is welcome wherever he has served and there is no need to introduce himself where he hasn't been on the job. He's a great little salesman, as those who have used him to help make sales have discovered.

OUR FUTURE

The future of our Company looks bright. Its finances are on the soundest possible basis. Its reputation for quality products and fair dealing is of the highest. Its Management includes men of great ability, who are alive to competitive conditions and the need for continued progress in merchandising and product development. Its rank and file of employees are loyal, conscientious and have a feeling of security engendered by the Company's efforts in behalf of their welfare and best interests. All of which makes for continued success in our industry.

OUR COMPANY . . .

ITS FAR-FLUNG INTERESTS

The following paragraphs about corporations in which National Lead Company is interested through ownership of all or part of the capital stock make it clear how they help diversify our products and extend our markets, thus adding to our Company's financial stability.

American Bearing Corporation, Indianapolis
Manufacturers of precision bearings for diesel engines.

American Lead Corporation, Indianapolis
Smelters of secondary metals containing lead, tin and antimony.

Baker Castor Oil Company, New York
Manufacturers of castor oil, several types of which are used in paint making.

Canadian Titanium Pigments Limited, Montreal
Distributors in Canada of titanium pigments.

Evans Lead Corporation, Charleston, W. Va.
Distributors of lead oxides. When acquired in 1930 as the Evans-Wallower Lead Company, it added the fumed process to our method of manufacturing lead oxides.

Hoyt Metal Company of Great Britain, London
Manufacturers of anti-friction metals.

Morris P. Kirk & Sons, Inc., Los Angeles
Manufacturers of metallic lead products, lead and zinc alloys and lead oxides.

Magnus Brass Mfg. Co., Cincinnati
Manufacturers of locomotive specialities.

Magnus Metal Corporation, Chicago
Brass founders and manufacturers of railroad journal bearings and castings.

Master Metals, Inc., Cleveland
Smelters of secondary metals containing lead, tin and antimony.

National Lead Co. S.A. (Argentina), Buenos Aires
Manufacturers and distributors of paint and metal products in South America.

St. Louis Smelting & Refining Company, St. Louis
Miners, smelters and refiners of lead.

The Canada Metal Company, Ltd., Toronto, Montreal, Winnipeg, VanCouver
Manufacturers of lead products, brass and bronze, dross smelters.

Titanium Pigment Corporation, New York
Manufacturers and distributors of titanium pigments.

ABOUT RESEARCH and PRODUCTION

There is a close relationship between the Sales, Research and Production Departments. Certainly, therefore, every salesman would want to be well-informed about these departments upon which he depends for maintaining the superior quality of Dutch Boy products and for whose existence he is responsible to an important degree.

Quality products help assure successful selling, and successful selling and advertising help assure the continued employment of factory and laboratory workers. The social-minded salesman should therefore, get an added satisfaction out of his efforts in knowing that he is importantly responsible for the livelihood of so many of his fellow employees.

It is our belief that the salesman will find in the succeeding pages the information he wants to know about our Laboratories and Production Department. It should add greatly to his feeling of confidence in the Company and its products. It should increase his self-confidence materially.

OUR RESEARCH LABORATORIES

The Research Laboratories of National Lead Company were started in 1892, and since then have presented an interesting story of continued progress and development exemplifying the benefits that accrue from the cooperative efforts of management and research.

The first Laboratory was located in Adams Street, Brooklyn, and was under the direction of Dr. G. W. Thompson who, with only one assistant, undertook to handle all of the chemical problems arising in the various plants of the newly formed National Lead Company. At that time the principal functions of the Laboratory were to maintain the high quality of the Company's products through regular analyses of samples of the plants' output, and develop new products. Improvements in various manufacturing processes naturally resulted.

The original Laboratory was soon found to be inadequate and in 1899 a four story building at 129 York Street was purchased and converted to accommodate the growing staff. Within a very few years an addition was erected where metallurgical investigations were conducted. Practical tests were made on pigments, drying oils and paints in this same building.

LABORATORY BUILT

By 1925 the Laboratory staff numbered about fifty and the scope of investigations had increased to such extent that it was necessary to build another, even larger Laboratory. The present five story building at the corner of York and Jay Streets, Brooklyn, was erected at that time.

In all its history there have been only a few changes in the directorship of the Research Laboratories. Dr. Thompson, after his retirement in 1938, was succeeded by R. L. Hallett and a few years later when Mr. Hallett was appointed Chief Chemist of National Lead Company, Alex Stewart became Director of Research.

LABORATORIES DEPARTMENTALIZED

The organization of the Laboratories has been changed from time to time to meet changing demands. Special departments have been established to handle the various phases of the work. Each is under the guidance of a well-trained, experienced individual who is responsible for all of the activities of his department and who reports directly to the Director of Research.

ANALYTICAL: The General Analytical Department conducts periodical examinations of National Lead Company's various products, analyzes materials submitted by other departments in connection with research and service work and handles all analysis work submitted by our various branches.

RESEARCH AND SERVICE: The Paint and Pigment Research and Service Department comprises four divisions—Sales Service, General Paint Research and Service, Sayville Experimental and Test Division (atmospheric and marine exposures) and Metal Paint Research and Service.

METALLURGICAL: Metal problems including metal refining, improvement of metal products and processes, and general physical metallurgy are handled by the Metallurgical Department. This department is located in the new laboratory building and also operates a pilot plant at 129 York Street.

STORAGE BATTERY: The Storage Battery Department has been constantly increasing the scope of its activities. The lead acid storage battery is highly important in these days of automotive transportation and the number of problems handled by this group is increasing constantly.

ORGANIC VEHICLE: Problems concerning organic products are handled by the Organic Vehicle

Dutch Boy Wall Primer

This sealer and paint coat combined was designed to assure satisfactory white lead jobs on interior plaster surfaces. Some of its outstanding qualities:

1. Seals all porous surfaces.
2. Hides well over patched or discolored plaster.
3. Brushes easily.
4. Spreads far (average 800 square feet per gallon on smooth plaster).
5. Adheres firmly.
6. Forms the tenacious foundation required for long-time service under succeeding repaint coats.
7. Low in cost applied, because of its spread, hiding and ease of application.

TIPS ON USE

New Plaster

1. If finished job is to be colored, tint Wall Primer to the shade of the finishing coat paint.
2. Apply two coats of White Lead and Lead Mixing Oil paint over Dutch Boy Wall Primer on new plaster.
3. To overcome excessive porosity, use one part Wall Primer to three parts White Lead and Lead Mixing Oil flat in second coat.

Repainting Plaster

1. One part Primer and three parts white lead flat paint also makes a superior first coat for two-coat work on old painted plaster.
2. On patched wall surfaces, spot paint new patches with Wall Primer before applying first paint coat.

Research Department. It is the duty of this group to develop new vehicles, improve present vehicles and the processes for making them and, in general, to investigate all problems involving organic chemistry. The rubber laboratory, for example, is part of this department. Investigation of organic by-products is an important part of the work.

MICROSCOPIC AND PHOTOGRAPHIC: Physical testing, microscopy, spectroscopy and photography are all handled under the direction of the Microscopic and Photographic Department. Problems concerning physical examination of paint materials and metal products are handled by this group.

NEW PRODUCT: In every research laboratory, there is one department which devotes its attention to pure scientific research. All departments are naturally on the alert for possible new products and processes but the actual research work involved is handled under the direction of the New Product Research and Development Department.

CORROSION: The function of the Corrosion Department is to study the various theories of corrosion, investigate corrosion testing methods, develop and investigate corrosion inhibitive systems. In general, it is the duty of this department to study corrosion from the broadest possible viewpoint.

ADMINISTRATIVE: The Administrative Department comprises the executive, purchasing, accounting and library divisions. The functions of the first two are self-evident. The library division in addition to its obvious activities, such as preparation of literature surveys, compilation of market data and reviewing of current technical publications, also assists in the preparation of patent applications.

MAINTENANCE: The Maintenance Department is responsible for the upkeep of the buildings and the general equipment. This is important, because the best efforts of the staff can be exerted only under proper working conditions.

All departments cooperate so that every detail of each problem is given adequate attention by competent individuals. Regular meetings of the department heads, with special meetings of certain groups as the need arises, are of considerable assistance in maintaining the necessary cooperation.

Other Laboratory Activities

The Laboratory activities are not confined to the Brooklyn building. Members of the staff regularly visit our various manufacturing branches in connection with their investigations. They also cooperate with various institutions where investigations are being conducted under industrial fellowships.

The Sayville Experimental Station, which was started in 1916, and our Fresh Water Test Basin at New Kensington, Pa., started in 1941, are really parts of the Laboratories. Our regular paint products and also new pigments and vehicles are subjected to exterior tests at these stations. Products are not released for the general market until they have been given suitable tests and have demonstrated their value fully in practical exterior exposure programs.

Achievements

The achievements of the Research Laboratories are reflected by the many diversified products which the company manufactures for home and industry. The Research Laboratories have contributed greatly to the development, manufacture and sales of these products and have been an important factor in establishing the Dutch Boy as the symbol of quality.

OUR PRODUCTION DEPARTMENT

It has always been Company policy to spare no expense or effort in producing products of the highest quality on the market. The constant research and study of our Laboratories and Production Department, backed by a progressive Management, have been responsible for many improvements in manufacturing processes and the development of new products. The salesmen, too, have had an important share in this record of progress, reporting, as they have done throughout the years, the demand for new and improved paint products.

The paints and paint products marketed by National Lead Company are manufactured in factories that are located strategically from a distribution standpoint in or near the cities of Chicago, New York, Philadelphia, St. Louis, San Francisco and Los Angeles. The product list in supplement No. 2 of this Manual will inform the salesman where each item is manufactured.

Improving Processes

Improved manufacturing processes and the production of new products have usually called for new and, oftentimes, especially designed equipment and machinery. Their purchase has been approved by the Management as the need has arisen, as have the expenditures for guarding the health and safety of our 3,500 or more factory employees. In the latter field the Company has always been in the forefront.

In addition to constantly improving our manufacturing processes and equipment, an equally important factor in assuring the high quality of our paint products is the careful and frequent testing by chemists during the various operations of production. In most cases the number of tests made to maintain quality exceeds materially the number of operations required in manufacture. This is true of our white lead and titanium pigments, as well as in the manufacture of white lead in oil, straight lead paints and multiple pigment paints.

Cutting Costs

While considerable time of our chemists, engineers and manufacturing experts has been concentrated on producing quality products, the cutting of costs to a minimum has by no means been neglected. So successful has been this effort that we have always been able to keep our price schedules in line with those of our competitors, despite the fact that in the case of most of our products the quality is superior.

Making Paints

One of our most interesting operations in manufacturing is that of our paint plants in or near Chicago, New York City and Los Angeles. These plants were erected in 1946 and 1947 in accordance with the most modern designs that could be devised to assure the greatest efficiency in manufacture. They were equipped with machinery of the latest design and some of them are amazing in performance. The manufacturing process was planned to achieve the maximum in mass production. In the description that follows we are confining ourselves to one plant, inasmuch as the three are fairly comparable in equipment and operation.

Gravity Flow Type

The plant is a gravity flow type, the raw materials being transported to the top floor of the four-floor building and then, by their own weight, flowing down floor by floor as soon as they are released after the different processing operations.

The fourth floor is devoted to paste mixing; the third to grinding; the second to paint finishing; and the first floor to filling, labeling and packing.

Pastes Mixed in Heavy-Duty Equipment

The different dry pigments used in our paints are transported to the fourth floor on a ten-ton elevator and the liquids necessary to paste mixing are pumped up through pipes from storage tanks. These raw materials are of course transported to the different mixing units where the first step is taken in processing the respective paints.

The paste mixing equipment is of an extremely heavy-duty type to assure thorough mixing. This is a very critical step in the manufacturing process, since proper mixing assures easier grinding and best ultimate pigment dispersion.

Machines Influence Gloss

When thoroughly mixed, the pastes flow down to the different types of grinding machinery on the third floor, which, in fact, is a mezzanine floor. If a high gloss paint is to be produced such as sash and trim colors, the proper paste mixture is ground in a machine especially designed for that purpose. If a moderate gloss is wanted, such as in a primer, another type of grinder produces the desired results with the proper paste mixture.

Pebble Mills Operate Economically

Suspended on a level with the mezzanine floor are pebble mills which can be operated at night without supervision, except a check-up by the night watchman on his rounds to preclude damage by over-heating or some other mechanical failure. Should such occur, the night watchman simply turns off the power and the necessary repairs to the pebble mills are made the following day.

When the pastes are ground to the satisfaction of the operator, they are released to flow down to their respective tanks on the second floor. Here is where the final steps in manufacture are taken and where there are some unusually interesting processes and equipment features.

Liquids Incorporated First

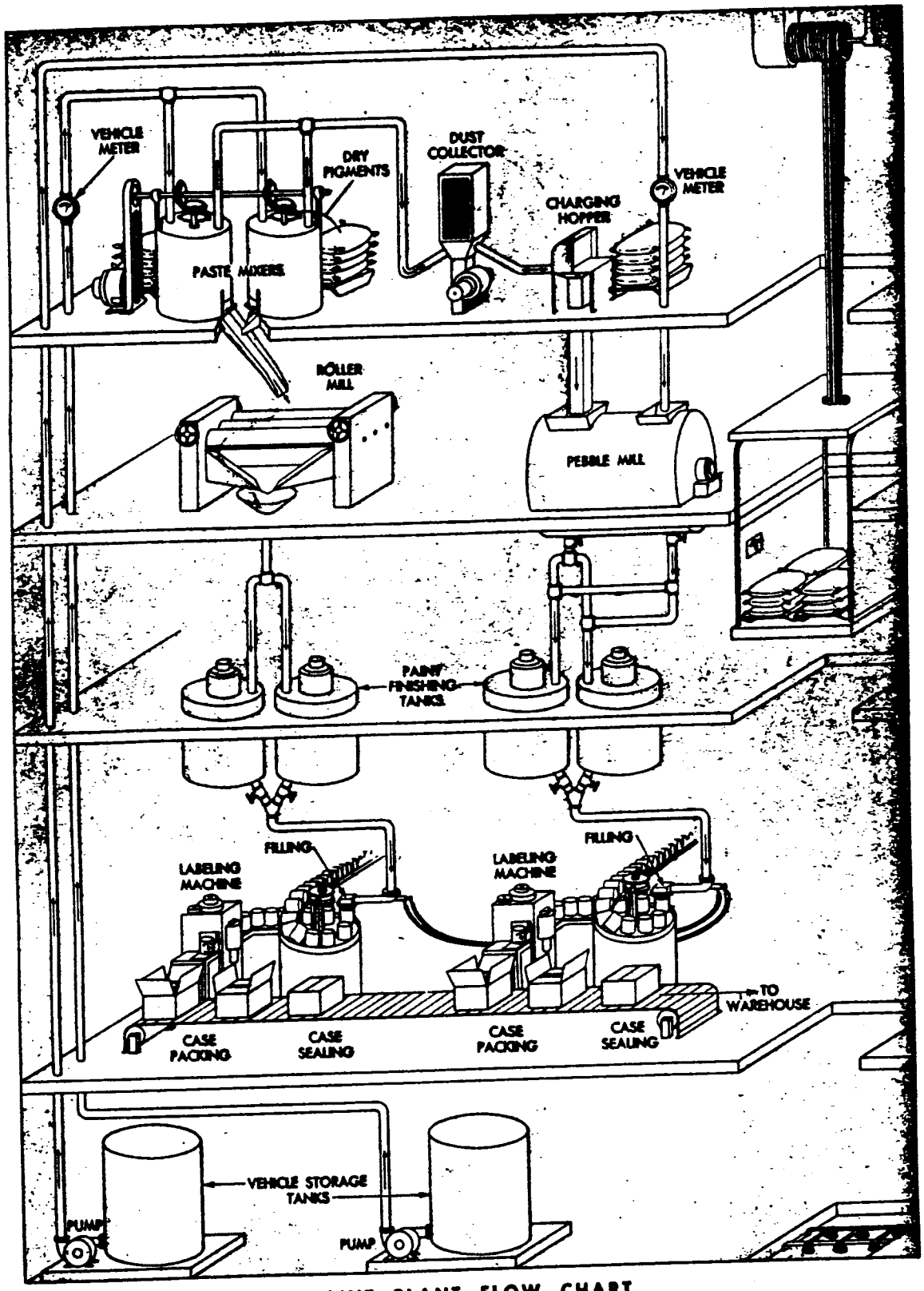
Contrary to the usual procedure in most paint factories, all the liquid ingredients used in our paints are introduced into the paint-finishing tanks before the paste mixtures are incorporated. By this procedure the agitator, which is started as soon as the paste mixture begins to flow in, is not required to stir heavy materials at any time during the process. This effects a saving in power, since a lower horse power motor can be used to operate the agitator than if it were required to mix pastes that are heavy until thinned with liquids.

The agitator is a turbine propeller type, which incorporates the liquid into the paste mixture much more thoroughly and quickly than does the more commonly used circulating type.

Liquids by Remote Control

Liquids are introduced into the paint-finishing tanks through an ingenious piece of equipment known as a remote-control switch system. The amount of each liquid needed in any particular batch is set on the respective meters in the same manner as one might punch an adding machine. Then switches are thrown and the vehicle pumps deliver the indicated amounts of liquids from their respective storage tanks through the meters to the paint-finishing tank. In many instances the particular oil or liquid is delivered at the rate of 50 to 75 gallons per minute.

A feature of this equipment is that the *same oil or liquid* can be delivered *at the same time* through a meter on the second floor to a paint-finishing tank and through a meter on the fourth floor to a paste-mixing tank.



PAINT PLANT FLOW CHART

the age of nineteen, obtaining employment with a Frederick, Md., merchant by the name of August King. The friendship between the two men became so deeply affectionate and mutually trustful that at the suggestion of Augustus they assumed the role of brothers, under the name of Graham, united their capital and launched a business and personal relationship that lasted until death separated them.

When the Brooklyn White Lead Company was incorporated in 1825, John Graham accepted stock of none too promising value at that time in payment of a substantial loan he had made previously to Augustus without security. Further evidence of their mutual faith was the fact that they never kept separate accounts, took funds each needed from a common purse and when final settlement was made, divided their joint holdings without the slightest disagreements.

Leavitt Met Financial Crisis

David Leavitt, the first President of the Brooklyn White Lead Company, was probably the greatest financial genius in the early history of the white lead industry.

In addition to maintaining a sound financial policy for the Brooklyn White Lead Company, Mr. Leavitt served as President of the Fulton Bank from 1826 to 1837 when he was elected to the Presidency of the American Exchange Bank of New York, which became one of the most powerful banks in the city.

It was in 1843 that he faced a severe test of his ability as a financial organizer. He and his bank were heavily invested in State of Illinois Canal bonds and a large additional amount of money was needed to complete the project and protect the investment. After a long bitter fight the Illinois legislature finally voted to pledge the credit of the State and Mr. Leavitt made two trips to London to supplement local assistance with loans from two of the great banking houses of that city. At that time Thomas Ford was Governor of Illinois and later in his "History of Illinois" he gave Mr. Leavitt credit for the success of the negotiations.

The Brooklyn White Lead Company became largely a family organization and when their father died, first Edward Leavitt and then at his death Sheldon Leavitt took the Presidency, but Reginald P. Rowe was the real manager from about 1885 until it was merged into the National Lead Company.

Atlantic Branch Formed

On April 3, 1890 the Jewett White Lead Company, the Bradley White Lead Company and others were consolidated with the Brooklyn White Lead Company under the name of the National Lead and Oil Company of New York. On December 8, 1891, all of these properties were acquired by the National Lead Company and were operated as the National Lead and Oil Works Branch with R. P. Rowe as Manager. On that date Mr. Rowe was also elected a member of the first Board of Directors of National Lead Company.

Meanwhile the Atlantic White Lead and Linseed Oil Works had also been made a branch of the National Lead Company and on July 1, 1893, the business of the two branches was consolidated into the Atlantic Branch with Romulus R. Colgate as Manager. He also had been elected in 1891 to National Lead Company's first Board of Directors. Mr. Rowe was made Manager of the Atlantic Branch in 1901 and was elected Vice-President of National Lead Company in 1904, holding both positions until his death.

Jewett Uses Whale Oil Factory

Next to the Brooklyn White Lead Company, the oldest manufacturer of white lead among our founding companies in the New York area was The Jewett White Lead Company, first organized as John Jewett & Sons. In the Atlantic Branch office is a large bottle filled with white lead and labeled, "Sample of the First White Lead Made at the Jewett Works, June 1830."

The Jewett family established their first white lead mills in an old whale oil factory, which had its origin in Revolutionary days. During the Civil War the main building of the Jewett Works was used as a barracks to train Federal soldiers.

The organizers of the white lead concern were John Jewett, John Jewett Jr., James R. Jewett and George W. Jewett. The business was managed successfully for about 50 years when all the members of the original family having died, it was reorganized in 1882 with only the treasurer, Charles H. Jewett, bearing the family name.

When the company was absorbed by National Lead Company ,its plant had a capacity of 3500 tons of high quality white lead annually.

Atlantic Most Successful

The "Atlantic White Lead and Linseed Oil Company," incorporated in 1866, was probably the most successful financially and manufactured products most widely accepted by the trade of any of our founding companies in the New York area.

Almost from its incorporation, the company paid substantial dividends to its stockholders, often over 20% on its capital stock.

Robert Colgate was the first President of the Atlantic White Lead and Linseed Oil Company and its principal stockholder, owning 330 of the 500 shares issued of $1,000 each. Edward Austin owned 140 shares, A. W. Colgate 25 shares and S. J. Colgate 5 shares.

Almost immediately after incorporation, the Robert Colgate & Company, founded in 1845, was appointed general sales agents of the Atlantic White Lead and Linseed Company with an annual commission of 2½ per cent on all sales and 1½ per cent on "all receipts and disbursements made for account of the Company." This arrangement was cancelled effective January 1, 1886, due to the death of Robert Colgate during the preceding year. The business was conducted thereafter in the name of the Company instead of through the agents, Robert Colgate & Company.

Paid Secretary $6,000 in 1885

When Samuel J. Colgate was elected President on October 30, 1885 all the capital stock was owned by the Colgate family, but at the subsequent annual meeting George W. Fortmeyer, a long-time employee and who many years later was to become Manager of the Atlantic Branch and a Director of National Lead Company, was elected Secretary of the Company at an annual salary of $6,000.

In the early days of his employment, Mr. Fortmeyer was practically a one-man business. In the morning he would hitch up his horse and buggy and call on the trade. In the afternoon, he would pack, bill and deliver the products for which he had orders.

With the exception of the Cornell Lead Company of Buffalo, little of historical interest is known of the other New York State founding companies, which included the Bradley White Lead Company, the Ulster Lead Company and the Union White Lead Manufacturing Company.

BUFFALO

First Buffalo White Lead Manufacturer

It was early in the year 1840 that a young chemist by the name of Henry Roop left his home in Buffalo for a visit with friends in New York City and vicinity. While making a few business calls in Brooklyn, he took advantage of an opportunity to inspect a white lead factory, asking a number of questions to satisfy the natural curiosity of a budding young scientist.

Returning to Buffalo he immediately began an intensive study of the practical and scientific phases of white lead manufacture with the idea in mind of entering the business.

When he considered himself sufficiently informed to take the risk and with borrowed capital of $3,000 he built a small wooden shop and started the manufacture of white lead. This was in 1841 and Henry Roop became the first manufacturer of white lead in Buffalo.

The product was fair in quality, considering the rather primitive method of manufacture. For instance, he had two sets of stones which were driven by horses.

Buffalo Mayor Invests

The infant business survived the first year and at that time attracted additional capital amounting to $9,000. The business began to make money and shortly afterwards got the attention of Sheldon Thompson, who was the first mayor of Buffalo to be elected by popular vote. He added $20,000 to the capital and in 1844 the plant was expanded and equipped with the latest machinery of the day.

Shortly after getting into operation, all the new buildings were completely destroyed by the historic gale of 1844. With no break walls to protect it, the entire lower city was submerged by the huge waves whipped up from Lake Erie by the high winds.

Undaunted by the catastrophe, the company moved all the machinery that could be salvaged to a new location, where an even larger and better equipped factory was built. Prosperity followed, according to an old account, which stated that "the concern made money as fast as any factory ought to."

During this period in white lead history, the principal source of supply of pig lead was the "Galena District" in northern Illinois and Southern Wisconsin. An interesting custom of the times was the auction of pig lead held daily by the smelters. Sheldon Thompson's son, A. P. Thompson, was his father's buyer for many years, often riding to and from the mines on horseback. The lead was carted by oxen to Milwaukee and brought down the lakes in sailing vessels.

When Mr. Roop retired from active business because of ill health, the firm's name was changed to Thompson & Company and was taken over by Sheldon Thompson and his son, A. P. Thompson, and his son-in-law, Edward Warren. Sheldon Thompson died in 1851 and Mr. Warren in 1863, the business being carried on by A. P. Thompson.

Katherine Cornell's Ancestor Enters Business

It was in 1852 that Mr. Roop, his health recovered, again entered the white lead business. With Gibson T. Williams and Samuel G. Cornell he formed the Niagara White Lead Company. Mr. Cornell, it is interesting to know, was the great-grandfather of the famous American actress, Katherine Cornell.

In the early 1860's Mr. Roop again retired because of ill health and the Niagara White Lead Company passed into the hands of Samuel G. Cornell and his son, S. Douglas Cornell. At the same time they purchased Thompson & Company, abandoned the latter's plant and consolidated the two companies under the name of S. G. Cornell & Son.

About two years later A. P. Thompson bought back a half interest from the Cornells and in 1867 the Cornell Lead Company was incorporated. Samuel G. Cornell died in 1879 and his son in 1910.

When the company was sold to National Lead Company, it became known as our Buffalo Branch, and A. P. Thompson served as Manager and as one of the first elected Directors until his death in 1911.

BOSTON

Historical Salem Contributes

Perhaps when you think of Salem, Mass., you recall the infamous witch trials there in the early days of our Country, but the Old Town made other more civilized contributions to history. One that is of special interest to us of National Lead Company was the incorporation in 1868 of The Salem Lead Company, one of our founders and destined to be the cornerstone of our Boston Branch.

Almost from its incorporation, the Salem Lead Company had offices in the "Hub City" so in effect it was a Boston concern practically throughout its existence.

When the company was absorbed by National Lead Company, it was operated as a subsidiary of the latter under the name of National Lead Company of Massachusetts. Walter Tufts was Treasurer and General Manager and later became one of the Directors of National Lead Company.

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INDUSTRIES

INTRODUCTION

N L Industries, Inc. came into being over 80 years ago. We began as a one product company and until 1971 were known as National Lead Company.

We changed our name because we had grown and diversified to the point where our old name no longer represented the true nature and scope of our operations.

Today, our more than 50 divisions, subsidiaries and affiliates are responsible for annual sales in excess of a billion dollars. Our more than 27,000 employees work in plants and laboratories, mines, mills and offices that are located in every state of the Union and in a score of other countries.

Our operations can be classified into the following primary categories:

Metals Group **Page-17**

N L Industries works with an alphabet of metals—from aluminum, bronze and cadmium, to titanium, uranium and zinc.

Pigments Group **Page-20**

N L Industries has been a leading producer of titanium dioxide since we pioneered the commercial development of this essential pigment almost two generations ago.

Fabricated Products Group **Page-20**

In addition to mining, smelting and refining a wide range of metals, N L Industries also fabricates these and other materials into an equally wide range of finished and semi-finished products for use in nearly every industry.

Chemicals Group **Page-21**

N L Industries is active in nearly every area of the chemical industry...from injection molding of thermoplastics to the production of a wide variety of chemicals for use in ceramics, paint, petroleum, plastics, paper, cosmetics, textiles and automotive production.

Industrial Specialties Group **Page-23**

The broad scope of N L Industries today is best indicated by the diversity of products and services represented in this classification. They range from specialized products for the ceramic industry to highly sophisticated nuclear products and services for both industry and medicine.

Other Products **Page-24**

N L Industries' major consumer product, the universally-recognized Dutch Boy® brand of paints, is included in this group.

International Operations **Inside Back Cover**

INDEX OF PRODUCTS AND SERVICES

This directory of N L Industries' products and services is divided into two sections:

Section 1 (Pages 1-16)—An alphabetical listing of products and services. The numbers opposite each listed product or service correspond with the numbers assigned to the operating units where the product or service may be obtained.

Section 2 (Pages 17-24)—A numbered listing of N L Industries' divisions, subsidiaries and affiliates, describing products and services, with sales office information.

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Metals Group

1. AMERICAN BEARING DIVISION

N L Industries, Inc.
429 South Harding Street
Indianapolis, Indiana 46221 317/632-5588

American Bearing manufactures a broad line of precision sleeve bearings, bushings and machined parts. Principal products include thick wall heavy duty sleeve bearings for medium and large diesel and gas engines, aircraft engines, gas and steam turbines, pumps, compressors, hydraulic transmissions and similar types of equipment.

SALES OFFICE & PLANT:

Ind.	Indianapolis 46221	429 So. Harding St.	317/632-5588

2. BUNTING BRASS AND BRONZE COMPANY

A subsidiary of N L Industries, Inc.
715 Spencer Street
Toledo, Ohio 43609 419/382-3451

Bunting is a major producer of cast bronze and powder metal (P/M) parts. Principal cast bronze products include commercial and precision sleeve bearings and bars in standard sizes ranging from ⅛" to 27" diameter, and mechanical components for industry and defense.

Products include standard and custom designs of cast bronze, sintered oil-filled (P/M) bearings, continuous cast or centrifugally cast bars and structural parts of bronze alloys and ferrous alloys. Bunting produces the only standard line of oil-filled (P/M) bronze bearings to ASTM size standards.

SALES OFFICES:

Calif.	Los Angeles 90007	2614 S. Main St.	213/747-5566
Calif.	San Francisco 94107	1551 Minnesota St.	415/647-1385
Ga.	Atlanta 30318	1216 Fowler St. N.W.	404/876-6316
Ill.	Elk Grove Vlge. 60007	1830 Lunt Ave.	312/593-2750
Mass.	Cambridge 02142	152 6th St.	617/547-5170
Mich.	Kalamazoo 49002	4252 E. Kilgore Rd.	616/345-8691
N.Y.	Woodside 11377	5905 39th Ave.	212/899-3100
Ohio	Toledo 43609	715 Spencer St.	419/382-3451
Tex.	Dallas 75207	2286 Vantage St.	214/631-8672

PLANTS: Toledo, Ohio; Kalamazoo, Mich.

3. GOLDSMITH DIVISION

N L Industries, Inc.
1300 West 59th Street
Chicago, Illinois 60636 312/925-3800

Goldsmith has been a leading refiner and processer of precious metals and chemicals for over 100 years. Today, it is one of the world's largest producers of silver nitrate for the photographic industry. Other Goldsmith products include silver chloride, oxide and powder; precious metals for the plating and electronics industries; and a complete line of silver brazing products: powder, paste, strip, wire, and preformed rings.

SALES OFFICES:

Ill.	Chicago 60636	1300 W. 59th St.	312/925-3800
N.Y.	New York 10036	20 W. 47th St.	212/582-0630

PLANT: Chicago Ill.

4. JONATHAN MANUFACTURING COMPANY

A subsidiary of N L Industries, Inc.
1101 South Acacia Avenue
Fullerton, California 92631 714/526-4651

Precision steel slides, cable retracting devices and related packaging components are principal products of Jonathan Manufacturing Co. Jonathan ball bearing chassis slides have been utilized on virtually every major military electronics program in the past decade.

The "Tru Glide" line of precision steel slides have found wide application in the commercial market, including use on copying machines, computer equipment, furniture, vending machines and lateral files.

SALES OFFICES:

Calif.	Fullerton 92631	1101 S. Acacia Ave.	714/526-4651
N.J.	Teaneck 07666	1258 Teaneck Rd.	201/833-0061

PLANT: Fullerton, Calif.

5. JONATHAN SYSTEMS DIVISION

N L Industries, Inc.
3405 Avenue D
Arlington, Texas 76011 817/265-2283

Jonathan Systems Division designs, develops and fabricates a wide range of special systems and equipment for both government and commercial enterprises. These products include integrated production lines, automatic gages, control devices and control systems, free-floating non-synchronous transfer-assembly systems and machinery systems. The majority of these products are being applied to plant modernization/automation projects.

SALES OFFICE & PLANT:

Texas	Arlington 76011	3405 Avenue D	817/265-2283

6. LEE METAL PRODUCTS COMPANY

An affiliate of N L Industries, Inc.
West Pine Street
Philipsburg, Pennsylvania 16866 814/342-0460

Manufacturers and designers of specialized corrosion resistant processing equipment for the chemical, pharmaceutical, cosmetic and food industries. Standard products include kettles (jacketed and unjacketed), agitation systems, mixers and blenders for wet and dry products, reactors, vacuum processing vessels, tanks, and accessory equipment.

Lee has developed the "Uniflow" pressure jacket with a working pressure of 250 P.S.I. The "Uniflow" jacket can be used for both heating and cooling and has proven to be highly efficient. Plant capability ranges from the smallest research vessel to the largest factory fabricated storage tank.

SALES OFFICES:

Calif.	Fullerton 92631	1101 S. Acacia Ave.	714/871-9033
Ill.	Chicago 60611	260 E. Chestnut St.	312/366-2455
N.Y.	Rockville Center 11571	P.O. Box 4	516/536-0517
Pa.	Philipsburg 16866	West Pine St.	814/342-0460

PLANT: Philipsburg, Pa.

7. MAGNESIUM DIVISION

N L Industries, Inc.
238 North 2200 West
Salt Lake City, Utah 84116 801/328-3761

The world's most advanced magnesium production facility with a capacity of 45,000 tons of magnesium metal per year. This new source of primary magnesium metal and magnesium alloys will increase U.S. production by one-third. The facility will also produce 80,000 tons of liquid chlorine per year. Ferric Chloride is also produced for use in water and sewage treatment applications.

SALES OFFICES:

Metal Sales:

Utah	Salt Lake City 84116	238 North 2200 West	801/328-3761

Chlorine & Ferric Chloride Sales:

Calif.	Newport Beach 92660	University Plaza, Suite 536 4500 Campus Dr.	714/546-6622

PLANTS: Fontana, Calif.; Rowley, Utah.

8. MAGNUS METAL DIVISION

N L Industries, Inc.
2234 West 43rd Street
Chicago, Illinois, 60609 312/376-8434

Since 1875, Magnus Metal Division has been a leading producer of solid journal bearings for railway rolling stock. It is also a major producer of motor support bearings for diesel-electric locomotives.

Magnus also supplies the railroad industry with a wide range of bronze replacement items for diesel engine repair, including connecting rod and main bearings.

Magnus is also the selling agent for freight car roller bearings produced by the Roller Bearing Division.

SALES OFFICES:

Calif.	French Camp 95231	P.O. Box 400	209/982-0961
Ga.	Atlanta 30349	6405 Kimberly Rd. S.W., College Pk.	404/964-6767
Ill.	Chicago 60609	2234 W. 43rd St.	312/376-8434
Kan.	Kansas City 66103	P.O. Box 3103 Rosedale Station	913/236-4640
Md.	Baltimore 21146	P.O. Box 346 Severna Park	301/647-3008
Mo.	St. Louis 63110	4153 Clayton Ave.	314/371-4030
N.J.	Somerville 08876	696 Talamini Rd.	201/526-1636
Texas	Houston 77001	P.O. Box 2663	713/227-5552

PLANTS: French Camp, Calif.; St. Louis, Mo.; Fremont, Neb.; Cincinnati, Ohio; Houston, Texas.

9. MAGNUS ROLLER BEARING DIVISION

N L Industries, Inc.
3670 Werk Road
Cincinnati, Ohio 45211 513/922-0439

Magnus Roller Bearing Division is a principal producer of tapered roller bearings for use on American railroad freight cars.

SALES OFFICES:

Calif.	French Camp 95231	P.O. Box 400	209/982-0961
Ga.	Atlanta 30349	6405 Kimberly Mill Rd. S.W.	404/964-6767
Ill.	Chicago 60609	2234 W. 43rd St.	312/376-8434
Kan.	Kansas City 66103	P.O. Box 3103 Rosedale Sta.	913/236-4640
Md.	Severna Park 21146	P.O. Box 346	301/647-3008
Mo.	St. Louis 63110	4153 Clayton Ave.	314/371-4030
N.J.	Somerville 08876	696 Talamini Rd.	201/526-1636

PLANT: Cincinnati, Ohio

10. METAL DIVISION

N L Industries, Inc.
111 Broadway
New York, N.Y. 10006 212/732-9400

Grid metal for the battery industry is a major product of the Metal Division. Also, it is a leading manufacturer of a wide range of non-ferrous metal products, including lead shot and solders and fluxing materials for the electronic and electric industries.

In addition to its broad line of products, the Metal Division offers its customers access to its research facilities and its highly competent technical service organization.

SALES OFFICES:

Calif.	Emeryville 94068	4050 Horton St.	415/653-7533
	Los Angeles 90023	2700 S. Indiana St.	213/262-1101
Colo.	Denver 80316	699 Denargo Market	303/222-4450
Ga.	Atlanta 30318	451 Bishop St. N.W.	404/876-7361
Ill.	Chicago 60680	900 W. 18th St.	312/226-3700
	Granite City 62040	16th & Cleveland Sts.	618/452-3000
Mich.	Detroit 48234	4700 E. Nevada Ave.	313/893-0100
Minn.	St. Louis Park 55426	Hampshire St. & Highway 7	612/929-2675
Neb.	Omaha 68114	7601 Dodge St.	402/393-3024
N.J.	Perth Amboy 08862	1050 State St.	201/826-6000
N.Y.	Depew 14043	3241 Walden Ave.	716/683-6840
Ohio	Cincinnati 45211	3670 Werk Rd.	513/922-4100
	Cleveland 44113	2850 W. 3rd St.	216/621-2361
Ore.	Portland 97210	5909 N.W. 61st Ave.	503/224-3370
Pa.	Pittsburgh 15212	1376 River Ave.	412/321-2335
Texas	Dallas 75222	1000 Sargent Rd.	214/948-3521

PLANTS: Los Angeles, Calif.; Atlanta, Ga.; Chicago, Ill.; Granite City, Ill.; Beech Grove, Ind.; Detroit, Mich.; St. Louis Park, Minn.; Pedricktown, N. J.; Perth Amboy, N. J.; Cincinnati, Ohio; Cleveland, Ohio; Portland, Ore.; Altoona, Pa.; Dallas, Texas.

11. MORRIS P. KIRK & SON, INC.

A subsidiary of N L Industries, Inc.
2700 South Indiana Street
Los Angeles, California 90023 213/262-1101

Morris P. Kirk & Son operates as the Western Region of the N L Metal Division. As such, it produces and markets a broad line of non-ferrous materials and fabrications in a territory comprised of California, Oregon, Washington, Idaho, Utah, Montana, Nevada, Arizona, Alaska and Hawaii.

Kirk products include lead, zinc and aluminum alloys for the automotive, aircraft and die casting industries; antimonial lead (grid metal) and lead oxides for storage batteries; fabricated lead products for the chemical and plumbing industries; solders for the electronics and can industries; lead radiation shielding in all forms.

SALES OFFICES:

Calif.	Emeryville 94608	4050 Horton St.	415/653-7533
	Los Angeles 90023	2700 S. Indiana St.	213/262-1101
Ore.	Portland 97210	5909 N.W. 61st Ave.	503/224-3370
Wash.	Spokane 99202	East 41 Gray Ave.	509/624-3583

PLANTS: Los Angeles, Calif.; Portland, Ore.

12. PIONEER METALS, INC.

A subsidiary of N L Industries, Inc.
3800 East 26th Street
Los Angeles, California 90023 213/263-7211

Pioneer Metals is the world's leading distributor of aluminum extrusions. An inventory of over 100,000 items in over 30,000 different shapes is strategically located in six locations in the United States.

Cast aluminum plate manufactured by Pioneer Metals is finished to extremely close dimensional, flatness and surface tolerances. It is used for a myriad of purposes including tooling jigs and fixtures, electronic equipment panels, hydraulic freezer units and vacuum chucks.

Pioneer also carries large inventories of aluminum sheet, plate and coil; aluminum and brass rod and bar and aluminum alloyed ingot.

SALES OFFICES:

Calif.	Los Angeles 90023	3800 E. 26th St.	213/263-7211
	South Gate 90280	10035 Burtis St.	213/263-7211
Ga.	Marietta 30060	484 Glover St. S.E.	404/422-2110
Kan.	Wichita 67207	4611 E. 31st St. So.	316/682-1521
N.J.	Teaneck 07666	1258 Teaneck Rd.	201/833-0061
Pa.	Altoona 16602	Sixth Ave. & 41st St.	
Wash.	Kent 98031	7820 196th St.	206/854-1500

PLANTS: Los Angeles, Calif.; South Gate, Calif.; Marietta, Ga.; Wichita, Kan.; Altoona, Pa.; Kent, Wash.

13. REGAL MOLDS, INC.

A subsidiary of N L Industries, Inc.
5515 Enterprise Boulevard
Toledo, Ohio 43612 419/729-3795

Regal produces small to medium size plastic molds for a wide range of industries, including manufacturers of appliances, automobiles, toys and household products. Regal also makes die casting and auto forge molds, and specializes in precision molds for such products as blower wheels and terminal strips.

SALES OFFICE & PLANT

Ohio	Toledo 43612	5515 Enterprise Blvd.	419/729-3795

14. SCREW MACHINE DIVISION

N L Industries, Inc.
900 West 18th Street
Chicago, Illinois 60608 312/226-3700

Screw Machine Division specializes in high volume production of completely finished precision parts, such as aluminum alloy hydraulic brake cylinder pistons for the automotive industry. The Division is expanding and diversifying its operations, as indicated by the recent installation of an automatic anodizing system for better serving customer requirements.

SALES OFFICE & PLANT:

Ill.	Chicago 60608	900 W. 18th St.	312/226-3700

15. STANDARD STEEL DIVISION TITANIUM METAL CORPORATION OF AMERICA

An affiliate of N L Industries, Inc.
Burnham, Pennsylvania 17009 717/248-4911

Standard Steel is one of the largest, and most versatile specialty steel plants in the world. Manufacturing processes are fully integrated from melting, through forging, rolling, heat treatment to finish machining. The variety of steels melted and processed run from the more common grades of carbon steel to stainless and the superalloys for critical high-temperature, high-stress applications in the missile, jet engine, and nuclear reactor component markets.

Standard Steel is a principal supplier of wheels and axles for the railroad and car building industries. Additionally, open die forgings (100 lbs to 52,000 lbs), weldless rings and flanges (15 in. to 240 in.—100 lbs to 30,000 lbs), and closed die forgings (12 in. to 50 in.—150 lbs to 2,000 lbs), are manufactured for the following industries: aircraft, shipbuilding, power generating, sugar refining, metal, mining, cement, material handling, petroleum, pipeline, printing and engraving, electrical, earth moving equipment and ordnance.

Facilities include electric melting furnaces, argon-oxygen vessels, vacuum arc remelting and vacuum degassing equipment, ring rolling mills, automatic forging machine, tape controlled and manually controlled machine tools, forging presses and hammers, treating furnaces and modern quality control equipment and laboratory.

SALES OFFICES:

Calif.	San Mateo 94402	1777 Borel Pl.	415/574-7000
Conn.	Hartford 06103	119 Ann St.	203/549-4160
Ga.	Atlanta 30341	5260 Peachtree Industrial Blvd. N.E.	404/451-9217
Ill.	Chicago 60601	111 E. Wacker Dr.	312/751-4300
Mo.	St. Louis 63102	410 Mansion House Ctr.	314/241-6315
N.Y.	Schenectady 12301	P.O. Box 779	518/393-1375
Ohio	Akron 44313	1795 W. Market St.	216/867-3056
Pa.	Philadelphia 19113	Scott Plaza 2	215/521-1550

PLANT: Burnham, Pa.

16. STEEL PACKAGE DIVISION

N L Industries, Inc.
15th & State Streets
Granite City, Illinois 62040 618/452-3000

Steel Package Division is a major producer of small steel shipping containers (2½-gal. to 6½-gal.) for such markets as the petroleum and chemical industries.

Types of containers produced are the Kerosene Type Utility Container (2½-gal. and 5-gal.); Lug Cover Steel Pail, both straight sided and tapered; Tight Head Steel Drums; Dome Stacker Utility Container. All of the above containers are manufactured to customer's individual specifications, which include metal decorating various fittings and handles, internal linings, etc.

SALES OFFICE & PLANT:

Ill.	Granite City 62040	15th & State Sts.	618/452-3000

17. TEXAS MINING AND SMELTING DIVISION

N L Industries, Inc.
Highway 81
Laredo, Texas 78040 512/722-2486

Texas Mining & Smelting is a major smelter and refiner of antimony ore to produce antimony metal and antimony oxide.

SALES OFFICES:

Antimony Metal: See Sales Offices of Metal Division (No. 10)
Antimony Oxide: See Sales Offices of Pigments & Chemicals Division (No. 28)

PLANTS: Laredo, Texas.

18. TIMET DIVISION TITANIUM METALS CORPORATION OF AMERICA

An affiliate of N L Industries, Inc.
1140 Bloomfield Avenue
West Caldwell, New Jersey 07006 201/575-9500

TIMET is the world's leading producer of titanium sponge, ingot and mill products for aerospace and industrial applications. Titanium product forms include powder, sponge, ingot, forging billet, bar, tube, plate, sheet and strip. Other products include magnesium chloride, titanium tetrachloride and nitinol.

SALES OFFICES:

Calif.	Irvine 92707	17802 Sky Park Blvd.	714/979-2800
Ill.	Skokie 60076	Westmoreland Bldg.	312/583-3777
N.J.	W. Caldwell 07006	1140 Bloomfield Ave.	201/575-9500
Ohio	Cleveland 44122	24300 Chagrin Blvd.	216/831-4400

PLANTS: Henderson, Nev.; Toronto, Ohio.

Pigments Group

19. TITANIUM PIGMENT DIVISION

N L Industries, Inc.
100 Chevalier Avenue
South Amboy, New Jersey 08879 201/721-8400

Titanium Pigment Division is the world's largest producer of titanium dioxide. TITANOX®-brand titanium dioxide is produced by both sulfate and chloride processes. Titanium dioxide is used to pigment paint, paper, plastic, rubber, ceramics, ink, flooring, roofing granules, synthetic fibers and miscellaneous products. Titanium dioxide imparts whiteness, brightness and opacity to the products in which it is incorporated, enchancing appearance and durability. Manufacturing TITANOX is a complex process requiring close quality control of the many specialized grades to insure the most economical and useful pigment for the users' application.

SALES OFFICES:

Calif.	Los Angeles 90040	6449 Corvette St.	213/723-6501
	Oakland 94601	4825 San Leandro St.	415/535-1770
Ga.	Atlanta 30322	6065 Roswell Rd.	404/256-1656
Ill.	Oak Brook 60521	1301 W. Cermak Rd.	312/654-0760
Md.	Timonium 21093	10 Gerard Ave.	301/252-8070
Mass.	Dedham 02026	886 Washington St.	617/326-8413
Minn.	Bloomington 55437	5001 W. 78th St.	612/920-0850
Mo.	St. Louis 63111	Carondelet Station	314/638-3200
N.J.	East Orange 07017	725 Park Ave.	201/676-0363
Ohio	Cincinnati 45243	7809 Laurel Ave.	513/561-7098
	Cleveland 44113	2208 Terminal Tower	216/241-7195
Ore.	Portland 97214	49 S.E. Clay St.	503/235-6689
Pa.	Newtown Sq.19073	13A St. Albans Ave.	215/353-3351
Texas	Dallas 75206	5646 Milton	214/363-7628

PLANTS: St. Louis, Mo.; Sayreville, N.J.

Fabricated Products Group

20. COCHRANE FOUNDRY, INC.

A subsidiary of N L Industries, Inc.
465 Ogontz Street
York, Pennsylvania 17405 717/848-2990

Cochrane is a leading producer of high-quality aluminum and copper sand castings from 1 ounce to 700 pounds with additional capabilities in pattern-making, core-making (shell, Co_2, oil sand), machining, heat treating, and match plate molding.

SALES OFFICES:

For sales information on Cochrane Foundry products, contact Doehler-Jarvis Division Sales Offices (No. 21).

PLANT: York, Pa.

21. DOEHLER JARVIS DIVISION

N L Industries, Inc.
1945 Smead Avenue
Toledo, Ohio 43601 419/244-9521

Doehler-Jarvis is an experienced, engineering-oriented maker of components, with the resources to meet the needs of major industrial customers for individual die castings, injection molded plastics, or machined, finished and assembled singular or multi-material components.

SALES OFFICES:

Calif.	Pomona 91767	947 Murray Ave.	213/749-5120
Ga.	Marietta 30060	3928 Sentry Walk	404/427-0638
Ill.	Chicago 60680	6027 Northwest Hwy.	312/763-2375
Mass.	Needham 02194	18 Longfellow Rd.	617/444-4819
Mich.	Dearborn 48124	19655 W. Outer Dr.	313/565-1462
	Grand Rapids 49502	525 Cottage Grove St.NE	616/245-1191
Minn.	Navarre 55392	Box104, Shadywood Rd.	612/471-8538
N.J.	Livingston 07039	299 Hillside Ave.	201/992-2661
N.Y.	Batavia 14021	Robertson St.	716/343-3000

N.Y.	New York 10006	111 Broadway	212/732-9400
N.C.	Greensboro 27406	3415 Winchester Dr.	919/299-8192
Ohio	Toledo 43601	1945 Smead Ave.	419/244-9521
	Toledo 43612	5400 N. Detroit Ave.	419/476-0721
Pa.	Pottstown 19464	Old Reading Pike	215/323-1100
Wisc.	Mequon 53092	103 Mequon Rd. East N112	414/241-5746
Texas	Dallas 75238	7758 Eagle Trail	214/321-9243

PLANTS: Grand Rapids, Mich.; Batavia, N.Y.; Toledo, Ohio; Pottstown, Pa.

22. FLOATING FLOORS, INC.

A subsidiary of N L Industries, Inc.
5400 North Detroit Ave.
Toledo, Ohio 43621 419/476-0721

Floating Floors manufactures and assembles die cast and steel panels for elevated floor systems consisting of strong, removable panels supported by pedestals, providing infinite access to cable installations and also a completely flexible air distribution system. Floating Floor Systems are principally used in computer rooms, office and medical installations and in communication centers.

Floating Floors also produces Site Environmental Systems which provide constant, precise control of temperature, humidity and air filtration within extremely close tolerances for computer room installations.

SALES OFFICE AND PLANT:

Ohio	Toledo 43612	5400 N. Detroit Ave.	419/476-0721

Note—Floating Floor Systems and Site Environmental Systems are available from 84 distribution centers located in 33 States. Contact Toledo Sales Office for nearest location.

23. SOUTHERN SCREW DIVISION

N L Industries, Inc.
P.O. Box 1360
Statesville, North Carolina 28677 704/873-7211

Southern Screw is a major manufacturer of small threaded fasteners for the appliance, automotive, furniture, marine and other industries. Over 2 billion standard and special items are kept in stock for immediate delivery. This stock includes the new ROLOK™ thread-rolling screw which eliminates tapping and resists vibration in metals, die castings and ductile plastics.

SALES OFFICES:

Calif.	Los Angeles 90040	6465 Corvette St.	213/723-4881
Ill.	Chicago 60639	1800 N. Pulaski Rd.	312/227-4200
N.J.	North Bergen 07047	4100 Dell Ave.	201/864-4330
Texas	Dallas 75207	2119 Farrington St.	214/748-8241

PLANT: Statesville, N.C.

24. TOOL AND ENGINEERING DIVISION

N L Industries, Inc.
735 South Washtenaw Avenue
Chicago, Illinois 60612 312/826-6335

The Tool and Engineering Division of N L Industries is a leading supplier of prototype body parts and assemblies for the automotive industry. The Division also produces dies, tooling and short to medium runs of sheet metal parts for use in aircraft, specialty vehicles and other segments of the metalworking industry.

The Division specializes in the development of large and medium size draw dies for prototype purposes, as well as production of deep drawn parts and assemblies from sheet steel, aluminum and the exotic alloys.

SALES OFFICES:

Ill.	Chicago 60612	735 S. Washtenaw Ave.	312/826-6335
Mich.	Detroit 48211	3501 Griffin Street	313/871-4640

PLANTS: Chicago, Ill.; Detroit, Mich.

Chemicals Group

25. AMOS-THOMPSON CORPORATION

A subsidiary of N L Industries, Inc.
600 South Kyle Street
Edinburg, Indiana 46124 812/526-5551

The Plastics Division of Amos-Thompson is a major custom injection molder and finisher of thermoplastics for such applications as grilles and other decorative parts for the automotive industry, TV cabinets and fronts, business machine and computer housings, and heavy appliance components. The Division also utilizes rotational casting to produce tanks and vessels for agricultural chemicals, wine making, milking machinery and other applications.

The Wood Division of Amos-Thompson is the world's largest producer of American walnut lumber. It also produces walnut veneers, as well as cherry, oak, pecan, bartiki, and poplar face veneers.

Excel Mold, Inc., a subsidiary of Amos-Thompson, designs and fabricates molds for the plastics and die casting industries. Multiple and single cavity molds from small to medium size range up to ten tons. Duplicating and contour work is a specialty for such applications as the automotive, electrical and communication industries.

SALES OFFICES:

Plastics Division:

Ill.	Des Plaines 60018	1001 E. Touhy Ave.	312/297-4570
Ind.	Edinburg 46124	600 S. Kyle St.	812/526-5551
Mich.	Dearborn 48124	19855 W. Outer Dr.	313/563-7715

Wood Division—Lumber:

Ala.	Birmingham 35213	101 Lake Dr.	205/871-0538
Ill.	St. Charles 60174	P.O. Box 125	312/584-0659
N.Y.	Brooklyn 11209	158 79th St.	212/836-3217
S.C.	Greenville 29606	P.O. Box 5621	803/233-3961
Texas	Dallas 75205	4712 Abbott St.	214/526-4173
Wash.	Gig Harbor 98335	R.R. 4, Box 4412	206/857-4101

Wood Division—Veneer:

Ala.	Birmingham 35213	101 Lake Dr.	205/871-0538
Calif.	S. Pasadena 91030	P.O. Box 578	213/254-9209
Ill.	St. Charles 60174	R.R. 3, Box 477	312/584-2352
Ind.	Edinburg 46124	P.O. Box 127	812/526-5551
Pa.	Wyncote 19095	P.O. Box 59	215/887-3163
Wash.	Gig Harbor 98335	R.R. 4, Box 4412	206/857-4101

Excel Mold, Inc.:

Ind.	Indianapolis 46203	939 E. Troy Ave.	317/787-3428

PLANTS: Edinburg, Ind.; Indianapolis, Ind.; Kansas City, Kan.

26. THE BAKER CASTOR OIL COMPANY

A subsidiary of N L Industries, Inc.
40 Avenue A — 201/436-8800
Bayonne, New Jersey 07002 — 212/349-0500

Baker Castor Oil is a major supplier of castor oil and its derivatives. Baker supplies all fundamental organic reaction forms of castor oil for which there is a market. Products include various castor oils and polymers; dehydrated castor oil (drying oil); esters; waxes; urethane prepolymers and polyols for casting systems, coatings and adhesives; rheological agents; resin intermediates. Major markets include coatings; lubricants; greases; inks; plastics; textiles; waxes; automotive chemicals; cosmetics; pharmaceuticals; toilet goods; functional fluids; hot melts; adhesives; paper coatings; leather; rubber; dielectrics; sealants; agricultural chemicals; flavors; perfumes; surfactants; electronics and communications.

SALES OFFICES:

Calif.	Burlingame 94010	340 Lorton Ave.	415/343-7818
	Los Angeles 90040	5585 E. 61 St.	213/723-1318
Ga.	Atlanta 30325	1303 Boyd Ave. N.W.	404/351-3501
Ill.	Arlington Hts. 60005	605 E. Algonquin Rd.	312/439-7350
Kan.	Kansas City 66110	5200 Speaker Rd.	913/321-3131
Ky.	Louisville 40202	446 Commonwealth Bldg.	502/584-6181
Md.	Baltimore 21202	1602 Mercantile Trust Bldg.	301/685-4365
Mich.	Southfield 48075	18777 W. Ten Mile Rd.	313/444-1636
Minn.	Minneapolis 55415	909 Second St., So.	612/332-5394
Mo.	St. Louis 63111	7710 Polk St.	314/638-7400
N.J.	Bayonne 07002	40 Avenue A	201/436-8800
Ohio	Cincinnati 45203	N-203 Union Terminal Bldg.	513/721-7518
	Cleveland 44115	1505 Broadway	216/241-2777
Okla.	Oklahoma City 73112	3909 S. Meridian Ave.	405/685-7741
	Tulsa 74017	801 W. 21 St.	918/584-6169
Ore.	Portland 97210	2728 N.W. Nela St.	503/222-1301
Pa.	Flourtown 19031	P.O. Box 27	215/887-6161
	Pittsburgh 15222	2010 Clark Bldg.	412/281-9373
Texas	Dallas 75222	2627 Weir St.	214/638-8034
	Houston 77001	1701 Oliver St.	713/869-5801
Wash.	Seattle 98134	2450 Eighth Ave. So.	206/682-4425

PLANTS: Los Angeles, Calif.; Bayonne, N.J.

27. BAROID DIVISION

N L Industries, Inc.
2404 Southwest Freeway
Houston, Texas 77001 — 713/524-6381

Baroid is a leading supplier of oil and gas well drilling fluids, chemicals, equipment, and engineering services. It pioneered the application of on-site computer technology to the drilling industry. Baroid also provides products and services to the oil and gas production, mining, water treatment, brewing, foundry, grease, ink, construction, livestock feed, steel and other industries.

SALES OFFICES:

Domestic Drilling Services:

Col.	Denver 80202	912 Security Life Bldg.	303/266-1953
La.	Lafayette 70501	Box 51287	318/234-5258
La.	New Orleans 70112	1512 Pere Marquette Bldg.	504/524-5165
Okla.	Oklahoma City 73106	2000 Classen Center Suite 312 East	405/521-1636
	Tulsa 74103	1302 Philtower Bldg.	918/587-3611
Texas	Amarillo 79109	514 Petroleum Bldg.	806/374-0282
	Corpus Christi 78401	600 Guaranty Bank Plaza	512/882-7487
	Dallas 75201	626 Fidelity Union Tower	214/747-5115
	Houston 77002	300 Southwest Tower	713/225-0391
	Midland 79701	Box 311	915/682-4381

McCullough Services Dept.:

Calif.	Downey 90241	Box 670	213/869-2517
Colo.	Denver 80202	912 Security Life Bldg.	303/255-3407
La.	Lafayette 70501	Box 51287 O.C.S.	318/233-5450
	New Orleans 70112	1509 Pere Marquette Bldg.	504/522-9067
Okla.	Oklahoma City 73119	Box 19036	405/685-5573
Texas	Corpus Christi 78401	602 Guaranty Bank Plaza	512/884-7262
	Dallas 75201	626 Fidelity Union Tower	214/747-5115
	Houston 77001	Box 2575	713/672-2461
	Midland 79701	Box 5	915/684-8085

PLANTS: Malvern, Ark.; Newberry Springs, Calif.; New Orleans, La.; Potosi, St. Louis, Mo.; Battle Mountain, Nev.; Belle Fourche, S.D.; Sweetwater, Tenn.; Channelview, Corpus Christi, Houston, Texarkana, Texas; Osage, Wyo.

28. PIGMENTS AND CHEMICALS DIVISION

N L Industries, Inc.
P.O. Box 420
Hightstown, New Jersey 08520 — 609/448-3200

The Pigments & Chemicals Division is the leading producer of lead oxides for use in the glass, ceramic and other industries. The Division also is a major manufacturer of stabilizers for vinyl plastics used in wire insulation, automotive interiors, upholstery, floor coverings, shoe soles and other products. The Division produces flame retardant chemicals for treating plastics, fibers, paper, adhesives, rubber, paint, and other products.

The P&C Division has been a major contributor to the technology of the coatings field, supplying specialty pigments for use in anticorrosive paints and Bentone® gellants as bodying and suspending agents. This latter group of products finds growing use in the areas of cosmetics, pharmaceuticals, pesticides and paper, as well as in paints and coatings of all kinds.

P&C Division's DeLore Products manufacturers and markets extender pigments. Its principal products are Barytes, Whiting, and a diatomaceous calcite trade named Lorite®. These products are used by the automotive market in brake linings, paints and urethane foams. Other major markets are the rubber and vinyl industries for closures and mechanical goods, the housing industry for paint and seamless flooring, and the refining of petroleum.

SALES OFFICES:

Pigments & Chemicals Division

Calif.	Los Angeles 90023	3800 E. 26th St.	213/266-1720
	Oakland 94601	4701 San Leandro St.	415/261-0180
Ga.	Atlanta 30309	P.O. Box 7008, Sta. C	404/876-7361

Ill.	Chicago 60680	P.O. Box 7000 A	312/226-3700
Mass.	Westwood 02090	425 University Ave.	617/762-7400
Mich.	Detroit 48211	3501 Griffin St.	313/874-0488
Minn.	St. Louis Park 55426	3645 Hampshire Ave. So.	612/929-2675
Mo.	St. Louis 63101	P.O. Box 7109	314/241-8782
N.Y.	New York 10006	111 Broadway	212/732-9400
Ohio	Cincinnati 45211	3670 Werk Rd.	512/922-4100
	Cleveland 44113	1776 Columbus Rd.	216/696-3800
Pa.	Philadelphia 19125	2607 E. Cumberland St.	215/426-0600
Texas	Dallas 75222	1000 Sargent Rd.	214/948-3521
W. Va.	Charleston 25325	P.O. Box 1467	304/342-8103

DeLore Products

DeLore Products are available through Pigments & Chemicals Division Sales Offices and through 18 sales agents in 17 locations. Contact nearest P&C Division Sales Office for sales agent information.

PLANTS:

Pigments & Chemicals Division

Los Angeles, Calif.; Atlanta, Ga.; Chicago, Ill.; St. Louis, Mo.; Brooklyn, N.Y.; Philadelphia, Pa.; Dallas, Texas; Charleston, W. Va.

DeLore Products

St. Louis, Mo.

Industrial Specialties Group

29. BELL CLAY COMPANY

A subsidiary of N L Industries, Inc.
Bell Street
Gleason, Tennessee 38229 — 901/648-5511

Bell Clay mines and produces ball clays, brick clays and lignite. These products are chiefly used by the ceramic industry in producing floor and wall tile, sanitaryware, dinnerware, hotel china, artware, refractories and structural clay products.

SALES OFFICES:

N.Y.	Niagara Falls 14305	Hyde Park Blvd.	716/285-3333
Tenn.	Gleason 38229	Bell Street	901/648-5511

PLANT: Gleason, Tenn.

30. CAMBRIDGE NUCLEAR RADIOPHARMACEUTICAL CORPORATION

A subsidiary of N L Industries, Inc.
575 Middlesex Turnpike
Billerica, Massachusetts 01821 — 617/935-4050

Cambridge Nuclear, and its affiliate, Industrial Reactor Laboratories, Inc., are major producers of radioisotopes, radiopharmaceuticals and radioimmunoassay reagents for diagnostic nuclear medicine.

Facilities include a five megawatt swimming-pool-type nuclear reactor and related facilities at Plainsboro, N. J. and 14,000 square feet of laboratory space at Billerica, Mass.

SALES OFFICES:

Mass.	Billerica 01821	575 Middlesex Tpk.	617/935-4050
N.J.	Princeton 08540	P.O. Box 528	609/799-1133

LABORATORIES: Billerica, Mass.; Plainsboro, N.J.

31. CHAS. TAYLOR SONS COMPANY

A subsidiary of N L Industries, Inc.
8361 Broadwell Rd.
Cincinnati, Ohio 45244 — 513/561-2100

Chas. Taylor Sons Company is the largest producer of mullite and zircon refractories in the United States, and a major producer of bonded alumina-zirconia-silica, magnesia-alumina spinels, zirconia, and alumina refractories. It produces these products in a variety of standard brick, special shapes, cements, castables, ramming mixes and patches. Taylor special refractories are supplied to the glass, ceramic, chemical, steel, aluminum, and other metallurgical industries.

SALES OFFICES:

Ga.	Atlanta 30342	174 W. Wieuca Rd., N.E.	404/255-6672
Ind.	Hammond 46320	6 Russell St.	219/932-1000
Mich.	Southfield 48076	29200 Southfield Rd.	313/557-6473
Mo.	Webster Groves 63119	325 Simmons Ave.	314/961-4317
Ohio	Cincinnati 45244	8361 Broadwell Rd.	513/561-2100
	Cleveland 44122	3431 W. Brainard Rd.	216/831-1125
Pa.	Pittsburgh 15222	706 Investment Bldg.	412/281-6362
	Valley Forge 19481	Box 314	215/783-7080

PLANTS: South Shore, Ky.; Cincinnati, Ohio.

32. EDGAR PLASTIC KAOLIN COMPANY

A subsidiary of N L Industries, Inc.
P.O. Box 8
Edgar, Florida 32049 — 904/481-2421

Edgar Plastic Kaolin is the only active producer of Florida kaolin—a high strength, high quality kaolin which has long been a standard of the ceramic industry. Users include manufacturers of dinnerware, sanitary ware, tile and electrical porcelain. Non-ceramic uses include filler and coatings applications.

In addition to clay, Edgar Plastic Kaolin supplies specialty sands to the construction, fertilizer, and glass manufacturing industries in the Southeast.

SALES OFFICES:

Fla.	Edgar 32049	Box 8	904/481-2421
N.Y.	Niagara Falls 14305	Box C, Bridge Sta.	716/285-3333

PLANTS: Edgar, Plant City, Fla.

33. ELECTRONICS DEPARTMENT

N L Industries, Inc.
P.O. Box 420
Hightstown, New Jersey 08520 — 609/448-3200

N L Industries Electronics Department is a major producer of thermistors (temperature sensitive resistors) and varistors (voltage sensitive resistors). These products are available as simple components or incorporated in complex assemblies. Major areas of application include air conditioning, automotive, CATV, computer and electrical generating. Also, home appliances, home entertainment, industrial control, medical electronics, mobile communications, photocopy, photographic, process control and telephone.

SALES OFFICES:

N.J.	Hightstown 08520	P.O. Box 420	609/448-3200

PLANT: Muskegon, Mich.

34. NATIONAL LEAD COMPANY OF OHIO

A subsidiary of N L Industries, Inc.
P.O. Box 39158
Cincinnati, Ohio 45239 513/738-1151

National Lead Company of Ohio is the contract operator for U.S. Atomic Energy Commission's uranium ore concentration plant.

PLANT: Fernald, Ohio.

35. NUCLEAR DIVISION

N L Industries, Inc.
111 Broadway
New York, New York 10006 212/732-9400

Nuclear Division is the major U.S. producer of depleted uranium products for radiation, shielding, counterweight and ballast applications in aircraft, industry and other applications, including ordnance. Manufacturing capabilities include large and small specialized shipping containers for containment of irradiated or corrosive materials, utilizing depleted uranium, lead, concrete or any conventional material.

Other facilities include designing or building-to-print a wide range of transfer and handling mechanisms for use in and around nuclear reactors. Also, total service in the transport of spent nuclear fuel to reprocessing sites.

SALES OFFICES:

Del.	Wilmington 19801	919 Market St.	302/656-1601
	Wilmington 19801	Foot of West St.	302/656-1661
N.Y.	Albany 12205	1130 Central Ave.	518/459-2700

PLANTS: Wilmington, Del.; Albany, N.Y.

36. TAM DIVISION

N L Industries, Inc.
Box C, Bridge Station
Niagara Falls, New York 14305 716/285-3333

TAM Division produces zirconium compounds, primarily silicates and oxides, from zircon mined in N L-owned facilities in Australia. Principal applications include ceramic glaze opacifiers and refractory constituents, as well as non-ceramic use in filler and coating applications.

TAM is also a major producer of dielectric titanates, zirconates and stannates used in the manufacture of ceramic capacitors.

SALES OFFICE AND PLANT:

N.Y. Niagara Falls 14305 Box C, Bridge Sta. 716/285-3333

Other Products

37. ANAHEIM CITRUS PRODUCTS COMPANY

A subsidiary of N L Industries, Inc.
421 East Commercial Street
Anaheim, California 92803 714/533-4558

Anaheim Citrus Products is one of the leading manufacturers of dry citrus peel products in the western United States. During an average season Anaheim Citrus processes some 2-million pounds of waste material per day into salable products for industrial and livestock uses.

The major product is dry citrus peel for pectic manufacturers. Other products include dried citrus pulp meal for the cattlefeed industry and wet brewers grains for the dairy industry.

SALES OFFICE:

Calif. Anaheim 92803 421 E. Commercial St. 714/533-4558

PLANTS: Yuma, Ariz.; Anaheim, Calif.

38. PAINT DIVISION

N L Industries, Inc.
195 Clinton Rd.
West Caldwell, New Jersey 07006 201/575-0970

The Dutch Boy® trademark identifies the line of interior and exterior paints that are produced and marketed by the Paint Division of N L Industries. Dutch Boy latex and alkyd finishes are sold to consumers and painting contractors by a network of independent dealers throughout the United States, the Caribbean area and the Philippine Islands.

SALES OFFICES:

Calif.	Burlingame 94010	1818 Gilbreth Rd.	415/692-4111
	Los Angeles 90023	3113 E. 26th St.	213/263-7121
	San Diego 92115	6415 University Ave.	714/582-3282
	Stockton 95204	204 E. Alpine St.	209/466-5025
Fla.	Ft. Lauderdale 33308	2801 E. Oakland Park Blvd.	305/564-7531
Ill.	Chicago 60680	900 W. 18th St.	312/226-3700
Mass.	Westwood 02090	425 University Ave.	617/762-7400
Mo.	St. Louis 63177	1015 Locust St.	314/241-8782
N.Y.	Woodbury 11797	211 Crossways Park Dr.	516/921-7380
Ohio	Cincinnati 45211	3670 Werk Rd.	513/922-4100
	Cleveland 44113	1776 Columbus Rd.	216/696-3800
Ore.	Portland 97214	810 S. E. Belmont St.	505/235-2191
Pa.	Philadelphia 19125	2607 E.Cumberland St.	215/426-0600
	Pittsburgh 15201	Arsenal Terminal Whse., Bldg. 43, 39th & Butler Sts.	412/687-3910
Texas	Dallas 75222	1000 Sargent Rd.	214/948-3521
Wash.	Seattle 98134	1128 S.W.Spokane St.	206/622-1950

PLANTS: Los Angeles, Calif.; Chicago, Ill.; Perth Amboy, N.J.; Philadelphia, Penna.; Seattle, Wash.

39. R-N CORPORATION

An affiliate of N L Industries, Inc.
111 Broadway
New York, New York 10006 212/732-9400

R-N Corporation is the developer and licensor of processes for the production of metallic iron by the direct reduction of iron ores and other iron-bearing materials.

SALES OFFICE:

N.Y. New York 10006 111 Broadway 212/732-9400

International Operations of N L Industries

Metals Group

Cia Minera y Refinadora, S.A. (49%), Mexico City, Mexico
Antimony mining.

The Canada Metal Company, Limited (50%), Toronto, Canada
Lead oxides, lead and zinc alloys, brass and bronze products, fabricated lead products.

Pigments Group

Canadian Titanium Pigments, Limited, Montreal, Canada
Titanium pigments; gellants; lead pigments; stabilizers; zirconium and titanium compounds.

Kronos SA/NV, Brussels, Belgium
Titanium pigments; gellants; lead pigments.

Kronos Titan A/S, Fredrikstad, Norway
Titanium pigments; gellants; lead pigments; stabilizers.

Kronos Titan—GmbH, Leverkusen, West Germany
Titanium pigments; gellants; lead pigments.

Kronos Titanium Pigments, Limited, London, England
Titanium pigments.

Societe Industrielle du Titane S.A. (93%), Paris, France
Titanium and lead pigments.

Titania A/S, Hauge i Dalane, Norway
Ilmenite ore mining.

Fabricated Products Group

Doehler-Australia Pty. Ltd. (70%), Auburn, Australia
Die castings.

Doehler Canada Limited, Hamilton, Canada
Aluminum, brass, magnesium, zinc die castings.

Industrias Doehler do Brasil, S.A., Sao Paulo, Brazil
Die castings.

Metal Castings Doehler, Ltd., Worcester, England
Die castings.

Schraubenfabrik Neustadt Goetz & Cie GmbH (99%).
Neustadt/Schwartzwald, West Germany
Screws and metal fasteners.

Chemicals Group

Abbey Chemicals Limited (70%), London, England
Gellants and stabilizers.

Baroid Australia Pty., Limited (99%), Sydney, Australia
Oil well drilling materials.

Baroid de Venezuela, S.A. (92%), Maracaibo, Venezuela
Oil well drilling materials.

Baroid do Brasil, Ltda., Salvador, Brazil
Oil well drilling materials.

Baroid International, S.p.A., Rome, Italy
Oil well drilling materials.

Baroid of Canada, Ltd., Calgary, Canada
Oil well drilling materials, services.

Baroid of Libya, Ltd. (49%), Benghazi, Libya
Oil well drilling materials.

Baroid of Nigeria, Limited, Lagos, Nigeria
Oil well drilling materials.

Baroid Trinidad Services, Ltd. (50%), Trinidad, West Indies
Oil well drilling services.

Baroid (U.K.) Limited, London, England
Oil well drilling materials.

Bentone-Chemie GmbH (70%), Nordenham, West Germany
Gellants.

Oncor SA/NV, Langerbrugge, Belgium
Anti-corrosive pigments.

Perubar, S.A., Lima, Peru
Barite mining.

Pigmentos Minerais Industrial e Commercial Pigmina, S.A.,
Salvador, Brazil
Barite mining.

The Carter White Lead Company of Canada, Limited (50%),
Montreal, Canada
Lead pigments; oxides; stabilizers.

Industrial Specialties Group

Chas. Taylor Sons, S.A., Brussels, Belgium
High temperature refractories.

Mineral Deposits, Limited (85%), Southport, Queensland, Australia
Mining of rutile, zircon ores.

Queensland Titanium Mines Pty., Ltd. (75%), Southport, Queensland, Australia.
Mining of rutile, zircon ores.

The Titanium Alloy Manufacturing Co. Pty., Limited,
Southport, Queensland, Australia.

Other Products

Industrias Deriplom, S.A., Buenos Aires, Argentina
Lead oxides.

National Lead Company (Philippines), Inc. (51%), Manila, Philippines
Paints and related products.

National Lead Company, S.A., Buenos Aires, Argentina
Lead products.

Figures in parentheses represent percentage of voting securities owned.

NATIONAL LEAD COMPANY
SUBSIDIARY AND AFFILIATED COMPANIES
DECEMBER 31, 1969

NAME OF CORPORATION	ADDRESS	TYPE OF BUSINESS	PERCENTAGE OF VOTING SECURITIES OWNED DIRECTLY OR INDIRECTLY BY NATIONAL LEAD CO.
National Lead Company	111 Broadway, New York, N. Y.	Manufacturing paints; pigments; fabricated lead and allied products; die castings; zinc alloys and metal forming dies; bearings; oil well drilling materials and miscellaneous products	Parent Company
Aluminum Match Plate Corp.	1500 Military Road, Kenmore, N. Y.	Manufacturing aluminum castings	100
American Bearing Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Amos-Thompson Corporation	600 S. Kyle St., Edinburg, Indiana	Manufacturing hardwood lumber, face veneers, molded plastics and plastic products	100
Amos Molded Plastics of Illinois, Inc.	290 E. Fullerton St., Carol Stream, Illinois	Manufacturing plastic products	100
Frank Purcell Walnut Lumber Co., Inc.	13th & Kaw River, Kansas City, Kansas	Production of lumber and purchase of logs	100
Excel-Mold, Inc.	939 E. Troy Ave., Indianapolis, Indiana	Manufacturing injection molds	100
Amos-Thompson of North Carolina, Inc.	600 S. Kyle St., Edinburg, Indiana	Sale of face veneer	100
Anchor Screw Products Co.	6465 Corvette St., Los Angeles, California	Distributing screws and metal fasteners	100
The Baker Castor Oil Co.	40 Ave. A, Bayonne, N. J.	Manufacturing castor oil and derivatives	71
The Baker Castor Oil Co. of Calif.	"	Real estate holding company	71
The Baker Castor Oil Co. of Texas	"	Purchasing castor beans	71
Cia Mamona Brasileira, S. A.	"	Inactive	71
Baroid Chemicals, Inc.	2404 Southwest Freeway, Houston, Texas	Selling oil well drilling materials	100
Baroid Sales Export Corp.	2404 Southwest Freeway, Houston, Texas	Selling oil well drilling materials	100
The Bunting Brass and Bronze Co.	715 Spencer St., Toledo, Ohio	Manufacturing bronze bushings, bars; special sintered bronze and iron parts	100
Cobalt Nickel Reduction Co.	111 Broadway, New York, N. Y.	Inactive	100
Cochrane Foundry, Inc.	465 Ogontz St., York, Pa.	Manufacturing aluminum, bronze, and brass sand castings	100
Doehler-Jarvis Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Edgar Plastic Kaolin Co., Inc.	Edgar, Florida	Mining kaolin clay and glass sand	100
Edgar Brick Co., Inc.	Edgar, Florida	Inactive	100
Evans Lead Corp.	111 Broadway, New York, N.Y.	Inactive	100
Floating Floors, Inc.	1945 Smead Ave., Toledo, Ohio	Selling elevated floors and site environmental systems	100
Goldsmith Bros. Dental Co.	900 West 18th St., Chicago, Ill.	Selling dental supplies	100
H-K, Inc.	238 North 2200 West, Salt Lake City, Utah	Inactive	100
Hoyt Metal Co.	111 Broadway, New York, N. Y.	Inactive	100
Jonathan Manufacturing Co.	1101 South Acacia Ave., Fullerton, Calif.	Manufacturing chassis slide rails and metal processing	100
Anaheim Citrus Products Co.	421 East Commerical, Anaheim, Calif.	Dehydrating citrus peel, pectin and cow feed	100
C. A. W. Metal Fabricators	1601 E. Orangethorpe Ave., Fullerton, Calif.	Fabricating metals	100
Entin Metals, Inc.	1621 E. Orangethorpe Ave., Fullerton, Calif.	Sale of metal products	100
Morris P. Kirk & Son, Inc.	2700 So. Indiana St., Los Angeles, Calif.	Manufacturing lead oxides, fabricated lead, aluminum zinc and allied products	76
Pioneer Aluminum, Inc.	3800 East 26th St., Los Angeles, Calif.	Manufacturing aluminum aircraft extrusions and tooling plate	76
Magnus Metal Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Master Metals, Inc.	2850 West 3rd St., Cleveland, Ohio	Manufacturing fabricated lead products	100
Metallurgical & Chemical Corp.	111 Broadway, New York, N. Y.	Inactive	100
National Lead Co., Inc.	"	Inactive	100
Lake View Trust and Savings Bank	3201 North Ashland Ave., Chicago, Ill.	Banking	99
National Lead Co. of Hawaii, Ltd.	1603 Dillingham Blvd., Honolulu, Hawaii	Liquidated December 1969	100
National Lead Co. of Ohio	111 Broadway, New York, N. Y.	Contract operator, atomic energy commission	100
National Lead Overseas Capital Corp.	"	Financing capital requirements of National Lead Co.'s foreign subsidiaries	100
Nickel Processing Corp. of New York	"	Inactive	100
Radio Baroid, Inc.	2404 Southwest Freeway, Houston, Texas	Radio station	100
The Ridge Machine Co.	5325 West 130th St., Cleveland, Ohio	Manufacturing of machines for die casting	100
Sayre & Fisher Land Co.	111 Broadway, New York, N. Y.	Real estate holding company	100
Southern Screw Co. of P. R., Inc.	Industrial Park, Arecibo, Puerto Rico	Manufacturing screws	100
Southern Screw Co.	111 Broadway, New York, N. Y.	Sales Agent	100
Synrox, Inc.	Cincinnati, Ohio	Manufacturing ceramic molds	100
The Chas. Taylor's Sons Co.	8361 Broadwell Rd., Cincinnati, Ohio	Manufacturing refractories	100
Titanium Pigment Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Titanium Pigment Export Corp.	"	Selling titanium pigments	100
United Lead Co.	"	Inactive	100
Zirconium Metals Corp. of America	"	Sales agent	100
Barber Die Casting Co., Ltd.	Hillyard St., Hamilton, Canada	Manufacturing die castings	100
Baroid of Canada, Ltd.	608 - 7th St. S. W. Calgary, Canada	Mining and manufacturing oil well drilling materials	100
The Canada Metal Co., Ltd.	721 Eastern Ave., Toronto, Canada	Manufacturing lead oxides; fabricated lead and allied products; lead and zinc alloys	50

NATIONAL LEAD COMPANY
SUBSIDIARY AND AFFILIATED COMPANIES
DECEMBER 31, 1969

NAME OF CORPORATION	ADDRESS	TYPE OF BUSINESS	PERCENTAGE OF VOTING SECURITIES OWNED DIRECTLY OR INDIRECTLY BY NATIONAL LEAD CO.
Atlas Smelting & Refining Co., Ltd.	721 Eastern Ave., Toronto, Canada	Inactive	50
Great Western Smelting Co., Ltd.	"	Inactive	50
Hewitt Metals Corp., Ltd.	1554 McDougall Ave., Windsor, Canada	Manufacturing fabricated lead and allied products	50
The Hoyt Metal Co. of Canada, Ltd.	721 Eastern Ave., Toronto, Canada	Inactive	50
Canadian Baroid Sales, Ltd.	608 -7th St. S. W. Calgary, Canada	Selling oil well drilling materials	100
Canadian Titanium Pigments, Ltd.	2140 Sun Life Building, Montreal, Canada	Manufacturing titanium pigments	100
The Carter White Lead Co. of Canada, Ltd.	1295 Delorimier Ave., Montreal, Canada	Manufacturing lead pigments, lead oxides & stabilizers	50
Lakeshore Die Casting, Ltd.	39 Royal Rd., Guelph, Canada	Manufacturing die castings	100
Baroid do Brasil, Ltda	Rua Miguel Calmon 19, Salvador Bahia, Brazil	Selling oil well drilling materials	100
Industrias Doehler do Brasil, S. A.	102 Av. Albert Schweitzer, Sao Bernardo do Campo, Brazil	Manufacturing die castings	95
Pigmentos Minerais Industrial e Comercial Pigmina, S. A.	Rua Miguel Calmon 19, Salvador, Bahia, Brazil	Mining barytes	100
Importacao e Exportacao Deor Ltda.	Praca Dom Jose Gaspar 134, Sao Paulo, Brazil	Holding Company	100
Baroid de Venezuela, S. A.	Apartado 42, Maracaibo, Venezuela	Manufacturing oil well drilling materials	89
Barytes & Minerals, Ltd.	59 Sackville St., Port of Spain, Trinidad, W. I.	Manufacturing oil well drilling materials	50
Cia. Minera y Refinadora Mexicana, S. A.	Av. Venustiano Carranza No. 980, S.L.P., Mexico	Mining antimony ore	49
Cia. Minera de Oaxaca, S. A.	"	" " "	74
Cia. Minera del Futuro, S. A.	"	" " "	73
Cia. Minera del Cerro Negro, S. A.	"	Inactive	100
Perubar, S. A.	Teodosio Parreno 342-344, Barranco, Lima, Peru	Barytes exploration	100
Baroid Australia Pty., Ltd.	16-20 Bridge St., Sydney, N.S.W., Australia	Selling oil well drilling materials	99
The Titanium Alloy Mfg. Co. Pty., Ltd.	Emperor St., Tin Can Bay, Queensland, Australia	Holding company	100
Mineral Deposits, Ltd.	81 Ashmore Road, Southport, Queensland, Australia	Mining and concentrating rutile and zircon	85
Queensland Titanium Mines Pty., Ltd.	Emperor St., Tin Can Bay, Queensland, Australia	Mining rutile and zircon ores	75
Baroid (U.K.) Ltd.	19 Grafton St., London, W. 1., England	Selling oil well drilling materials	100
The Hoyt Metal Co. of Great Britain, Ltd.	105 Deodar Rd., Putney, London, England	Manufacturing bearings and antifriction metals	100
Abbey Chemicals, Ltd.	8 Baker St., Portman Square, London, England	Manufacturing gellants and stabilizers	52
Heavy Duty Bearings, Ltd.	105 Deodar Rd., Putney, London, England	Inactive	100
The Hoyt Metal Co. of Australia Pty., Ltd.	68-80 Hughes Ave., Ermington, N.S.W., Australia	Manufacturing bearings and antifriction metals	100
Ste. Francaise du Metal Antifriction Hoyt	55 Quai de Valmy, Paris, France	" " " " "	100
Kronos Titanium Pigments, Ltd.	St. Ann's House, Parsonage Green, Wilmslow, England	Selling Titanium pigments	100
Metal Castings Doehler, Ltd.	Droitwich Rd., Worcester, England	Manufacturing die castings	100
National Lead Co. (Philippines), Inc.	Makati Commercial Center, Makati, Rizal, P. I.	Manufacturing paints	51
National Lead Co. (Thailand), Ltd.	10 Bush Lane, Bangkok, Thailand	" "	51
Industrias Deriplom, S. A.	Av. R. Saenz Pena 567, Buenos Aires, Argentina	Holding Company	100
National Lead Co., S. A.	"	Lead smelting and manufacturing fabricated lead products	100
Cia Minera Castano Viejo, S. A.	"	Mining lead and zinc and mfg. lead and zinc concentrates	50
Mereta, S. A.	"	Holding company	100
Doehler Argentina, S.A.I.C.I.F.	Avda. Marquez e Italia, Buenos Aires, Argentina	Manufacturing die castings	100
Baroid International, S.p.A.	Via G.A. Guattani 14, Rome, Italy	Mining and manufacturing oil well drilling materials	100
Chas. Taylor Sons, S. A.	Rue Leopold 11, Brussels, Belgium	Manufacturing refractories	100
Colver, S.p.A.	Brugherio, (Milano), Italy	Manufacturing paints	70
Ste. Belge du Titane, S. A.	Rue Leopold 11, Brussels, Belgium	Selling titanium pigments	100
Derives du Titane, S. A.	"	Manufacturing titanium pigments	100
Ste. Industrielle du Titane	45 Rue de Courcelles, Paris, France	Selling titanium pigments	91
Kronos Titaan N. V.	Groothandelsgebouw, Stationsplein 45, Rotterdam, Holland	Selling paints and titanium pigments	100
Titan Co. A/S	Fredrikstad, Norway	Manufacturing paints and titanium pigments	100
Titania A/S	Hauge - Dalane, Norway	Mining and milling ilmenite	100
The Jossingfjord Mfg. Co. A/S	"	Producing electricity	100
Tiferro, S. A.	Rue Leopold 11, Brussels, Belgium	Holding company	100
Kronos Titanpigment A. B.	Nybrogatan 44, Stockholm, Sweden	Selling titanium pigments	76
Schraubenfabrik Neustadt Goetz & Cie, GmbH	7828 Neustadt/Schwarzwald, West Germany	Manufacturing screws and metal fasterners	99
Titangesellschaft mbH	Peschstrasse 5, Leverkusen, Germany	Manufacturing titanium pigments	100
Unterstutzungskasse Titan GmbH	"	Holding company	100
Baroid of Nigeria, Ltd	134/136 Broad St., Lagos, Nigeria	Selling oil well drilling materials	100
Enenco Inc.	5050 Poplar St., Memphis, Tenn.	Producting fatty amines	50
Mine La Motte Corp.	250 Park Ave., New York, N. Y.	Inactive	50
R-N Corporation	111 Broadway, New York, N. Y.	Selling R-N process for direct reduction and beneficiation of iron ores	50
Titanium Metals Corp. of America	195 Clinton Road, West Caldwell, N. J.	Manufacturing titanium metal sponge, ingots, sheet and forgings	50
Wilson-Snead Mining Co., Inc.	Eufaula, Alabama	Mining vauxite	50

NATIONAL LEAD CO./NL INDUSTRIES, INC.

HISTORY OF GROWTH (U.S. ONLY)

1891 - 1981

1891 - National Lead Company was incorporated by consolidation of the following companies:

Original Name	Location	Products	New Name
John T. Lewis & Company	Phila., Pa.	white,red lead	John T. Lewis & Bros. Branch
Western White Lead Company	"	white lead	
Brooklyn White Lead Company	New York, N.Y.	"	National Lead and Oil Works Branch
Tewett White Lead Company	"	"	
Bradley White Lead Company	"	"	
Atlantic White Lead & Linseed Oil Company	"	"	Atlantic White Lead and Linseed Oil Branch
Cornell Lead Company	Buffalo, N.Y.	*	Buffalo Branch
Salem Lead Company	Boston, Mass.	*	Nat'l Lead Co. of Mass.
Anchor White Lead Company	Cincinnati, Ohio	white lead	Cincinnati Branch
Eckstein Company	"	"	
Collier White Lead & Oil Co.	St. Louis, Mo.	"	St. Louis Branch(?)
St. Louis Lead & Oil Co.	"	"	
Southern White Lead & Color Co.	"	*	
Missouri Lead & Oil Co.	"	white lead	
D. B. Shipman White Lead Co.	Chicago, Ill.	"	Chicago Branch (?)
Southern White Lead Co.	"	"	
Fahnestock White Lead Co.	Pittsburgh, Pa.	"	Pittsburgh, Pa.
Beymer-Bauman Lead Co.	"	*	
Davis-Chambers Lead Co.	"	*	
Armstrong-McKelvey Lead & Oil Co.	"	white lead	
T. H. Morley & Company	Cleveland, Ohio	*	Cleveland Branch

* Presumed to be white lead

1890 - Bought Lennox Smelting, Front & Jay St., Brooklyn, N.Y.

1891 - Bought Kentucky Lead & Oil Co., 9th St. between Main & River Sts., Louisville, Ky. Sold it in 1906.
- Bought American White Lead, 8th St. & Cawthorne, Louisville, Ky. Sold it in 1896.
- Bought Red Seal Castor Oil Co., St. Louis, Mo.

1893 - Acquired Ulster Lead Company, New York, N.Y.
- Acquired Union White Lead Mfg., Company, New York, N.Y.
- Combined these with the previously formed Atlantic White Lead and Linseed Oil Branch and the National Lead and Oil Works Branch into the Atlantic Branch.

1897 - Acquired the St. Louis Smelting and Refining Co., St. Louis, Mo.

1899 - Established Baltimore Branch
- Began production at mine in St. Francois County, Missouri.

1905 - Tells of mining property acquired in 1897, which became productive in 1899. Property was in St. Francois County, Missouri.

1906 - Acquired United Lead Co., with its companies as listed below:
American Shot & Lead Co., Fayette, Pitt & Front St., Baltimore, Md
American Shot & Lead Co., Dickson & Lewis St., St. Louis, Mo.
American Shot & Lead Co., St. Joseph & Constance St., New Orleans,
Sportsman's Shot Works, Cincinnati, Oh.
Collier Shot Tower Works, St. Louis, Mo.
Omaha Shot & Lead Works, 2810 "A" St., Omaha, Nebraska
Northwestern Shot & Lead, 118 Fairfield Ave., St. Paul, Mn.
Chicago Shot Tower Works, Chicago, Ill.
Bailey Farrell Shot Works, Pittsburg, Pa.
LeRoy Shot & Lead Works, N.Y.
Lousten Lead Works, Chicago, Ill.
Merchants Shot Works, Baltimore, Md.
(Hoyt) Markle Lead Works, St. Louis, Mo., plant in Granite City, Ill.
Union Lead & Oil, Front St., Brooklyn, N.Y.
W. L. McDougall Co., Elk & Prenitt St., Buffalo, N.Y.
Tatham Bros., 82-84 Beekman St., N.Y.
Tatham Bros., 82 Morgan St., Jersey City, N.J.
Tatham Bros., 226 S. 5th St., Philadelphia, Pa.

1907 - (reported in 1911) - Acquired Heath & Millgan Co., paint manfacturer, Chicago, Ill.

1908 - "Your mining and smelting interest have a plant in process of erection for the manufacture of sublimed lead (basic lead sulfate made directly from ore), product which now enters into a variety of uses including ready mixed paints."

1909 - Acquired an interest in U.S. Cartridge Co. of Lowell, Mass. (ammunition maker).
- (reported in 1912) Built a steel package plant.

1910 - Built a new plant in Pittsburgh, Pa. (Sterling Works?)
- Purchased a metal plant in Baltimore, Md.
- New plant of Southern Works, Chicago, Ill. (white lead).
- New St. Louis works nearing completion.

1911 - Sold Shipman Works, Chicago, Ill.
- New plant, Pittsburgh, Pa., Sterling Works (white lead).
- "A modern smelter has been constructed at Collinsville, Ill. . . . In addition to and in connection with the smelter, has been erected and is now in successful operation, a plant for the manufacture of Basic Sulfate of Lead." (This is all the St. Louis Smelting and Refining Co.)

- Baltimore Branch apparently absorbed into John T. Lewis & Co. Branch of Philadelphia, Pa.
- United Lead Co. bought Consolidated Lead Co.

1912 - Acquired Matheson Lead Co., Long Island City, N.Y.

1915 - Announced that the River Smelting and Refining Co. is a new corporation organized jointly by Messrs. Stone and Webster of Boston and the National Lead Co. for the purpose of manufacturing spelter by electrolytic process from zinc ores. "The plants of this company are completed and . . . they are about to be put in operation."
- (reported in 1916) Large plant in Brooklyn for aluminum die-castings.

1916 - Purchased Bass-Hueter Paint Co., San Francisco, Calif.
- Announce plans to build a tin smelter in the U.S. "The Co. has for many years smelted scrap tin and tin drosses."
- Acquired majority interest in Cinch Expansion Bolt and Engineering Co.
- Hoyt Metal Co. building die-casting facilities at its St. Louis plant.
- New plant of Carter White Lead nearly completed at West Pullman, Chicago.

1917 - Tin Smelting works being constructed in Brooklyn. (Williams Harvey Corp. of New York),

1918 - New construction took place in Phila., New York City, Cincinnati, San Francisco, Detroit, Denver, and New Haven.
- A United Lead Co. plant in Keokuk, Iowa made a tin substitute alloy, Ulco Hard Metal, during the war.
- Williams Harvey Corp. (American) new plant began operations (tin smelter).

1919 - Sold Heath & Milligan Co., Chicago (paints).
- Acquired all of Hirst and Begley Co., Chicago, Ill. (linseed oil production).
- Purchased all remaining stock of U.S. Cartridge Co.

1921 - Acquired one-half of the Titanium Pigment Co., Inc. plant in Niagara Falls, N.Y. (including Florida ilmenite properties, later known as Ponte Vedra Co.)

1923 - Acquired National Pigments and Chemical Co., St. Louis, Mo. (barytes plant).
- Titanium Pigment Co. is building a large plant in St. Louis, Mo. using equipment bought from a plant of the Mineral Refining and Chemical Corp. of St. Louis, Mo.
- Closed Williams Harvey Corp. tin - smelting plant on Long Island, N.Y.
- Acquired all interest in the Mueller Brass Foundry Co. of St. Louis.
-Acquired an interest in Combined Metals Reduction Co.

1926 - Sold United States Cartridge Co., Lowell, Mass.
- Acquired Chicago Bearing Metal Co.

1927 - Sold the Die-Casting Department, accepting stock in the Newton Die-Casting Corp., New Haven, Conn.

1928 - United Lead Co. plants consolidated with those of the National Lead Co.
- Acquired Georgia Lead Co.

1929 - Formed the Midwest Carbide Corp. to take over the business formerly operated by the National Lead Co. at Keokuk, Iowa. The Shawinigan Products Corp. became (50%) associates.

1930 - Acquired majority interest in Morris P. Kirk & Sons, Inc., Los Angeles, Calif. (purchase, treatment, and sale of secondary metals).
- Bought Evans Lead Co. plant at Charleston, W. Va. (lead oxides).
- Dissolved Cinch Expansion Bolt and Engineering Co.
- Dissolved Williams - Harvey Corp.

1932 - Acquired all outstanding stock of the Titanium Pigment Co. (including lands owned by Buckman & Pritchard, Inc. a subsidiary wholly owned by the Titanium Pigment Co. consisting of 17 miles of beach and abutting lands between Jacksonville and St. Augustine, Florida).

1933 - Acquired controlling interest in Master Metals, Inc., Cleveland, Ohio (smelting and refining drosses and secondary metals).
- Calif. Branch renamed the Pacific Coast Branch.

1935 - New TiO_2 plant built at Sayreville, N.J.
- Acquired majority interest in the American Bearing Corp., Indianapolis, Ind. (bearings).
- Acquired the California Talc Co.
- Acquired the Silica Products Co.
- Acquired the unowned balance of the Baroid Sales Co.
- Closed plant and liquidated the Virginia Lead Smelting Corp.

1936 - Sold mining properties the St. Francois, Missouri district (mines).
- Abandoned the Matawan, N.J. plant, transferring its operations to Perth Amboy, N.J.
- Simplified the corporate organization by dissolving the following subsidiary companies (acquiring all of the assets of the companies:)

Titanium Pigment Company.....
National Pigments and Chemical Co...
California Talc Co. .....
Silica Products Company .....
National Pigments Co. .....
National Barytes Co. .....
Baroid Sales Company .....
Magnus Co. Inc. New York .....
Magnus Co. Inc. California .....
The Magnus Co. Colorado.....
Magnus Co. Inc. Connecticut .....
Magnus Co. Inc. Georgia .....
Magnus Metal Co. Illinois .....
The Magnus Metal Co. Kansas.....
Magnus Metal Co. Inc. Kentucky .....
Magnus Co. Inc. Michigan .....
Magnus Metal Co. Missouri .....
Magnus Co. Inc. Oregon .....
Magnus Co. Inc. Texas .....
Magnus Co. Inc. Wisconsin .....
Evans Lead Company .....
U. S. Cartridge Company.....
Carter White Lead Company.....

1938 - Development of the Buckman & Pritchard, Inc. real estate (Florida) is being continued under the corporate name of Ponte Vedra Co.

1941 - Acquired MacIntyre ilmenite deposits (in Town of Newcomb, Essex County, N.Y.)

1942 - Built and began operations at Magnesium Reduction Co., Luckey (Toledo), Ohio (production of magnesium). All funds for construction and operation were provided by Federal government.
- Sold Ponte Vedra Co. (Florida).
- Continued exploration and development (mining properties) in Missouri, Kansas, and Oklahoma; and at mines operated by our subsidiary, Combined Metals Reduction Co., in Utah and Nevada.
- Mining properties in Rico, Col. abandoned.
- Non-operating properties in Bonanza, Col. were sold.

1943 - Acquired Edna Brass Manufacturing Co. (locomotive specialities).
- Relinquished interest in Combined Metals Reduction Co.

1944 - Acquired William A. Hardy & Sons Company, Fitchburg, Mass. (railroad bearings and paper mill screen plates).
- The newly developed Madison County, Missouri, area, which yields lead, copper, nickel, and cobalt concentrates, was brought into production.

1945 - Magnesium plant operated by the Magnesium Reduction Co. was closed.
- Missouri mining operations in the Madison County area substantially curtailed.

1946 - Acquired the outstanding minority shares of American Lead Corp., Indianapolis, Ind. (secondary metals smelters).
- Acquired the Texas Mining and Smelting Co., Laredo, Texas (metallic antimony and antimony oxides).

1947 - Began production of mixed paints at Perth Amboy, N.J. and Chicago, Ill.
- Constructed a plant to produce ground bentonite at Aladdin, Wyo., replacing unit at Belle Fourche, So. Dak. which was destroyed by fire.

1948 - New paint factory built in Los Angeles, Calif.
- Acquired majority interest in the Minnesota Linseed Oil Co., Minneapolis, Minn.
- Ceased linseed oil crushing operations at plants in Philadelphia, Pa. and Brooklyn, N.Y.
- Purchased certain assets of Titanium Alloy Manufacturing Co., Niagara Falls, N.Y.

1949 - New non-ferrous metal plants were constructed and are being operated by Morris P. Kirk & Son, Inc. in Salt Lake City, Utah and Portland, Ore.

- Acquired majority stock of Baker Castor Oil, with plants in Bayonne and Jersey City, N.J., Los Angeles, Calif., and Rochester, N.Y.

1950 - Acquired the plant of the Schorn Paint Co., Seattle, Wash.
- Formed Titanium Metals Corp. of America, owned jointly with Allegheny Ludlum Steel Corp.
- New bentone plant built in St. Louis, Mo.

1951 - Operations ceased at the Atlantic plant (linseed oil, white lead, paint products) in Brooklyn, N.Y., and the property was sold.
- Began production of titanium metal at Henderson, Nevada.
- Acquired all of the stock of Chas. Taylor's Sons Co. (plants in Cincinnati, Ohio and Taylor, Ken.).

1952 - Began operating AEC Feed Materials Plant at Fernald, Ohio.
- Operating small plant for AEC in Middlesex, N.J. (uranium ore sampling).
- Formed the Pioneer Alloy Products Division (valves, castings), with a plant in Ellwood City, Pa.

1953 - Acquired the Doehler-Jarvis Corp.
- Built new Doehler-Jarvis plant in Pottstown, Pa.
- Completed new DeLore (pigment extender) plant in Edson, Kansas.
- Completed new Baroid barytes plant in Corpus Christi, Texas.
- With Goodyear Tire & Rubber Co. and Bird & Son, Inc., formed Ruberite, Inc. (rubberized barytes for paving material). Plant in Malvern, Arkansas.

1954 - Completed nickel-copper-cobalt refinery at Fredericktown, Mo. (on the site of the lead and zinc mine of the St. Louis Smelting and Refining Division).
- Became contract operator of AEC Raw Materials Development Laboratory in Winchester, Mass. (including a pilot plant in Grand Junction, Col.).

1955 - Acquired Southern Screw Co., Statesville, No. Carolina.

1957 - Disposed of a D-J plant unit in Chicago which had not been in operation for several years.
- Formed new Nuclear Metals Division (supervises Fernald, Winchester, Grand Junction, Monticello operations).
- Nickel oxide smelted to produce metallic nickel at Crum Lynn, Pa.

1958 - Completed facilities at Albany, N.Y. for fabrication of nuclear fuel elements.
- Apparently ceased operations at Grand Junction, Colorado.
- Completed, with nine other companies, a nuclear research reactor at Plainsboro, N.J.

1959 - Acquired Goldsmith Bros. Smelting and Refining Co.
- Closed lead and zinc mine at Baxter Springs, Kansas.
- Monticello, Colorado facility closed.

1960 - Magnus Metal Division completed new facility in Fremont, Neb.
- Operating contract of Nickel Processing Corp. terminated.
- Started operation of new facility in Middlesex County, N.J. to produce materials encapsulated in polyethylene.

1961 - Disposed of majority stock interest in Minnesota Linseed Oil.
- Fredericktown, Mo. mine closed, operation liquidated.
- Hightstown laboratories completed.

1962 - Treating chemicals added to Baroid product line.
- Acquired Floating Floors Inc. (markets products made in D-J plants).

1963 - Production facilities for die-casting aluminum flooring and site-environmental systems transferred from Newark, N.J. to Toledo, Ohio.
- Metal fabricating plant and warehouse in Cincinnati, Ohio relocated to new facility in same area.
- New, partly owned, subsidiary, Enenco, Inc. built new plant in Memphis, Tenn.
- Paint test station transferred from Sayville, N.Y. (since 1917) to Hightstown, N.J.

1964 - Acquired all the stock of American Tansul Co. (specialized clay products).
- Two Doehler plants in Pottstown, Pa. consolidated into one location.
- Agreement signed with Bunker Hill Co. for development and mining of the Company's Higdon lead-zinc property near Fredericktown, Mo.
- TMCA opened applications development center at West Caldwell, N.J. to conduct special metallurgical investigations and to build and test prototype parts for the chemical industry.
- Construction began of new lead oxide facilities in Portland, Ore.
- Set up large experimental facility at Lakepoint, Utah to study magnesium salts extraction.

1965 - Acquired a plant at Landover, Maryland (cast acrylic sheets).
- Started manufacturing aluminum castings in a plant at Kenmore, N.Y.

1966 - New plant built by Magnus Metal Division at French Camp, Calif.
- Albany operations expanded through purchase of the equipment of the Sylcor Division of Sylvania Electric Products.
- New plant completed by Baroid at Channelview, Texas to produce oil field chemicals.
- New secondary lead refinery built at Beech Grove, Ind.

1967 - Acquired Amos Thompson Corp.
- Acquired Cochrane Foundry Inc.
- Purchased a plant in Wilmington, Del. to augment and broaden capability to fabricate radiation shielding material and mechanisms from depleted uranium.

1968 - Acquired Lake View Trust and Savings Bank, Chicago, Ill.
- Acquired Bunting Brass and Bronze Co.

1969 - Acquired McCullough Tool Co.
- Acquired Jonathan Manufacturing Co.
- Began Magnesium Division.
- Acquired Anaheim Citrus Products.

1970 - Closed paint and varnish manufacturing operations in San Francisco (in operation since 1891).
- Fasteners plant in Puerto Rico began operations.
- Baroid Treating Chemicals plant into full operation, including mineral synthesis plant.
- Discontinued manufacture of acrylic plastic sheet, and of encapsulated cellulose.
- Opened an antimony-ore concentrating mill in Nevada.

1971 - "In the past 18 months, we have closed down seven unprofitable plants and have sold three marginal operations."
- Acquired General Electric Company's speciality resistor business in Muskegon, Mich.
- Sold Blatchford Base and Aluminum Match Plate Corporation.
- Discontinued production of ferro titanium alloys.
- Chloride plants in U.S. and Canada shut down. Ceased production calcium-based titanium pigments.
- Name changed to NL Industries, Inc.

1972 - Pedricktown started up.
- Acquired Cambridge Nuclear Radiopharmaceutical Corp. (Billerica, Mass.) and Industrial Reactor Laboratories Inc. (Plainsboro, N.J.).
- Purchased (TIMET) Standard Steel Division.
- Acquired outstanding stock of Bell Clay Co.
- Started magnesium plant.

1973 - Greenville, Tenn. plant (Southern Screw) began operations.
- New plant opened in Altoona, Pa.
- Acquired outstanding stock of Triangle Service Inc.

1974 - Four operations - American Bearing, Bunting Brass, Magnus Metal, Regal Molds - combined into Bearings Division.
- Acquired remaining outstanding stock of Wilson-Snead Mining Co.

1975 - Sold five operations: Amos-Thompson Wood Div., Electronics Dep't., Floating Floors Inc., Lee Metal Products Co., Regal Molds Inc.
- Closed Doehler-Jarvis plant in Grand Rapids, Mich.

1976 - Sold Dutch Boy Paints Division.
- Sold Lake View Trust and Savings Bank.
- Sold Bell Clay Co.
- Sold Anaheim Citrus Products Co.
- Sold "....the Company's interest in lead mining properties."

1977 - Acquired the Rucker Co.
- Sold Jonathan Slide Div.
- Acquired Jett Engineering, Charlotte, N.C.

- Operations terminated at Antimony Division, Laredo, Texas. Subsequently sold.
- Southern Screw plants in Greenville, Tenn. and Puerto Rico closed.
- Sold Plastic Products Division.
- Sold Cochrane Foundry
- Sold Metallurgical Products operation.
- Acquired outstanding stock of Ashton Supply Co., Inc.

1978 - Began operations of D-J plant in Greenville, Tenn.
- Acquired Well Services Division workover, maintenance, and completion. (Formerly Texas International).
- Acquired Control Systems Division (formerly Stewart and Stevenson).
- Shut down St. Louis TiO_2 plant.
- Sold Taylor Refractories Division.
- Sold NL Clays Corp.
- Sold Pioneer Aluminum, Inc.
- Sold lead-plants in Portland, Ore. and Los Angeles, Calif.
- Closed lead plant in Dallas, Texas; subsequently sold.

1979 - Opened North Belt Complex.
- Completed new Hycalog plant in Oklahoma.
- Acquired Basin Surveys.
- Acquired Petrolog.
- New plant, Atlas-Bradford, Bryan, Texas.
- Sold Philadelphia plant (lead chemicals).
- Sold Niagara Falls plant (ceramics, Zr chemicals).
- Sold Bearings plant in Indianapolis, Ind.
- Sold Secondary lead plants: Altoona, Pa.,; Cleveland, Ohio; Granite City, Ill.; Beech Grove, Ind.; St. Louis Park, Minn.; Brooklyn (Bradley plant), N.Y.

1980 - Sold Bearings plants: Toledo, Ohio; Kalamazoo, Mich.
- Closed Bearings plant in Houston, Texas.
- Sold Magnesium Division.

1981 - Acquired Sperry-Sun, Sugarland, Texas.

* * *

HGR/aab
Revised 6/18/81

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF ORGANIZATION

OF

NATIONAL LEAD COMPANY

To: The Secretary of State
State of New Jersey

Pursuant to the provisions of Section 14A:9-2(4) and Section 14A:9-4(3) of the New Jersey Business Corporation Act, the undersigned executes the following Certificate of Amendment of the Certificate of Organization of National Lead Company:

1. The name of the corporation is NATIONAL LEAD COMPANY.

2. The following amendment of the Certificate of Organization of National Lead Company having been approved by its Board of Directors was adopted upon receiving the affirmative vote of two-thirds of the votes cast by the holders of shares entitled to vote thereon at a meeting of its shareholders held on the 15th day of April A.D., 1971:

The Certificate of Organization of National Lead Company, as amended, is amended so that Article I will read as follows:

"I. That the name assumed to designate such company and to be used in its business dealings is N L INDUSTRIES, INC."

3. The number of shares outstanding at the time said amendment was adopted and the number of shares entitled to vote thereon was 23,816,042.

4. The number of shares voted for and against such amendment, respectively, was 17,412,572 votes for and 350,822 votes against such amendment.

IN WITNESS WHEREOF, this Certificate has been executed on behalf of National Lead Company by its Chairman of the Board thereunto duly authorized this 16th day of April A.D., 1971.

NATIONAL LEAD COMPANY

[CORPORATE SEAL]

By EDWARD R. ROWLEY
Edward R. Rowley
Chairman of the Board

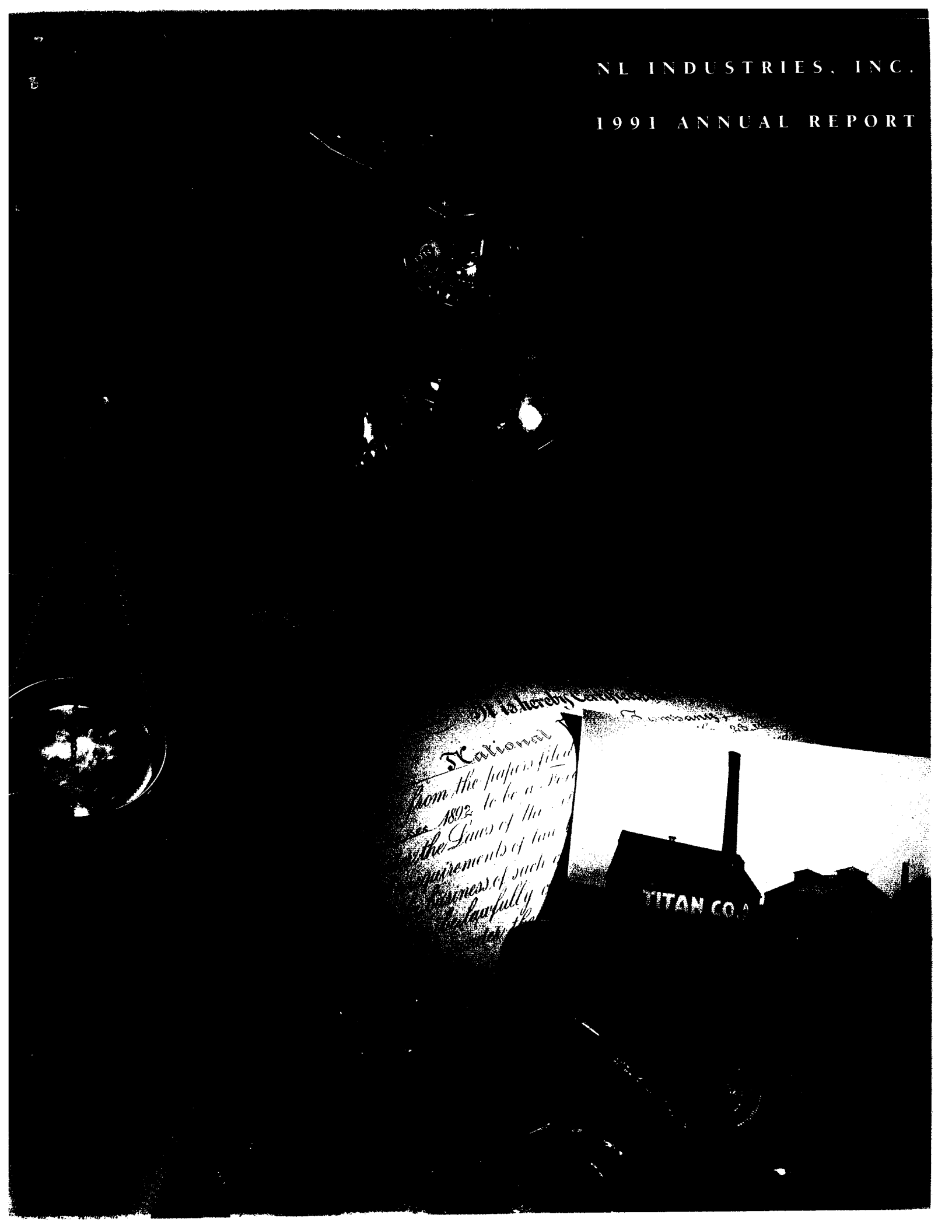
Attest:

THOMAS P. MESICK
Thomas P. Mesick, Secretary

Exhibit 4

NL INDUSTRIES, INC.

1991 ANNUAL REPORT



COMPANY PROFILE

NL Industries, Inc. is a multinational company that manufactures and markets titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two principal operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paint, plastics, paper, fiber and ceramics. Rheox, Inc., NL's other principal operating subsidiary, is a major supplier of water-based and solvent-based rheological additives. These products are used to control the flow and levelling characteristics of paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,500 people worldwide. The Company is committed to being a leading corporate citizen and fair employer in the countries where it operates. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

ABOUT THE COVER

To commemorate the centennial anniversary of the founding of NL Industries, this image visually presents a "historical perspective" of the Company. The Dutch Boy, well-recognized for many years as the logo which represented NL's line of high-quality paints, is now a worldwide trademark of the Sherwin-Williams Company and its affiliates. The leather-bound ledger contains the minutes from NL's first Board of Directors meeting held in 1891. Also shown is the charter document from 1892 when the Company was registered in the state of New York. The photo with the smokestack shows the first titanium dioxide pigments plant built in Norway in the 1920s.

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FINANCIAL HIGHLIGHTS

(In millions, except per share data)	1991	1990	1989
Net sales	**$ 840.3**	$ 906.6	$ 1,000.9
Operating income	**139.0**	251.1	308.6
Income (loss) before income taxes	**(19.0)**	154.8	278.1
Income (loss) before extraordinary items	**(24.0)**	93.5	170.3
Net income (loss)	**(16.5)**	92.4	172.9
Capital expenditures	**195.1**	195.3	83.4
Cash and cash equivalents	**125.3**	435.3	165.6
Marketable securities:			
Current	**228.0**	7.8	129.9
Noncurrent	**220.3**	429.7	449.0
Total assets	**1,831.0**	1,966.7	1,512.3
Notes payable and current maturities of long-term debt	**139.0**	180.0	465.9
Long-term debt	**1,150.3**	1,130.4	383.9
Common shareholders' equity (deficit)	**(58.3)**	38.6	132.3
Income (loss) per common share:			
Income (loss) before extraordinary items	**$ (.40)**	$ 1.42	$ 2.57
Extraordinary items	**.13**	(.02)	.04
Net income (loss)	**$ (.27)**	$ 1.40	$ 2.61

ABOUT THIS REPORT

This annual report gives a concise overview of NL's products, financial condition and financial results for 1991. Additional detailed information is provided annually to shareholders in accordance with the regulations of the Securities and Exchange Commission. This detailed information is in the Company's Annual Report on Form 10-K, which includes complete audited financial statements and information pertaining to litigation and other contingencies to which the Company is subject. Certain portions of this information are also included in the appendix to the Company's annual meeting proxy statement, which accompanied the initial mailing of this annual report to shareholders.

NL's products are used worldwide to make inks brighter and paper whiter, and this annual report represents just one of thousands of products containing titanium dioxide pigments.

TO OUR SHAREHOLDERS:

The year 1991 marked the centennial anniversary of the founding of NL Industries, Inc. The titanium dioxide pigments business of our wholly-owned subsidiary, Kronos, Inc., traces its origins to companies which became part of NL during the early years of its growth. These companies played an important role in the development of today's pigment industry by establishing the titanium dioxide pigments market and improving product performance. This was accomplished by building an international organization that continues to meet the needs of this important market.

Harold Simmons
Chairman of the Board

The recession in the United States and other parts of the world, combined with excess industry capacity, posed difficult challenges for our Company in 1991 and as we begin 1992. Net sales were $840 million, down 7% from the previous year. Operating income was $139 million, a 45% reduction from 1990. As a result of investment losses, interest and other expenses, the Company incurred a net loss of $16 million compared to net income of $92 million in 1990. Operations in 1991 were adversely affected by a continued worldwide decline in titanium dioxide pigment prices, which began to fall early in 1990. Substantial cost reductions, record production from our chloride process technology plants, and sales volume 10% above 1990 mitigated the decline in operating income due to price erosion.

This year will mark the completion of construction at Kronos' 80,000 metric ton capacity titanium dioxide pigments plant in Lake Charles, Louisiana. This facility, which is in the early start-up stages, marks Kronos' return to manufacturing titanium dioxide pigments in the United States for the first time since 1982. We believe that sales in the United States have been constrained by customer preferences for a domestic supplier, and that operation of the Lake Charles plant will facilitate future growth of Kronos' U.S. sales.

In September 1991, the Company purchased 11.3 million shares of its common stock for an aggregate cost of $181 million in a self-tender offer. As of February 14, 1992, the Company had also purchased 4.0 million shares of its common stock pursuant to a 5 million share repurchase program authorized in 1990, including 1.6 million shares repurchased during 1991 for an aggregate cost of $21 million.

J. Landis Martin
President and Chief Executive Officer

Recovery from the effects of a worldwide decline in economic conditions has been disappointingly slow. The tight titanium dioxide pigments supply/demand relationship that existed in the late 1980s eased significantly during the past two years. Worldwide pigment supply increased from production expansion projects begun in the late 1980s, while 1991 demand growth did not fully recover from reductions sustained in 1990. According to industry estimates, capacity utilization was below 90% in both 1990 and 1991. As a result, pigment prices weakened and the impact of these reduced prices will continue to be felt in 1992. Without significant price improvements over current levels, Kronos' operating income in 1992 is expected to be substantially lower than in 1991, and the Company currently expects to report a net loss for 1992. However, when an economic recovery begins, operating rates should improve and result in higher prices in the longer term.

Our Rheox subsidiary made considerable progress in its second year of operating as a separate subsidiary by bringing 20 new products to global markets, and by organizing its product lines into three distinct groups. Most of the new products were introduced late in the year and did not substantially affect 1991 net sales.

All operations of the Company have ongoing stringent cost control programs to enhance future profitability, and we are confident that these efforts will have a positive impact in 1992. Throughout our 100 year history, NL has endured cyclical swings in the economy, and we believe that the titanium dioxide pigments industry has significant long-term potential.

Harold Simmons

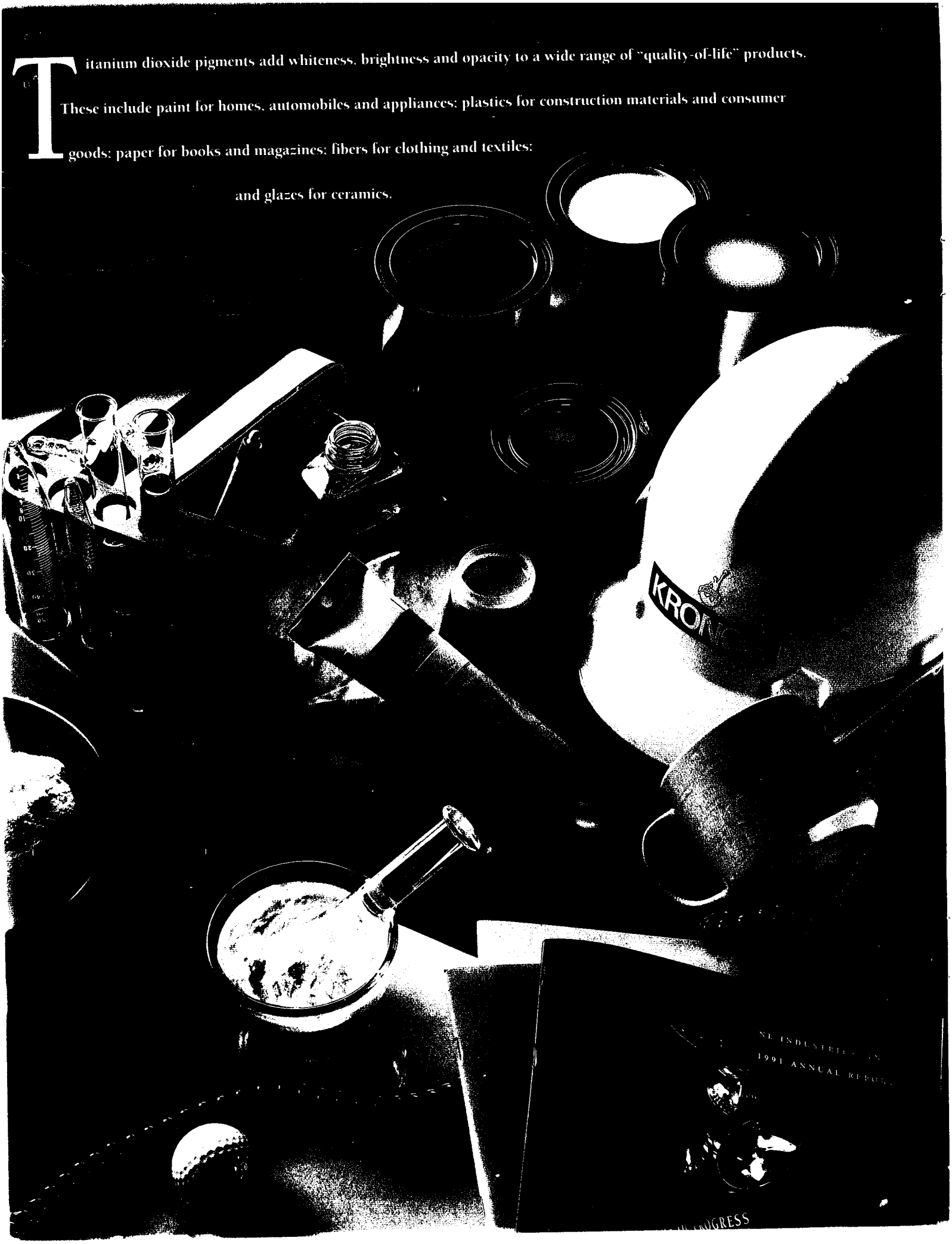
Harold Simmons
Chairman of the Board

J. Landis Martin

J. Landis Martin
President and Chief Executive Officer

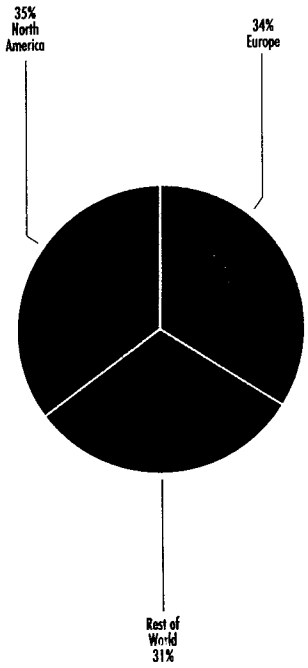
February 14, 1992

Titanium dioxide pigments add whiteness, brightness and opacity to a wide range of "quality-of-life" products. These include paint for homes, automobiles and appliances; plastics for construction materials and consumer goods; paper for books and magazines; fibers for clothing and textiles; and glazes for ceramics.



Demand for titanium dioxide pigments increases with the growth of end-use products related to an improved standard of living. The titanium dioxide pigments industry has grown 50% during the last two decades to an annual production capacity of almost three million metric tons. This growth was achieved despite temporary setbacks resulting from the cyclical nature of worldwide economic conditions.

An employee at Kronos' new Lake Charles facility removes titanium dioxide pigments from the slurry collection filters prior to the drying phase of the manufacturing process.

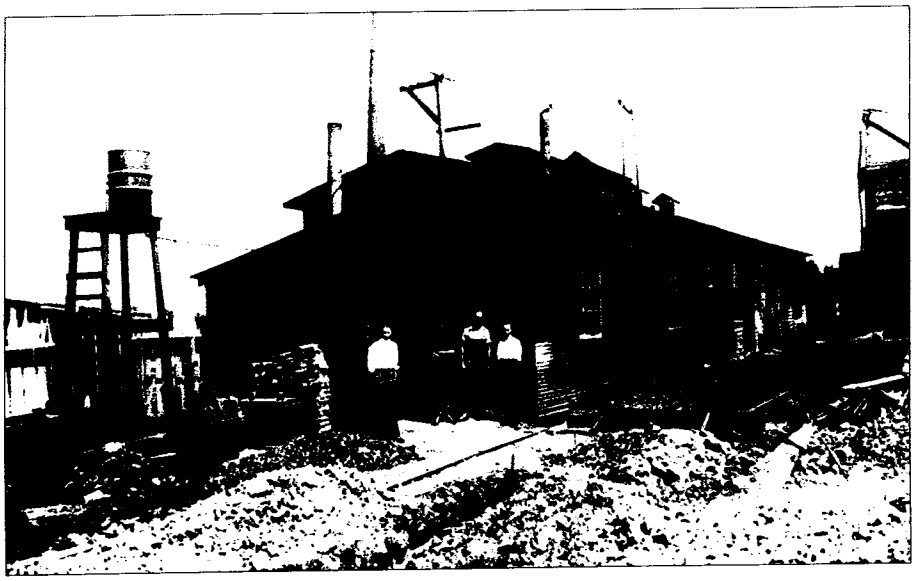


Worldwide Pigment Consumption by Geographic Region

The potential for long-term growth of the industry can be seen by examining per capita consumption of titanium dioxide pigments in various geographical regions. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world. Kronos believes that economic development in Eastern Europe, the Far East and China should eventually produce consumption patterns approaching those of more industrialized nations. This will result in increased demand for titanium dioxide pigments – a product for which there presently is no direct substitute. As the world's fourth largest producer of these pigments, Kronos is well positioned to participate in this future growth.

TITANIUM DIOXIDE PIGMENTS– A HISTORY OF PROGRESS

Kronos played a leading role in development of the worldwide titanium dioxide pigments market and in the growth of NL Industries. Predecessor companies first commercialized production of titanium dioxide pigments in the United States and Norway in the 1920s. The sulfate manufacturing process pioneered by these operations remains a basic technology for plants that today account for over half of the world's titanium dioxide pigments supply. The company also provided ilmenite ore, a key raw material for the growing industry, from two mines, one of which is still in operation in Norway.



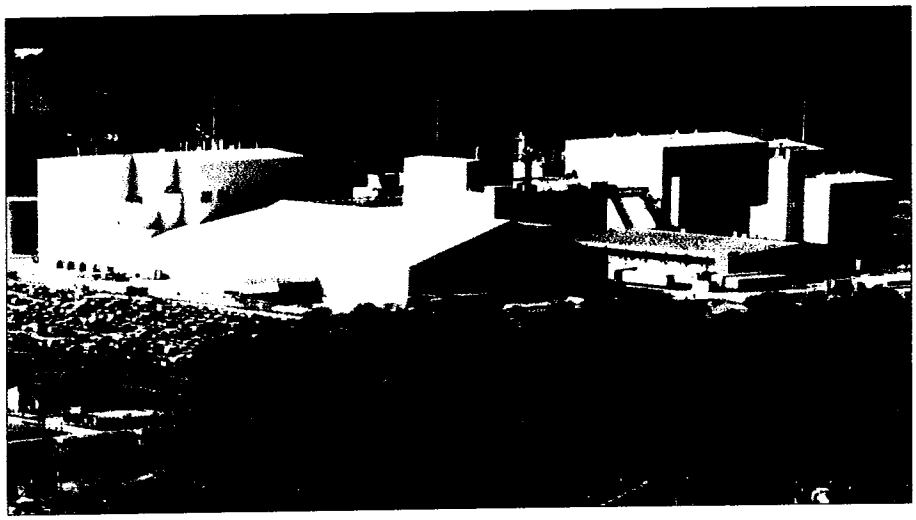
The first plant to produce commercial quantities of titanium dioxide pigments in the United States began operations in Niagara Falls, New York in 1916. This plant became part of the Company's operations in 1920.

As demand for titanium dioxide pigments spread throughout Europe, the company established manufacturing facilities in Germany and sales organizations in France and Belgium. Further growth in worldwide pigment demand led to construction of additional production facilities in Belgium and Canada during the late 1950s.

Kronos research and development scientists continued to improve the sulfate process and also developed a proprietary chloride process technology. In 1978, Kronos completed construction of the first commercial titanium dioxide pigments plant in Continental Europe to utilize the chloride process technology. This technology is a

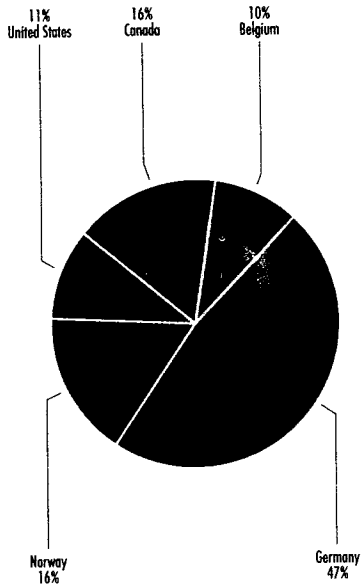
keystone for Kronos' continued growth as it provides significant economic and environmental advantages from reduced effluent waste treatment requirements and improved energy and manpower utilization compared to the sulfate process.

Over the past decade, Kronos developed and implemented an environmental initiative which included building three environmentally-preferred chloride process plants and discontinuing waste acid discharge from all European sulfate process plants. Kronos has undertaken these measures well ahead of other titanium dioxide pigment companies in the European Community.



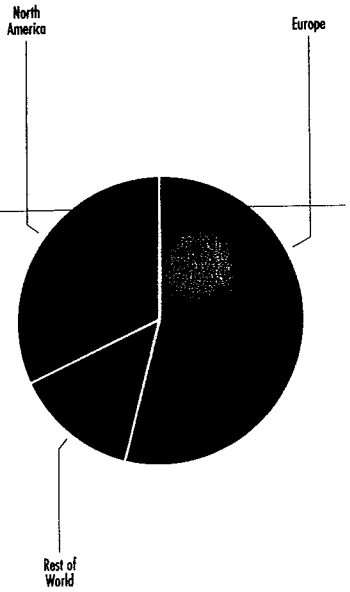
Kronos has completed construction of its U.S. titanium dioxide pigments plant in Lake Charles, Louisiana. Start-up of production began in early 1992 utilizing the environmentally-preferred chloride process.

Kronos currently operates six pigment production plants and one mine at locations in five countries. Successful operation of these facilities has been achieved by employing strong managerial and technical personnel recruited from local areas. The multinational nature of Kronos is evident from both a historical perspective and the 1991 geographical distribution of its employees. This worldwide presence provides the manufacturing, sales and distribution systems to service more than 5,000 customers in over 100 countries.



Kronos Employee Distribution

Operating income in 1991 was $110.8 million, compared to $230.3 million in 1990. This decline resulted from a 15% decrease in average selling prices, partially offset by a 10% growth in sales volume which improved Kronos' worldwide market share. The continued decline in prices was due primarily to easing of the supply/demand balance resulting from the combined effects of increased worldwide production capacity and reduced demand.



Kronos 1991 Unit Sales Volume

Although selling prices declined, lower demand did not uniformly impact all pigment products. Sales of pigments produced by the chloride process remained relatively strong compared to sales of sulfate process pigments. Having approximately equal capacities of both processes, Kronos responded by reducing production at the sulfate facilities, while maintaining full chloride production.

Kronos also took advantage of its strong chloride production base to increase sales volume, especially in the United States. Seven new pigment products were introduced in the U.S. during 1991. Four of these have been specifically designed for plastics applications, which are the fastest growing market segment. The major coatings market was bolstered by the introduction of two new products, one of which is supplied to customers in slurry form. Shipment of pigment as a slurry reduces wastes from discarded packaging materials, and eliminates an initial customer operation required for paint manufacturing. Another new pigment product was also introduced in the important paper laminate market.

Start-up is currently underway at Kronos' new titanium dioxide pigments plant located in Lake Charles, Louisiana. This is the first new titanium dioxide pigments plant built in the United States since 1979. The facility incorporates the latest in Kronos' proprietary chloride process technology, including capability to utilize a wide range of

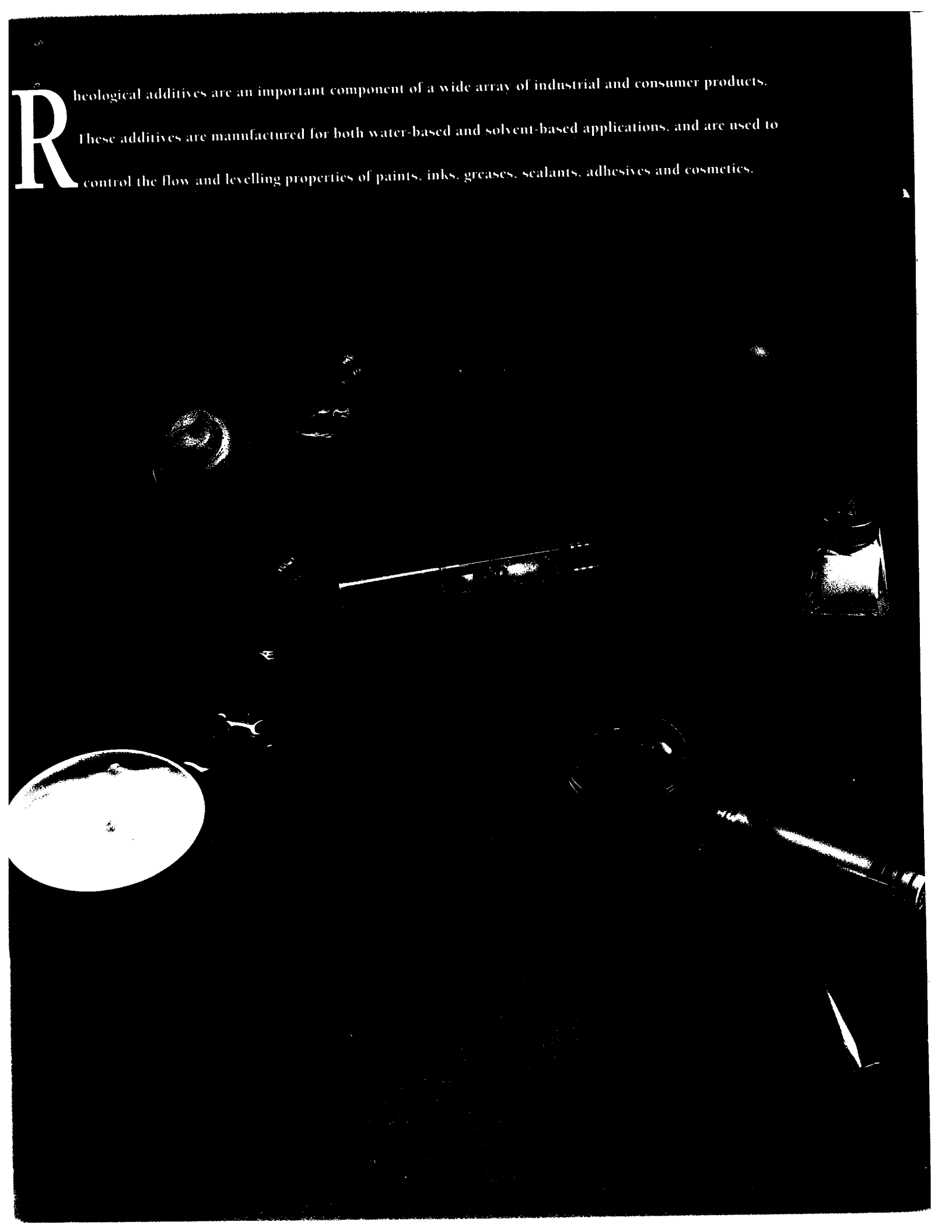
feedstock materials. This flexibility, which is not available to all manufacturers, allows consumption of relatively low-cost raw materials. The plant also incorporates the latest environmental and safety technology.

A research scientist uses a high resolution X-ray diffractometer to certify the purity of titanium dioxide pigments and determine parameters for product processing.

The U.S. and Canadian pigment markets continue to move closer together with pending full implementation of the Free Trade Agreement in 1993. The Lake Charles facility, in conjunction with the existing Canadian plant, is expected to enhance Kronos' position in this strategically important North American market. The additional production capacity of the Lake Charles plant is expected to allow the company to take full advantage of anticipated increased demand resulting from a worldwide economic recovery.

The strong manufacturing and marketing base established by Kronos assures our customers a secure supply of quality pigments manufactured in cost-effective plants. Our employees are secure in the knowledge that they work in safe facilities, and the neighboring communities know that these facilities are operated with a high regard for protection of the environment. We believe these factors provide a strong business foundation for future success.

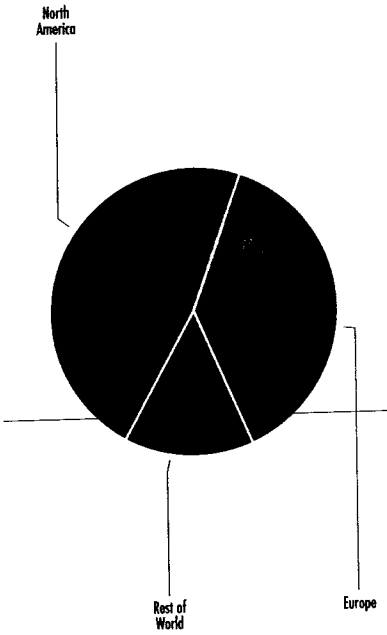
Rheological additives are an important component of a wide array of industrial and consumer products. These additives are manufactured for both water-based and solvent-based applications, and are used to control the flow and levelling properties of paints, inks, greases, sealants, adhesives and cosmetics.



Operating income in 1991 was $28.2 million, compared to $23.6 million in 1990. The 1990 earnings included a nonrecurring charge related to settlement of certain patent infringement litigation. Excluding the effect of this charge, 1991 earnings were essentially unchanged from 1990, with a slight reduction in sales volume being offset by production efficiencies and cost reduction programs. Average prices in 1991 were above 1990 levels as Rheox continued to focus on higher-margin products and expansion of its product lines.

Rheox also focused on global growth by organizing into three business groups: Solvent Base Coatings, Water Base Coatings and Specialties. This will facilitate responsiveness to customer needs in each business segment. International expansion resulted in a 16% growth in net sales in the Far East and Pacific Rim markets compared to 1990.

Rheox 1991 Unit Sales Volume



The Solvent Base Coatings group represents Rheox's largest business segment. This group benefits from a worldwide customer base and production of its own key raw materials. Hectorite clays are obtained from a company-owned mine in California which contains what is believed to be the largest known commercial deposit in the world. Quaternary amines, another important raw material, are purchased primarily from a 50%-owned joint venture company.

New solvent base products were patented and introduced during 1991. These include THIXATROL® TSR which prevents seeding in aliphatic coatings, and M-P-A® 3000 MS, a liquid anti-settling additive. In response to global distribution demands, Rheox developed a dry powder version of some of its newer liquid products. Dry products are easier to ship and are environmentally preferable to solvent-containing liquid forms.

The Water Base Coatings group introduced a wide array of products that are being sold in construction, paint and automotive end-user markets. Construction products BENAQUA™ 4000 and 8000 are additives for indoor and outdoor textured wall

coatings and elastomeric roof coatings. Other products include RHEOLATE® 300 which is a non-urethane associative thickener useful in high-value interior paints. RHEOLATE 2000, a water-dispersible additive, is being utilized successfully in the development of new water base automotive paints.

The Specialties group began marketing several new products during 1991. These include new ink additives such as BENTONE® 760 and several developmental products which enable customers to formulate inks based on environmentally preferred vegetable

Rheox utilizes an advanced infrared microscope which allows examination and analysis of microsamples to determine chemical composition and identify contaminants.

oils. A new acrylic polymer, RHEOLATE 5000, is currently being evaluated by customers as a thickener in water base cosmetics and industrial applications. Another polymer was market tested in an adhesive/sealant application, and commercial introduction of a broad family of adhesive products is expected in 1992. New oil well drilling products broadened the Rheox line of low-temperature drilling fluid additives. These complement the family of more technically demanding high-temperature products. The grease and plastics additives businesses were also expanded globally, and several new gels for cosmetics were introduced.

During 1992, Rheox will continue to develop its traditional products and markets while intensifying efforts to expand into other specialty chemicals areas.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)	Years ended December 31		
	1991	1990	1989
Net sales:			
Kronos	**$ 732,108**	$ 792,390	$ 822,324
Rheox	**108,187**	114,199	108,635
Specialty chemicals unit sold	**–**	–	69,924
	$ 840,295	$ 906,589	$ 1,000,883
Operating income:			
Kronos	**$ 110,767**	$ 230,250	$ 280,944
Rheox	**28,194**	23,598	25,733
Specialty chemicals unit sold	**–**	–	6,004
Group expense, excluding general corporate items	**–**	(2,772)	(4,131)
	138,961	251,076	308,550
Disposition of business units	**–**	–	33,523
General corporate income (expense):			
Interest and dividend income	**40,502**	40,556	21,967
Securities transactions, net	**(53,092)**	8,745	5,126
Expenses, net	**(44,921)**	(44,290)	(44,644)
Interest expense	**(100,412)**	(101,240)	(46,433)
	(18,962)	154,847	278,089
Provision for income taxes	**(3,910)**	(60,078)	(106,439)
Minority interest	**(1,113)**	(1,263)	(1,376)
Income (loss) before extraordinary items	**(23,985)**	93,506	170,274
Extraordinary items	**7,523**	(1,083)	2,620
Net income (loss)	**$ (16,462)**	$ 92,423	$ 172,894
Per common share:			
Income (loss) before extraordinary items	**$ (.40)**	$ 1.42	$ 2.57
Extraordinary items	**.13**	(.02)	.04
Net income (loss)	**$ (.27)**	$ 1.40	$ 2.61
Dividends	**$ .60**	$ .60	$ .45
Weighted average common shares outstanding	**60,233**	65,666	66,017

CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands)	December 31 1991	1990
Current assets:		
Cash and cash equivalents	$ 125,270	$ 435,256
Marketable securities	227,996	7,809
Accounts and notes receivable	239,338	222,888
Inventories	196,911	207,895
Prepaid expenses	6,001	10,577
Total current assets	795,516	884,425
Other assets:		
Marketable securities	220,345	429,749
Prepaid pension cost	17,511	16,713
Other	59,077	58,694
Total other assets	296,933	505,156
Property and equipment, net	738,584	577,114
	$1,831,033	$1,966,695
Current liabilities:		
Notes payable	$ 429	$ 40,746
Current maturities of long-term debt	138,605	139,285
Accounts payable and accrued liabilities	216,194	184,561
Income taxes	4,941	35,811
Total current liabilities	360,169	400,403
Noncurrent liabilities:		
Long-term debt	1,150,251	1,130,444
Deferred income taxes	232,336	257,148
Accrued pension cost	78,218	82,326
Other	66,495	56,276
Total noncurrent liabilities	1,527,300	1,526,194
Minority interest	1,839	1,530
Shareholders' equity (deficit)	(58,275)	38,568
	$1,831,033	$1,966,695
Common shares outstanding	51,201	64,135

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Years ended December 31		
	1991	1990	1989
Cash flows from operating activities:			
Net income (loss)	**$ (16,462)**	$ 92,423	$ 172,894
Depreciation, depletion and amortization	**32,581**	35,525	26,458
Deferred income taxes	**(14,665)**	75,387	(9,764)
Securities transactions, net	**53,092**	(8,745)	(5,126)
Changes in assets and liabilities	**2,513**	(108,370)	(35,917)
Other, net	**(7,127)**	(5,121)	(20,941)
Net cash provided by operating activities	**49,932**	81,099	127,604
Cash flows from investing activities:			
Capital expenditures	**(195,146)**	(195,304)	(83,386)
Sales (purchases) of securities, net	**87,502**	73,529	(646,381)
Other, net	**(1,786)**	45,073	102,423
Net cash used by investing activities	**(109,430)**	(76,702)	(627,344)
Cash flows from financing activities:			
Net borrowings	**2,504**	327,697	576,307
Dividends	**(34,724)**	(40,056)	(39,770)
Purchases of treasury stock	**(202,519)**	(22,129)	–
Other, net	**(842)**	(6,143)	(5,850)
Net cash provided (used) by financing activities	**(235,581)**	259,369	530,687
Cash and cash equivalents:			
Net change during the year	**(295,079)**	263,766	30,947
Net change due to currency translation	**(14,907)**	5,852	(3,676)
Balance at beginning of year	**435,256**	165,638	138,367
Balance at end of year	**$ 125,270**	$ 435,256	$ 165,638
Supplemental disclosures - cash paid for:			
Interest, net of amount capitalized	**$ 107,638**	$ 83,214	$ 34,620
Income taxes	**54,628**	62,547	113,602

CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)	Years ended December 31, 1991, 1990 and 1989
Balance at December 31, 1988	$ 145,365
Net income	172,894
Dividends	(30,599)
Adjustments:	
Currency translation	(86,980)
Marketable equity securities	(68,482)
Other	112
Balance at December 31, 1989	132,310
Net income	92,423
Dividends	(39,772)
Adjustments:	
Currency translation	(49,985)
Marketable equity securities	(74,641)
Purchases of treasury stock	(22,129)
Other	362
Balance at December 31, 1990	38,568
Net loss	(16,462)
Dividends	(34,724)
Adjustments:	
Currency translation	19,637
Marketable equity securities	137,198
Purchases of treasury stock	(202,519)
Other	27
Balance at December 31, 1991	**$ (58,275)**

REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders of NL Industries, Inc.:

We have audited, in accordance with generally accepted auditing standards, the consolidated balance sheets of NL Industries, Inc. as of December 31, 1991 and 1990, and the related consolidated statements of operations, cash flows and shareholders' equity for each of the three years in the period ended December 31, 1991 appearing in an appendix to the proxy statement for the 1992 Annual Meeting of Shareholders of NL Industries, Inc. (not presented herein). In our report dated February 14, 1992 also appearing in that proxy statement, we expressed an unqualified opinion on those consolidated financial statements.

In our opinion, the information set forth in the accompanying condensed consolidated financial statements is fairly presented, in all material respects, in relation to the consolidated financial statements from which it has been derived.

COOPERS & LYBRAND

Houston, Texas
February 14, 1992

DIRECTORS, OFFICERS AND EXECUTIVES

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer - NL Industries, Inc.

Kenneth R. Peak
President - Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman - Valhi, Inc. (diversified holding company)

Harold Simmons
Chairman of the Board - NL Industries, Inc.
Chairman and Chief Executive Officer - Valhi, Inc.

John R. Sloan
President and Chief Executive Officer - The Thompson Group (private investment company)

Michael A. Snetzer
President - Valhi, Inc.

Admiral Elmo R. Zumwalt, Jr. (Retired)
President - Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee
John R. Sloan, Chairman
Kenneth R. Peak

Management Development and Compensation Committee
Kenneth R. Peak, Chairman
John R. Sloan
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee
Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS AND EXECUTIVES

NL Industries, Inc.

Harold Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel, and Secretary

Dennis G. Newkirk
Vice President and Controller

Kronos, Inc.

J. Landis Martin
Chairman of the Board

Dr. Lawrence A. Wigdor
President and Chief Executive Officer

Susan E. Alderton
Vice President and Treasurer

William R. Bronner
Vice President and Secretary

Dennis G. Newkirk
Vice President and Controller

Anthony L. DeGisi
Vice President, North America

Fred DeJong
Vice President

Dr. Siegfried Hartmann
Vice President, Manufacturing

Edward J. Zadzora
Vice President, Human Resources

Dr. Christopher E. Jones
President, Kronos Louisiana, Inc.

Rheox, Inc.

Dr. Lawrence A. Wigdor
Chairman of the Board and Chief Executive Officer

Susan E. Alderton
Treasurer

Wilbert E. Blair
Vice President, Manufacturing

William R. Bronner
Vice President and Secretary

Dr. Michael A. DeSesa
Vice President, Technology

Paul A. Kopasko
Vice President, Finance

Larry Weissman
Vice President, Marketing

David Wood
Vice President, Europe

SHAREHOLDER INFORMATION

Annual Meeting

The annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

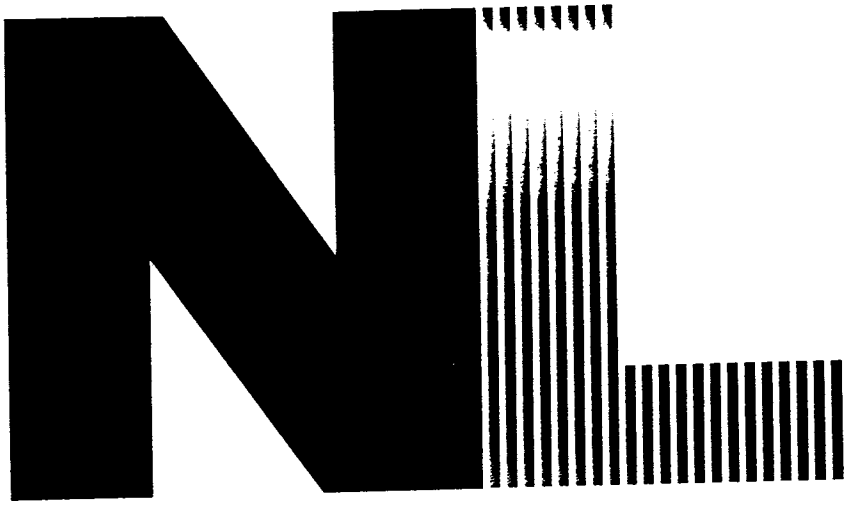
Registrar and Transfer Agency

First Chicago Trust Company of New York, P.O. Box 3981, Church Street Station, New York, New York 10008-3981. Telephone (212)791-6422

Form 10-K Report

Shareholders may obtain a free copy of the Annual Report on Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ended December 31, 1991. Requests should be addressed to NL Industries, Inc., Investor Relations Department, P.O. Box 60087, Houston, Texas 77205, or by calling (713)987-5186.

NL INDUSTRIES, INC.



1992

Annual

Report

COMPANY PROFILE

NL Industries, Inc. is a multinational company that manufactures and markets titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, the larger of NL's two principal operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paint, plastics, paper, fiber and ceramics. Rheox, NL's other principal operating subsidiary, is a worldwide supplier of solvent-based and water-based rheological additives. These products are used to control the flow and levelling characteristics of paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,600 people worldwide. The Company is committed to being a leading corporate citizen and fair employer in the countries where it operates. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL."

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Shareholder Information	IBC

TO OUR SHAREHOLDERS

The financial performance of NL Industries, Inc. in 1992 was adversely affected by the depressed worldwide economic climate and continued deterioration of pricing for titanium dioxide pigments. Although the year's financial results were disappointing, important strides were taken which should help enhance our business in future years.

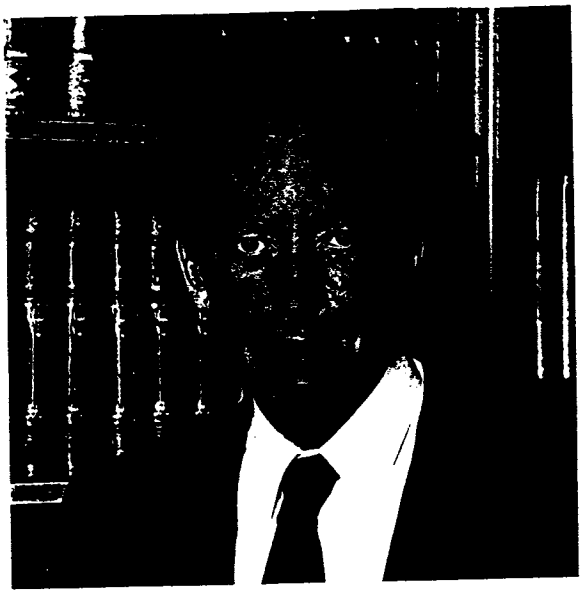
Kronos, our titanium dioxide pigments subsidiary, improved operating efficiencies and achieved production records at our chloride process titanium dioxide pigments plants in Canada and Europe. Kronos also implemented a new marketing and pricing program for its water treatment chemicals, which resulted in a more significant contribution to operating income from this co-product. We also successfully commissioned our chloride process titanium dioxide pigments plant in Lake Charles, Louisiana. Since its start-up, the plant has demonstrated continuing improvement in operating performance and has the potential of producing over 100,000 metric tons per year.

Rheox, our specialty chemicals subsidiary, continued to broaden its product lines in 1992. Rheox introduced 21 new products, many of which are aimed at the faster growing water-based applications. Rheox also focused on product development for environmental applications, with new products introduced for de-inking and soil remediation. An expansion of our specialty chemicals plant at St. Louis was completed, which met our operating objectives of lowering costs, improving quality and reducing Rheox's use of toll producers. In late 1992, a direct marketing and technical service organization was established in Europe which is expected to help increase Rheox's market share in 1993 and beyond.

NL's net sales increased 6% to $893 million in 1992, as increased sales volumes offset lower average selling prices. Kronos achieved record sales volumes in 1992 and improved its share of titanium dioxide pigments sales in the United States and Europe. Kronos' sales volume increase of 11% was well above the industry's 1992 average growth rate.

Despite Kronos' record sales and production volumes and the continuation of stringent cost controls, the further erosion of selling prices resulted in NL's operating income declining by 20% to $111 million compared to 1991. Operating income for Kronos fell 26% to $82 million in 1992. Operating income for Rheox approximated the previous year at $29 million.

General corporate expense was $2 million lower in 1992 than in 1991 due to reductions in certain proxy solicitation expenses and litigation settlements and expenses partially offset by an increased provision for environmental costs. In March 1992, the Company ceased capitalizing interest upon completion of the new Lake Charles plant. As a result, 1992 interest expense was $118 million, an $18 million increase over 1991. Interest and corporate expense were greater than operating income, which resulted in a 1992 loss of $44 million before the effects of changes in accounting principles and extraordinary items compared to a loss of $24 million in 1991. The loss before changes in accounting principles and extraordinary items includes aggregate losses on securities transactions of $6 million and $53 million in 1992 and 1991, respectively.



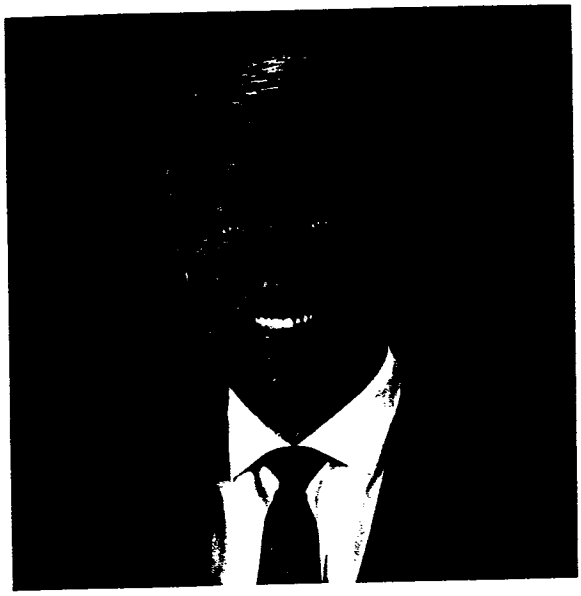
Harold Simmons

The Company's net loss for 1992 was $76 million compared to $16 million for 1991. The 1992 net loss includes the impact of adopting two accounting changes relating to postretirement benefits other than pensions and deferred income taxes. The net impact of these changes was a one-time non-cash charge of $32 million.

In June 1992, Kronos International, Inc. amended its Deutsche Mark-denominated term loan resulting in a prepayment of the June 1993 DM 200 million ($132 million) principal installment and modification of certain financial covenants alleviating potential loan covenant compliance concerns in the short term.

In February 1993, Kronos announced it had entered into a Letter of Intent to establish a 50/50 manufacturing joint venture with Tioxide Group, a wholly-owned subsidiary of Imperial Chemical Industries PLC, for operation of the Lake Charles titanium dioxide pigments plant. The Letter of Intent provides for Kronos to receive a cash payment of approximately $200 million from Tioxide along with an exchange of technology. A portion of the proceeds will be used to pay down existing debt related to

the plant. The transaction is subject to, among other things, obtaining acceptable financing, preparation of definitive documents, and review by U.S. antitrust authorities. Kronos' share of output from the joint venture, combined with increased capacities at Kronos' other chloride process plants, will provide Kronos the opportunity to meet current market requirements and strengthen its worldwide presence in future years.



J. Landis Martin

Additional steps taken to conserve cash included the suspension of the Company's quarterly cash dividend. We will continue to implement measures to reduce the Company's debt and improve cash flows from operations and explore other means to improve liquidity.

While recovery from the effects of the decline in the worldwide economy continues to be disappointingly slow, we believe that the titanium dioxide pigments industry has significant long-term potential. Cost controls and reduced capital spending now in place, along with the benefits expected to be realized through the proposed joint venture, will help NL emerge from the recession as a stronger company.

Harold Simmons

Harold Simmons
Chairman of the Board

J. Landis Martin

J. Landis Martin
President and Chief Executive Officer

March 5, 1993

FINANCIAL HIGHLIGHTS

(In millions, except per share data)	1990	1991	1992
Net sales	$ 906.6	$ 840.3	$ 893.5
Operating income	251.1	139.0	110.7
Income (loss) before income taxes	154.8	(19.0)	(43.0)
Income (loss) before extraordinary items and cumulative effect of changes in accounting principles	93.5	(24.0)	(44.6)
Cumulative effect of changes in accounting principles	–	–	(31.8)
Net income (loss)	92.4	(16.5)	(76.4)
Capital expenditures	195.3	195.1	85.2
Cash and cash equivalents	435.3	125.3	87.3
Marketable and other securities:			
Current	7.8	228.0	100.6
Noncurrent	429.7	220.3	23.6
Total assets	1,966.7	1,831.0	1,472.1
Notes payable and current maturities of long-term debt	180.0	139.0	43.6
Long-term debt	1,130.4	1,150.3	992.0
Shareholders' equity (deficit)	38.6	(58.3)	(146.3)
Income (loss) per common share:			
Income (loss) before extraordinary items	$ 1.42	$ (.40)	$ (.88)
Extraordinary items	(.02)	.13	–
Cumulative effect of changes in accounting principles	–	–	(.62)
Net income (loss)	$ 1.40	$ (.27)	$ (1.50)

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required]**
— For the fiscal year ended December 31, 1992

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 1-640

NL Industries, Inc.

(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	**13-5267260** (IRS Employer Identification No.)
3000 North Sam Houston Parkway East, Houston, Texas (Address of principal executive offices)	**77032** (Zip Code)

Registrant's telephone number, including area code: **(713) 987-5000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	**New York Stock Exchange** **Pacific Stock Exchange**
7½% Debentures, due December 15, 1995	**New York Bond Exchange**

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes ✓

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months and (2) has been subject to such filing requirements for the past 90 days. Yes ✓ No __

As of March 16, 1993, 50,889,943 shares of common stock were outstanding. The aggregate market value of the 17,037,953 shares of voting stock held by nonaffiliates as of such date approximated $85 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the Registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a corporation under the laws of the State of New Jersey in 1891, is primarily a holding company with its operations conducted principally through two wholly-owned subsidiaries, Kronos and Rheox. During 1989 and 1990, NL implemented an organizational restructuring of its worldwide operations whereby, among other things, its titanium dioxide pigments ("TiO_2") operations were grouped under Kronos, and its specialty chemicals operations were grouped under Rheox. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company."

At December 31, 1992, Valhi, Inc. held approximately 49% of NL's outstanding common stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies.

Legal proceedings, environmental matters and other contingencies are described in Item 3 — "Legal proceedings," and Notes 13, 17 and 20 to the Consolidated Financial Statements, which information is incorporated herein by reference, and under the caption "Regulatory and environmental matters" below. Business and geographic segment financial information is included in Note 3 to the Consolidated Financial Statements, which information is incorporated herein by reference.

Chemicals Operations

Products and operations

The Company is an international producer and marketer of TiO_2 and specialty chemicals, primarily rheological additives. The Company and its distributors and agents sell and provide technical services for its products to over 5,000 customers in over 100 countries, with the largest portion of sales in Europe, the United States and Canada. Kronos accounted for 88% of the Company's net sales in 1992, and Rheox accounted for the remainder.

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide variety of products, including paint, paper, plastics, fibers and ceramics. Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos is the world's fourth largest TiO_2 producer, with an estimated 11% share of the worldwide market. Kronos' major customers include international paint, paper and plastics manufacturers.

TiO_2 demand is driven by the growth in the end-use markets — paint, paper and plastics — which are generally considered "quality-of-life" markets. As such, demand for TiO_2 is influenced by the relative economic well-being of various geographical regions. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. Economic development in Eastern Europe, the Far East and China may eventually produce consumption patterns approaching those of the more industrialized nations and these regions are expected to provide the largest percentage growth rates in future TiO_2 demand.

Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in international markets. By volume, over one-half of Kronos' 1992 TiO_2 sales were to Europe, with approximately one-third to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ores (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived co-products of the pigment production processes). These co-product chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Rheological additives produced by Rheox control the flow and levelling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays that have been chemically reacted with organic chemicals and compounds. The Company believes that it is the world's largest producer of rheological additives for solvent-based systems, supplying approximately one-half of the worldwide market, and is also a supplier for rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for slightly over 90% of Rheox's sales in 1992. Rheox introduced 21 new products in 1992, many of which are aimed at the faster growing water-based applications. Rheox also focused on product development for environmental applications with new products introduced for de-inking and soil remediation.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using the chloride and sulfate pigment production processes. While most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred by certain segments of the coatings and plastics markets, and sulfate process pigments are generally preferred by the paper, fibers and ceramics markets. Due to, among other things, relative capacity and operating costs of chloride process and environmentally-corrected sulfate process plants, the market share of chloride process pigments has increased in recent years, which trend is expected to continue. Kronos believes that its proprietary chloride process technology makes it one of the lower cost producers in the world. Almost two-thirds of Kronos' production capacity is based on chloride process technology.

Kronos produced 358,000 tons of TiO_2 in 1992, up from 293,000 metric tons in 1991. The increase in production during 1992 was primarily at Kronos' chloride process plants, including its new plant in Lake Charles, Louisiana which commenced production in 1992. As a result of improved operating efficiencies, Kronos achieved record production levels of chloride process pigments in 1992. Kronos believes its annual attainable production capacity has been increased to approximately 430,000 metric tons, including the new Louisiana plant.

The primary raw materials used in the chloride pigment production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and rutile. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process are available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Ltd. (South Africa), approximately 60% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp, in South Africa. Natural rutile ore is purchased from a number of sources. Synthetic rutile, another beneficiated ilmenite, is purchased from Renison Goldfields Consolidated, Ltd., formerly Associated Minerals Consolidated, Ltd., in Western Australia.

The primary raw materials used in the sulfate pigment production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided substantially all of Kronos' feedstock for its European sulfate process pigment plants in 1992. Kronos' mine is also a major commercial source of rock ilmenite for other sulfate process producers in Europe. Kronos also has ilmenite reserves in the state of New York, but production from these reserves is not economical under present market conditions. Kronos purchases sulfate grade ilmenite slag under contracts negotiated annually with QIT and Tinfos Titan and Iron K/S in Norway.

While Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate in the near term, tightening supplies for the chloride process may be encountered in the late 1990s. To meet this challenge, Kronos is attempting to identify alternate sources of titanium-containing feedstock and does not anticipate experiencing any interruptions of its raw material supplies, as new mining ventures for beach sand ilmenite and rutile are being evaluated by suppliers in various parts of the world.

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with Bentonite Corporation, a wholly-owned subsidiary of Tremont, which has significant bentonite reserves in Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future and Bentonite's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of hectorite clays in the world. Quaternary amines are purchased primarily from a joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Proposed Joint Venture

In January 1993, Kronos entered into a letter of intent to establish a manufacturing joint venture with Tioxide Group, a wholly-owned subsidiary of Imperial Chemicals Industries PLC. The joint venture, which would be equally owned by Kronos and Tioxide, would operate the Lake Charles chloride process TiO_2 plant currently owned by Kronos. Under separate offtake agreements, Kronos and Tioxide would be required to purchase their equal share of TiO_2 produced at the plant. Under the terms of the letter of intent, Kronos would contribute the Lake Charles plant to the joint venture and receive approximately $200 million in cash from Tioxide. The letter of intent also provides for the companies to exchange certain technological information. The transaction is subject to, among other things, obtaining acceptable joint venture financing, preparation of definitive documents and review by U.S. antitrust authorities.

Upon completion of the Kronos/Tioxide joint venture transaction, Kronos' annual TiO_2 production capacity, including its one-half share of output from the joint venture, would aggregate approximately 380,000 metric tons, of which two-thirds would be based on chloride process technology. Such capacity is slightly higher than actual 1992 production and is believed to be sufficient to provide Kronos the opportunity to strengthen its North American and worldwide presence in future years.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity and customers generally were accumulating pigments. In the past few years, supply has exceeded demand, in part due to new chloride process capacity coming on-stream, and customers have generally reduced inventories accumulated in prior years to more normal levels. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980's, have had a negative impact since prices peaked in early 1990.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and a significant amount of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada. Kronos' principal competitors are E.I. du Pont de Nemours & Co.; Hanson PLC (SCM Chemicals); Tioxide Group; Kemira Oy; Ishihara Sangyo Kaisha, Ltd.; and Bayer AG. These six competitors have estimated individual worldwide market shares ranging from 5% to 21%, and an aggregate 65% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is the principal North American competitor.

Worldwide capacity additions in the TiO_2 market have been limited because of the significant capital expenditures and lead time (typically four or five years) required to obtain environmental approval and build new facilities. Kronos has substantially completed a major environmental protection and improvement program commenced in the early 1980s to replace, expand or modify its European TiO_2 production facilities for compliance with various environmental laws by the respective effective dates. All of Kronos' European plants now use either the low-waste yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Kronos has announced its intentions to construct a $30 million waste acid neutralization/synthetic gypsum manufacturing facility for its Canadian sulfate process TiO_2 plant, which is expected to be completed in mid-1994. The Company believes that its environmental protection and improvement program places it in an advantageous position relative to many of its competitors in the TiO_2 industry. See "Regulatory and environmental matters."

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors are Laporte PLC, Sud-Chemie AG and Akzo NV.

Research and development

The Company's annual expenditures for research and development and technical support programs have averaged over $10 million during the past three years with Kronos accounting for about 70% of the annual total. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are primarily directed towards improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to specialty chemicals are conducted primarily in the United States and are primarily directed towards the development of new products for water-based systems and environmental applications and new applications for existing product lines.

Patents and trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the proposed joint venture with Tioxide, the parties would exchange certain technological information, with such exchange resulting in cross-licensing of certain patents currently held by each party.

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada and approximately one-third of Rheox's sales in the past few years have been attributable to European production. An aggregate of 77% of the Company's 1992 consolidated sales were attributable to non-U.S. customers, including 11% attributable to customers in areas other than Europe and Canada.

The Company's foreign businesses are subject to the risks customarily attendant to foreign operations and investments in foreign countries, including nationalization, restrictive action by local governments, limitations on repatriation of earnings and changes in currency exchange rates. The Company's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and environmental matters."

Customer base and seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1992, the Company employed approximately 3,600 persons, with approximately 800 employees in the United States and approximately 2,800 at sites outside the United States. About 90% of worldwide production facility hourly employees are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and environmental matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company has and continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants are in substantial compliance with applicable requirements of these laws. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the Company's plants to operate. The Company believes all of its European plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of TiO_2 plants in Europe vary from country to country, a common regulatory denominator is provided by the European Community (the "EC"). Germany and Belgium, members of the EC, follow the initiatives of the EC. Norway, although not a member, generally patterns its environmental regulatory actions after the EC. Kronos is in compliance with agreements reached with the environmental authorities of Germany and Belgium and is also in compliance with an EC directive to control the effluents produced by TiO_2 production facilities.

Germany and Belgium have ratified the Oslo Convention of February 1972 which restricts marine pollution caused by the offshore disposal of wastes. Kronos' German and Belgian chloride process plants do not dispose of effluents offshore. Waste sulfuric acid from the Nordenham sulfate process plant is concentrated and recycled using a waste acid concentration plant developed by Kronos in conjunction with the German government to replace offshore disposal of effluents. Waste acid from the Leverkusen sulfate process plant is concentrated and recycled under a long-term service contract.

The Norwegian Pollution Control Act of 1981, as amended, is the principal environmental statute regulating the Fredrikstad plant. Kronos has a ten-year operating permit which expires in May 1999. In accordance with the terms of an agreement with environmental regulatory authorities which expires in 2004, Kronos disposes its waste acid effluents at a neutralization facility in Norway.

Kronos' ilmenite mine near Hauge i Dalane has a permit for the offshore disposal of tailings until February 1994. In 1990, the Norwegian government issued a decree mandating that Kronos convert to onshore disposal of tailings by January 1994. Kronos is constructing a $17 million onshore disposal system, including $7 million incurred through 1992, which is on schedule for timely completion. Onshore disposal will result in a modest increase in the mine's operating costs.

In Varennes, Quebec, the Quebec provincial government is the principal environmental body with regulatory authority over Kronos' Canadian TiO_2 production facilities, which currently consist of plants utilizing both the chloride and sulfate process technologies. The provincial government has jurisdiction, delegated by the Canadian government, over discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos' right to discharge effluents from its Canadian sulfate process Ti02 plant into the St. Lawrence River until June 1994, at which time Kronos' new waste acid neutralization facility is expected to be completed. In January 1993, the Quebec provincial government granted Kronos a permit to construct the facility and established the future permit parameters which Kronos will be required to meet upon completion of the facility in June 1994.

In March 1993, Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate TiO_2 production facility. The penalty for these violations could be up to Canadian $15 million, if proven. Additional charges, if brought, could involve additional penalties. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above, and will contest the matter vigorously.

Future capital expenditures related to the Company's ongoing environmental protection and improvement program, including those described above, are currently expected to be approximately $82 million, including $40 million in 1993.

In connection with past operations and waste disposal practices, the Company has been named a potentially responsible party ("PRP") pursuant to CERCLA, in governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priority List. See Item 3 — "Legal Proceedings".

ITEM 2. PROPERTIES

The principal executive offices of the Company are located at 3000 North Sam Houston Parkway East, Houston, Texas 77032. These offices are made available to the Company through an intercorporate services agreement with Baroid Corporation.

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway), a facility in Varennes, Quebec, Canada and a new facility in Lake Charles, Louisiana which started production in 1992.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately 30% of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired on December 31, 1991 and to which an extension through 2011 has been agreed to in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreements contain restrictions on the Company's ability to transfer ownership or use of the Leverkusen facility.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany.

All of the Company's principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed at the state, local and federal levels that seek to impose various obligations on present and former manufacturers of lead pigment and lead paint with respect to asserted health concerns associated with the use of such products. No legislation or regulations have been adopted to date which are expected to have a material adverse effect on the Company.

In 1987 and 1988, actions were filed against the Company and other defendants for injuries allegedly caused by lead pigment purportedly supplied by the defendants (*Spriggs v. Sherwin-Williams, et al.*, No. LE3121-5-87 Housing Court of Massachusetts, Hampden County; *LeBlanc v. Marderosian, et al.*, No. 87-CV-0036, Superior Court of Massachusetts, Worcester County; *Santiago v. Sherwin-Williams, et al.*, No. 87-2799T, United States District Court for the District of Massachusetts). The complaints seek compensatory and punitive damages for allegedly negligent product design, failure to warn, breach of warranty, and concert of action from the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA").

In January 1992, the court in *Santiago* granted the defendants' summary judgment motion barring the plaintiff from relying on a market-share liability theory and denied the plaintiff's cross-motion. In July 1992, the court granted summary judgment to the defendants, including the Company, on the plaintiff's two remaining claims: concert of action, because the plaintiff was unable to identify whose products caused her alleged injuries; and enterprise liability, because that theory of liability is not recognized by the courts in Massachusetts. The dismissal of the complaint is on appeal.

In August 1992, the court in *LeBlanc, et al. v. Marderosian, et al.* granted the plaintiffs' motion to dismiss the Company and the other pigment manufacturing defendants with prejudice.

In January 1993, the parties in *Spriggs v. Sherwin-Williams, et al.* agreed to seek a stay of the action pending the outcome of the appeal in *Santiago*.

In July 1992, the Company was served with a complaint entitled *Boston Housing Authority v. Sherwin-Williams Company*, C.A. No. 92-10624-Y, United States District Court for the District of Massachusetts. The complaint asserts a claim for contribution from the Company, other pigment manufacturers and the LIA based on their alleged negligence in product design, manufacture and distribution; negligent failure to warn; breach of warranty; aiding and abetting; and conspiracy. The plaintiff seeks contribution to its $1.45 million cost of settling a claim by an individual who was allegedly injured by exposure to lead pigment in the period from 1973 to 1977. In September 1992, on joint motion of the parties, the court entered a stay of all proceedings pending the outcome of the appeal in Santiago. The parties stated in the motion that if the *Santiago* decisions are affirmed, this case would be dismissed with prejudice.

In November and December 1990, the Company and others were served with third-party complaints in actions entitled *Coren, et al. v. Cardozo v. Sherwin-Williams, et al.* (No. 29101) and *Pacheco, et al. v. Ortiz v. The Sherwin-Williams Company, et al.* (No. 90-3067-B) in the Housing Court of Massachusetts, Suffolk County. The third-party complaints against the pigment manufacturers and the LIA contain allegations similar to those in the *Santiago* action and also seek contribution and indemnification for any relief awarded to plaintiffs.

In *Coren,* the third-party defendants removed the case to federal court. In 1992, the federal court dismissed the direct claims and remanded the indemnification and contribution claims to the housing court. Thereafter, the housing court granted the third-party defendants' motion to stay discovery, pending trial on the main action. The Company has answered the third-party complaint, denying all allegations of wrongdoing.

In *Pacheco,* plaintiffs settled with the defendant landlords for less than $100,000. The third-party claims are in discovery. Third-party plaintiffs have proposed a stay of this matter pending the outcome of the appeal in *Santiago.*

In October 1991, the Company and others were served with a third-party complaint by the owner of the plaintiff's apartment in an action entitled *Barros v. Pires v. Sherwin-Williams Co., et al.,* (Civ. No. 01011), in the Housing Court of Massachusetts, Suffolk County. The third party complaint against the pigment manufacturers and the LIA alleges negligent product design, negligent failure to warn, breach of warranty, aiding and abetting, and concert of action, and also seeks contribution and indemnification for any relief awarded to plaintiff for damages allegedly suffered due to exposure to lead-based paint. In May 1992, the court granted the third-party defendants' motion to dismiss. In June 1992, the third-party plaintiffs moved for reconsideration or for reversal of the dismissal.

Pending in the Civil District Court for the Parish of Orleans, State of Louisiana, are numerous actions against the Housing Authority of New Orleans ("HANO") wherein residents of HANO housing seek compensatory and punitive damages for injuries allegedly caused by lead pigment. In 1989 and 1990, HANO filed third-party complaints in 14 of these actions for indemnity and/or contribution against the pigment manufacturers and the LIA. Subsequently, HANO agreed to dismiss all such complaints and to consolidate them for purposes of appeal. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other eight cases also included in the appeal, the court of appeals reversed the lower court decision dismissing the cases on various grounds. These eight cases have been remanded to the district court for further proceedings.

In January 1990, HANO filed a third-party complaint against the pigment manufacturers, the LIA and certain paint companies in a class action filed on behalf of all present and future residents of approximately 16,000 HANO apartments (*Spells v. HANO, et al.,* CDC 89-25170) seeking indemnity and/or contribution for abatement of lead paint allegedly found in the HANO apartments. The court dismissed the third-party complaint in December 1991. Thereafter, plaintiffs filed an appeal.

In April 1990, an action was filed in a Civil District Court for the Parish of Orleans, State of Louisiana, against the pigment manufacturers and the LIA seeking indemnity and/or contribution for the abatement of lead paint in approximately 14,750 HANO apartments (*HANO v. NL Industries, Inc., et al.,* CDC 90-6091). The court dismissed this case in August 1991. Plaintiff appealed the decision, and the appeal was consolidated with the appeal in *Spells.* In January 1993, the Court of Appeals affirmed the lower court judgments dismissing the complaints in *HANO v. NL Industries, Inc., et al.* and *Spells v. HANO, et al.* on the grounds that the statute of limitations barred the actions. Hano has applied to the Supreme Court of Louisiana for writs of certiorari in both cases.

In August 1991, the Company was served with a complaint in an action entitled *Orleans Parish School Board v. Apex Sales Company, et al.,* (No. 91-6014) filed in Louisiana State Court against numerous lead pigment and paint manufacturers, including the Company, for lead paint abatement in approximately 160 schools and surrounding grounds. Plaintiff alleged, among other things, that the defendants conspired to mislead and failed to warn the public regarding the hazards associated with lead paint use. In July 1992, the court dismissed the complaint in its entirety and, in August 1992, plaintiffs appealed the dismissal of the complaint.

In December 1991, the Company received a copy of a complaint filed in the Civil District Court for the Parish of Orleans seeking indemnification and/or contribution against the Company and eight other defendants for approximately $4.5 million in settlements paid to Housing Authority residents (*Housing Authority of New Orleans v. Hoechst Celanese Corp., et al.*, No. 91-28067). These claims appear to be the same theories which HANO had previously filed. The Company has not been served.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability. In January 1992, plaintiffs appealed the dismissal, and the defendants cross-appealed. Plaintiffs' appeal was voluntarily dismissed. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In December 1992, plaintiffs filed a motion to stay the claims of the City of New York and the New York City Health and Hospitals Corporation pending resolution of the Housing Authority's claim.

In November 1990, a purported class action was filed in the United States District Court for the Eastern District of Pennsylvania against the pigment manufacturers and the LIA on behalf of the City of Philadelphia, the Philadelphia Housing Authority ("PHA") and all other municipalities in the United States with a population over 100,000 carrying out lead abatement programs (*City of Philadelphia and Philadelphia Housing Authority v. Lead Industries Association, Inc., et al.*, No. 90-7064JG). The action alleges liability on a variety of theories, including negligent product design, negligent failure to warn, strict liability, breach of warranty, restitution, indemnity, concert of action, conspiracy and market share liability and seeks compensatory and punitive damages and injunctive relief. The alleged damages are similar to those claimed in the *City of New York* case. In February 1992, the court ruled that the claims of the City of Philadelphia, but not the PHA, were barred by the statute of limitations, and clarified the dates upon which the period of limitations commenced to run.

In April 1992, the court in the *City of Philadelphia* matter granted defendants' motions to dismiss the amended complaint in its entirety with prejudice, ruling that the negligent product design, civil conspiracy, concert of action, enterprise liability, market share liability, alternative liability, and indemnification counts should be dismissed because they failed to state a claim under Pennsylvania law, and that the negligent failure to warn and restitution counts should be dismissed because the defendants' alleged conduct was not the proximate cause of plaintiffs' injuries. The court dismissed the breach of warranty count on the ground that plaintiffs did not purchase any lead pigment from defendants. Finally, the court dismissed the fraud and misrepresentation counts because plaintiffs did not allege with required specificity that the defendants had unique knowledge concerning the alleged hazards of lead paint that was not also available to plaintiffs. In July 1992, plaintiffs filed an appeal, in the United States Court of Appeals for the Third Circuit, of the court's grant of defendants' motion to dismiss the amended complaint in its entirety. The defendants filed a cross-appeal of the court's previous decision holding that the statute of limitations did not bar the claims of the PHA.

In June 1991, a purported class action was filed in the United States District Court for the Eastern District of Pennsylvania against the LIA and 18 alleged former lead pigment and/or lead paint manufacturers, including the Company, by the named plaintiffs and on behalf of all current and retired residential, commercial and industrial painters (and their spouses) residing in Pennsylvania and New Jersey who have been occupationally exposed to lead paint and lead pigment products *Swartzbauer, et al. v. Lead Industries Association, Inc. et. al.*, No. 91-CV-3948. Plaintiffs allege that the defendants are liable on a variety of theories including negligent product design, failure to warn, breach of warranty, strict liability, fraud and misrepresentation, intentional tort, market share, joint and several liability, civil conspiracy, and concert of action. Plaintiffs seek damages in excess of $100,000 for each affected class member (alleged to be over 21,000

individuals exclusive of spouses), punitive damages, the establishment of a fund to cover the costs of periodic diagnostic medical examinations and tests for affected individuals, and a fund to develop alleged alternative safety equipment procedures and paint products. In July 1992, the court granted defendants' motion to dismiss the enterprise liability and alternative liability claims because they failed to state a claim under Pennsylvania law. The court denied the defendants' motion to dismiss the remainder of the complaint. The case is in discovery.

In July 1991, a purported class action was filed in the United States District Court for the Eastern District of Pennsylvania against a variety of defendants including the PHA, the City of Philadelphia, the United States Department of Housing and Urban Development, the LIA and 19 alleged former lead pigment and/or paint manufacturers, including the Company, on behalf of current residents in approximately 5,000 dwelling units overseen by the PHA which were painted prior to 1978, *Hurt, et al. v. Philadelphia Housing Authority, et al.*, No. 91-CV-4746. Plaintiffs alleged that the defendants are liable on a variety of theories, including negligent product design, failure to warn, breach of warranty, strict liability, fraud and misrepresentation, intentional tort, market share, joint and several liability, civil conspiracy and concert of action. The action seeks injunctive relief for the abatement of lead-based paint alleged to exist in the PHA units in which members of the class reside, medical monitoring and treatment, education as to the alleged hazards of lead-based paint and the reimbursement for past and future abatement and medical expenses. In August 1992, the court granted motions to dismiss all claims against the Company, the pigment manufacturing defendants, and the LIA. The court's dismissal of the Company, the other pigment manufacturing defendants and the LIA is not yet appealable pending entry of final judgement as to all parties.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the PHA and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. Defendants moved to dismiss various claims, but the court dismissed only the claim for loss of consortium. Defendants answered the complaint denying allegations of wrongdoing. The case is in discovery.

In August 1992, the Company was named as a defendant and served with an amended complaint in *Renita Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative liability. In October 1992, the Company and the other defendants moved to dismiss the complaint. Discovery has been stayed pending the outcome of the motion.

In December 1992, the Company was served with the complaint in *Shelton v. Sherwin-Williams, et al.* in District Court, County of Hennepin, Minnesota. The complaint alleges personal injury caused by exposure to lead paint during the early 1970s. The legal theories pled are negligent failure to warn, negligent product design, conspiracy and concert of action, breach of warranty and market share liability. Counsel for plaintiff served but did not file the complaint. Thereafter, the parties entered into a stipulated dismissal without prejudice. Plaintiff has until July 1, 1993 to recommence the action.

The Company believes that the foregoing lead pigment actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that described above will not be filed.

Environmental matters and litigation

Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities. Additionally, in connection with past disposal practices, the Company has been named a PRP pursuant to CERCLA in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. EPA's Superfund National Priority List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims.

Typically, CERCLA liability cannot be estimated until the Remedial Investigation and Feasability Study ("RIFS") is complete, the U.S. EPA issues a final record of decision and costs are allocated. Such proceedings may involve numerous waste generators and transporters and seek to allocate or recover costs associated with such investigation and cleanup which costs could be substantial. The Company currently believes it has adequately provided accruals for CERCLA and hazardous waste matters. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites, could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

In Pedricktown, the U.S. EPA divided the site into two operable units, and a RIFS relating to the first operable unit is being performed. The U.S. EPA performed a focused feasibility study for the other operable unit which consists of a partial surface cleanup. The U.S. EPA selected a remedy for the surface cleanup estimated to cost approximately $5 million. In April 1992, the Company and 30 other PRPs were served with a Unilateral Administrative Order issued by the EPA, Index No. II-CERCLA 20105 (the "Order"), directing immediate removal activities, including the cleanup of waste, surface water, and building surfaces, at the Company's former Pedricktown, New Jersey secondary lead smelter. The Company and other PRPs are performing the work in accordance with the Order.

In Granite City, the RIFS is complete, and the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others, *(United States of America v. NL Industries, Inc., et al., Civ. No. 91-CV 00578)*, with respect to the Granite City smelter. The action seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was arbitrary, capricious and not in accordance with law. The action also seeks to recover past costs of $300,000 and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. Currently discovery is delayed pending the outcome of a motion for a protective order filed by the government. At a status conference in January 1993, the court ordered the parties to consider the submittal of proposals for a Technical Advisory Committee, whose role would be to advise the court as to the technical issues in the case.

Having completed the RIFS in Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc., Civ. No. 89-408,* United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notice of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, estimated to cost approximately $16 million. In January 1992, the U.S. EPA issued unilateral administrative orders Docket No. 1091-01-10-106 to the Company and six other PRPs directing the performance of the remedy. The Company and others have commenced performance of the remedy. In November 1991, Gould Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.,* No. 91-1091, U.S.D.C.D. Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and $5 million in punitive damages. In January 1993, Gould filed a motion to amend the complaint to add additional defendants and third party defendants. The amended complaint deletes the fraud and punitive damages claims asserted against the Company. The court granted the motion. The Company denied liability in the Gould action and intends to defend it vigorously.

In November 1992, the Company entered into negotiations with the U.S. EPA regarding an administrative consent order requiring a removal action at the Company's former plant in Perth Amboy, New Jersey. Negotiations are still in progress in this matter.

Pursuant to an administrative consent order entered into with the U.S. EPA, the Company is also conducting a RIFS at a municipal and industrial waste disposal site in Batavia, New York. With respect to the Batavia site, six other PRPs have been notified. The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois *(People of the State of Illinois v. NL Industries, et al.,* No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.27 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. The case is in discovery.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.,* Civ. No. 91-4098. The complaint seeks to recover $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. In compliance with the order, the Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because they were in conflict with California law. The Company believes it had sufficient cause not to comply with the order. The Company answered the complaint denying liability and intends to defend the action vigorously. The government now claims it expended in excess of $2.4 million for this matter. Trial is scheduled to commence in March 1993.

In July 1990, the Company notified the U.S. EPA that it was investigating the possibility that certain chemicals manufactured during the period in which Kronos owned a former subsidiary were not appropriately listed with the U.S. EPA pursuant to the Toxic Substances Control Act. The Company believes that the manufacture of the chemicals in questions was initiated by a prior owner of the subsidiary. The Company intends to cooperate fully with the U.S. EPA in investigating this matter and determining whether any manufacture of non-listed chemicals occurred. If such manufacture is found to have occurred, the U.S. EPA may levy fines against the Company and possibly others. If any fines are levied, the Company will attempt to seek reimbursement from such prior owner of the subsidiary.

Other litigation

In April 1990, the Company filed a complaint in the United States District Court for the Central District of California against Lockheed Corporation and its directors in connection with Lockheed's 1990 annual meeting of stockholders, (*NL Industries, Inc. v. Lockheed Corporation, et al.*, No. CV-90-1950 RMT (Bx)), which complaint was subsequently amended. In December 1992, a unanimous jury verdict was returned in the Company's favor in the amount of $30 million, which award is a gain contingency not recorded as income by the Company and which would result in net proceeds to the Company of approximately $22 million. The jury found that Lockheed violated the federal securities laws by making false and misleading public statements about Lockheed's employee stock ownership plan. Lockheed has filed numerous post-trial motions and an appeal is anticipated. The Company has filed a motion requesting prejudgment interest.

During 1992, the Company settled certain litigation (*NL Industries, Inc. v. UAW*, Civ. Act. No. 87-12992A and *Haggerty v. NL Industries, Inc.*, Civ. Act. No. 87-1549A, W. D. N.Y.) related to the Company's 1987 termination of certain postretirement benefits other than pensions ("OPEB") (collectively, the "*Haggerty* litigation") and a matter (*Farley, Inc. v. UAW*, Civ. Act. No. 90-6195, E.D. Pa.) involving OPEB benefits for retirees of certain plants sold by the Company in 1982 for which the purchaser, Farley, Inc., contractually assumed responsibility for such benefits (the "*Farley* matter"). Pursuant to a court-approved settlement of the *Haggerty* litigation, the Company will provide class members benefits under a modified postretirement health care benefits plan, the cost of which is less than the cost of providing benefits under the arrangement terminated in 1987. In addition, the Company will pay certain previously accrued amounts. Pursuant to the court-approved settlement of the *Farley* matter, Farley has agreed to establish a new medical benefit plan for the benefit of the purported class, and the Company has agreed to fund a portion of the benefits provided under the new plan. The Bankruptcy Court in Farley's bankruptcy proceeding approved the settlement in December 1992. Benefits to be provided by the Company pursuant to the settlement of the *Haggerty* litigation and the *Farley* matter are components of the Company's OPEB liabilities.

In January 1990, an action was filed in the United States District Court for the Southern District of Ohio against NLO, Inc., a subsidiary of the Company, and the Company on behalf of a putative class of former NLO employees and their families and former frequenters and invitees of the Feed Materials Production Center ("FMPC") in Ohio (*Day, et al. v. NLO, Inc., et al*, No. C-1-90-067). The FMPC is owned by the United States Department of Energy (the "DOE") and was formerly managed under contract by NLO. The complaint seeks damages for, among other things, emotional distress and damage to personal property allegedly caused by exposure to radioactive and/or hazardous materials at the FMPC and punitive damages. A trial was held separately on the defendants' defense that the statute of limitations barred the plaintiffs' claims. In November 1991, the jury returned a verdict against six of the ten named plaintiffs, finding that their claims were time barred. The court has denied the plaintiffs' motion to vacate the verdict, and has certified this action as a class action, but has not ruled on various motions by the defendants to dismiss the claims of the remaining plaintiffs. A nonbinding summary jury trial, previously scheduled for February 1993, has been stayed by the Court of Appeals; a trial on the merits is scheduled for September 1993. Although no assurance can be given, the Company believes that, consistent with a July 1987 DOE contracting officer's decision, the DOE will indemnify NLO in the event of an adverse decision just as it did when two previous cases relating to NLO's management of the FMPC were settled; therefore, the resolution of the *Day* matter is not expected to have a material adverse affect on the Company. In the 1987 decision, the contracting officer affirmed NLO's entitlement to indemnification under its contract for the operation of the FMPC for all liability, including the cost of defense, arising out of those two previous cases.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1992.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of March 16, 1993, there were approximately 12,000 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape, and dividends declared during the periods indicated. On March 16, 1993, the closing price of NL common stock according to the NYSE Composite Tape was $5.

	High	Low	Dividends declared
Year ended December 31, 1991:			
First quarter	$13⅞	$ 8½	$.15
Second quarter	16⅛	11½	.15
Third quarter	16¾	13½	.15
Fourth quarter	14⅛	9	.15
Year ended December 31, 1992:			
First quarter	$12⅞	$ 7¼	$.15
Second quarter	8⅞	7⅝	.15
Third quarter	8½	6	.05
Fourth quarter	6¼	4	—

The Company suspended its regular quarterly dividend in October 1992, in view of, among other things, the continuing weakness in TiO_2 prices. The Company will continue its policy of evaluating dividends and the amounts thereof based on the Company's results of operations, financial condition, cash requirements for its businesses, contractual restrictions on payment of dividends, if any, and other factors deemed relevant by the Board of Directors.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 — "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1988	1989	1990	1991	1992
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$1,007.0	$1,000.9	$ 906.6	$ 840.3	**$ 893.5**
Operating income	284.1	308.5	251.1	139.0	**110.7**
Income (loss) from continuing operations	134.2	170.3	93.5	(24.0)	**(44.6)**
Net income (loss)	163.0	172.9	92.4	(16.5)	**(76.4)**
Per common share:					
Income (loss) from continuing operations	$ 2.02	$ 2.57	$ 1.42	$ (.40)	**$ (.88)**
Net income (loss)	2.45	2.61	1.40	(.27)	**(1.50)**
Cash dividends	$ 1.50	$ .45	$ .60	$ .60	**$ .35**
BALANCE SHEET DATA (at year-end):					
Cash and cash equivalents	$ 138.4	$ 165.6	$ 435.3	$ 125.3	**$ 87.3**
Marketable securities:					
Current assets	—	129.9	7.8	228.0	**100.6**
Noncurrent assets	—	449.0	429.7	220.3	**23.6**
Total assets	841.4	1,512.3	1,966.7	1,831.0	**1,472.1**
Notes payable and current maturities of long-term debt	19.5	465.9	180.0	139.0	**43.6**
Long-term debt	183.3	383.9	1,130.4	1,150.3	**992.0**
Series A preferred stock — redeemable	10.0	5.0	—	—	**—**
Common shareholders' equity (deficit)	145.4	132.3	38.6	(58.3)	**(146.3)**

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results of Operations

The Company's operations are conducted in two business segments — titanium dioxide pigments and specialty chemicals. During 1989 and 1990, NL implemented an organizational restructuring of its worldwide operations whereby, among other things, its TiO_2 operations were grouped under Kronos and its specialty chemicals operations were grouped under Rheox.

The Company adopted Statement of Financial Accounting Standards ("SFAS") No. 106, "Employers' Accounting For Postretirement Benefits other than Pensions," and SFAS No. 109, "Accounting For Income Taxes" in 1992. As a result, the Company recorded a $32 million "one-time catch-up" charge to earnings in 1992. See Note 18 to the Consolidated Financial Statements. These new accounting standards relate principally to accrual accounting for postretirement benefits ("OPEB") and to accounting for deferred income taxes and do not impact cash flows from operating activities.

The following table sets forth, for the periods indicated, certain information related to the Company's business segments.

	Years Ended December 31,			% Change	
	1990	1991	1992	1991-90	1992-91
		(In millions)			
Net sales:					
Kronos	$792.4	$732.1	**$784.6**	−8%	+7%
Rheox	114.2	108.2	**108.9**	−5%	+1%
	$906.6	$840.3	**$893.5**	−7%	+6%
Operating income:					
Kronos	$230.3	$110.8	**$ 81.9**	−52%	−26%
Rheox	23.6	28.2	**28.8**	+19%	+2%
Group expenses, net	(2.8)	—	—		
	$251.1	$139.0	**$110.7**	−45%	−20%
Percent change in TiO_2:					
Sales volume				+10%	+11%
Average selling prices (in billing currencies)				−15%	−6%

The worldwide TiO_2 industry continues to be adversely affected by production capacity in excess of current demand. TiO_2 selling prices continued to decline during 1992; however, the rate of decline during most of the year was generally lower than that experienced during much of 1990 and 1991. Average selling prices at the end of 1992 were about 5% below year-earlier prices and about 28% below those at the peak in early 1990. A significant amount of sales are denominated in currencies other than the U.S. dollar. Accordingly, fluctuations in the value of the U.S. dollar relative to other currencies increased 1992 net sales compared to 1991 and slightly decreased 1991 sales compared to 1990.

The increases in TiO_2 sales volumes, in 1992, were primarily in the United States and European markets and, in 1991, were also in export markets. These increases reflect, in Kronos' opinion, increases in both demand and Kronos' worldwide market share. The 1990-91 volume comparison was also aided by reduced volume in 1990 resulting from customers reducing inventories accumulated in prior years. Demand for chloride process pigments has remained relatively strong compared to sulfate process pigments, and Kronos achieved record production levels of chloride process pigments in 1992 while it has been producing sulfate process pigments at less than capacity levels since the second half of 1991.

Approximately one-third of Kronos' 1992 TiO_2 sales, by volume, were attributable to markets in North America with over one-half attributable to Europe and the balance to export markets.

Kronos commenced production at its new chloride process plant in Lake Charles, Louisiana during the first half of 1992 and start-up costs have negatively impacted operating income. Kronos expects that start-up costs will continue to decline as the new plant continues to increase its production rates during 1993.

Kronos' 1992 operating income was also impacted by slightly lower unit production costs which are a result of continued emphasis on cost reduction efforts and increased production volumes. Kronos' water treatment chemicals business, which utilizes TiO_2 co-products, increased its contribution to operating income in both 1991 and 1992. Kronos' operating income in 1991 was impacted by higher raw material and production costs as well as the impact of slightly lower TiO_2 production volumes. Kronos implemented a number of cost reductions during 1991 to mitigate the impact of certain cost increases, and consequently, unit production costs were only slightly higher in 1991 than 1990.

The Company currently believes that Kronos' operating income in 1993 will be lower than 1992 as further selling price declines will likely not be fully offset by the expected reduction in start-up costs of the Louisiana plant and slightly higher sales volumes. Kronos expects the TiO_2 industry to continue to operate at lower levels of capacity over the next few years than the full capacity levels prevalent during the late 1980s. Recovery from the effects of the decline in the worldwide economy continues to be disappointingly slow. The Company believes market conditions have improved in the United States, are generally stable in export markets and are adjusting to currency devaluations in Europe. The Company believes the European market was poised for price improvement prior to currency devaluations in the fall of 1992, which resulted in further TiO_2 price decreases. Kronos currently believes that prices in Europe may stabilize during the second half of 1993. Kronos expects that operating income in 1993 will not be significantly affected by completion of the pending joint venture with Tioxide; however, interest expense would be reduced due to the proposed joint venture financing. Based on, among other things, Kronos' current near-term outlook for its TiO_2 business (particularly pricing in Europe), and expected 1993 debt and interest rate levels, the Company currently expects to report a net loss for 1993.

Rheox's sales and operating income increased in 1992 due principally to the favorable impact of changes in currency exchange rates, partially offset by lower sales volume and slightly higher operating costs. Rheox's sales declined in 1991 due primarily to lower sales volume. Operating income in 1991, excluding the impact of a 1990 charge related to the settlement of certain patent infringement litigation, approximated 1990 as lower operating costs mostly offset the effect of the lower sales volume.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Increase (decrease)	
	1990	1991	1992	1991-90	1992-91
			(In millions)		
Interest and dividends	$ 40.6	$ 40.5	**$ 14.2**	$ (.1)	$(26.3)
Securities transactions	8.7	(53.1)	**(6.0)**	(61.8)	47.1
Corporate expenses, net	(44.3)	(44.9)	**(43.4)**	(.6)	1.5
	$ 5.0	$(57.5)	**$(35.2)**	$(62.5)	$ 22.3

The Company periodically acquires and disposes of marketable securities, including U.S. Treasury securities, and changes in market values and the timing of sales can cause gains and losses to occur at irregular intervals and to fluctuate significantly from period-to-period. The significant loss in 1991 relates principally to the Company's disposition of its interest in Lockheed Corporation.

Interest and dividend income fluctuates based upon the amount of funds invested and yields thereon. Amounts available for investment in 1992, and yields thereon were lower than in 1991 and 1990.

Corporate expenses, net for 1992 decreased from 1991 due primarily to reductions in certain proxy solicitation expenses and litigation settlements and expenses partially offset by an increased provision for environmental costs. Corporate expenses, net in 1991 approximated those of the prior year as a $9 million decrease in certain Lockheed-related expenses was substantially offset by additional environmental, legal and other expenses.

Interest expense

Average outstanding principal balances of indebtedness amounts increased in 1991, as did effective Deutsche Mark interest rates. Outstanding principal amounts declined in 1992. In addition to the effect of changes in outstanding principal amounts and in interest rates, interest expense fluctuations were impacted by (i) capitalized interest ($8 million in 1990, $26 million in 1991 and $9 million in 1992), principally related to the Louisiana plant which was completed in 1992, (ii) a $9 million reduction in the Company's accrual for income tax related interest in 1991, and (iii) relative currency exchange rates which increased 1991 and 1992 interest expense, in U.S. dollar terms. As discussed above and in "LIQUIDITY AND CAPITAL RESOURCES", the expected pay down of existing indebtedness associated with the Louisiana plant in conjunction with the pending joint venture with Tioxide, would reduce interest expense.

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In 1992, the geographic mix, including losses in certain jurisdictions for which no current refund was available and in which recognition of a deferred tax asset is not currently considered appropriate, contributed significantly to the Company's effective tax rate varying from a normally expected rate. The Company's deferred tax status at December 31, 1992 is explained in "LIQUIDITY AND CAPITAL RESOURCES". In 1991, realization of the available capital loss carryback of the Company's securities transactions at a relatively low rate due to the alternative minimum tax rates in prior years significantly impacted the Company's effective tax rate.

Extraordinary items

See Note 15 to the Consolidated Financial Statements.

Changes in accounting principles

See Notes 2 and 18 to the Consolidated Financial Statements.

Liquidity and Capital Resources

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1990	1991	1992
		(In millions)	
Net cash provided (used) by:			
Operating activities:			
Net income (loss)	$ 92.4	$ (16.5)	$ (76.4)
Depreciation, depletion and amortization	35.5	32.6	47.8
Deferred income taxes	75.4	(14.7)	(18.9)
Minority interest	1.3	1.1	1.1
Net (gains) losses from securities transactions	(8.7)	53.1	6.0
Cumulative effect of changes in accounting principles	—	—	31.8
Change in assets and liabilities, net	(108.4)	2.4	(42.6)
Other, net	(6.4)	(8.1)	4.6
	81.1	49.9	(46.6)
Investing activities:			
Capital expenditures	(195.3)	(195.1)	(85.2)
Sales of securities, net	73.5	87.5	317.4
Other, net	45.1	(1.8)	2.7
	(76.7)	(109.4)	234.9
Financing activities:			
Net borrowings (repayments)	327.7	2.5	(199.5)
Dividends paid	(40.1)	(34.7)	(17.8)
Capital transactions, net	(27.1)	(202.5)	(3.6)
Other, net	(1.1)	(.9)	(.3)
	259.4	(235.6)	(221.2)
Net cash provided (used) by operating, investing and financing activities	$ 263.8	$(295.1)	$ (32.9)

Depreciation, depletion and amortization and capital expenditures for each business segment are presented in Note 3 to the Consolidated Financial Statements. The components of securities transactions are summarized in Note 4 to the Consolidated Financial Statements.

The significant deterioration in cash provided by operating activities in 1991 and 1992 is primarily due to the decline in earnings.

The Company's capital expenditures during the past three years include an aggregate of $349 million ($42 million in 1992) related to completion of the Louisiana chloride process TiO_2 plant and an aggregate of $43 million ($16 million in 1992) for environmental protection and compliance programs related to the Company's ongoing operations. The Company's 1993 estimated capital expenditures are $62 million, which includes $40 million relating to environmental protection and compliance programs including sulfur dioxide removal systems at various operating facilities, the Canadian waste acid neutralization facility and the Norwegian onshore tailings disposal system.

Net sales of securities relate primarily to the net sales of marketable securities in each period and in 1992 relate principally to the disposition of U.S. Treasury securities and DM time deposits to fund repayments of indebtedness, capital expenditures and operations.

Net repayments of indebtedness in 1992 included payments on the DM term loan aggregating DM 350 million ($225 million when paid) and $61 million drawn under Kronos' Louisiana plant credit facilities. Net borrowings in 1991 included a $115 million Rheox term loan, a $52 million increase in the Louisiana plant term construction loan and a DM 150 million ($87 million when paid) reduction in the DM term loan, while net borrowings in 1990 include a DM 463 million ($277 million when drawn) increase in the DM term loan, a $102 million increase in the Louisiana loan and $62 million of sinking fund debentures redeemed. NL has guaranteed $15 million of the remaining $97 million principal balance of Rheox's term loan until the balance is reduced to $85 million. At December 31, 1992, $14 million of the Company's noncurrent marketable securities are restricted under the terms of the Rheox loan agreement. In addition, NL and Kronos have agreed, under certain conditions, to provide Kronos' principal international subsidiary with up to DM 125 million through June 1994.

Capital transactions, net, are primarily treasury stock purchases in each year, including $181 million expended in 1991 in relation to a "Dutch auction" self-tender offer.

At December 31, 1992, the Company had cash, cash equivalents and current marketable securities aggregating $188 million (36% held by non-U.S. subsidiaries). The Company's subsidiaries had $24 million and $52 million available for borrowing at December 31, 1992 under existing U.S. and non-U.S. credit facilities, respectively. At December 31, 1992, the Company had long-term debt aggregating $1.0 billion of which Kronos' DM 1.1 billion ($682 million) term loan represented about two-thirds. For each one percent change in the DM/U.S. dollar exchange rate, the Company's outstanding long-term debt, expressed in U.S. dollars, changes by approximately $7 million. Current maturities of long-term debt at December 31, 1992 were $43 million, including $13 million related to the Louisiana plant borrowings. No principal payments on the DM term loan are scheduled for 1993 as the 1993 installment was prepaid in 1992.

The Company has taken and continues to take measures to manage its near-term and long-term liquidity requirements, including cost reduction efforts, tightening of controls over working capital, deferral and reduction of capital expenditures, suspension of unrelated business acquisition activities, suspension of quarterly dividend payments and also intends to enter into the manufacturing joint venture with Tioxide. The Company currently expects to have sufficient liquidity to meet near-term obligations including operations, capital expenditures and debt service. However, continued use of cash by operations for an extended period of time would have an adverse effect on liquidity and, among other things, would result in requiring the Company to seek modifications of the covenants and/or repayment terms of certain indebtedness. Covenants contained in certain subsidiary loan agreements, including the DM term loan, Rheox term loan and Louisiana plant term loan, currently restrict dividends from substantially all of the Company's operating units.

Kronos expects to use part of the cash payment and financing from the proposed Louisiana joint venture to repay the outstanding principal amount of the existing Louisiana plant term loan and revolving credit facility in 1993. In the event the joint venture transaction is not consummated, the Company believes that modification of the fixed charge coverage ratio in the existing Louisiana plant term loan will be required in the second half of 1993. No discussions with the lenders have taken place with respect to this matter.

The Company expects to report a gain on the joint venture transaction, which gain is expected to be offset in part by a loss related to the settlement of certain interest rate swaps in conjunction with repaying the existing Louisiana plant borrowings. The gain would be reported as a component of pretax income (loss) while the loss related to settlement of indebtedness would be reported as an extraordinary item.

As previously reported, certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position. In 1992, the Company's net cash payments for previously-accrued income taxes and interest related to the settlement of U.S. tax audits for 1979 through 1984 aggregated $15 million. At December 31, 1992, the Company's current assets include $102 million of refundable income taxes, primarily 1989 and 1990 German refund claims, which are currently being contested by German tax authorities.

As a result of adopting SFAS No. 106 (OPEB) in 1992, the Company's balance sheet at December 31, 1992 includes $77 million of accrued postretirement benefit costs, almost all of which relates to current retirees.

Adoption of SFAS No. 109 in 1992 affected the Company's reported results of operations and financial position with respect to deferred income taxes. At December 31, 1992, the Company has recorded net deferred tax liabilities of $150 million. The Company operates in a number of tax jurisdictions, in certain of which it has net deferred tax assets (before valuation allowance). Considering all factors believed to be relevant, the Company has provided a deferred tax valuation allowance of $86 million, principally related to the U.S. and Germany, for deferred tax assets which the Company believes may not currently meet the "more likely than not" realization criteria for asset recognition. The Company will continue to monitor and evaluate the need for, and amount of, a deferred tax valuation allowance and will, in the future, after considering all factors believed to be relevant, make appropriate adjustments of such reserves.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and another Contran subsidiary.

The Company has been named as a defendant or PRP in various legal actions concerning environmental or other matters arising out of operations no longer conducted by the Company. On a regular basis, the Company evaluates the potential range of its liability at CERCLA sites where it is a PRP. The Company believes it has provided adequate accruals for such matters, but the amount the Company could ultimately pay may be affected by a number of factors, including changes in remedial costs and in the allocation of such costs. See Item 3 — "Legal Proceedings" and Note 17 to the Consolidated Financial Statements.

The Company periodically evaluates its liquidity requirements, capital needs and availability of resources in view of, among other things, its debt service requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to raise additional capital, restructure ownership interests, refinance or restructure indebtedness, sell interests in subsidiaries, marketable securities or other assets, or take a combination of such steps or other steps to increase or manage its liquidity and capital resources. Such activities have in the past and may in the future involve related companies.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 16 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1992.

October 23, 1992 — reported items 5 and 7.

October 28, 1992 — reported items 5 and 7.

December 7, 1992 — reported items 5 and 7.

December 31, 1992 — reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
3.1		By-Laws, as amended on June 28, 1990 — incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2		Certificate of Amended and Restated to Certificate of Incorporation dated June 28, 1990 — incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1		Form of 7½% Debenture, due December 15, 1995 — incorporated by reference to Exhibit 2.1 to Amendment No. 1 to the Registrant's Registration Statement on Form S-7 (Registration No. 2-38999).
4.2		Form of Indenture between NL and The Chase Manhattan Bank (N.A.), Trustee, dated December 15, 1970 — incorporated by reference to Exhibit 2.2 to Amendment No. 1 to the Registrant's Registration Statement on Form S-7 (Registration No. 2-38999).
4.3		Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation — incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.1		Credit Agreement dated December 29, 1989 among Kronos Louisiana, Inc. and Citibank, N.A., as Agent — incorporated by reference to Exhibit 10.18 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1989.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
10.2		Loan Agreement dated May 30, 1990 between Kronos International, Inc. and Hypobank International S.A. as Agent and Banque Paribas as Co-agent — incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1990 as amended by the Registrant's Form 8 as of January 29, 1991, to include exhibits and certain schedules to the Loan Agreement. Schedules 10A, 10E, 10F and 10G have been omitted pursuant to a request for confidential treatment in accordance with Rule 24b-2 of the 1934 Act.
10.3		Amendments 1 and 2 dated December 31, 1990 and March 22, 1991, respectively to the Loan Agreement between Kronos International, Inc. and Hypobank International S.A. as Agent and Banque Paribas as Co-agent — incorporated by reference to Exhibit 10.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
10.4		Amendment 3 dated June 15, 1992 to the Loan Agreement between Kronos International, Inc. and Hypobank International S.A. as Agent and Banque Paribas as Co-Agent — incorporated by reference to Exhibit 10.1 the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1992.
10.5		Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents — incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
10.6		Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents — incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1992.
10.7		Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents.
10.8		Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) — incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.
10.9		Contract dated September 9, 1971, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung concerning supplies and services (German language version and English translation thereof) — incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.
10.10		Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) — incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.
10.11		NL Supplementary Life Insurance Plan for Key Executives — incorporated by reference to Exhibit 10.12 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1982.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
10.12		1982 Long Term Performance Incentive Plan of NL Industries, Inc. as restated by the Board of Directors on February 22, 1984 — incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 25, 1984.
10.13		1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 — incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.
10.14		NL Industries, Inc. Modification Agreement supplementing certain Executive Severance Agreements, — incorporated by reference to Exhibit 10.11 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.15		Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL — incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.16		1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 — incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.17		Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 — incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.18		NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 — incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.19		Intercorporate Services Agreement by and between Baroid Corporation and the Registrant effective as of January 1, 1993.
10.20		Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1992.
10.21		Intercorporate Services and Reimbursement Agreement between Tremont Corporation and the Registrant effective as of January 1, 1992 — incorporated by reference to Exhibit 10.19 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.22		First amendment to Intercorporate Services and Reimbursement Agreement between Tremont Corporation and the Registrant effective as of January 1, 1993.
10.23		Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation — incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.24		Employment Agreement dated as of January 1, 1990 among Kronos, Inc., the Registrant and Dr. Lawrence A. Wigdor — incorporated by reference to Exhibit 10.19 to Amendment 2 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1989.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
10.25		Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin — incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.26		Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991.
22.1		Subsidiaries of the Registrant.
24.1		Consent of Independent Accountants.
28.1		Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 8 to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1992.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL INDUSTRIES, INC.
(Registrant)

By /s/ J. LANDIS MARTIN
J. Landis Martin, March 17, 1993
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

Signature

/s/ J. LANDIS MARTIN
J. Landis Martin, March 17, 1993
Director, President and Chief Executive Officer

/s/ GLENN R. SIMMONS
Glenn R. Simmons, March 17, 1993
Director

/s/ KENNETH R. PEAK
Kenneth R. Peak, March 17, 1993
Director

/s/ ELMO R. ZUMWALT, JR.
Elmo R. Zumwalt, Jr., March 17, 1993
Director

/s/ DENNIS G. NEWKIRK
Dennis G. Newkirk, March 17, 1993
Vice President and Controller
(Principal Accounting Officer)

Signature

/s/ HAROLD C. SIMMONS
Harold C. Simmons, March 17, 1993
Chairman of the Board

/s/ MICHAEL A. SNETZER
Michael A. Snetzer, March 17, 1993
Director

/s/ Dr. LAWRENCE A. WIGDOR
Dr. Lawrence A. Wigdor, March 17, 1993
Director, President and Chief Executive Officer
of Kronos and Rheox

/s/ SUSAN E. ALDERTON
Susan E. Alderton, March 17, 1993
Vice President and Treasurer
(Principal Financial Officer)

NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K
Items 8, 14(a) and 14(d)

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All other schedules are omitted because they are not applicable or not required, or because the required information is included in the consolidated financial statements or notes thereto.

REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1991 and 1992, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 1992. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1991 and 1992, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1992 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 18 to the consolidated financial statements, in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes.

COOPERS & LYBRAND

Houston, Texas
March 5, 1993

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1991 and 1992

(In thousands, except per share data)

ASSETS

	1991	1992
Current assets:		
Cash and cash equivalents	$ 125,270	$ 87,333
Marketable securities	227,996	100,607
Accounts and notes receivable, less allowance of $1,749 and $2,385	133,757	123,020
Refundable income taxes	105,581	101,537
Inventories	196,911	216,232
Prepaid expenses	6,001	5,413
Deferred income taxes	—	1,676
Total current assets	795,516	635,818
Other assets:		
Marketable securities	220,345	23,581
Prepaid pension cost	17,511	16,056
Other	59,077	50,675
Total other assets	296,933	90,312
Property and equipment:		
Land	19,645	29,863
Buildings	150,235	208,056
Machinery and equipment	566,803	811,531
Mining properties	81,959	75,731
Construction in progress	338,685	21,042
	1,157,327	1,146,223
Less accumulated depreciation and depletion	418,743	400,246
Net property and equipment	738,584	745,977
	$1,831,033	$1,472,107

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS — (Continued)
December 31, 1991 and 1992
(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' EQUITY

	1991	1992
Current liabilities:		
Notes payable	$ 429	$ 315
Current maturities of long-term debt	138,605	43,328
Accounts payable and accrued liabilities	208,002	189,638
Payable to affiliates	8,192	4,086
Income taxes	4,941	6,825
Deferred income taxes	—	4,573
Total current liabilities	360,169	248,765
Noncurrent liabilities:		
Long-term debt	1,150,251	991,956
Deferred income taxes	232,336	145,745
Accrued pension cost	78,218	73,956
Accrued postretirement benefits cost	—	71,761
Other	66,495	83,878
Total noncurrent liabilities	1,527,300	1,367,296
Minority interest	1,839	2,339
Shareholders' equity (deficit):		
Preferred stock — 5,000 shares authorized, no shares issued or outstanding	—	—
Common stock — $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,300	759,281
Adjustments:		
Currency translation	(116,640)	(111,820)
Marketable equity securities	(5,925)	(896)
Retained earnings (deficit)	(339,043)	(433,250)
	306,047	221,670
Less treasury stock, at cost (15,638 and 15,949 shares)	364,322	367,963
Total shareholders' equity (deficit)	(58,275)	(146,293)
	$1,831,033	$1,472,107

Commitments and contingencies (Notes 13, 17 and 20)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1990, 1991 and 1992
(In thousands, except per share data)

	1990	1991	1992
Revenues and other income:			
Net sales	$906,589	$840,295	$893,465
Interest and dividend income	49,956	47,293	19,618
Securities transactions	8,745	(53,092)	(6,018)
Other, net	9,914	7,043	1,197
	975,204	841,539	908,262
Costs and expenses:			
Cost of sales	512,633	566,608	629,029
Selling, general and administrative	206,484	193,481	203,736
Interest	101,240	100,412	118,511
	820,357	860,501	951,276
Income (loss) before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles	154,847	(18,962)	(43,014)
Provision for income taxes	60,078	3,910	459
Income (loss) before minority interest, extraordinary items and cumulative effect of changes in accounting principles	94,769	(22,872)	(43,473)
Minority interest	1,263	1,113	1,123
Income (loss) before extraordinary items and cumulative effect of changes in accounting principles	93,506	(23,985)	(44,596)
Extraordinary items	(1,083)	7,523	—
Cumulative effect of changes in accounting principles	—	—	(31,804)
Net income (loss)	$ 92,423	$(16,462)	$(76,400)
Income (loss) per share of common stock:			
Before extraordinary items and cumulative effect of changes in accounting principles	$ 1.42	$ (.40)	$ (.88)
Extraordinary items	(.02)	.13	—
Cumulative effect of changes in accounting principles	—	—	(.62)
Net income (loss)	$ 1.40	$ (.27)	$ (1.50)
Weighted average common shares outstanding	65,666	60,233	50,907

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Years ended December 31, 1990, 1991 and 1992

(In thousands, except per share data)

			Adjustments				
	Common stock	Additional paid-in capital	Currency translation adjustment	Marketable equity securities	Retained earnings (deficit)	Treasury stock	Total
Balance at December 31, 1989	$8,350	$758,916	$ (86,292)	$ (68,482)	$(340,508)	$(139,674)	$ 132,310
Net income	—	—	—	—	92,423	—	92,423
Dividends declared:							
Series A preferred — $8.625 per share	—	—	—	—	(431)	—	(431)
Common — $.60 per share	—	—	—	—	(39,341)	—	(39,341)
Adjustments	—	—	(49,985)	(74,641)	—	—	(124,626)
Purchases of treasury stock	—	—	—	—	—	(22,129)	(22,129)
Other, net	5	357	—	—	—	—	362
Balance at December 31, 1990	8,355	759,273	(136,277)	(143,123)	(287,857)	(161,803)	38,568
Net loss	—	—	—	—	(16,462)	—	(16,462)
Common dividends declared — $.60 per share	—	—	—	—	(34,724)	—	(34,724)
Adjustments	—	—	19,637	137,198	—	—	156,835
Purchases of treasury stock	—	—	—	—	—	(202,519)	(202,519)
Other, net	—	27	—	—	—	—	27
Balance at December 31, 1991	8,355	759,300	(116,640)	(5,925)	(339,043)	(364,322)	(58,275)
Net loss	—	—	—	—	(76,400)	—	(76,400)
Common dividends declared — $.35 per share	—	—	—	—	(17,807)	—	(17,807)
Adjustments	—	—	4,820	5,029	—	—	9,849
Purchases of treasury stock	—	—	—	—	—	(3,641)	(3,641)
Other, net	—	(19)	—	—	—	—	(19)
Balance at December 31, 1992	$8,355	$759,281	$(111,820)	$ (896)	$(433,250)	$(367,963)	$(146,293)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1990, 1991 and 1992

(In thousands)

	1990	1991	1992
Cash flows from operating activities:			
Net income (loss)	$ 92,423	$ (16,462)	$ (76,400)
Adjustments:			
Depreciation, depletion and amortization	35,525	32,581	47,829
Deferred income taxes	75,387	(14,665)	(18,949)
Cumulative effect of changes in accounting principles	—	—	31,804
Minority interest	1,263	1,113	1,123
Net (gains) losses from:			
Securities transactions	(8,745)	53,092	6,018
Disposition of property and equipment	1,146	1,009	1,419
Pension cost, net	(1,241)	(377)	(2,024)
Other postretirement benefits, net	—	—	1,830
Change in assets and liabilities:			
Accounts and notes receivable	24,554	(6,430)	(1,776)
Inventories	(56,120)	6,582	(33,814)
Prepaid expenses	(4,311)	4,885	207
Accounts payable and accrued liabilities	25,491	30,218	(6,111)
Income taxes	(84,088)	(43,629)	(13,501)
Accounts with affiliates	2,310	5,328	(4,106)
Other noncurrent assets	(15,495)	(3,584)	3,383
Other noncurrent liabilities	(711)	9,143	13,072
Other, net	(6,289)	(8,872)	3,442
Total adjustments	(11,324)	66,394	29,846
Net cash provided (used) by operating activities	81,099	49,932	(46,554)
Cash flows from investing activities:			
Capital expenditures	(195,304)	(195,146)	(85,150)
Marketable securities:			
Purchases	(53,343)	(536,435)	(156,573)
Dispositions	126,872	623,937	473,935
Proceeds from disposition of property and equipment	673	1,033	1,484
Loans to affiliates:			
Loans	—	(150,000)	—
Collections	44,400	150,000	—
Other, net	—	(2,819)	1,168
Net cash provided (used) by investing activities	(76,702)	(109,430)	234,864

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)
Years ended December 31, 1990, 1991 and 1992
(In thousands)

	1990	1991	1992
Cash flows from financing activities:			
Notes payable and long-term debt:			
Additions	$1,139,402	$ 178,195	$ 63,603
Principal payments	(800,705)	(174,565)	(263,093)
Repayments of loans from affiliates	(11,000)	(1,126)	—
Distributions to minority interest	(1,505)	(869)	(277)
Dividends paid:			
Series A preferred stock	(431)	—	—
Common stock	(39,625)	(34,724)	(17,807)
Redemption of Series A preferred stock	(5,000)	—	—
Purchases of treasury stock and other	(21,767)	(202,492)	(3,660)
Net cash provided (used) by financing activities	259,369	(235,581)	(221,234)
Net change during the year from operating, investing and financing activities	$ 263,766	$(295,079)	$ (32,924)
Cash and cash equivalents:			
Net change during the year from operating, investing and financing activities	$ 263,766	$(295,079)	$ (32,924)
Net change due to currency translation	5,852	(14,907)	(5,013)
	269,618	(309,986)	(37,937)
Balance at beginning of year	165,638	435,256	125,270
Balance at end of year	$ 435,256	$ 125,270	$ 87,333
Supplemental disclosures — cash paid for:			
Interest, net of amounts capitalized	$ 83,214	$ 107,638	$ 137,996
Income taxes	62,547	54,628	31,369

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — Organization and basis of presentation:

NL Industries, Inc., primarily a holding company, completed an organizational restructuring of its worldwide operations in 1990 whereby, among other things, its titanium dioxide pigments ("TiO_2") operations were grouped under Kronos, and its specialty chemicals operations were grouped under Rheox. Kronos and Rheox are wholly-owned by NL.

At December 31, 1992, Valhi, Inc. held approximately 49% of NL's outstanding common stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies.

Note 2 — Summary of significant accounting policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments, gains and losses from hedges of investments in non-U.S. entities and the related income tax effects are accumulated in the currency translation adjustments component of shareholders' equity. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less and are carried at amortized cost, which approximates market value.

Marketable securities and securities transactions

Marketable securities are carried at the lower of aggregate quoted market value or amortized cost.

Unrealized losses on noncurrent marketable equity securities and the related income tax effects are accumulated in the marketable equity securities adjustment component of shareholders' equity. Realized gains or losses are computed based on specific identification of the securities sold.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in affiliates

Investments in 20% to 50%-owned companies are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to 40 years for buildings and three to 20 years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Employee benefit plans

Pension plan accounting and funding policies are described in Note 10.

The Company adopted Statement of Financial Accounting Standards ("SFAS") No. 106, "Employers' Accounting For Postretirement Benefits other than Pensions" in 1992, which changed the Company's method of accounting for the cost of providing postretirement benefits other than pensions ("OPEB") from the expensed when paid ("pay-as-you-go") method to the accrual method which recognizes OPEB cost over the employee service period based upon the estimated amount and timing of future benefit payments. See Notes 10 and 18.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

The Company adopted SFAS No. 109, "Accounting For Income Taxes" in 1992, which changed the Company's method of accounting for deferred income taxes from the deferred method of Accounting Principles Board Opinion ("APBO") No. 11 to the asset and liability method. See Notes 13, 15 and 18.

Income per share of common stock

Income per share of common stock is based upon the weighted average number of common shares outstanding and is computed after giving effect to preferred stock dividend requirements of $431,000 in 1990. Common stock equivalents are excluded from the computation because they are either antidilutive or the dilutive effect is not material.

Note 3 — Business and geographic segments:

The Company's operations are conducted in two business segments — TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and levelling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics.

Sales between geographic areas are principally between the United States, Europe and Canada. No single customer represents a significant portion of the Company's business. Net sales of an unconsolidated affiliate, which are not included in the Company's consolidated net sales, were $15 million in 1990, $16 million in 1991 and $17 million in 1992.

General corporate assets consist principally of cash, cash equivalents and marketable securities.

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Business segments			
Net sales:			
Kronos	$ 792,390	$ 732,108	$ 784,568
Rheox	114,199	108,187	108,897
	$ 906,589	$ 840,295	$ 893,465
Operating income:			
Kronos	$ 230,250	$ 110,767	$ 81,941
Rheox	23,598	28,194	28,792
Group expense, excluding general corporate items	(2,772)	—	—
	251,076	138,961	110,733
General corporate income (expense):			
Interest and dividend income	40,556	40,502	14,234
Securities transactions	8,745	(53,092)	(6,018)
Expenses, net	(44,290)	(44,921)	(43,452)
Interest expense	(101,240)	(100,412)	(118,511)
	$ 154,847	$ (18,962)	$ (43,014)
Capital expenditures:			
Kronos	$ 190,510	$ 189,475	$ 81,872
Rheox	2,478	5,358	3,064
General corporate	2,316	313	214
	$ 195,304	$ 195,146	$ 85,150
Depreciation, depletion and amortization:			
Kronos	$ 32,592	$ 29,324	$ 44,360
Rheox	2,802	2,974	3,184
General corporate	131	283	285
	$ 35,525	$ 32,581	$ 47,829

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Geographic areas			
Net sales — point of origin:			
United States	$ 208,707	$ 207,762	$ 238,170
Europe	665,346	623,036	643,670
Canada	139,372	136,316	138,656
Eliminations	(106,836)	(126,819)	(127,031)
	$ 906,589	$ 840,295	$ 893,465
Net sales — point of destination:			
United States	$ 175,643	$ 180,883	$ 204,270
Europe	553,351	485,784	518,711
Canada	90,861	79,198	72,692
Other	86,734	94,430	97,792
	$ 906,589	$ 840,295	$ 893,465
Operating income:			
United States	$ 25,596	$ 16,578	$ 629
Europe	193,061	99,646	81,805
Canada	32,419	22,737	28,299
	$ 251,076	$ 138,961	$ 110,733

	December 31,	
	1991	1992
	(In thousands)	
Identifiable assets		
Business segments:		
Kronos	$1,246,432	$1,246,186
Rheox	76,669	76,248
General corporate	507,932	149,673
	$1,831,033	$1,472,107
Geographic segments:		
United States	$ 419,971	$ 498,029
Europe	752,626	671,349
Canada	150,504	153,056
General corporate	507,932	149,673
	$1,831,033	$1,472,107

Note 4 — Marketable securities and securities transactions:

	December 31, 1991	December 31, 1992
	(In thousands)	
Current:		
Marketable equity securities	$ 11,870	$ 6,996
U.S. Treasury securities	216,126	93,611
	$227,996	$100,607
Noncurrent:		
Marketable equity securities	$ 10,177	$ 9,192
U.S. Treasury securities	208,168	14,389
Other	2,000	—
	$220,345	$ 23,581
Marketable equity securities:		
Current:		
Unrealized gains	$ —	$ 13
Unrealized losses	(3,761)	(4,233)
Cost	15,631	11,216
Aggregate market	$ 11,870	$ 6,996
Noncurrent:		
Unrealized losses	$ (5,925)	$ (979)
Cost	16,102	10,171
Aggregate market	$ 10,177	$ 9,192
Current U.S. Treasury securities:		
Unrealized gains (losses)	$ 2,544	$ (59)
Cost	213,582	93,670
Aggregate market	$216,126	$ 93,611

At December 31, 1992, noncurrent marketable securities included an aggregate $14 million of U.S. Treasury securities which are restricted under the terms of a loan agreement. Noncurrent U.S. Treasury securities are carried at cost, which approximates market.

Net gains and losses from securities transactions are composed of:

	Years ended December 31, 1990	1991	1992
		(In thousands)	
Realized gains (losses):			
Marketable equity securities	$12,069	$(52,813)	$ (528)
Other securities	—	4,437	1,006
Unrealized gains (losses):			
Marketable equity securities	(3,324)	(517)	(52)
Other securities	—	2,337	(1,570)
Writedown of noncurrent marketable securities	—	(6,536)	(5,931)
Other	—	—	1,057
	$ 8,745	$(53,092)	$(6,018)

Note 5 — Inventories:

	December 31, 1991	December 31, 1992
	(In thousands)	
Raw materials	$ 38,922	$ 43,773
Work in process	10,427	9,201
Finished products	110,887	123,317
Supplies	36,675	39,941
	$196,911	$216,232

Note 6 — Other noncurrent assets:

	December 31, 1991	December 31, 1992
	(In thousands)	
Intangible assets, net of accumulated amortization of $7,270 and $9,792	$23,054	$19,127
Deferred financing costs	24,987	20,533
Investment in affiliates	1,564	2,434
Other	9,472	8,581
	$59,077	$50,675

Note 7 — Accounts payable and accrued liabilities:

	December 31, 1991	December 31, 1992
	(In thousands)	
Accounts payable	$102,205	$ 98,990
Accrued liabilities:		
Employee benefits	39,273	38,506
Environmental costs	5,480	12,080
Interest	24,826	4,376
Miscellaneous taxes	4,709	3,980
Other	31,509	31,706
	105,797	90,648
	$208,002	$189,638

Note 8 — Other noncurrent liabilities:

	December 31, 1991	December 31, 1992
	(In thousands)	
Environmental costs	$43,148	$59,403
Insurance claims and claim expenses	8,559	10,014
Employee benefits	8,146	10,392
Other	6,642	4,069
	$66,495	$83,878

Note 9 — Notes payable and long-term debt:

	December 31, 1991	December 31, 1992
	(In thousands)	
Notes payable — non-U.S. credit agreements	$ 429	$ 315
Long-term debt:		
NL Industries:		
7.5% sinking fund debentures — due through 1995	$ 17,047	$ 14,374
Industrial revenue bonds	12,200	—
	29,247	14,374
Kronos:		
DM bank term loan	955,550	681,560
Kronos Louisiana term loan	154,000	195,000
Kronos Louisiana revolving credit facility	—	20,000
Canadian bank credit agreement	12,977	3,942
5% to 12% bank loans payable through 2000	27,938	19,367
Other	99	2,230
	1,150,564	922,099
Rheox:		
Bank term loan	107,500	97,500
Other	1,545	1,311
	109,045	98,811
	1,288,856	1,035,284
Less current maturities	138,605	43,328
	$1,150,251	$ 991,956

Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, has a Deutsche mark-denominated term loan with an international bank syndicate with DM 1.1 billion ($682 million) principal amount remaining at December 31, 1992. Borrowings bear interest at DM LIBOR (9⅜% at December 31, 1992) plus 1⅝% and are repayable in annual installments in 1994 through 1997. KII has entered into agreements with certain banks in the syndicate which caps DM LIBOR at 10.5% on DM 810 million principal amount of the loan. The principal amount subject to the cap declines as the loan is repaid.

In June 1992, KII amended the term loan to, among other things, modify certain financial covenants and restructure DM 400 million of the loan as a revolving credit facility due no later then June 1997. In connection with the amendment, NL and Kronos agreed, under certain circumstances, to provide KII up to an additional DM 125 million through June 1994.

The DM term loan borrowings are collateralized by pledges of the stock of certain KII subsidiaries. The DM term loan agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, has a long-term loan agreement which provides for (i) a $200 million three-year senior secured construction loan which converts at the end of the construction period into a variable rate seven-year senior secured term loan and (ii) a $30 million senior secured revolving credit facility for working capital purposes (together, the "KLA Loan"). Borrowings under the KLA Loan bear interest, at the Company's option, at rates based upon LIBOR plus 1% (4.52% at December 31, 1992), or the base rate plus .125%, mature through 2000 and are collateralized by KLA's assets. The loan agreement restricts KLA's ability to incur additional indebtedness, restricts its dividend payments, requires it to maintain a specified fixed charge coverage ratio and contains other provisions and restrictive covenants customary in lending transactions of this type. See Note 20.

In connection with the KLA Loan, KLA has entered into interest rate swap agreements to mitigate the impact of changes in interest rates. These swap agreements, which mature December 31, 1997, effectively convert the interest rate on $150 million of the loan (at December 31, 1992) from the variable rate to a fixed rate of 9.4%. The principal amount covered by the swap agreements declines as the KLA Loan is repaid. The effective interest rate on the KLA Loan was 8.7% at December 31, 1992, including the impact of the swap agreements. At December 31, 1992, the fair value of the swap agreements payable is estimated to be $18 million, which amount represents the estimated cost to the Company if it were to terminate the swap agreements at that date. KLA is exposed to interest rate risk in the event of nonperformance by the other parties to the swap agreements. However, KLA does not anticipate nonperformance by such parties.

KII's wholly-owned Canadian subsidiary has a bank credit agreement which provides for a Canadian $45 million reducing term loan facility due June 1993. Borrowings bear interest, at the Company's option, at rates based upon the U.S. or Canadian prime rates, LIBOR or a market related fixed rate (7.5% at December 31, 1992). The Canadian credit agreement prohibits the subsidiary from affirmatively encumbering its assets, requires it to maintain minimum levels of equity, limits capital expenditures and the payment of dividends and contains other provisions and restrictive covenants customary in lending transactions of this type.

Rheox has a credit agreement providing for a $115 million seven-year term loan ($98 million outstanding at December 31, 1992) due in quarterly installments through December 1997 and a $15 million revolving credit/letter of credit facility due March 1994. At December 31, 1992, letters of credit aggregating $1 million were outstanding. Borrowings bear interest, at Rheox's option, at the prime rate plus 1.5% or LIBOR plus 2.5% (6.0% at December 31, 1992), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's additional indebtedness and dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type. NL has guaranteed $15 million of the principal and interest until the borrowings are reduced to $85 million.

In connection with the credit agreement, Rheox has entered into interest rate swap agreements to mitigate the impact of changes in interest rates on the term loan. These swap agreements, which mature December 31, 1994, effectively convert the interest rate on $60 million of the loan (at December 31, 1992) from a variable rate to a fixed rate of 8.1%. The principal amount covered by the swap agreements declines as the loan is repaid. The effective interest rate on the Rheox term loan was 7.5% at December 31, 1992, including the impact of the swap agreements. At December 31, 1992, the fair value of the swap agreements payable is estimated to be $1 million which amount represents the estimated cost to the Company if it were to terminate the swap agreements at that date. Rheox is exposed to interest rate risk in the event of nonperformance by the other parties to the agreements. However, Rheox does not anticipate nonperformance by such parties.

Substantially all notes payable and long-term debt of the Company, except to the extent of the interest rate swap agreements relating to the KLA Loan and the Rheox term loan as noted above, have variable interest rates which adjust with changes in market interest rates or have short terms to maturity, and the book value of such indebtedness is deemed to approximate fair value.

The aggregate maturities of long-term debt at December 31, 1992 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1993	$ 43,328
1994	144,336
1995	210,678
1996	240,717
1997	305,942
1998 and thereafter	90,283
	$1,035,284

Unused lines of credit available for short-term borrowings under U.S. and non-U.S. credit facilities approximated $24 million and $52 million, respectively, at December 31, 1992.

Other loans consist of non-U.S. mortgage and other borrowings of the Company's subsidiaries denominated primarily in non-U.S. currencies.

Note 10 — Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was $.3 million, $.6 million and $1.0 million in 1990, 1991 and 1992, respectively.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Service cost benefits earned during the year	$ 4,266	$ 5,151	$ 4,272
Interest cost on projected benefit obligations	13,068	12,705	13,804
Actual return on plan assets	(11,875)	(13,147)	(12,248)
Net amortization and deferrals	2,317	439	(1,346)
	$ 7,776	$ 5,148	$ 4,482

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations in 1991 and 1992 were (i) discount rates — 8% to 9% and (ii) rates of increase in future compensation levels — nil to 7%. The expected long-term rates of return on assets used ranged from 8% to 10%. Plan assets at December 31, 1992, are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

	Assets exceed accumulated benefits		Accumulated benefits exceed assets	
	December 31,		December 31,	
	1991	1992	1991	1992
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$28,709	$27,874	$141,337	$141,909
Nonvested benefits	1,288	933	3,004	3,297
Accumulated benefit obligations	29,997	28,807	144,341	145,206
Effect of projected salary increases	7,416	6,289	9,041	8,762
Projected benefit obligations	37,413	35,096	153,382	153,968
Plan assets at fair value	53,814	50,579	100,068	102,553
Plan assets over (under) projected benefit obligations	16,401	15,483	(53,314)	(51,415)
Unrecognized net loss (gain) from experience different from actuarial assumptions	1,267	718	(34,770)	(29,744)
Unrecognized prior service cost (credit)	4,505	3,646	(4,724)	(4,284)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(4,662)	(3,791)	6,749	5,017
Total prepaid (accrued) pension cost	17,511	16,056	(86,059)	(80,426)
Less current portion	—	—	(7,841)	(6,470)
Noncurrent prepaid (accrued) pension cost	$17,511	$16,056	$(78,218)	$(73,956)

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. The Company is phasing out such benefits for currently active U.S. employees over a ten-year period beginning in 1989. The majority of all retirees are required to contribute ›rtion of the cost of their benefits and certain current and future retirees are eligible for reduced health care ·s at age 65. The Company's policy is to fund medical claims as they are incurred, net of any ·ons by the retirees. Effective January 1, 1993, the Company's postretirement medical plans were ›ong other things, increase the deductible and maximum out-of-pocket amounts, increase the ·nt percentage and pass on future cost increases to the participants through increased ›reased reimbursements.

The rates used in determining the actuarial present value of the accumulated benefit obligations at December 31, 1992, as set forth in the table below, were (i) discount rate — 7.75%, (ii) rate of increase in future compensation levels — 5%, (iii) rate of increase in future health care costs — 14% in 1993, gradually declining to 6% in 2000 and thereafter and (iv) return on plan assets — 9%. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.5 million in 1992, and the actuarial present value of accumulated benefit obligations at December 31, 1992 would have increased by approximately $4 million.

	Amount (in thousands)
Actuarial present value of accumulated benefit obligations:	
Retiree benefits	$62,696
Other fully eligible active plan participants	1,151
Other active plan participants	2,336
	66,183
Plan assets at fair value	(7,640)
Accumulated postretirement benefit obligations in excess of plan assets	58,543
Unrecognized net gain from experience different from actuarial assumptions	1,588
Unrecognized prior service credit	16,618
Total accrued postretirement benefits cost	76,749
Less current portion	4,988
Noncurrent accrued postretirement benefits cost	$71,761

The components of the Company's net periodic postretirement benefit cost pursuant to SFAS No. 106 for 1992 are set forth below:

	Amount (In thousands)
Interest cost on accumulated benefit obligations	$6,189
Service cost benefits attributed to service during the year	130
Expected return on plan assets	(650)
	$5,669

The aggregate net pay-as-you-go cost to the Company for these benefits approximated $4 million and $7 million in 1990 and 1991, respectively.

Note 11 — Shareholders' equity:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
		(In thousands)	
Balance at December 31, 1989	66,797	736	66,061
Exercise of options and other	42	—	42
Purchase of treasury shares	—	1,968	(1,968)
Balance at December 31, 1990	66,839	2,704	64,135
Purchase of treasury shares	—	12,934	(12,934)
Balance at December 31, 1991	66,839	15,638	51,201
Purchase of treasury shares	—	311	(311)
Balance at December 31, 1992	66,839	15,949	50,890

During 1990, NL's Board of Directors authorized the purchase of up to five million shares of NL's common stock over an unspecified period of time, to be held as treasury shares available for general corporate purposes. Pursuant to this authorization, the Company purchased 2.0 million, 1.6 million and .3 million shares of its common stock in the open market at an aggregate cost of $22 million, $21 million and $4 million in 1990, 1991 and 1992, respectively. In September 1991, the Company purchased 11.3 million shares of its common stock pursuant to a "Dutch auction" self-tender offer for an aggregate cost of $181 million, including 10.9 million shares purchased from Valhi for $175 million.

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options and SARs granted pursuant to similar plans which preceded the NL Option Plan ("the Predecessor Option Plans") remain outstanding at December 31, 1992, no additional options may be granted under the Predecessor Option Plans.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to 100% of the fair market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan.

Changes in outstanding options granted pursuant to the NL Option Plan and the Predecessor Option Plans are summarized in the table below. At December 31, 1992, options to purchase 343,771 shares were exercisable and options to purchase 268,877 shares become exercisable in 1993. At December 31, 1992, an aggregate of 3.9 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands, except per share amounts)		
Outstanding at December 31, 1989	281	$ 7.77-26.17	$ 4,997
Granted	295	12.37-24.19	6,069
Exercised	(38)	7.77-13.42	(468)
Canceled or expired	(5)	8.65-10.78	(48)
Outstanding at December 31, 1990	533	8.65-26.17	10,550
Granted	522	10.50	5,486
Exercised	(4)	8.65-11.66	(44)
Outstanding at December 31, 1991	1,051	8.65-26.17	15,992
Granted	237	9.31	2,207
Canceled or expired	(10)	9.31-26.17	(126)
Outstanding at December 31, 1992	1,278	$ 8.65-24.19	$18,073

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance. During 1990, 50,000 shares of the 8.625% Series A redeemable preferred stock were retired.

Note 12 — Other income, net:

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Royalty income	$ 1,968	$ 2,547	$ 1,014
Currency transaction gains, net	4,969	1,594	1,735
Disposition of property and equipment	(1,146)	(1,009)	(1,419)
Other, net	4,123	3,911	(133)
	$ 9,914	$ 7,043	$ 1,197

Note 13 — Income taxes:

The components of (i) income (loss) before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 34%, (iii) the provision for income taxes (benefit) and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Pretax income (loss):			
U.S.	$ 32,717	$(25,330)	$(52,724)
Non-U.S.	122,130	6,368	9,710
	$154,847	$(18,962)	$(43,014)
Expected tax expense (benefit), at 34%	$ 52,648	$ (6,447)	$(14,625)
Non-U.S. tax rates	(17,033)	(4,681)	(11,224)
Rate difference on capital loss carryback and capital loss for which no carryback was available	—	14,351	—
Expected benefit of certain U.S. expenses not recognized due primarily to deemed dividends from non-U.S. subsidiaries	11,599	—	—
Valuation allowance	—	—	20,237
Incremental tax on income of companies not included in the NL Tax Group	12,071	3,198	5,385
U.S. state income taxes	2,945	2,605	353
Other, net	(2,152)	(5,116)	333
	$ 60,078	$ 3,910	$ 459
Provision for income taxes:			
Current income taxes (benefit):			
U.S. federal	$ 6,116	$ (6,180)	$ (2,103)
U.S. state	2,946	2,604	(292)
Non-U.S.	(24,371)	14,904	21,803
	(15,309)	11,328	19,408
Deferred income taxes (benefit):			
U.S. federal	—	7,658	(612)
U.S. state	—	—	645
Non-U.S.	75,387	(15,076)	(18,982)
	75,387	(7,418)	(18,949)
	$ 60,078	$ 3,910	$ 459
Comprehensive tax provision (benefit) allocable to:			
Pretax income (loss)	$ 60,078	$ 3,910	$ 459
Extraordinary items, principally deferred income taxes	(22)	(7,241)	—
Stockholders' equity, principally deferred income taxes allocable to currency translation adjustments	13,885	1,023	(1,196)
	$ 73,941	$ (2,308)	$ (737)

The components of the net deferred tax liability at December 31, 1992 are summarized below:

	Deferred tax	
	Assets	Liabilities
	(In thousands)	
Tax effect of temporary differences relating to:		
Inventories	$ 3,823	$ (2,986)
Property and equipment	261	(101,409)
Accrued postretirement benefits cost	26,112	—
Accrued pension cost	7,808	(9,770)
Accrued environmental costs	21,404	—
Accrued liabilities and other deductible differences	14,484	—
Other taxable differences	—	(95,892)
Tax on unremitted earnings of non-U.S. subsidiaries	619	(39,277)
Tax loss and tax credit carryforwards	112,212	—
Valuation allowance	(86,031)	—
Gross deferred tax assets (liabilities)	100,692	(249,334)
Reclassification, principally netting by tax jurisdiction	(99,016)	99,016
Net total deferred tax assets (liabilities)	1,676	(150,318)
Net current deferred tax assets (liabilities)	1,676	(4,573)
Net noncurrent deferred tax assets (liabilities)	$ —	$(145,745)

The components of the provision for deferred income taxes for 1990 and 1991 (a disclosure required under APBO No. 11 income tax accounting but not by SFAS No. 109) is summarized below.

	Years ended December 31,	
	1990	1991
	(In thousands)	
Depreciation	$ 6,040	$ 2,525
Cash basis income and expense	5,886	(1,607)
Undistributed income of subsidiaries	63,082	(8,747)
Other, net	379	411
	$75,387	$(7,418)

At December 31, 1992, the Company had approximately $180 million of non-U.S. income tax loss carryforwards with no expiration dates. In addition, the Company had, for U.S. federal income tax purposes, capital loss carryforwards of approximately $18 million which expire during 1996, net operating loss carryforwards of $9 million which expire in 2007, and an alternative minimum tax credit carryforward of approximately $11 million with no expiration date.

The 1990 provision for deferred income taxes related to undistributed income of subsidiaries includes a reversal of a $48 million credit established in 1989 for non-U.S. income taxes refundable upon distribution, which distribution is attributable to 1990 for income tax purposes.

The Company is undergoing examinations of certain of its income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, and tax authorities have proposed or may propose tax deficiencies. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of all such examinations should not have a material adverse effect on the Company's consolidated financial position. In July 1992, the Company paid $15 million of previously accrued interest and income taxes related to the settlement of examinations of the Company's U.S. federal income tax returns for the years ended December 31, 1979 through 1984. At December 31, 1992, the Company's current assets include $102 million of refundable income taxes, primarily 1989 and 1990 German refund claims, which are currently being contested by German tax authorities.

In 1991, based upon revisions in the Company's estimate of liabilities for income taxes and related interest expense which may ultimately result from the examinations referred to above, the Company reduced its accrual for income tax related interest by $9 million. This change in estimate considered, among other things, the Company's settlement with the IRS of a matter related to the qualified status of certain of the Company's defined benefit pension plans, which plans were determined to be qualified with respect to the periods in question.

Note 14 — Other items:

Research, development and sales technical support expense approximated $11 million in 1990, $9 million in 1991 and $11 million in 1992.

Interest capitalized in connection with long-term capital projects was $8 million in 1990, $26 million in 1991 and $9 million in 1992.

Note 15 — Extraordinary items:

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Gain (loss) on early extinguishment of indebtedness:			
7.5% sinking fund debentures	$ 60	$ 282	$ —
9.375% sinking fund debentures	(1,165)	—	—
Provision for income taxes	22	(6)	—
	(1,083)	276	—
Income tax benefit of utilization of tax loss and tax credit carryforwards	—	7,247	—
	$(1,083)	$7,523	$ —

In August 1990, the Company redeemed the then-outstanding 9.375% sinking fund debentures at 101⅞% of the $62 million principal amount outstanding.

Upon adoption of SFAS No. 109 in 1992, utilization of tax loss and tax credit carryforwards are not classified as extraordinary items.

Note 16 — Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company (except as otherwise set forth in this Annual Report on Form 10-K), the Company from time to time considers, reviews and evaluates, and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

During August 1991, the Company entered into a revolving demand loan agreement with Valhi in an amount not to exceed the lesser of $200 million or the amount Valhi has available under bank credit agreements. The Company advanced $150 million pursuant to this agreement which Valhi repaid in September 1991. Interest income on the amount advanced under the demand loan agreement was $.6 million in 1991.

Baroid Corporation, a former wholly-owned subsidiary of the Company, and the Company are parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis through December 31, 1993, subject to termination or renewal by mutual agreement. Management services fee expense pursuant to the Baroid ISA approximated $6.3 million in 1990, $4.3 million in 1991 and $2.3 million in 1992.

The Company is party to an intercorporate services agreement with Valhi (the "Valhi ISA") whereby Valhi provides certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi ISA was $1.6 million in 1990, $1.5 million in 1991 and $1.4 million in 1992.

The Company is party to an intercorporate services agreement with Tremont (the "Tremont ISA") whereby the Company provides certain management, financial and legal services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.3 million in 1991 and $.5 million in 1992.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.5 million in 1990, $.6 million in 1991 and $.6 million in 1992. Interest expense on balances with Tremont was $1.3 million in 1990.

Sales to Baroid in the ordinary course of business were $1.7 million in 1990, $1.8 million in 1991 and $2.1 million in 1992. Interest income on balances with Baroid was $.9 million in 1990.

Purchases in the ordinary course of business from unconsolidated affiliates were approximately $8 million in 1990 and $9 million in both 1991 and 1992.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (credit) ($(2.5) million in 1990, nil in both 1991 and 1992) in a manner similar to accounting for SARs. At December 31, 1992, employees of the Company held options to purchase 365,000 shares (338,000 shares vested) of Valhi common stock at exercise prices ranging from $5 to $15 per share.

In conjunction with the formation of Baroid, the Company and Baroid entered into a Cross-Indemnification Agreement pursuant to which, as amended, the Company agreed to indemnify Baroid with regard to all liabilities not expressly assumed by Baroid and Baroid agreed to indemnify the Company with regard to all liabilities assumed by Baroid.

Net amounts payable to affiliates, including dividends declared in 1991, are summarized in the following table.

	December 31,	
	1991	1992
	(In thousands)	
Tremont Corporation	$4,474	$4,056
Valhi, Inc.	3,718	30
	$8,192	$4,086

Note 17 — Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases. In addition, Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately 30% of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired on December 31, 1991, and to which an extension through 2011 has been agreed to in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive extension of the supplies and services agreement. Both the lease and the supplies and services agreements contain restrictions on the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expenses aggregated $7 million in 1990, $6 million in 1991 and $9 million in 1992. At December 31, 1992, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1993	$ 1,549	$2,786
1994	1,359	2,195
1995	1,433	1,659
1996	1,434	420
1997	1,418	190
1998 and thereafter	18,656	122
	$25,849	$7,372

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's Superfund National Priority List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. The Company believes it has adequately provided accruals for CERCLA and hazardous waste matters. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is involved in other litigation, including litigation regarding the Feed Materials Production Center in Ohio owned by the U.S. Department of Energy, formerly managed under contract by NLO, Inc., a wholly-owned subsidiary of the Company, and other matters.

See Item 1 — "Business" of this report for discussion of other environmental matters. See Item 3 — "Legal Proceedings" of this report for discussion of specific lead pigment, environmental and other litigation.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition.

Concentrations of credit risk

Sales of TiO_2 accounted for 87% and 88% of net sales in 1991 and 1992, respectively. Titanium dioxide pigments are sold to the paint, paper and plastics industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. Titanium dioxide pigments are sold to over 5,000 customers, none of which represents a significant portion of net sales. Over one-half of the Company's TiO_2 sales by volume were to Europe and approximately one-third were attributable to North America in both 1991 and 1992.

Consolidated cash and cash equivalents includes $40 million and $22 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1991 and 1992, respectively. Such securities are held in trust for the Company by a single U.S. bank.

Note 18 — Changes in accounting principles:

The Company (i) elected early compliance with both SFAS No. 106 (OPEB) and SFAS No. 109 (income taxes) as of January 1, 1992; (ii) elected immediate recognition of the OPEB transition obligation; and (iii) elected to apply SFAS No. 109 prospectively and not restate prior years. The cumulative effect of changes in accounting principles adjustment is shown below.

	Amount (In thousands)
Increase (decrease) in net assets at January 1, 1992:	
Accrued postretirement benefits cost	$(74,918)
Deferred income taxes, net	43,114
Loss from cumulative effect of changes in accounting principles	$(31,804)

Note 19 — Quarterly financial data (unaudited):

	Quarter ended,			
	March 31	June 30	September 30	December 31
	(In thousands, except per share amounts)			
Year ended December 31, 1992:				
Net sales	$226,091	$235,603	$232,297	$199,474
Cost of sales	158,891	169,896	164,133	136,109
Operating income	25,610	26,302	29,282	29,539
Loss before cumulative effect of changes in accounting principles	$ (7,510)	$ (8,467)	$(11,331)	$(17,288)
Cumulative effect of changes in accounting principles	(31,804)	—	—	—
Net loss	$(39,314)	$ (8,467)	$(11,331)	$(17,288)
Per share of common stock:				
Loss before cumulative effect of changes in accounting principles	$ (.15)	$ (.17)	$ (.22)	$ (.34)
Cumulative effect of changes in accounting principles	(.62)	—	—	—
Net loss	$ (.77)	$ (.17)	$ (.22)	$ (.34)
Weighted average shares outstanding	50,959	50,890	50,890	50,890
Year ended December 31, 1991:				
Net sales	$225,047	$217,247	$202,365	$195,636
Cost of sales	143,954	141,306	142,418	138,930
Operating income	47,101	38,062	30,364	23,434
Income (loss) before extraordinary items	$(39,367)	$ 17,603	$ 4,610	$ (6,831)
Extraordinary items	5,833	878	160	652
Net income (loss)	$(33,534)	$ 18,481	$ 4,770	$ (6,179)
Per share of common stock:				
Income (loss) before extraordinary items	$ (.61)	$ .28	$ .08	$ (.13)
Extraordinary items	.09	.01	.00	.01
Net income (loss)	$ (.52)	$ .29	$ .08	$ (.12)
Weighted average shares outstanding	64,134	63,957	61,098	51,743

The sum of quarterly income per common share is not equal to the related annual amount due to changes in weighted average common shares outstanding.

The Company adopted SFAS Nos. 106 and 109 in the fourth quarter of 1992 effective January 1, 1992 and, accordingly, the Company restated its results for the first three quarters of 1992. The effect of these changes in accounting principles on originally reported operating income and loss before cumulative effect of changes in accounting principles is summarized below.

	1992 Quarter ended		
	March 31	June 30	September 30
	(In thousands, except per share amounts)		
Operating income:			
As originally reported	$25,799	$26,260	$ 29,377
Adjustments	(189)	42	(95)
As restated	$25,610	$26,302	$ 29,282
Loss before cumulative effect of changes in accounting principles:			
As originally reported	$(4,413)	$(6,293)	$ (8,104)
Adjustments	(3,097)	(2,174)	(3,227)
As restated	$(7,510)	$(8,467)	$(11,331)
Per common share:			
As originally reported	$ (.09)	$ (.12)	$ (.16)
Adjustments	(.06)	(.05)	(.06)
As restated	$ (.15)	$ (.17)	$ (.22)

Note 20 — Subsequent events:

In January 1993, Kronos entered into a letter of intent to establish a manufacturing joint venture with Tioxide Group ("Tioxide"), a wholly-owned subsidiary of Imperial Chemical Industries PLC. The joint venture, which would be equally owned by Kronos and Tioxide, would operate the Lake Charles chloride process TiO_2 plant currently owned by Kronos. Under separate offtake agreements, Kronos and Tioxide would be required to purchase their equal share of TiO_2 produced at the plant. Under the terms of the letter of intent, Kronos would contribute the Lake Charles plant to the joint venture and receive approximately $200 million in cash from Tioxide. The letter of intent also provides for the companies to exchange certain technological information. The transaction is subject to, among other things, obtaining acceptable joint venture financing, preparation of definitive agreements, and review by U.S. antitrust authorities.

Kronos expects to use part of the cash payment and financing from the proposed joint venture to repay the outstanding principal amount of the KLA Loan. In the event that the joint venture transaction is not consummated, the Company believes that modification of the fixed charge coverage ratio in the KLA Loan agreement will be required in the second half of 1993. No discussions with the lenders have taken place with respect to this matter.

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 18 to the consolidated financial statements, in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND

Houston, Texas
March 5, 1993

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I — MARKETABLE SECURITIES
December 31, 1992
(In thousands)

Name of issuer and title of each issue	Number of shares/principal amount	Cost	Market value	Amount carried in balance sheet
Current assets —				
Common stock:				
Lockheed, Corp.	2	$ 83	$ 96	$ 96
Maxxam, Inc.	251	11,133	6,900	6,900
		11,216	6,996	6,996
U.S. Treasury securities	93,645	93,670	93,611	93,611
		$104,886	$100,607	$100,607
Noncurrent assets —				
Common stock:				
Keystone Consolidated Industries, Inc.(a)	326	$ 4,240	$ 3,261	$ 3,261
Valhi, Inc.	1,186	5,931	5,931	5,931
		10,171	9,192	9,192
U.S. Treasury securities	14,389	14,389	14,389	14,389
		$ 24,560	$ 23,581	$ 23,581

(a) A majority-owned subsidiary of Contran Corporation.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III — CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets
December 31, 1991 and 1992
(In thousands)

	1991	1992
Current assets:		
Cash and cash equivalents	$ 9,467	$ 11,043
Marketable securities	30,484	90,639
Accounts and notes receivable	3,314	2,319
Refundable income taxes	—	2,012
Receivable from subsidiaries and affiliates	4,138	—
Prepaid expenses	187	198
Total current assets	47,590	106,211
Other assets:		
Marketable securities	19,047	23,581
Investment in subsidiaries	41,437	(8,388)
Other	2,934	2,412
Total other assets	63,418	17,605
Property and equipment, net	4,446	4,241
	$115,454	$128,057
Current liabilities:		
Current maturities of long-term debt	$ 14,247	$ 4,374
Accounts payable and accrued liabilities	26,589	29,828
Payable to subsidiaries and affiliates	8,613	23,642
Income taxes	3,374	—
Deferred income taxes	—	2,506
Total current liabilities	52,823	60,350
Noncurrent liabilities:		
Long-term debt	15,000	10,000
Notes payable to subsidiary	—	65,000
Deferred income taxes	56,010	28,091
Accrued pension cost	13,105	12,765
Accrued postretirement benefits cost	—	45,072
Other	36,791	53,072
Total noncurrent liabilities	120,906	214,000
Shareholders' equity (deficit)	(58,275)	(146,293)
	$115,454	$128,057

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III — CONDENSED FINANCIAL INFORMATION OF REGISTRANT — (Continued)

Condensed Statements of Operations
Years ended December 31, 1990, 1991 and 1992
(In thousands)

	1990	1991	1992
Revenues and other income:			
Equity in income (loss) of subsidiaries	$125,821	$ 7,515	$(10,703)
Interest and dividend income	7,827	4,714	2,829
Securities transactions	3,937	(10,586)	2,691
Other, net	1,720	3,121	1,791
	139,305	4,764	(3,392)
Costs and expenses:			
General and administrative	46,009	48,042	45,243
Interest, net	15,088	(4,540)	1,598
	61,097	43,502	46,841
Income (loss) before income taxes, extraordinary items and cumulative effect of changes in accounting principles	78,208	(38,738)	(50,233)
Income tax benefit	15,298	14,753	5,637
Income (loss) before extraordinary items and cumulative effect of changes in accounting principles	93,506	(23,985)	(44,596)
Extraordinary items:			
Equity in income of subsidiaries	—	16,263	—
Income tax benefit of utilization of tax loss and tax credit carryforwards	—	(9,016)	—
Early extinguishment of indebtedness	(1,083)	276	—
	(1,083)	7,523	—
Cumulative effect of changes in accounting principles:			
NL	—	—	(30,546)
Equity in income of subsidiaries	—	—	(1,258)
	—	—	(31,804)
Net income (loss)	$ 92,423	$(16,462)	$(76,400)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III — CONDENSED FINANCIAL INFORMATION OF REGISTRANT — (Continued)

Condensed Statements of Cash Flows
Years ended December 31, 1990, 1991 and 1992
(In thousands)

	1990	1991	1992
Cash flows from operating activities:			
Net income (loss)	$ 92,423	$ (16,462)	$(76,400)
Adjustments:			
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary items and cumulative effect of changes in accounting principles	(125,821)	(7,515)	10,703
Extraordinary items	—	(16,263)	—
Cumulative effect of changes in accounting principles	—	—	1,258
Distributions	8,731	317,000	54,000
Securities transactions	(3,937)	10,586	(2,691)
Cumulative effect of changes in accounting principles	—	—	30,546
Change in assets and liabilities, net	58,416	22,383	6,340
Other, net	(765)	(9,408)	1,243
Total adjustments	(63,376)	316,783	101,399
Net cash provided by operating activities	29,047	300,321	24,999
Cash flows from investing activities:			
Purchases of marketable securities	(27,308)	(46,654)	(1,238)
Proceeds from disposition of marketable securities	92,965	93,646	6,735
Capital expenditures	(2,247)	(260)	(214)
Investment in subsidiary	—	(3,248)	(3,896)
Loans to affiliates and subsidiaries:			
Loans	—	(150,000)	—
Collections	44,400	150,000	—
Other, net	—	(126)	(768)
Net cash provided by investing activities	107,810	43,358	619
Cash flows from financing activities:			
Additions to (principal payments on):			
Long-term debt	(62,365)	(9,025)	(14,873)
Loans from affiliates	(11,000)	(100,526)	12,298
Dividends paid	(40,056)	(34,724)	(17,807)
Redemption of Series A preferred stock	(5,000)	—	—
Purchases of treasury stock and other	(21,767)	(202,492)	(3,660)
Net cash used by financing activities	(140,188)	(346,767)	(24,042)
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	29,047	300,321	24,999
Investing activities	107,810	43,358	619
Financing activities	(140,188)	(346,767)	(24,042)
Net change from operating, investing and financing activities	(3,331)	(3,088)	1,576
Balance at beginning of year	15,886	12,555	9,467
Balance at end of year	$ 12,555	$ 9,467	$ 11,043

Notes to Condensed Financial Information

Note 1 — Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 — Net payable to (receivable from) subsidiaries and affiliates:

	December 31,	
	1991	1992
	(In thousands)	
Current:		
Tremont Corporation	$ 4,474	$ 4,056
Valhi, Inc.	3,718	30
Kronos and Rheox:		
Income taxes	(4,484)	2,680
Other, net	767	16,876
	$ 4,475	$23,642
Noncurrent:		
Note payable — Kronos	$ —	$65,000

Note 3 — Long-term debt:

The aggregate maturities of the Company's long-term debt at December 31, 1992 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1993	$ 4,374
1994	5,000
1995	5,000
	$14,374

The Company has guaranteed $15 million of Rheox's seven-year term loan until borrowings are reduced to $85 million. The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through June 1994.

NL INDUSTRIES, INC. AND SUBSIDIARIES
SCHEDULE V — PROPERTY AND EQUIPMENT
(In thousands)

Classification	Balance at beginning of year	Additions at cost	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1992:					
Land	$ 19,645	$ 11,493	$ (146)	$ (1,129)	$ 29,863
Buildings	150,235	74,924	(6,480)	(10,623)	208,056
Machinery and equipment	566,803	311,240	(28,403)	(38,109)	811,531
Mining properties	81,959	2,346	(491)	(8,083)	75,731
Construction in progress	338,685	(314,853) (a)	(407)	(2,383)	21,042
	$1,157,327	$ 85,150 (b)	$(35,927) (c)	$(60,327)	$1,146,223
Year ended December 31, 1991:					
Land	$ 19,096	$ 788	$ (103)	$ (136)	$ 19,645
Buildings	151,079	379	(258)	(965)	150,235
Machinery and equipment	547,077	31,368	(8,165)	(3,477)	566,803
Mining properties	81,363	1,718	(244)	(878)	81,959
Construction in progress	177,778	160,893 (a)	(426)	440	338,685
	$ 976,393	$ 195,146 (b)	$ (9,196)	$ (5,016)	$1,157,327
Year ended December 31, 1990:					
Land	$ 16,786	$ 417	$ (23)	$ 1,916	$ 19,096
Buildings	133,953	4,184	(111)	13,053	151,079
Machinery and equipment	465,921	43,057	(10,621)	48,720	547,077
Mining properties	72,515	3,863	(414)	5,399	81,363
Construction in progress	33,244	143,783 (a)	(208)	959	177,778
	$ 722,419	$ 195,304 (b)	$(11,377)	$ 70,047	$ 976,393

(a) Net of amounts transferred to applicable property and equipment accounts.
(b) Includes costs for chloride process TiO_2 plant in Lake Charles, Louisiana.
(c) Includes retirement of sulfate process TiO_2 plant in Langerbrugge, Belgium.

SCHEDULE VI — ACCUMULATED DEPRECIATION AND DEPLETION OF PROPERTY AND EQUIPMENT
(In thousands)

Classification	Balance at beginning of year	Additions charged to costs and expenses	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1992:					
Land	$ 5,948	$ 841	$ —	$ (414)	$ 6,375
Buildings	75,038	4,531	(6,339)	(5,334)	67,896
Machinery and equipment	272,467	35,933	(25,124)	(19,505)	263,771
Mining properties	65,290	3,535	(478)	(6,143)	62,204
	$418,743	$44,840	$(31,941) (a)	$(31,396)	$400,246
Year ended December 31, 1991:					
Land	$ 5,536	$ 473	$ (33)	$ (28)	$ 5,948
Buildings	72,666	3,125	(234)	(519)	75,038
Machinery and equipment	258,865	22,371	(6,643)	(2,126)	272,467
Mining properties	62,212	3,762	(244)	(440)	65,290
	$399,279	$29,731	$ (7,154)	$ (3,113)	$418,743
Year ended December 31, 1990:					
Land	$ 4,452	$ 440	$ (2)	$ 646	$ 5,536
Buildings	62,249	3,035	(96)	7,478	72,666
Machinery and equipment	219,577	22,821	(8,196)	24,663	258,865
Mining properties	55,676	3,164	(17)	3,389	62,212
	$341,954	$29,460	$ (8,311)	$ 36,176	$399,279

(a) Includes retirement of sulfate process TiO_2 plant in Langerbrugge, Belgium.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE VIII — VALUATION AND QUALIFYING ACCOUNTS
(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Balance at end of year
Year ended December 31, 1992:					
Allowance for doubtful accounts and notes receivable	$1,749	$ 945	$ (190) (a)	$(119)	$ 2,385
Amortization of intangibles	$7,270	$ 2,989	$ —	$(467)	$ 9,792
Valuation allowance for deferred income taxes	$ —	$86,031	$ —	$ —	$86,031
Year ended December 31, 1991:					
Allowance for doubtful accounts and notes receivable	$2,107	$ 478	$ (846) (a)	$ 10	$ 1,749
Amortization of intangibles	$4,211	$ 2,850	$ —	$ 209	$ 7,270
Year ended December 31, 1990:					
Allowance for doubtful accounts and notes receivable	$2,821	$ (9)	$ (973) (a)	$ 268	$ 2,107
Amortization of intangibles	$3,652	$ 6,065	$(5,788)	$ 282	$ 4,211

(a) Amounts written off, less recoveries.

SCHEDULE IX — SHORT-TERM BORROWINGS
(In thousands, except percentages)

Category of aggregate short-term borrowings	Balance at end of year	Weighted average interest rate	Maximum amount outstanding during the year	Average amount outstanding during the year(a)	Weighted average interest rate during the year(b)
Bank credit agreements and other:					
Year ended December 31, 1992	$ 315	7.3%	$ 1,100	$ 239	8.4%
Year ended December 31, 1991	$ 429	9.8%	$ 40,746	$ 5,484	11.1%
Year ended December 31, 1990	$40,746	11.1%	$454,217	$214,081	8.8%

(a) The average amount outstanding during the year is calculated based on the average of the month-end balances of short-term borrowings during the year.

(b) The weighted average interest rate during the year is calculated based on total interest expense on short-term borrowings divided by the average amount outstanding during the year.

SCHEDULE X — SUPPLEMENTARY INCOME STATEMENT INFORMATION
(In thousands)

	Years ended December 31,		
	1990	1991	1992
Maintenance and repairs	$81,073	$81,201	$93,036
Depreciation, depletion and amortization:			
Property and equipment	$29,460	$29,731	$44,840
Intangible assets	6,065	2,850	2,989
	$35,525	$32,581	$47,829
Taxes, other than payroll and income taxes	$10,705	$12,748	$15,319

DIRECTORS, OFFICERS AND EXECUTIVES

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer - NL Industries, Inc.

Kenneth R. Peak
President - Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman - Valhi, Inc. (diversified holding company)

Harold C. Simmons
Chairman of the Board - NL Industries, Inc.
Chairman and Chief Executive Officer - Valhi, Inc.

Michael A. Snetzer
President - Valhi, Inc.

Dr. Lawrence A. Wigdor
President and Chief Executive Officer - Kronos and Rheox

Admiral Elmo R. Zumwalt, Jr. (retired)
President - Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee
Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee
Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee
Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS AND EXECUTIVES

NL Industries, Inc.

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

Kronos

J. Landis Martin
Chairman of the Board

Dr. Lawrence A. Wigdor
President and Chief Executive Officer

Susan E. Alderton
Vice President and Treasurer

William R. Bronner
Vice President and Secretary

Anthony L. DeGisi
Vice President

Fred DeJong
Vice President

Dr. Siegfried Hartmann
Vice President

Dr. Christopher E. Jones
Vice President

Dennis G. Newkirk
Vice President and Controller

Edward J. Zadzora
Vice President

Rheox

Dr. Lawrence A. Wigdor
Chairman of the Board, Chief Executive Officer and President

Susan E. Alderton
Vice President and Treasurer

Henry H. Basson
Vice President

William R. Bronner
Vice President and Secretary

David J. Fisher
Vice President

Paul A. Kopasko
Vice President

Laurence I. Weissman
Vice President

SHAREHOLDER INFORMATION

Annual Meeting

The annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agency

First Chicago Trust Company of New York, P.O. Box 3981, Church Street Station, New York, New York 10008-3981. Telephone (212) 791-6422

Form 10-K Report

The Company's Annual Report on Form 10-K for the year ended December 31, 1992, filed with the Securities and Exchange Commission, is printed as part of this report. Additional copies are available to shareholders without charge. Requests should be addressed to NL Industries, Inc., Investor Relations Department, P.O. Box 60087, Houston, Texas 77205, or made by calling (800) 285-3519.

NL Industries, Inc.

1993

Annual

Report

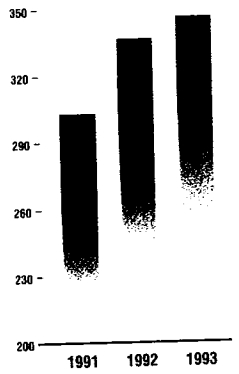
NL Industries, Inc. is a multinational company that manufactures and markets titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two principal operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. Rheox, Inc., NL's other principal operating subsidiary, is the world's largest producer of rheological additives for solvent-based systems and is also a supplier of rheological additives used in water-based systems. These products control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,200 people worldwide. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

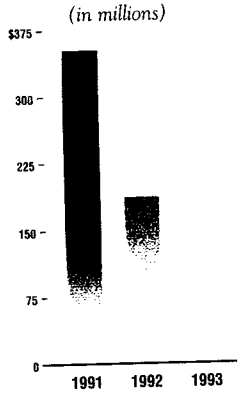
Annual Highlights

($ in millions, except per share data)	1991	1992	1993
Net sales	$ 840.3	$ 893.5	$805.3
Operating income	139.0	110.7	62.4
Loss before extraordinary items and cumulative effect of changes in accounting principles	(24.0)	(44.6)	(83.2)
Net loss	(16.5)	(76.4)	(109.8)
Loss per common share:			
Before extraordinary items	$ (.40)	$ (.88)	$(1.63)
Net loss	(.27)	(1.50)	(2.16)
Capital expenditures	$ 195.1	$ 85.2	$ 48.0
Cash and current marketable securities	$ 353.3	$ 187.9	$147.6
Long-term debt, including current maturities	$1,288.9	$1,035.3	$870.9
Operational data (metric tons):			
TiO_2 sales volume	302,000	336,000	346,000
TiO_2 production volume	293,000	358,000	352,000

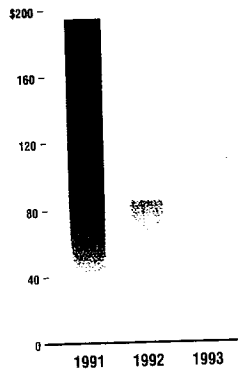
TiO_2 Sales Volume
(in thousands)



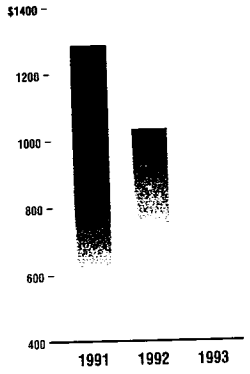
Cash & Marketable Securities
(in millions)



Capital Expenditures
(in millions)



Debt
(in millions)



T[redacted]OLDERS

Our results for 1993 reflected the continuing difficult market environment for titanium dioxide pigments ("TiO_2"). The weak economic conditions of Western Europe, coupled with only a modest economic recovery in North America, continued to depress prices for TiO_2, prolonging the trend that began in early 1990. Although some pricing improvement was realized in the fourth quarter, weak pricing was the key factor contributing to the decline in our overall results.

Net sales decreased 10% to $805 million in 1993 due principally to lower TiO_2 prices, although our volume and market share increased slightly on record sales volume of 346,000 metric tons of TiO_2. Operating income for 1993 declined 44% to $62 million and after an extraordinary loss related to the settlement of interest rate swap agreements and other costs associated with the joint venture formation and debt refinancing described below, NL reported a net loss of $2.16 per share.

Notwithstanding these results, we continue to aggressively position NL to be a stronger company for the future. During 1993, we substantially improved our liquidity and financial flexibility, formed a strategic joint venture to own and operate Kronos' Louisiana plant and continued our cost reduction and environmental improvement efforts.

We continue to aggressively position NL to be a stronger company for the future. During 1993, we substantially improved our liquidity and financial flexibility.

In October 1993, the Company issued $350 million of Senior Notes and used the net proceeds to prepay a portion of its Deutsche mark (DM) denominated bank credit facility. The terms of the DM credit facility were amended to reschedule the repayment terms of the remaining term loan beginning in 1997, extend the final maturity and provide for DM 150 million of revolving credit availability.

In October 1993, Kronos, Inc., our TiO_2 subsidiary, formed a manufacturing joint venture and exchanged certain technologies with Tioxide Group Ltd. This transaction reduced long-term debt by $107 million and improved the Company's balance sheet. Kronos' production capacity subsequent to the formation of the joint venture is 10% higher than its 1993 sales volume and we believe is sufficient to provide Kronos with the capability to meet current market requirements and continue its worldwide presence in future years.

During 1993, Kronos continued its commitment to maintaining its competitive position by investing $47 million in capital improvements, including $30 million related to its environmental protection and compliance programs. In early 1994, Kronos completed its Norwegian onshore tailings disposal system and expects to complete its Canadian waste acid neutralization facility by mid-year. In order to reduce sulfur dioxide emissions into the atmosphere, Kronos is installing off-gas desulfurization systems at its German plants at an estimated cost of $24 million. Kronos' joint venture is installing an off-gas desulfurization system at an estimated cost of $15 million. The German systems are scheduled to be completed

in 1996 and the Louisiana system is scheduled for completion in 1995. Kronos will continue to commit substantial resources to its business and continue its efforts to be a leader in the area of environmental compliance.

Operating income of Kronos' TiO_2 business declined from $82 million in 1992 to $36 million in 1993, as the effects of depressed TiO_2 selling prices and the impact of production curtailments to reduce inventories were only partially offset by the reduction in start-up costs of the Louisiana plant, which commenced production during 1992. The worldwide TiO_2 industry continues to be adversely affected by excess production capacity and Kronos' average selling prices continued to decline during 1993. Most of the decline occurred in the first half of 1993; average prices declined only slightly during the third quarter and increased approximately 3% during the fourth quarter. The increase in the fourth quarter average selling prices reflects improved pricing in Europe.

We believe the TiO_2 industry has significant long-term potential. As gross domestic product grows in various regions of the world, TiO_2 consumption should increase due to its widespread application in end-use products and the absence of effective substitutes.

Rheox, Inc., our specialty chemicals subsidiary, produces rheological additives for both solvent-based and water-based systems. Rheological additives for solvent-based systems accounted for approximately 90% of Rheox's sales in 1993. Rheox introduced several new products in 1993 to the water-based additives market, which is larger and has more growth potential than the solvent-based additives market.

We believe the TiO_2 industry has significant long-term potential. As gross domestic product grows in various regions of the world, TiO_2 consumption should increase due to its widespread application in end-use products and the absence of effective substitutes. Also, construction of additional TiO_2 production capacity requires significant capital expenditures and substantial lead time for planning, obtaining environmental approvals and construction. We are not aware of any announced additions to production capacity in North America or Europe. With the October 1993 formation of the joint venture and debt refinancing, NL is well-positioned to take advantage of the economic recovery under way in North America and future improvements in market conditions.

Sincerely,

Harold Simmons

Harold C. Simmons
Chairman of the Board

J. Landis Martin

J. Landis Martin
President and Chief Executive Officer

March 1, 1994

KRONOS

Kronos is the world's fourth largest producer of titanium dioxide pigments, with annual production capacity of approximately 380,000 metric tons. Titanium dioxide pigments ("TiO_2") provide whiteness, brightness and opacity to a wide range of end-use products, including paints, plastics, papers, textiles, inks and ceramics.

Kronos has played a leading role in the development of the worldwide titanium dioxide pigments industry, with predecessor companies first commercializing this product during the early 1920s in both the United States and Norway. Since then Kronos has continually refined its technology and expanded its manufacturing capabilities to now include six manufacturing facilities located in five countries: Germany, Belgium, Norway, Canada and the United States and a mine located in Norway.

Currently, Kronos has an 11% worldwide market share with its largest markets being in Western Europe, which closely follows North America as the largest consumer of titanium dioxide pigments. Kronos is gaining increased sales volume in North America, aided by its strong technology, wide range of products, and new manufacturing facilities. Assisted by the economic recovery under way in the United States, the Company expects continued market share growth in this area.

Kronos' newest plant in Lake Charles, Louisiana utilizes the chloride process technology. Since October 1993, this plant has been owned and operated by a 50%-owned joint venture. Kronos believes the joint venture provides the Company with the production capacity to participate in the economic recovery in North America.

Kronos uses both the sulfate and chloride production processes to manufacture over 40 grades of titanium dioxide pigments for a broad range of applications. Approximately two-thirds of Kronos' production is based upon the newer chloride process. While the pigments produced by the two processes are generally interchangeable, chloride process pigments are increasingly preferred by major customers.

Wide acceptance of its plastic-grade pigments makes Kronos a world leader in sales to this market. Recognized by many as having the best multipurpose paint grades of titanium dioxide pigments, and with increased slurry capacity in North America, Kronos' position in the coatings industry is being further enhanced.

Kronos operates a rock ilmenite mine in Norway, which provides all of Kronos' feedstock for its European sulfate process pigment plants. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe, supplying nearly 40% of the European demand for sulfate feed material.

Kronos has substantially completed a major environmental protection and improvement program commenced in the early 1980s to replace or modify its TiO_2 production facilities for compliance with various environmental laws by their respective effective dates. All of Kronos' European plants now use either the low-waste yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Kronos has commenced construction of a $25 million waste acid neutralization facility for its Canadian sulfate process TiO_2 plant, which is expected to be completed in mid-1994. Although these upgrades increased operating costs, they are expected to reduce future capital expenditures that Kronos would otherwise need to incur as environmental standards are increased.

Kronos maintains an active research and development program and continuously works to improve both the sulfate and chloride technologies. Through this effort, Kronos has increased output in its four chloride process pigment plants so that all plants exceed original design capacity. These plant improvements have been accomplished with relatively little capital expenditure.

Kronos' water treatment chemicals business has successfully developed an extensive sales program in Europe for the iron compounds which result from both the chloride and sulfate processes. By converting the iron compounds to commercial products, disposal costs are reduced and additional revenue is generated.

RHEOX

Rheox manufactures and sells a wide variety of specialty chemicals to the paint, ink, lubricant, oil drilling, adhesives, sealants, household and personal care markets throughout the world. Rheox specialty chemicals are additives which modify the rheological properties of the many products sold in those markets. Rheox products improve the flow and appearance of trade paints and industrial finishes and make it possible to change oil into grease lubricants.

Rheox products are used to modify end-products made from either an oil or water base. Worldwide sales volume in 1993 increased 3% over 1992. The majority of the sales were solvent-based products. Rheox believes that water-based systems will account for an increasing portion of the market and more emphasis is being placed on developing water-based products, with approximately 10% of Rheox's 1993 sales derived from this end-use.

Rheox manufactures its products in five plants located in the United States and Europe, its key market areas. In 1993, four of the five plants received the worldwide-respected quality approval of ISO 9002 with approval at the fifth plant expected during 1994. This quality status is highly desired by customers who are demanding more stringent quality performance throughout the world.

The Company owns a mine in California which produces hectorite clays, a major raw material in its manufacturing process. The mine is believed to be the largest known commercial hectorite clay deposit in the world, assuring Rheox a stable low cost supply of this raw material.

A key Rheox strength is the extensive technical support given to customers from our laboratories in the United States and Germany. These laboratories are staffed with specialists in many of the industries served and they provide opportunities for our customers to develop improved products. A key part of the customer interface is a dedicated sales force in both North America and Europe. In addition, over 70 agents worldwide promote Rheox's products.

Rheox commercialized ten new products in 1993 and became the exclusive reseller of EFKA's (a Dutch producer) dispersants and defoamers for sale in North America. Among the new introductions are products for water-based coatings, environmental and construction markets. Product introductions included new water-based thickeners for paints which have no organic volatiles (no VOC) and low VOC additives for anti-perspirants. An improved product for auto underbody coatings generated sales in 1993, and Rheox expects an increase in sales of this product in 1994. A product developed for the remediation of organic chemical contaminated soil will have its first major trial in mid-1994.

One of the newer developments is a product which has the capability to de-ink recycled newspaper containing difficult-to-remove flexographic inks. Another product, which is capable of de-inking all newsprint, has been developed and is being tested for commercial use, with its first plant test in 1994.

A recent development with significant potential is the discovery of water retention additives which can replace cellulosics in the construction markets. This experimental family of products is being developed for joint compounds in the North American market and plasters in Europe. Currently the market for cellulosic-type additives in these applications is estimated at over $200 million per year. The products are in various stages of customer laboratory trials.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required] - For the fiscal year ended December 31, 1993

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-640

NL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	13-5267260 (IRS Employer Identification No.)
3000 North Sam Houston Parkway East, Houston, Texas (Address of principal executive offices)	77032 (Zip Code)

Registrant's telephone number, including area code: (713) 987-5000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	New York Stock Exchange Pacific Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes X No ___

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

As of February 28, 1994, 50,889,943 shares of common stock were outstanding. The aggregate market value of the 17,037,953 shares of voting stock held by nonaffiliates as of such date approximated $151 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the Registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a New Jersey corporation in 1891, conducts its operations through its principal wholly-owned subsidiaries, Kronos, Inc. and Rheox, Inc. At December 31, 1993, Valhi, Inc. held approximately 49% of NL's outstanding stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company".

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2") with an estimated 11% share of the worldwide market. Approximately one-half of Kronos' 1993 sales volume was in Europe, where Kronos is the second largest producer of TiO_2. Kronos accounted for 87% of the Company's sales and 58% of its operating income in 1993. Rheox is the world's largest producer of rheological additives for solvent-based systems, supplying an estimated 40% of the worldwide market.

Kronos

Industry

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide range of products, including paints, paper, plastics, fibers and ceramics. TiO_2 is considered to be a "quality-of-life" product with demand affected by the gross domestic product in various regions of the world.

Demand, supply and pricing of TiO_2 have historically been cyclical and the last cyclical peak for TiO_2 prices occurred in early 1990. While prices for TiO_2 are currently depressed, the Company believes that the TiO_2 industry has significant long-term potential. However, the Company expects that the TiO_2 industry will continue to operate at lower capacity utilization levels over the next few years relative to the high utilization levels prevalent during the late 1980s, primarily because of the slow recovery from the worldwide recession and the impact of capacity additions since the late 1980s. The economic recovery has been particularly slow in Europe where a significant portion of the Company's TiO_2 manufacturing facilities are located. Kronos has an estimated 17% share of European TiO_2 sales and an estimated 9% share of U.S. TiO_2 sales. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. However, if the economies in Eastern Europe, the Far East and China continue to develop, a significant market for TiO_2 could emerge in those countries and Kronos believes that it is well positioned to participate in the Eastern European market.

Products and operations

The Company believes that there are no effective substitutes for TiO_2. However, extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used in a number of Kronos' markets. Generally, extenders are used to reduce to some extent the utilization of higher cost TiO_2. The use of extenders has not significantly affected TiO_2 consumption over the past decade because extenders generally have, to date, failed to match the performance characteristics of TiO_2. The Company believes that the use of extenders will not materially alter the growth of the TiO_2 business in the foreseeable future.

Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos' major customers include international paint, paper and plastics manufacturers.

Kronos is one of the world's leading producers and marketers of TiO_2. Kronos and its distributors and agents sell and provide technical services for its products to over 5,000 customers with the majority of sales in Europe, the United States and Canada.

Kronos' international operations are conducted through Kronos International, Inc. ("KII"), a German-based holding company formed in 1989 to manage and coordinate the Company's manufacturing operations in Germany, Canada, Belgium and Norway and its sales and marketing activities in over 100 countries worldwide. The Company believes that KII's structure allows it to capitalize on expertise and technology developed in Germany over a 60-year period.

Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets. By volume, one-half of Kronos' 1993 TiO_2 sales were to Europe, with 38% to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ores (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived from co-products of the pigment production processes). Water treatment chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using either the chloride or sulfate pigment production process. Although most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred in certain segments of the coatings and plastics applications, and sulfate process pigments are generally preferred for paper, fibers and ceramics applications. Due to environmental factors and customer considerations, the proportion of TiO_2 industry sales represented by chloride process pigments has increased relative to sulfate process pigments. Approximately two-thirds of Kronos' current production capacity is based on an efficient chloride process technology.

Kronos produced approximately 352,000 metric tons of TiO_2 in 1993, compared to approximately 358,000 metric tons in 1992 and 293,000 metric tons in 1991. The increase in production during 1992 was primarily at Kronos' chloride process plants, including the plant in Lake Charles, Louisiana. Kronos achieved record production levels of chloride process pigments in 1992 through improved operational efficiencies. In response to weakened demand, production rates were reduced in late 1992 and during 1993 in order to reduce inventory levels. Kronos believes its annual attainable production capacity is approximately 380,000 metric tons, including its one-half interest in the Louisiana plant.

The primary raw materials used in the TiO_2 chloride production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and rutile. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Ltd. (South Africa), approximately 50% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp. Natural rutile ore is purchased from a number of sources.

The primary raw materials used in the TiO_2 sulfate production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided all of Kronos' feedstock for its European sulfate process pigment plants in 1993. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe supplying, the Company believes, nearly 40% of the European demand, including the Company, for sulfate feedstock. Additionally, Kronos purchases sulfate grade slag under contracts negotiated annually with QIT and Tinfos Titanium and Iron K/S.

Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate in the near term; however, tightening supplies for the chloride process may be encountered in the late 1990s. Kronos does not anticipate experiencing any interruptions of its raw material supplies.

TiO_2 manufacturing joint venture

In October 1993, Kronos formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). The joint venture, which is equally owned by subsidiaries of Kronos and Tioxide (the "Partners"), owns and operates the Louisiana chloride process TiO_2 plant formerly owned by Kronos. Under the terms of the joint venture and related agreements, Kronos contributed the plant to the joint venture, Tioxide paid an aggregate of approximately $205 million, including its tranche of the joint venture debt, and Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Of the total consideration paid by Tioxide, $30 million was attributable to the exchange of technologies and is being reported as a component of operating income ratably over three years beginning in October 1993. Production from the plant is being shared equally by Kronos and Tioxide pursuant

to separate offtake agreements. The formation of the manufacturing joint venture resulted in a 12% decrease in Kronos' total TiO_2 production capacity; however, Kronos' remaining capacity is 10% higher than 1993 sales volume, and is believed to be sufficient to provide Kronos with the capability to meet current market requirements and continue its worldwide presence in future years.

A supervisory committee, composed of four members, two of whom are appointed by each Partner, directs the business and affairs of the joint venture, including production and output decisions. Two general managers, one appointed and compensated by each Partner, manage the day-to-day operations of the joint venture acting under the direction of the supervisory committee.

Upon formation, the joint venture obtained $216 million in new financing consisting of two equal tranches, one attributable to each Partner, which is serviced through the purchase of the plant's TiO_2 output in equal quantities by the Partners. The Partners are each required to make capital contributions to the joint venture to pay principal on their respective portion of the joint venture indebtedness. Kronos' pro rata share of the joint venture debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's operating expenses (fixed and variable costs of production and interest expense). Kronos' share of the fixed and variable production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity. In the past few years, supply has exceeded demand, in part due to new chloride process capacity coming on-stream. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980s, have had a negative impact since prices peaked in early 1990. Worldwide capacity additions in the TiO_2 market are slow to develop because of the significant capital expenditures and substantial lead time (typically three to five years in the Company's experience) for, among other things, planning, obtaining environmental approvals and construction.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and substantially all of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada.

Kronos' principal competitors are E.I. du Pont de Nemours & Co. ("DuPont"); Imperial Chemical Industries PLC (Tioxide); Hanson PLC (SCM Chemicals); Kemira Oy; Bayer AG; and Ishihara Sangyo Kaisha, Ltd.. These six competitors have estimated individual worldwide market shares ranging from 5% to 21%, and an estimated aggregate 65% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is Kronos' principal North American competitor.

Kronos has substantially completed a major environmental protection and improvement program commenced in the early 1980s to replace or modify its European TiO_2 production facilities for compliance with various environmental laws by their respective effective dates. All of Kronos' European plants now use either the low-waste yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Kronos has commenced construction of a $25 million waste acid neutralization facility for its Canadian sulfate process TiO_2 plant, which is expected to be completed in mid-1994. Although these upgrades increased operating costs, they are expected to reduce future capital expenditures that Kronos would otherwise need to incur as environmental standards are increased. The Company believes that certain competitors have not upgraded their facilities and are expected to do so in the future or be forced to curtail production due to lack of environmental compliance. See "Regulatory and Environmental Matters".

Rheox

Products and operations

Rheological additives control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays which have been chemically reacted with organic chemicals and compounds. Rheox produces rheological additives for both solvent-based and water-based systems. Rheox is the world's largest producer of rheological additives for solvent-based systems, supplying, the Company believes, approximately 40% of the worldwide market, and is also a supplier of rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for approximately 90% of Rheox's sales in 1993, with the remainder being principally rheological additives for water-based systems. Rheox introduced a number of new products during the past three years, many of which are for water-based systems, which currently represent a larger portion of the market than solvent-based systems and which the Company believes, in the long term, will account for an increasing portion of the market. Rheox also focused on product development for environmental applications with new products introduced for de-inking recycled paper and soil stabilization at contaminated sites.

Sales of rheological additives generally follow overall economic growth in Rheox's principal markets and are influenced by the volume of shipments of the worldwide coatings industry. Since Rheox's rheological additives are also used in industrial coatings, plant and equipment spending also has an influence on demand for this product line.

Manufacturing process and raw materials

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with a subsidiary of Dresser Industries, Inc. ("Dresser"), which has significant bentonite reserves in Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future and Dresser's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from Company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of hectorite clays in the world. Quaternary amines are purchased primarily from a

joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Competition

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors for rheological additives for solvent-based systems are Laporte PLC, Sud-Chemie AG and Akzo NV. Rheox's principal competitors for water-based systems are Rohm and Haas Company, Hercules Incorporated, The Dow Chemical Company and Union Carbide Corporation.

Research and Development

The Company's annual expenditures for research and development and technical support programs have averaged approximately $10 million annually during the past three years with Kronos accounting for approximately three-quarters of the annual total. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are directed primarily toward improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to rheological additives are conducted primarily in the United States and are directed towards the development of new products for water-based systems, environmental applications and new end-use applications for existing product lines.

Patents and Trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the formation of the manufacturing joint venture with Tioxide, Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Use by each recipient of the other's technology in Europe is restricted until October 1996. See "Kronos - TiO_2 manufacturing joint venture".

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign Operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada, and approximately one-third of Rheox's sales in the past three years have been attributable to European production. Approximately three-quarters of the Company's 1993 consolidated sales were attributable to non-U.S. customers, including 12% attributable to customers in areas other than Europe and Canada. See Note 3 to the Consolidated Financial Statements.

Political and economic uncertainties in certain of the countries in which the Company operates may expose it to risk of loss. The Company does not believe that there is currently any likelihood of material loss through political or economic instability, seizure, nationalization or similar event. The Company cannot predict, however, whether events of this type in the future could have a material effect on its operations. NL's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and Environmental Matters".

Customer Base and Seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1993, the Company employed approximately 3,200 persons, excluding the joint venture employees, with approximately 400 employees in the United States and approximately 2,800 at sites outside the United States. Hourly employees in production facilities worldwide are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and Environmental Matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain past and current operations and products of the Company have the potential to cause environmental or other damage. The Company has implemented and continues to implement various policies and programs in an effort to minimize these risks. The policy of the Company is to achieve compliance with applicable environmental laws and regulations at all its facilities and to strive to improve environmental performance. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. manufacturing operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants and the Louisiana plant owned and operated by the joint venture are in substantial compliance with applicable requirements

of these laws. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the plants to operate. The Company believes all its European plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory denominator is provided by the European Union (the "EU"). Germany, Belgium and the United Kingdom, members of the EU, follow the initiatives of the EU. Norway, although not a member, generally patterns its environmental regulatory actions after the EU. The Company believes Kronos is in substantial compliance with agreements reached with European environmental authorities and with an EU directive to control the effluents produced by TiO_2 production facilities. The Company believes Rheox is in substantial compliance with the environmental regulations in Germany and the United Kingdom.

In order to reduce sulfur dioxide emissions into the atmosphere, Kronos is installing off-gas desulfurization systems at its German plants at an estimated cost of $24 million. The manufacturing joint venture is installing an off-gas desulfurization system at the Louisiana plant at an estimated cost of $15 million. The German systems are scheduled to be completed in 1996 and the Louisiana system is scheduled for completion in 1995.

Kronos' ilmenite mine near Hauge i Dalane had a permit for the offshore disposal of tailings through February 1994. In February 1994, Kronos completed the $15 million onshore disposal system to replace the offshore disposal of tailings. Onshore disposal will result in a modest increase in the mine's operating costs.

The Quebec provincial government is an environmental regulatory body with authority over Kronos' Canadian TiO_2 production facilities in Varennes, Quebec, which currently consist of plants utilizing both the chloride and sulfate process technologies. The provincial government regulates discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos' right to discharge effluents from its Canadian sulfate process TiO_2 plant into the St. Lawrence River until June 1994, at which time Kronos' new $25 million waste acid neutralization facility is expected to be completed. In January 1993, the Quebec provincial government granted a permit to Kronos to construct the facility and established the future permit parameters, which Kronos will be required to meet upon completion of the facility.

Notwithstanding the above-described agreement, in March 1993 Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate process TiO_2 production facility. The penalty for these violations, if proven, could be up to Canadian $15 million. Additional charges, if brought, could involve additional penalties. The Company has moved to dismiss the case on constitutional grounds. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above.

The Company's future capital expenditures related to its ongoing environmental protection and improvement program are currently expected to be approximately $75 million, including $30 million in 1994.

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws, in approximately 80 governmental enforcement and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, many of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List or similar state lists. See Item 3 - "Legal Proceedings".

ITEM 2. PROPERTIES

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway), a facility in Varennes, Quebec, Canada and through the manufacturing joint venture described above, a one-half interest in a plant in Lake Charles, Louisiana which commenced production in 1992. Prior to October 1993, Kronos owned all of the Louisiana plant.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreement restrict Kronos' ability to transfer ownership or use of the Leverkusen facility.

All of Kronos' principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany. All of such production facilities are owned.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. Considering the Company's previous involvement in the lead pigment and lead-based paint businesses, there can be no assurance that additional litigation, similar to that described below, will not be filed. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed at the state, local and federal levels that seek

to (a) impose various obligations on present and former manufacturers of lead pigment and lead-based paint with respect to asserted health concerns associated with the use of such products and (b) effectively overturn court decisions in which the Company and other pigment manufacturers have been successful. One such bill that would subject lead pigment manufacturers to civil liability for damages caused by lead-based paint on the basis of market share, and extends certain statutes of limitations, passed the Massachusetts House of Representatives in 1993. The same bill has been reintroduced in the Massachusetts legislature in 1994. No legislation or regulations have been enacted to date which are expected to have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Any liability that may result is not reasonably capable of estimation.

In 1987, an action was filed against the Company and other defendants for injuries allegedly caused by lead pigment purportedly supplied by the defendants (*Spriggs v. Sherwin-Williams, et al.*, No. LE3121-5-87 Housing Court of Massachusetts, Hampden County). The complaint sought compensatory and punitive damages for alleged negligent product design, failure to warn, breach of warranty, and concert of action from the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA"). In November 1993, a stipulation of dismissal with prejudice was filed with the court.

In July 1992, the Company was served with a complaint entitled *Boston Housing Authority v. Sherwin-Williams Company*, C.A. No. 92-10624-Y, United States District Court for the District of Massachusetts. The complaint asserted a claim for contribution from the Company, other pigment manufacturers and the LIA based on their alleged negligence in product design, manufacture and distribution; negligent failure to warn; breach of warranty; aiding and abetting; and conspiracy. The plaintiff sought contribution to its $1.45 million cost of settling a claim by an individual who was allegedly injured by exposure to lead pigment in the period from 1973 to 1977. In November 1993, the parties filed a stipulation of dismissal with prejudice with the court.

In November and December 1990, the Company and others were served with third-party complaints in actions entitled *Coren, et al. v. Cardozo v. Sherwin-Williams, et al.* (No. 29101) and *Pacheco, et al. v. Ortiz v. The Sherwin-Williams Company, et al.* (No. 90-3067-B) in the Housing Court of Massachusetts, Suffolk County. The third-party complaints against the pigment manufacturers and the LIA contain allegations similar to those in the *Spriggs* action and also seek contribution and indemnification for any relief awarded to plaintiffs. In *Coren*, the third-party defendants removed the case to federal court. In 1992, the federal court dismissed the direct claims and remanded the indemnification and contribution claims to the housing court. Thereafter, the housing court granted the third-party defendants' motion to stay discovery, pending trial on the main action. The Company has answered the third-party complaint, denying all allegations of wrongdoing. In *Pacheco*, plaintiffs settled with the defendant landlords for less than $100,000. The third-party claims are in discovery. Third-party plaintiffs have proposed a stay of this matter pending the outcome of the appeal in another personal injury action, which was thereafter resolved in the Company's favor.

In October 1991, the Company and others were served with a third-party complaint by the owner of the plaintiff's apartment in an action entitled *Barros v. Pires v. Sherwin-Williams Co., et al.*, (Civ. No. 01011), in the Housing Court of Massachusetts, Suffolk County. The third party complaint against the pigment manufacturers and the LIA alleges negligent product design, negligent failure to warn, breach of warranty, aiding and abetting, and concert of action, and also seeks contribution and indemnification for any relief awarded to plaintiff for damages allegedly suffered due to exposure to lead-based paint. In May 1992, the court granted the third-party defendants' motion to dismiss. In June 1992, the third-party plaintiffs moved for reconsideration or for reversal of the dismissal.

In 1989 and 1990, the Housing Authority of New Orleans ("HANO") filed third-party complaints for indemnity and/or contribution against the pigment manufacturers and the LIA in 14 actions commenced by residents of HANO units seeking compensatory and punitive damages for injuries allegedly caused by lead pigment. The actions are pending in the Civil District Court for the Parish of Orleans, State of Louisiana. Subsequently, HANO agreed to dismiss all such complaints and to consolidate them for purposes of appeal. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other eight cases also included in the appeal, the court of appeals reversed the lower court decision dismissing the cases due to inadequate pleading of facts. These eight cases have been remanded to the district court for further proceedings. Discovery is proceeding.

In December 1991, the Company received a copy of a complaint filed in the Civil District Court for the Parish of Orleans seeking indemnification and/or contribution against the Company and eight other defendants for approximately $4.5 million in settlements paid to Housing Authority residents (*Housing Authority of New Orleans v. Hoechst Celanese Corp., et al.*, No. 91-28067). These claims appear to be based upon the same theories which HANO had previously filed. The Company has not been served.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability and denied the remainder of the motion. In January 1992, defendants appealed the denial. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In December 1992, plaintiffs filed a motion to stay the claims of the City of New York and the New York City Health and Hospitals Corporation pending resolution of the Housing Authority's claim. In May 1993, the Appellate Division of the Supreme Court affirmed the denial of the motion to dismiss plaintiffs' fraud, restitution, conspiracy and concert of action claims. In August 1993, the defendants' motion for leave to appeal was denied. Discovery is proceeding.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the PHA and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. Defendants moved to dismiss various claims, but the court dismissed only the claim for loss of consortium. Defendants answered the complaint denying allegations of wrongdoing. The case is in discovery.

In August 1992, the Company was named as a defendant and served with an amended complaint in *Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative liability. In October 1992, the Company and the other defendants moved to dismiss the complaint with prejudice. In July 1993, the court dismissed the complaint. In September 1993, the plaintiffs appealed.

In November 1993, the Company was served with a complaint in *Brenner, et al. v. American Cyanamid, et al.*, Supreme Court, State of New York, Erie County alleging injuries to two children purportedly caused by lead pigment. The complaint seeks $24 million in compensatory and $10 million in punitive damages for alleged negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, and alternative liability. In January 1994, the Company answered the complaint, denying liability.

The Company believes that the foregoing lead pigment actions are without merit and intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously.

The Company has filed declaratory judgment actions against various insurance carriers seeking costs of defense and indemnity coverage for certain of its environmental and lead pigment litigation. *NL Industries, Inc. v. Commercial Union Insurance Cos., et al.*, Nos. 90-2124, -2125 (HLS). In May 1990, the Company filed an action in the United States District Court for the District of New Jersey against Commercial Union Insurance Company ("Commercial Union") seeking to recover defense costs incurred in the *City of New York* lead pigment case and two other cases which have since been resolved in the Company's favor. In July 1991, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the Company's reasonable defense costs for such cases. In June 1992, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Commercial Union seeking to recover costs incurred in defending four additional lead pigment cases which have since been resolved in the Company's favor. In August 1993, the court granted the Company's motion for summary judgment and ordered Commercial Union

to pay the reasonable costs of defending those cases. The court has not made any rulings on defense costs or indemnity coverage with respect to the Company's pending environmental litigation or on indemnity coverage in the lead pigment litigation. No trial dates have been set. Other than rulings to date, the issue of whether insurance coverage for defense costs or indemnity or both will be found to exist depends upon a variety of factors, and there can be no assurance that such insurance coverage will exist in other cases. The Company has not included amounts in any accruals in anticipation of insurance coverage for lead pigment or environmental litigation.

Environmental matters and litigation

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws in approximately 80 governmental and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage, or both. Certain of these proceedings involve claims for substantial amounts. Although the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition to the matters noted above, certain current and former facilities of the Company, including several divested secondary lead smelter and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities.

The extent of CERCLA liability cannot be determined until the Remedial Investigation and Feasibility Study ("RIFS") is complete, the U.S. EPA issues a record of decision and costs are allocated among PRPs. The extent of liability under analogous state cleanup statutes and for common law equivalents are subject to similar uncertainties. The Company believes it has provided adequate accruals for reasonably estimable costs for CERCLA matters and other environmental liabilities. At December 31, 1993, the Company had accrued $70 million in respect of those environmental matters which are reasonably estimable. The Company determines the amount of accrual on a quarterly basis by analyzing and estimating the range of possible costs to the Company. Such costs include, among other things, remedial investigations, monitoring, studies, clean-up, removal and remediation. It is not possible to estimate the range of costs for certain sites. The Company has estimated that the upper end of the range of reasonably possible costs to the Company for sites for which it is possible to estimate costs is approximately $105 million. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future. More detailed descriptions of certain legal proceedings relating to environmental matters are set forth below.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

At Pedricktown, the U.S. EPA divided the site into two operable units. Operable unit one covers contaminated ground water, surface water, soils and stream sediments. The Company submitted the final RIFS for operable unit one to the U.S. EPA in May 1993. In July 1993, the U.S. EPA issued the proposed remediation plan for operable unit one, which the U.S. EPA estimates will cost approximately $24.5 million. In addition, the U.S. EPA proposed that a removal action be performed on the soils and sediments of a stream at the site, estimated to cost approximately $1.3 million. The U.S. EPA has not yet issued the record of decision. The U.S. EPA issued a Unilateral Administrative Order (Index No. II-CERCLA 20205) with respect to operable unit two in March 1992 to the Company and 30 other PRPs directing immediate removal activities including the cleanup of waste, surface water and building surfaces. The Company has agreed to pay approximately 50% of the operable unit two costs, up to $2.5 million.

At Granite City, the RIFS is complete, and the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others (*United States of America v. NL Industries, Inc., et al.*, Civ. No. 91-CV 00578) with respect to the Granite City smelter. The complaint seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was invalid, arbitrary, capricious and not in accordance with law. The complaint also seeks recovery of past costs of $.3 million and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. At a status conference in January 1993, the court ordered the parties to consider the submission of proposals to a Technical Advisory Committee, whose role would be to advise the court as to the technical issues in the case. The government has opposed the establishment of a Technical Advisory Committee. The court has not ruled on the matter. The government has agreed to reopen the administrative record to receive additional public comments on the selected remedy and the court stayed the action until the record is again closed.

Having completed the RIFS at Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc.*, Civ. No. 89-408, United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notices of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, which was initially estimated to cost approximately $17 million, exclusive of administrative and overhead costs and any additional costs for the disposition of recycled materials from the site. In January 1992, the

U.S. EPA issued unilateral administrative orders Docket No. 1091-01-10-106 to the Company and six other PRPs directing the performance of the remedy. The Company and others have commenced performance of the remedy and, through December 31, 1993, the Company and the PRPs had spent approximately $5.5 million. Based upon site operations to-date, the remedy is not proceeding in accordance with engineering expectations or cost projections; therefore, the Company and the other PRPs have met with the U.S. EPA to discuss alternative remedies. Pursuant to an interim allocation, the Company's share of remedial costs is approximately 50%. In November 1991, Gould Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.*, No. 91-1091, United States District Court for the District of Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and $5 million in punitive damages. The court granted Gould's motion to amend the complaint to add additional defendants (adjoining current and former landowners) and third party defendants (generators). The amended complaint deletes the fraud and punitive damages claims asserted against NL; thus, the pending action is essentially one for allocation of past and future cleanup costs. In March 1993, the parties agreed to a case management order limiting discovery until 1995, after which time full discovery will proceed. A trial date has been tentatively set for September 1996.

There are several actions pending relating to alleged contamination at other properties formerly owned or operated by the Company or its subsidiaries or their predecessors. In one of those cases, suit was filed in November 1992 against the Company asserting claims arising out of the sale of a former business of the Company to Exxon Chemical Company (*Exxon Chemical Company v. NL Industries, Inc.*, United States District Court for the Southern District of Texas, No. H-92-3360). The action seeks contractual indemnification, contribution under CERCLA for costs associated with the environmental assessment and cleanup at nine properties included in the sale, a declaration of liability for future environmental cleanup costs, and punitive damages for fraud. Plaintiff has asserted that past and future cleanup costs, business interruption, and asset value losses and legal and site assessment costs are approximately $25 million. In February 1994, the court entered an order referring the case to mediation which is to occur by April 1994.

The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc. The Company mined at the Baxter Springs subsite, where it is the largest viable PRP. The final RIFS was submitted to the U.S. EPA in May 1993. The estimated cost of proposed remedies at the Baxter Springs subsite ranges from approximately $1 million to $28 million, plus annual operation and maintenance costs.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois (*People of the State of Illinois v. NL Industries, et al.*, No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.27 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. In December 1993, the trial court denied the State's petition to reinstate the complaint, and dismissed the case with prejudice. In February 1994, the State filed a notice of appeal.

In 1980, the State of New York commenced litigation against the Company in connection with the operation of a plant in Colonie, New York formerly owned by the Company. *Flacke v. NL Industries, Inc.*, No. 1842-80 ("Flacke I") and *Flacke v. Federal Insurance Company and NL Industries, Inc.*, No. 3131-92 ("Flacke II"), New York Supreme Court, Albany County. The plant manufactured military and civilian products from depleted uranium and was acquired from the Company by the U.S. Department of Energy ("DOE") in 1984. Flacke I seeks penalties for alleged violations of New York's Environmental Conservation Law, and of a consent order entered into to resolve these alleged violations. Flacke II seeks forfeiture of a $200,000 surety bond posted in connection with the consent order, plus interest from February 1980. The Company denied liability in both actions. The litigation had been inactive since 1984. In July 1993, the State moved for partial summary judgment for approximately $1.5 million on certain of its claims in Flacke I and for summary judgment in Flacke II. In January 1994, the Company cross-moved for summary judgment in Flacke I and Flacke II.

Residents in the vicinity of the Company's former Philadelphia lead chemicals plant commenced a class action allegedly comprised of over 7,500 individuals seeking medical monitoring and damages allegedly caused by emissions from the plant. *Wagner, et al. v. Anzon and NL Industries, Inc.*, No. 87-4420, Court of Common Pleas, Philadelphia County. The complaint seeks compensatory and punitive damages from the Company and the current owner of the plant, and alleges causes of action for, among other things, negligence, strict liability, and nuisance. A class was certified to include persons who reside, owned or rented property, or who work or have worked within up to approximately three-quarters of a mile from the plant from 1960 through the present. The Company has answered the complaint, denying liability. The case is in discovery. Residents also filed consolidated actions in the United States District Court for the Eastern District of Pennsylvania, *Shinozaki v. Anzon, Inc.* and *Wagner and Antczak v. Anzon and NL Industries, Inc.* Nos. 87-3441 and 87-3502. The consolidated action is a putative class action seeking CERCLA response costs, including cleanup and medical monitoring, declaratory and injunctive relief and civil penalties for alleged violations of the Resource Conservation and Recovery Act ("RCRA"), and also asserting pendent common law claims for strict liability, trespass, nuisance and punitive damages. The court dismissed the common law claims without prejudice, dismissed two of the three RCRA claims as against the Company with prejudice, and stayed the case pending the outcome of the state court litigation. The trial is set for June 1994.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.*, Civ. No. 91-4098. The complaint seeks to recover $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. The Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because it believed they were in conflict with California law. The Company answered the complaint denying liability. The government now claims it expended in excess of $2.7 million for this matter. Trial was held in March and April 1993. The judge has preliminarily indicated that the Company will be ordered to pay response costs plus an amount which is the product of a multiplier of 1.625 to be applied to a portion of those costs, which amount has not yet been determined. In May 1993, the government submitted Proposed Supplemental Findings of Fact and Conclusions

of Law Regarding Response Costs and Penalty Amount stating that the amount owed is $6.7 million. The Company's response states that the total of recoverable response costs and penalty is $6.4 million. The court has not yet entered final judgment in this matter.

At a municipal and industrial waste disposal site in Batavia, New York, the Company and six others have been identified as PRPs. The U.S. EPA has divided the site into two operable units. Pursuant to an administrative consent order entered into with the U.S. EPA, the Company is conducting a RIFS for operable unit one, the closure of the industrial waste disposal section of the landfill. The Company's RIFS costs to date are approximately $1.9 million. With respect to the second operable unit, the extension of the municipal water supply, the U.S. EPA estimated the costs at $1 million plus annual operation and maintenance costs. The Company and the other PRPs are performing the work comprising operable unit two. The U.S. EPA has also demanded approximately $.9 million in past costs from the PRPs.

In July 1990, the Company notified the U.S. EPA that it was investigating the possibility that certain chemicals manufactured during the period in which Kronos owned a former subsidiary were not appropriately listed with the U.S. EPA pursuant to the Toxic Substances Control Act. The Company believes that the manufacture of the chemicals in question was initiated by a prior owner of the subsidiary. The Company intends to cooperate fully with the U.S. EPA in investigating this matter and determining whether any manufacture of non-listed chemicals occurred. If such manufacture is found to have occurred, the U.S. EPA may levy fines against the Company and possibly others. If any fines are levied, the Company will attempt to seek reimbursement from the prior owner of the subsidiary.

See Item 1 - "Business - Regulatory and Environmental Matters".

Other litigation

In April 1990, the Company filed a complaint in the United States District Court for the Central District of California against Lockheed Corporation and its directors in connection with Lockheed's 1990 annual meeting of stockholders, (*NL Industries, Inc. v. Lockheed Corporation, et al.*, No. CV-90-1950 RMT (Bx)), which complaint was subsequently amended. In December 1992, a unanimous jury verdict was returned in the Company's favor in the amount of $30 million, which award is a gain contingency not recorded as income by the Company. The jury found that Lockheed violated the federal securities laws by making false and misleading public statements about Lockheed's employee stock ownership plan. Lockheed has appealed. The Company has cross appealed with respect to its claims against Lockheed's directors. On February 24, 1994, the case was settled with a cash payment to the Company by Lockheed of $27 million resulting in net proceeds to the Company of approximately $20 million.

In January 1990, an action was filed in the United States District Court for the Southern District of Ohio against NLO, Inc., a subsidiary of the Company, and the Company on behalf of a putative class of former NLO employees and their families and former frequenters and invitees of the Feed Materials Production Center ("FMPC") in Ohio (*Day, et al. v. NLO, Inc.*, et al, No. C-1-90-067). The FMPC is owned by the DOE and was formerly managed under contract by NLO. The complaint seeks damages for, among other things, emotional distress and damage to personal property allegedly caused by exposure to radioactive and/or hazardous materials at the FMPC and punitive damages. A trial was held separately on the defendants' defense that the statute of limitations barred the plaintiffs'

claims. In November 1991, the jury returned a verdict against six of the ten named plaintiffs, finding that their claims were time barred. Without denying the plaintiffs' motion to vacate the verdict, the court certified this action as a class action. A merits trial is expected to be held in 1994. Although no assurance can be given, the Company believes that, consistent with a July 1987 DOE contracting officer's decision, the DOE will indemnify NLO in the event of an adverse decision just as it did when two previous cases relating to NLO's management of the FMPC were settled; therefore, the resolution of the *Day* matter is not expected to have a material adverse affect on the Company. In the 1987 decision, the contracting officer affirmed NLO's entitlement to indemnification under its contract for the operation of the FMPC for all liability, including the cost of defense, arising out of those two previous cases.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses, and the disposition of past properties and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1993.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of February 28, 1994, there were approximately 11,000 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape, and dividends declared during the periods indicated. On February 28, 1994, the closing price of NL common stock according to the NYSE Composite Tape was $8-7/8.

	High	Low	Dividends declared
Year ended December 31, 1992:			
First quarter	$12-7/8	$ 7-1/4	$.15
Second quarter	8-7/8	7-5/8	.15
Third quarter	8-1/2	6	.05
Fourth quarter	6-1/4	4	-
Year ended December 31, 1993:			
First quarter	$ 6-1/8	$ 4-1/4	-
Second quarter	5-5/8	3-3/8	-
Third quarter	6-1/8	3-7/8	-
Fourth quarter	6	4-1/2	-

The Company suspended its regular quarterly dividend in October 1992, in view of, among other things, the continuing weakness in TiO_2 prices. The Company's Senior Notes generally limit the ability of the Company to pay dividends to 50% of consolidated net income, as defined, subsequent to October 1993. At December 31, 1993, no amounts were available for dividends.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1989	1990	1991	1992	1993
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$1,000.9	$ 906.6	$ 840.3	$ 893.5	$ 805.3
Operating income	308.5	251.1	139.0	110.7	62.4
Income (loss) from continuing operations	170.3	93.5	(24.0)	(44.6)	(83.2)
Net income (loss)	172.9	92.4	(16.5)	(76.4)	(109.8)
Per common share:					
Income (loss) from continuing operations	$ 2.57	$ 1.42	$ (.40)	$ (.88)	$ (1.63)
Net income (loss)	2.61	1.40	(.27)	(1.50)	(2.16)
Cash dividends	$ .45	$ .60	$ .60	$ .35	$ -
BALANCE SHEET DATA (at year-end):					
Cash, cash equivalents and current marketable securities	$ 295.6	$ 443.1	$ 353.3	$ 187.9	$ 147.6
Current assets	586.2	884.4	795.5	635.8	467.5
Total assets	1,512.3	1,966.7	1,831.0	1,472.1	1,206.5
Current liabilities	647.0	400.4	360.2	248.8	232.5
Long-term debt including current maturities	403.0	1,269.7	1,288.9	1,035.3	870.9
Common shareholders' equity (deficit)	132.3	38.6	(58.3)	(146.3)	(264.8)
OTHER DATA:					
EBITDA (1)	$ 290.6	$ 242.3	$ 126.6	$ 115.1	$ 67.2
Interest expense, net (2)	24.5	60.7	59.9	104.3	95.1
Cash interest expense, net (3)	24.1	53.0	53.9	98.0	86.8
Capital expenditures	83.4	195.3	195.1	85.2	48.0

(1) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation depletion and amortization.

(2) Interest expense, net represents interest expense less general corporate interest and dividend income.

(3) Cash interest expense, net represents interest expense, net less deferred interest expense on the Senior Secured Discount Notes and amortization of deferred financing costs.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

General

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. The future profitability of the Company is dependent upon, among other things, improved pricing for TiO_2. Selling prices for TiO_2 are significantly influenced by industry capacity and demand. As discussed below, TiO_2 selling prices declined significantly from their peak in early 1990, and largely as a result thereof, Kronos' operating income and margins significantly declined during the past three years. In the fourth quarter of 1993, selling prices increased slightly in certain markets. Based on, among other things, the Company's current near-term outlook for its TiO_2 business, the Company expects its results for 1994, while improved from 1993, will still result in a net loss for the year.

Net sales and operating income

	Years ended December 31,			% Change	
	1991	1992	1993	1992-91	1993-92
	(In millions)				
Net sales:					
Kronos	$732.1	$784.6	$697.0	+7%	-11%
Rheox	108.2	108.9	108.3	+1%	-1%
	$840.3	$893.5	$805.3	+6%	-10%
Operating income:					
Kronos	$110.8	$ 81.9	$ 36.1	-26%	-56%
Rheox	28.2	28.8	26.3	+2%	-9%
	$139.0	$110.7	$ 62.4	-20%	-44%
Percent change in TiO_2:					
Sales volume				+11%	+3%
Average selling prices (in billing currencies)				-6%	-8%

The worldwide TiO_2 industry continues to be adversely affected by, among other things, production capacity in excess of current demand. Largely as a result thereof, TiO_2 selling prices continued to decline during most of 1993 and Kronos' operating income and margins significantly declined. Recessionary economic conditions in Europe and changes in the relative values of European currencies were principal additional factors influencing demand and pricing levels during 1993. In billing currency terms, Kronos' 1993 average TiO_2 selling prices were approximately 8% lower than in 1992 and were 6% lower in 1992 than in 1991. A significant amount of sales are denominated in currencies other than the U.S. dollar, and fluctuations in the value of the U.S. dollar relative to other currencies further decreased 1993 sales by $45 million compared to 1992 and increased 1992 sales by $22 million compared to 1991. Average TiO_2 prices at the end of 1993 were approximately 5% below year-end 1992 levels and approximately one-third below those of the last cyclical peak in early 1990. While TiO_2 prices are significantly below prior year levels, most of the 1993 decline occurred in the first half of the year as average prices declined only slightly during the third quarter and increased slightly during the fourth quarter.

TiO_2 sales volume of 346,000 metric tons in 1993 increased 3% compared to 1992, as increases in North American sales volume more than offset weakened demand in Europe. In response to weakened demand, and in order to reduce inventories, Kronos made further reductions in its TiO_2 production rates during 1993. TiO_2 sales volume increased 11% in 1992 compared to 1991, primarily in U.S. and European markets. Approximately one-half of Kronos' 1993 TiO_2 sales, by volume, were attributable to markets in Europe with approximately 38% attributable to North America and the balance to export markets.

As a result of continued cost reduction and containment efforts, Kronos' raw material and production costs increased only slightly in 1993 compared to year-ago levels. Start-up costs at the chloride process plant in Lake Charles, Louisiana, which commenced production during the first half of 1992, unfavorably impacted operating income in 1992. Kronos' 1992 operating income was also impacted by slightly lower unit production costs resulting from its continued emphasis on cost reduction efforts and increased production volumes. Kronos' water treatment chemicals business, which utilizes TiO_2 co-products, increased its contribution to operating income in 1992 but such contribution was lower in 1993 than in 1992.

Demand, supply and pricing of TiO_2 have historically been cyclical and, as noted above, the last cyclical peak for TiO_2 prices occurred in early 1990. Kronos believes that its operating income and margins for 1994 will be higher than in 1993 due principally to slightly higher sales and production volumes, and the favorable effect of the joint venture. However, the Company expects that the TiO_2 industry will continue to operate at lower capacity utilization levels over the next few years relative to the high utilization levels prevalent during the late 1980s, primarily because of the slow recovery from worldwide recession and the impact of capacity additions since the late 1980s. The economic recovery has been particularly slow in Europe, where a significant portion of Kronos' TiO_2 manufacturing facilities are located.

During the current period of depressed TiO_2 prices, the Company has operated with a strategy to maintain its competitive position. During the past three years, Kronos has increased its estimated worldwide market share from 10% to 11%. Kronos has implemented a cost reduction and control program which favorably impacted Kronos' operating results, and Kronos has continued its environmental improvement efforts. In October 1993, the Company formed a manufacturing joint venture with Tioxide and refinanced certain debt which, among other things, increased the Company's liquidity, reduced its aggregate debt level and extended its debt maturities. See also "Liquidity and Capital Resources".

The manufacturing joint venture, which is equally owned by subsidiaries of Kronos and Tioxide, owns and operates the chloride process TiO_2 plant in Lake Charles, Louisiana formerly owned by Kronos. Under the terms of the joint venture and related agreements, Kronos contributed the plant to the joint venture, Tioxide paid an aggregate of approximately $205 million, including its tranche of the joint venture debt, and Kronos and certain subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Of the total consideration paid by Tioxide, $30 million was attributable to the exchange of technologies and is being reported as a component of operating income ratably over three years from October 1993. Production from the plant is being shared equally by Kronos and Tioxide pursuant to separate offtake agreements. The formation of the joint venture resulted in a 12% decrease in Kronos' total TiO_2 production capacity; however, Kronos' remaining capacity is about 10% higher than Kronos' 1993 sales volume.

Rheox's operating results have been relatively consistent during the past three years. Changes in currency exchange rates had a negative effect in 1993 and a positive effect in 1992 compared to the respective prior year, and operating costs generally increased during both years.

The Company has substantial operations and assets located outside the United States. Foreign operations are subject to currency exchange rate fluctuations and the Company's results of operations have in the past been both favorably and unfavorably affected by the fluctuations in currency exchange rates. To the extent the Company both manufactures and sells in a given country, the impact of currency exchange rate fluctuations is to some extent mitigated.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Increase (decrease)	
	1991	1992	1993	1992-91	1993-92
		(In millions)			
Interest and dividends	$ 40.5	$ 14.2	$ 4.1	$(26.3)	$(10.1)
Securities transactions	(53.1)	(6.0)	4.4	47.1	10.4
Corporate expenses, net	(44.9)	(43.4)	(41.5)	1.5	1.9
	$(57.5)	$(35.2)	$(33.0)	$ 22.3	$ 2.2

Interest and dividend income fluctuates based upon the amount of funds invested and yields thereon. Amounts available for investment and the yields thereon in 1993 were lower than in 1992 and 1991.

After the two unsuccessful attempts to gain representation on the board of directors of Lockheed Corporation, the Company disposed of its interest in Lockheed in 1991, and the significant securities transactions loss in 1991 relates principally to that disposition. Securities transactions in 1992 and 1993 relate principally to U.S. Treasury securities. The Company does not anticipate acquiring marketable securities (other than U.S. Treasury or similar securities) in the foreseeable future.

The Company adopted the accounting for certain marketable debt and equity securities prescribed by SFAS No. 115 effective December 31, 1993. Accordingly, the timing of recognition of gains and losses related to marketable securities beginning in 1994 will, in certain respects, be different than in prior years.

Corporate expenses, net have decreased slightly during each of the past two years. In 1992, reductions in certain proxy solicitation and litigation settlement expenses of $5 million and $9 million, respectively, compared to 1991, were partially offset by an $11 million increase in environmental remediation costs.

Interest expense

Lower levels of indebtedness in 1993, principally Kronos' Deutsche Mark-denominated bank credit facility, and lower DM interest rates reduced the Company's interest expense in 1993 compared to the 1992 periods. In addition, 1992 interest expense reflected the benefit of $9 million of capitalized interest related principally to the Louisiana plant completed in March 1992. Interest expense increased from 1991 to 1992 due to the net effects of lower average levels of indebtedness, a $17 million decline in capitalized interest and a $9 million reduction in the Company's accrual for income tax related interest in 1991. Overall, the Company expects its October 1993 reduction and refinancing of certain indebtedness will result in a modest decrease in the Company's interest expense. See "Liquidity and Capital Resources".

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In both 1992 and 1993, the geographic mix, including losses in certain jurisdictions for which no current refund was available and in which recognition of a deferred tax asset is not currently considered appropriate, contributed significantly to the Company's effective tax rate varying from a normally expected rate. The Company's deferred income tax status at December 31, 1993 is discussed in "Liquidity and Capital Resources". In 1991, realization of the available capital loss carryback of the Company's securities transactions at a relatively low rate due to the alternative minimum tax rates in prior years also significantly impacted the Company's effective tax rate.

Extraordinary items

See Note 16 to the Consolidated Financial Statements.

Changes in accounting principles

See Notes 2 and 19 to the Consolidated Financial Statements.

Statement of Financial Accounting Standards ("SFAS") No. 112, "Employers' Accounting for Postemployment Benefits", requires the accrual method of accounting for benefits provided to former employees after employment but before retirement. The Company expects to adopt SFAS No. 112 in the first quarter of 1994. Adoption is not expected to have a material impact on the Company's consolidated financial position, results of operations or liquidity.

LIQUIDITY AND CAPITAL RESOURCES

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1991	1992	1993
	(In millions)		
Net cash provided (used) by:			
Operating activities	$ 58.1	$ (44.7)	$ (7.3)
Investing activities	(109.4)	234.9	181.9
Financing activities	(243.8)	(223.1)	(155.3)
Net cash provided (used) by operating, investing and financing activities	$(295.1)	$ (32.9)	$ 19.3

During 1993, the Company's operations continued to use significant amounts of cash. TiO_2 production rates were reduced in late 1992 and during 1993 in order to reduce inventory levels. The $30 million received from Tioxide in October 1993 related to the exchange of technologies, which is being recognized as a component of operating income over three years, favorably impacted 1993 cash flow from operating activities. Other relative changes in working capital items, which result principally from the timing of purchases, production and sales, also contributed to the comparative decrease in the Company's cash used by operating activities in 1993. The significant deterioration in the Company's cash flow from operating activities from 1991 to 1992 resulted primarily from the decline in earnings and the relative change in the Company's receivables, inventories and payables.

Cash provided by investing activities relates primarily to net sales of marketable securities in each period to fund debt repayments, capital expenditures and operations, and in 1993 includes $161 million net cash generated related to the formation of the manufacturing joint venture with Tioxide.

The Company's capital expenditures during the past three years include an aggregate of $204 million related to the completion of the Louisiana chloride process TiO_2 plant and an aggregate of $57 million ($30 million in 1993) for the Company's ongoing environmental protection and compliance programs, including a Canadian waste acid neutralization facility, a Norwegian onshore tailings disposal system and off-gas desulfurization systems. The Company's estimated 1994 capital expenditures are $44 million and include $30 million in the area of environmental protection and compliance primarily related to the Canadian waste acid neutralization facility and the German off-gas desulfurization systems. The capital expenditures of the manufacturing joint venture are not included in the Company's capital expenditures.

Net repayments of indebtedness in 1993 included payments on the DM bank credit facility of DM 552 million ($342 million when paid), a $110 million net reduction in indebtedness related to the Louisiana plant and $350 million proceeds from the Company's October 1993 public offering of debt, all as discussed below. Net repayments of indebtedness in 1992 included payments on the DM term loan aggregating DM 350 million ($225 million when paid) and $61 million drawn under Kronos' Louisiana plant credit facilities. Net borrowings in 1991 included a $115 million Rheox term loan, a $52 million increase in the Louisiana plant term construction loan and a DM 150 million ($87 million when paid) reduction in the DM term loan. NL and Kronos have agreed, under certain conditions, to provide Kronos' principal international subsidiary with up to an additional DM 125 million through January 1, 2001.

In October 1993, the Company (i) completed the formation of the manufacturing joint venture with Tioxide, including related refinancing of the Louisiana plant indebtedness, (ii) completed a public offering of $250 million of 11.75% Senior Secured Notes due 2003 and $100 million proceeds ($188 million principal amount at maturity) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes"), (iii) prepaid DM 552 million ($342 million when paid) of the DM bank credit facility and amended the DM loan agreement, and (iv) redeemed the remaining $10 million of the Company's 7.5% sinking fund debentures.

The DM bank credit facility, as amended, consists of a DM 448 million term loan and a DM 250 million revolving credit facility, of which DM 100 million is outstanding and DM 150 million was available for future borrowings at December 31, 1993. During February 1994, the Company borrowed an additional DM 25 million under the revolving credit facility. The final maturities of the term and revolving portion of the DM credit facility were extended to 1999 and 2000, respectively, with the first payment of the term loan due in 1997.

Upon formation, the manufacturing joint venture obtained $216 million in new financing consisting of two equal tranches, one attributable to each Partner, which is serviced through the purchase of the plant's TiO_2 output in equal quantities by the Partners. The Partners are required to make capital contributions to the joint venture to pay principal on their respective portion of the joint indebtedness. Kronos' pro rata share of the joint venture debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche.

Formation of the joint venture and related refinancing, issuance of the Notes and prepayment of a portion of the DM bank credit facility significantly improved the Company's liquidity and financial flexibility by (i) increasing cash and cash equivalents by approximately $75 million, (ii) reducing total outstanding indebtedness by approximately $109 million, (iii) providing for approximately DM 150 million of borrowing availability under the revolving portion of the amended DM bank credit facility, (iv) eliminating the near-term principal amortization requirements and extending the remaining principal amortization schedule of the DM bank credit facility, and (v) replacing approximately $100 million of outstanding debt with the Senior Secured Discount Notes which do not require cash interest payments for five years.

Financing activities also include treasury stock purchases, including $181 million expended in 1991 in connection with a "Dutch auction" self-tender offer. Dividends paid were $35 million in 1991 and $18 million in 1992. The Company suspended dividend payments in October 1992.

At December 31, 1993, the Company had cash, cash equivalents and current marketable securities aggregating $148 million (25% held by non-U.S. subsidiaries) including restricted cash and cash equivalents of $18 million. The Company's subsidiaries had $14 million and $117 million available for borrowing at December 31, 1993 under existing U.S. and non-U.S. credit facilities, respectively.

The Company has taken and continues to take measures to manage its near-term and long-term liquidity requirements, including cost reduction efforts, tightening of controls over working capital, deferral and reduction of capital expenditures, discontinuance of unrelated business acquisition activities, suspension of dividends, formation of the manufacturing joint venture and the refinancing discussed above. The Company currently expects to have sufficient liquidity to meet near-term obligations including operations, capital expenditures and debt service. A prolonged period of depressed selling prices and continued use of cash by operations would, however, over the long term, have an adverse effect on liquidity and financial condition.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. In June 1993, German tax authorities issued assessment reports in connection with examinations of the Company's German income tax returns disallowing the Company's claims for refunds, primarily for 1989 and 1990, aggregating DM 160 million ($92 million at year-end exchange rates), and proposing additional taxes of approximately DM 100 million ($58 million). The Company has applied for administrative relief from collection procedures and may grant a lien on certain German assets while the Company contests the proposed adjustments. Although the Company believes that it will ultimately prevail, in June 1993 the Company reclassified the DM 160 million of refundable income tax claims disallowed by the German tax authorities from current assets to noncurrent assets due to the uncertain timing of a resolution. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of all such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. Pursuant to the amended DM bank credit facility, any receipt of the refundable German income taxes will be applied ratably to prepay installments of the term portion of the DM bank credit facility, with any remaining proceeds of the tax refund used to permanently reduce the revolving credit portion.

At December 31, 1993, the Company had recorded net deferred tax liabilities of $139 million. The Company operates in several tax jurisdictions, in certain of which it has temporary differences that net to deferred tax assets (before valuation allowance). The Company has provided a deferred tax valuation allowance of $133 million, principally related to the U.S. and Germany, for deferred tax assets which the Company believes may not currently meet the "more likely than not" realization criteria for asset recognition.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and another Contran subsidiary.

The Company has been named as a defendant, PRP, or both, in a number of legal proceedings associated with environmental matters, including waste disposal sites currently or formerly owned, operated or used by the Company, many of which disposal sites or facilities are on the U.S. EPA's Superfund National Priorities List or similar state lists. On a regular basis, the Company evaluates the potential range of its liability at sites where it has been named as a PRP or defendant. The Company believes it has provided adequate accruals for reasonably estimable costs of such matters, but the Company's ultimate liability may be affected by a number of factors, including changes in remedial alternatives and costs and the allocation of such costs among PRPs. The Company is also a defendant in a number of legal proceedings seeking damages for personal injury and property damage arising out of the sale of lead pigments and lead-based paints. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Any liability that may result is not reasonably capable of estimation. The Company currently believes the disposition of all claims and disputes, individually or in the aggregate, should not have a

material adverse effect on the Company's consolidated financial position, results of operations or liquidity. There can be no assurance that additional matters of these types will not arise in the future. See Item 3 - "Legal Proceedings" and Note 18 to the Consolidated Financial Statements.

The Company periodically evaluates its liquidity requirements, capital needs and availability of resources in view of, among other things, its debt service requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to refinance or restructure indebtedness, raise additional capital, restructure ownership interests, sell interests in subsidiaries, marketable securities or other assets, or take a combination of such steps or other steps to increase or manage its liquidity and capital resources.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 17 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1993.

October 13, 1993 - reported items 5 and 7.
October 19, 1993 - reported items 5 and 7.
October 20, 1993 - reported items 5 and 7.
October 26, 1993 - reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Exhibit Index

Item No.	
3.1	By-Laws, as amended on June 28, 1990 - incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2	Certificate of Amended and Restated Certificate of Incorporation dated June 28, 1990 - incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1	Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation - incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
4.2	Indenture dated October 20, 1993 governing the Registrant's 11.75% Senior Secured Notes due 2003, including form of Senior Note - incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.3	Senior Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.4 Senior Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.5 Third Party Pledge and Intercreditor Agreement dated October 20, 1993 between Registrant, Chase Manhattan Bank (National Association) and Chemical Bank - incorporated by reference to Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.6 Indenture dated October 20, 1993 governing the Registrant's 13% Senior Secured Discount Notes due 2005, including form of Discount Note - incorporated by reference to Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.7 Discount Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.8 Discount Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.1 Amended and Restated Loan Agreement dated as of October 15, 1993 among Kronos International, Inc., the Banks set forth therein, Hypobank International S.A., as Agent and Banque Paribas, as Co-agent - incorporated by reference to Exhibit 10.17 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.2 Amended and Restated Liquidity Undertaking dated October 15, 1993 by the Registrant, Kronos, Inc. and Kronos International, Inc. to Hypobank International S.A., as agent, and the Banks set forth therein - incorporated by reference to Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.3 Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents - incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.

10.4 Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents- incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on form 10-Q for the quarter ended June 30, 1992.

10.5 Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents - incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

10.6 Credit Agreement dated as of October 18, 1993 among Louisiana Pigment Company, L.P., as Borrower, the Banks listed therein and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.7 Security Agreement dated October 18, 1993 from Louisiana Pigment Company, L.P., as Borrower, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.8 Security Agreement dated October 18, 1993 from Kronos Louisiana, Inc. as Grantor, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.9 KLA Consent and Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.10 Guaranty dated October 18, 1993, from Kronos, Inc., as guarantor, in favor of Lenders named therein, as Lenders, and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.11 Mortgage by Louisiana Pigment Company, L.P. dated October 18, 1993 in favor of Citibank, N.A. - incorporated by reference to Exhibit 10.16 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.12 Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.13 Contract dated September 9, 1971, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung concerning supplies and services (German language version and English translation thereof) - incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.14 Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) - incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.15 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.16 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.17 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.18 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.19 TCI/KCI Output Purchase Agreement dated as of October 18, 1993 between Tioxide Canada Inc. and Kronos Canada, Inc. - incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.20 TAI/KLA Output Purchase Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.21 Master Technology Exchange Agreement dated as of October 18, 1993 among Kronos, Inc., Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited - incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.22 Parents' Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos, Inc. - incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.23 Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos, Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.24* 1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.

10.25	Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.26*	1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.27	Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.28*	NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 - incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.29	Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1994.
10.30	Intercorporate Services Agreement by and between Contran Corporation and the Registrant effective as of January 1, 1994.
10.31	Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.32*	Employment Agreement dated as of January 1, 1990 among Kronos, Inc., the Registrant and Dr. Lawrence A. Wigdor - incorporated by reference to Exhibit 10.19 to Amendment 2 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1989.
10.33*	Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin - incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.34*	Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991 - incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Accountants.
99.1	Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 8 to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1993.

* Management contract, compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL Industries, Inc.
(Registrant)

By /s/ J. Landis Martin
J. Landis Martin, March 1, 1994
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/s/ J. Landis Martin
J. Landis Martin, March 1, 1994
Director, President and
Chief Executive Officer

/s/ Harold C. Simmons
Harold C. Simmons, March 1, 1994
Chairman of the Board

/s/ Glenn R. Simmons
Glenn R. Simmons, March 1, 1994
Director

/s/ Michael A. Snetzer
Michael A. Snetzer, March 1, 1994
Director

/s/ Kenneth R. Peak
Kenneth R. Peak, March 1, 1994
Director

/s/ Dr. Lawrence A. Wigdor
Dr. Lawrence A. Wigdor, March 1, 1994
Director, President and Chief Executive
Officer of Kronos and Rheox

/s/ Elmo R. Zumwalt, Jr.
Elmo R. Zumwalt,Jr., March 1, 1994
Director

/s/ Joseph S. Compofelice
Joseph S. Compofelice, March 1, 1994
Vice President and
Chief Financial Officer

/s/ Dennis G. Newkirk
Dennis G. Newkirk, March 1, 1994
Vice President and Controller
(Principal Accounting Officer)

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NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K

Items 8, 14(a) and 14(d)

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All other schedules are omitted because they are not applicable or not required, or because the required information is included in the consolidated financial statements or notes thereto.

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1992 and 1993, and the related consolidated statements of operations, shareholders' deficit, and cash flows for each of the three years in the period ended December 31, 1993. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1992 and 1993, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1993 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for certain investments in debt and equity securities in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, and in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes in accordance with SFAS Nos. 106 and 109, respectively.

COOPERS & LYBRAND

Houston, Texas
February 9, 1994 except for
Note 21, as to which the
date is February 24, 1994

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1992 and 1993

(In thousands, except per share data)

ASSETS	1992	1993
Current assets:		
Cash and cash equivalents	$ 87,333	$ 106,593
Marketable securities	100,607	41,045
Accounts and notes receivable, less allowance of $2,385 and $3,008	123,020	116,355
Refundable income taxes	101,537	386
Inventories	216,232	194,167
Prepaid expenses	5,413	5,637
Deferred income taxes	1,676	3,315
Total current assets	635,818	467,498
Other assets:		
Marketable securities	23,581	18,428
Refundable income taxes	-	91,994
Investment in joint ventures	2,434	190,787
Prepaid pension cost	16,056	16,307
Deferred income taxes	-	577
Other	48,241	42,355
Total other assets	90,312	360,448
Property and equipment:		
Land	29,863	18,237
Buildings	208,056	129,582
Machinery and equipment	811,531	515,090
Mining properties	75,731	72,711
Construction in progress	21,042	30,050
	1,146,223	765,670
Less accumulated depreciation and depletion	400,246	387,067
Net property and equipment	745,977	378,603
	$1,472,107	$1,206,549

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 1992 and 1993

(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' DEFICIT	1992	1993
Current liabilities:		
Notes payable	$ 315	$ -
Current maturities of long-term debt	43,328	35,716
Accounts payable and accrued liabilities	189,638	177,265
Payable to affiliates	4,086	9,566
Income taxes	6,825	6,353
Deferred income taxes	4,573	3,623
Total current liabilities	248,765	232,523
Noncurrent liabilities:		
Long-term debt	991,956	835,169
Deferred income taxes	145,745	138,977
Accrued pension cost	73,956	72,606
Accrued postretirement benefits cost	71,761	68,322
Other	83,878	121,309
Total noncurrent liabilities	1,367,296	1,236,383
Minority interest	2,339	2,438
Shareholders' deficit:		
Preferred stock - 5,000 shares authorized, no shares issued or outstanding	-	-
Common stock - $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,281	759,281
Adjustments:		
Currency translation	(111,820)	(115,803)
Pension liabilities	-	(3,442)
Marketable securities	(896)	(2,164)
Accumulated deficit	(433,250)	(543,059)
	221,670	103,168
Less treasury stock, at cost (15,949 shares)	367,963	367,963
Total shareholders' deficit	(146,293)	(264,795)
	$1,472,107	$1,206,549

Commitments and contingencies (Notes 13 and 18)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1991, 1992 and 1993

(In thousands, except per share data)

	1991	1992	1993
Revenues and other income:			
Net sales	$840,295	$893,465	$ 805,323
Interest and dividends	47,293	19,618	7,872
Securities transactions	(53,092)	(6,018)	4,363
Other, net	7,043	1,197	9,849
	841,539	908,262	827,407
Costs and expenses:			
Cost of sales	566,608	629,029	612,367
Selling, general and administrative	193,481	203,736	185,689
Interest	100,412	118,511	99,119
	860,501	951,276	897,175
Loss before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles	(18,962)	(43,014)	(69,768)
Income tax expense	3,910	459	12,713
Loss before minority interest, extraordinary items and cumulative effect of changes in accounting principles	(22,872)	(43,473)	(82,481)
Minority interest	1,113	1,123	730
Loss before extraordinary items and cumulative effect of changes in accounting principles	(23,985)	(44,596)	(83,211)
Extraordinary items	7,523	-	(27,815)
Cumulative effect of changes in accounting principles	-	(31,804)	1,217
Net loss	$(16,462)	$(76,400)	$(109,809)

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Years ended December 31, 1991, 1992 and 1993

(In thousands, except per share data)

	1991	1992	1993
Loss per share of common stock:			
Before extraordinary items and cumulative effect of changes in accounting principles	$(.40)	$ (.88)	$(1.63)
Extraordinary items	.13	-	(.55)
Cumulative effect of changes in accounting principles	-	(.62)	.02
Net loss	$(.27)	$(1.50)	$(2.16)
Weighted average common shares outstanding	60,233	50,907	50,890

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT

Years ended December 31, 1991, 1992 and 1993

(In thousands, except per share data)

	Common stock	Additional paid-in capital	Adjustments: Currency translation	Adjustments: Pension liabilities	Adjustments: Marketable securities	Accumulated deficit	Treasury stock	Total
Balance at December 31, 1990	$8,355	$759,273	$(136,277)	$ -	$(143,123)	$(287,857)	$(161,803)	$ 38,568
Net loss	-	-	-	-	-	(16,462)	-	(16,462)
Common dividends declared - $.60 per share	-	-	-	-	-	(34,724)	-	(34,724)
Adjustments	-	-	19,637	-	137,198	-	-	156,835
Purchases of treasury stock	-	-	-	-	-	-	(202,519)	(202,519)
Other, net	-	27	-	-	-	-	-	27
Balance at December 31, 1991	8,355	759,300	(116,640)	-	(5,925)	(339,043)	(364,322)	(58,275)
Net loss	-	-	-	-	-	(76,400)	-	(76,400)
Common dividends declared - $.35 per share	-	-	-	-	-	(17,807)	-	(17,807)
Adjustments	-	-	4,820	-	5,029	-	-	9,849
Purchases of treasury stock	-	-	-	-	-	-	(3,641)	(3,641)
Other, net	-	(19)	-	-	-	-	-	(19)
Balance at December 31, 1992	8,355	759,281	(111,820)	-	(896)	(433,250)	(367,963)	(146,293)
Net loss	-	-	-	-	-	(109,809)	-	(109,809)
Adjustments	-	-	(3,983)	(3,442)	(51)	-	-	(7,476)
Cumulative effect of change in accounting principle	-	-	-	-	(1,217)	-	-	(1,217)
Balance at December 31, 1993	$8,355	$759,281	$(115,803)	$(3,442)	$ (2,164)	$(543,059)	$(367,963)	$(264,795)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from operating activities:			
Net loss	$(16,462)	$(76,400)	$(109,809)
Adjustments:			
Depreciation, depletion and amortization	32,581	47,829	46,340
Deferred income taxes	(14,665)	(18,949)	(670)
Cumulative effect of changes in accounting principles	-	31,804	(1,217)
Minority interest	1,113	1,123	730
Net (gains) losses from:			
Securities transactions	53,092	6,018	(4,363)
Disposition of property and equipment	1,009	1,419	199
Pension cost, net	(377)	(2,024)	(2,134)
Other postretirement benefits, net	-	1,830	(2,422)
Other, net	(8,872)	3,442	(1,349)
Change in assets and liabilities:			
Accounts and notes receivable	(6,430)	(1,776)	(1,291)
Inventories	6,582	(33,814)	12,166
Prepaid expenses	4,885	207	(472)
Accounts payable and accrued liabilities	30,218	(6,111)	(1,567)
Income taxes	(43,629)	(13,501)	1,507
Accounts with affiliates	5,328	(4,106)	5,426
Other noncurrent assets	4,604	5,264	14,588
Other noncurrent liabilities	9,143	13,072	37,069
Total adjustments	74,582	31,727	102,540
Net cash provided (used) by operating activities	58,120	(44,673)	(7,269)

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from investing activities:			
Capital expenditures	$(195,146)	$ (85,150)	$ (47,986)
Marketable securities:			
Purchases	(536,435)	(156,573)	(11,053)
Dispositions	623,937	473,935	79,398
Proceeds from disposition of property and equipment	1,033	1,484	175,537
Investment in joint venture	-	-	(14,405)
Loans to affiliates:			
Loans	(150,000)	-	(210)
Collections	150,000	-	-
Other, net	(2,819)	1,168	670
Net cash provided (used) by investing activities	(109,430)	234,864	181,951
Cash flows from financing activities:			
Notes payable and long-term debt:			
Additions	178,195	63,603	465,554
Principal payments	(174,565)	(263,093)	(607,417)
Deferred financing costs	(8,188)	(1,881)	(12,860)
Repayments of loans from affiliates	(1,126)	-	-
Distributions to minority interest	(869)	(277)	(613)
Dividends paid	(34,724)	(17,807)	-
Purchases of treasury stock and other	(202,492)	(3,660)	-
Net cash used by financing activities	(243,769)	(223,115)	(155,336)
Net change during the year from operating, investing and financing activities	$(295,079)	$ (32,924)	$ 19,346

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash and cash equivalents:			
Net change during the year from:			
Operating, investing and financing activities	$(295,079)	$(32,924)	$ 19,346
Currency translation	(14,907)	(5,013)	(86)
	(309,986)	(37,937)	19,260
Balance at beginning of year	435,256	125,270	87,333
Balance at end of year	$ 125,270	$ 87,333	$106,593
Supplemental disclosures - cash paid for:			
Interest, net of amounts capitalized	$ 107,638	$137,996	$ 91,576
Income taxes	54,628	31,369	11,897

See accompanying notes to consolidated financial statements.

Note 1 - Organization and basis of presentation:

NL Industries, Inc. is primarily a holding company and conducts its operations through its wholly-owned subsidiaries, Kronos, Inc. (titanium dioxide pigments ("TiO_2")) and Rheox, Inc. (specialty chemicals).

At December 31, 1993, Valhi, Inc. held approximately 49% of NL's outstanding common stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies.

Note 2 - Summary of significant accounting policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated. Certain prior year amounts have been reclassified to conform to the 1993 presentation.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments, gains and losses from hedges of investments in non-U.S. entities and the related income tax effects are accumulated in the currency translation adjustments component of shareholders' deficit. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less. Cash and cash equivalents includes $6 million and $18 million at December 31, 1992 and 1993, respectively, which are restricted for letters of credit and certain indebtedness agreements.

Marketable securities and securities transactions

The Company adopted Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities" effective December 31, 1993, and the Company's marketable securities were classified as either "available-for-sale" or "trading" and are carried at market. Unrealized gains and losses on trading securities are recognized in income currently. Unrealized gains and losses on available-for-sale securities, and the related deferred income tax effects, are accumulated in the marketable securities adjustment component of shareholders' deficit. See Notes 4 and 19.

SFAS No. 115 superseded SFAS No. 12 under which marketable securities were generally carried at the lower of aggregate market or amortized cost and unrealized net gains were not recognized.

Realized gains or losses are computed based on specific identification of the securities sold.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in joint ventures

Investments in 20% to 50%-owned entities are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to 40 years for buildings and three to 20 years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Employee benefit plans

Accounting and funding policies for retirement plans and postretirement benefits other than pensions ("OPEB") are described in Note 11.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

Loss per share of common stock

Loss per share of common stock is based upon the weighted average number of common shares outstanding. Common stock equivalents are excluded from the computation because they are antidilutive.

Note 3 - Business and geographic segments:

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and leveling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. General corporate assets consist principally of cash, cash equivalents and marketable securities.

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Business segments			
Net sales:			
Kronos	$ 732,108	$ 784,568	$697,048
Rheox	108,187	108,897	108,275
	$ 840,295	$ 893,465	$805,323
Operating income:			
Kronos	$ 110,767	$ 81,941	$ 36,146
Rheox	28,194	28,792	26,254
	138,961	110,733	62,400
General corporate income (expense):			
Interest and dividends	40,502	14,234	4,104
Securities transactions	(53,092)	(6,018)	4,363
Expenses, net	(44,921)	(43,452)	(41,516)
Interest expense	(100,412)	(118,511)	(99,119)
	$ (18,962)	$ (43,014)	$(69,768)

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Capital expenditures:			
Kronos	$ 189,475	$ 81,872	$ 46,913
Rheox	5,358	3,064	1,069
General corporate	313	214	4
	$ 195,146	$ 85,150	$ 47,986
Depreciation, depletion and amortization:			
Kronos	$ 29,324	$ 44,360	$ 42,877
Rheox	2,974	3,184	3,176
General corporate	283	285	287
	$ 32,581	$ 47,829	$ 46,340
Geographic areas			
Net sales - point of origin:			
United States	$ 207,762	$ 238,170	$ 270,288
Europe	623,036	643,670	519,064
Canada	136,316	138,656	132,930
Eliminations	(126,819)	(127,031)	(116,959)
	$ 840,295	$ 893,465	$ 805,323
Net sales - point of destination:			
United States	$ 180,883	$ 204,270	$ 217,892
Europe	485,784	518,711	418,072
Canada	79,198	72,692	76,078
Other	94,430	97,792	93,281
	$ 840,295	$ 893,465	$ 805,323
Operating income:			
United States	$ 16,578	$ 629	$ 20,981
Europe	99,646	81,805	19,658
Canada	22,737	28,299	21,761
	$ 138,961	$ 110,733	$ 62,400

	December 31, 1992	December 31, 1993
	(In thousands)	
Identifiable assets		
Business segments:		
Kronos	$1,246,186	$1,008,453
Rheox	76,248	75,362
General corporate	149,673	122,734
	$1,472,107	$1,206,549
Geographic segments:		
United States	$ 498,029	$ 326,831
Europe	671,349	622,826
Canada	153,056	134,158
General corporate	149,673	122,734
	$1,472,107	$1,206,549

Note 4 - Marketable securities and securities transactions:

	December 31, 1992	December 31, 1993
	(In thousands)	
Current:		
Marketable equity securities	$ 6,996	$ -
U.S. Treasury securities	93,611	41,045
	$100,607	$41,045
Noncurrent:		
Marketable equity securities	$ 9,192	$18,428
U.S. Treasury securities	14,389	-
	$ 23,581	$18,428
Marketable equity securities:		
Current:		
Unrealized gains	$ 13	$ -
Unrealized losses	(4,233)	-
Cost	11,216	-
Aggregate market	$ 6,996	$ -
Noncurrent:		
Unrealized gains	$ -	$ 33
Unrealized losses	(979)	(2,951)
Cost	10,171	21,346
Aggregate market	$ 9,192	$18,428
Current U.S. Treasury securities:		
Unrealized gains (losses)	$ (59)	$ 52
Cost	93,670	40,993
Aggregate market	$ 93,611	$41,045

Upon adoption of SFAS No. 115 as of December 31, 1993, the Company classified its portfolio of U.S. Treasury Securities as trading securities and its marketable equity securities as available-for-sale.

Net gains and losses from securities transactions are composed of:

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Unrealized gains (losses):			
Marketable equity securities	$ (517)	$ (52)	$2,348
Other securities	2,337	(513)	1,172
Realized gains (losses):			
Marketable equity securities	(52,813)	(528)	(9)
Other securities	4,437	1,006	852
Writedown of noncurrent marketable equity securities	(6,536)	(5,931)	-
	$(53,092)	$(6,018)	$4,363

Note 5 - Inventories:

	December 31,	
	1992	1993
	(In thousands)	
Raw materials	$ 43,773	$ 19,785
Work in process	9,201	7,173
Finished products	123,317	135,102
Supplies	39,941	32,107
	$216,232	$194,167

Note 6 - Investment in joint ventures:

	December 31,	
	1992	1993
	(In thousands)	
TiO_2 manufacturing joint venture	$ -	$188,031
Other	2,434	2,756
	$2,434	$190,787

In October 1993, Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). Under the terms of the joint venture and related agreements, KLA contributed the Louisiana plant to the joint venture, Tioxide paid an aggregate of approximately $205 million, including its tranche of the joint venture debt, and Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with

Tioxide and certain of its affiliates. Of the total consideration paid by Tioxide, $30 million was attributable to the exchange of technologies. The manufacturing joint venture, which is equally owned by KLA and a subsidiary of Tioxide, owns and operates the Louisiana chloride process TiO_2 plant formerly owned by KLA. Upon formation, the joint venture obtained $216 million in new financing, which is collateralized by the partnership interests of the partners and substantially all of the assets of the joint venture. The new financing consists of two equal tranches, one attributable to each partner, and each tranche is serviced through (i) the purchase of the plant's TiO_2 output in equal quantities by the partners and (ii) cash capital contributions. KLA has entered into an Offtake Agreement which requires the purchase of one-half of the TiO_2 produced by the joint venture. Kronos' pro rata share of the joint venture debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche. See Note 10.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's operating expenses (fixed and variable costs of production and interest expense). Kronos' share of the fixed and variable production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

A summary balance sheet of the manufacturing joint venture is shown below.

	December 31, 1993 (In thousands)
ASSETS	
Current assets	$ 44,477
Other assets	2,376
Property and equipment, net	347,344
	$394,197
LIABILITIES AND PARTNERS' EQUITY	
Long-term debt, including current portion:	
Kronos tranche	$104,143
Tioxide tranche	102,600
Other liabilities, primarily current	16,197
	222,940
Partners' equity	171,257
	$394,197

Note 7 - Other noncurrent assets:

	December 31, 1992	December 31, 1993
	(In thousands)	
Intangible assets, net of accumulated amortization of $9,792 and $11,941	$19,127	$15,317
Deferred financing costs, net	20,533	18,954
Other	8,581	8,084
	$48,241	$42,355

Note 8 - Accounts payable and accrued liabilities:

	December 31, 1992	December 31, 1993
	(In thousands)	
Accounts payable	$ 98,990	$ 89,010
Accrued liabilities:		
Employee benefits	38,506	32,350
Environmental costs	12,080	14,517
Interest	4,376	6,933
Miscellaneous taxes	3,980	2,240
Other	31,706	32,215
	90,648	88,255
	$189,638	$177,265

Note 9 - Other noncurrent liabilities:

	December 31, 1992	December 31, 1993
	(In thousands)	
Environmental costs	$59,403	$ 70,789
Insurance claims expenses	10,014	10,299
Employee benefits	10,392	10,084
Deferred technology fee income	-	26,881
Other	4,069	3,256
	$83,878	$121,309

Note 10 - Notes payable and long-term debt:

	December 31, 1992	December 31, 1993
	(In thousands)	
Notes payable - non-U.S. credit agreements	$ 315	$ -
Long-term debt:		
NL Industries:		
11.75% Senior Secured Notes	$ -	$250,000
13% Senior Secured Discount Notes	-	102,627
7.5% sinking fund debentures	14,374	-
	14,374	352,627
Kronos:		
DM bank credit facility	681,560	316,032
Joint venture term loan	-	104,143
Kronos Louisiana credit facility	215,000	-
Canadian bank credit agreement	3,942	-
5% to 8% bank loans payable through 2000	19,367	12,338
Other	2,230	2,175
	922,099	434,688
Rheox:		
Bank term loan	97,500	82,500
Other	1,311	1,070
	98,811	83,570
	1,035,284	870,885
Less current maturities	43,328	35,716
	$ 991,956	$835,169

In October 1993, NL issued $250 million principal amount of 11.75% Senior Secured Notes due 2003 and $188 million principal amount at maturity ($100 million proceeds at issuance) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes"). The Notes are collateralized by a series of intercompany notes from Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, to NL, the terms of which mirror those of the respective Notes (the "Mirror Notes"). The Senior Secured Notes are also collateralized by a first priority lien on the stock of Kronos and a second priority lien on the stock of Rheox. The Senior Secured Notes and the Senior Secured Discount Notes are redeemable, at the Company's option, after October 2000 and October 1998, respectively, except that up to one-third of the aggregate principal amount of the Senior Secured Discount Notes are redeemable (at 113% of the then-accreted value) upon any Common Stock Offering, as defined, prior to October 1996. For redemptions, other than redemptions pursuant to any Common Stock Offering, the redemption prices range from 101.5% (starting October 2000) declining to 100% (after October 2001) of the principal amount for the Senior Secured Notes and range from 106% (starting October 1998) declining to 100% (after October 2001) of the then-accreted value of the Senior Secured Discount Notes. In the event of a Change of Control, as defined, the Company would be required to make an offer to purchase the Notes at 101% of the principal amount of the Senior Secured Notes and 101% of the then-accreted value of the Senior Secured Discount Notes. The Notes are issued pursuant to indentures

which contain a number of covenants and restrictions which, among other things, restrict the ability of the Company and its subsidiaries to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of its assets to, another entity. At December 31, 1993, there were no amounts available for payment for dividends pursuant to the terms of the indentures. The Senior Secured Discount Notes do not require cash interest payments for the first five years. At December 31, 1993, the quoted market price per $100 principal amount at maturity of the Senior Secured Notes and the Senior Secured Discount Notes was $104 and $57.75, respectively.

The DM credit facility, as amended, consists of a DM 448 million term loan due from 1997 to 1999 and a DM 250 million revolving credit facility due no later than 2000, of which DM 100 million is outstanding and DM 150 million was available for future borrowings by KII at December 31, 1993. During February 1994, the Company borrowed an additional DM 25 million under the revolving credit facility. Borrowings bear interest at DM LIBOR plus 1.625% (8.19% at December 31, 1993). KII has entered into agreements with certain banks in the syndicate which caps DM LIBOR at 10.5% on DM 520 million principal amount of the loan. The principal amount subject to the cap declines as the loan is repaid. NL and Kronos have agreed, under certain circumstances, to provide KII with up to DM 125 million through January 1, 2001.

The DM credit facility is collateralized by pledges of the stock of certain KII subsidiaries. The credit agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Borrowings under KLA's tranche of the joint venture term loan bear interest at LIBOR plus 1.625% (5.01% at December 31, 1993) and are repayable in quarterly installments through September 2000. See Note 6.

Rheox has a credit agreement providing for a seven-year term loan due in quarterly installments through December 1997 and a $15 million revolving credit/letter of credit facility due March 1994. At December 31, 1993, letters of credit aggregating $1 million were outstanding. Borrowings bear interest, at Rheox's option, at prime rate plus 1.5% or LIBOR plus 2.5% (5.83% at December 31, 1993), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's ability to incur additional indebtedness, restricts its dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type. The Company has initiated discussions with the agent bank regarding the extension of the revolving credit/letter of credit facility.

In connection with the credit agreement, Rheox has entered into interest rate swap agreements to mitigate the impact of changes in interest rates on the term loan. These swap agreements, which mature December 31, 1994, effectively convert the interest rate on $60 million of the loan (at December 31, 1993) from a variable rate to a fixed rate of 8.1% The effective interest rate on the Rheox term loan was 7.3% at December 31, 1993, including the impact of the swap agreements. At December 31, 1993, the fair value of the swap agreements payable is estimated to be $1 million, which amount represents the estimated cost to the Company if it were to terminate the swap agreements at that date. Rheox is exposed to interest rate risk in the event of nonperformance by the other parties to the agreements. However, Rheox does not anticipate nonperformance by such parties.

Unused lines of credit available for short-term borrowings under U.S. and non-U.S. credit facilities approximated $14 million and $117 million, respectively, at December 31, 1993.

Other loans consist of non-U.S. mortgage and other borrowings of the Company's subsidiaries denominated primarily in non-U.S. currencies.

Substantially all of the long-term debt of subsidiaries, except to the extent of the interest rate swap agreements relating to the Rheox term loan as noted above, have variable interest rates which adjust with changes in market interest rates or have short terms to maturity, and the book value of such indebtedness is deemed to approximate fair value.

The aggregate maturities of long-term debt at December 31, 1993 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1994	$ 35,716
1995	39,327
1996	40,940
1997	101,100
1998	102,186
1999 and thereafter	636,489
	955,758
Less unamortized original issue discount on the Senior Secured Discount Notes	84,873
	$870,885

Note 11 - Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was $.6 million, $1.0 million and nil in 1991, 1992 and 1993, respectively.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations were (i) discount rates - 7% to 8.5% (1992 - 8% to 9%) and (ii) rates of increase in future compensation levels - nil to 6% (1992 - nil to 7%). The expected long-term rates of return on assets used ranged from 8% to 10% in both 1992 and 1993. Plan assets are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

SFAS No. 87, "Employers' Accounting for Pension Costs" requires that an additional pension liability be recognized when the unfunded accumulated pension benefit obligation exceeds the unfunded accrued pension liability. Variances from actuarially assumed rates, including the rate of return on pension plan assets, will result in additional increases or decreases in accrued pension liabilities, pension expense and funding requirements in future periods.

	Assets exceed accumulated benefits December 31,		Accumulated benefits exceed assets December 31,	
	1992	1993	1992	1993
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$27,874	$40,612	$141,909	$137,156
Nonvested benefits	933	3,160	3,297	2,893
Accumulated benefit obligations	28,807	43,772	145,206	140,049
Effect of projected salary increases	6,289	6,235	8,762	17,664
Projected benefit obligations	35,096	50,007	153,968	157,713
Plan assets at fair value	50,579	63,565	102,553	88,881
Plan assets over (under) projected benefit obligations	15,483	13,558	(51,415)	(68,832)
Unrecognized net loss (gain) from experience different from actuarial assumptions	718	774	(29,744)	(4,958)
Unrecognized prior service cost (credit)	3,646	3,121	(4,284)	(3,879)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(3,791)	(1,146)	5,017	2,586
Adjustment required to recognize minimum liability	-	-	-	(3,442)
Total prepaid (accrued) pension cost	16,056	16,307	(80,426)	(78,525)
Less current portion	-	-	(6,470)	(5,919)
Noncurrent prepaid (accrued) pension cost	$16,056	$16,307	$(73,956)	$(72,606)

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Service cost benefits earned during the year	$ 5,151	$ 4,272	$ 4,082
Interest cost on projected benefit obligations	12,705	13,804	14,430
Actual return on plan assets	(13,147)	(12,248)	(15,647)
Net amortization and deferrals	439	(1,346)	2,413
	$ 5,148	$ 4,482	$ 5,278

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. In 1989, the Company began phasing out such benefits for currently active U.S. employees over a ten-year period. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. The Company's policy is to fund medical claims as they are incurred, net of any contributions by the retirees. Effective January 1, 1993, the Company's postretirement medical plans were revised to, among other things, increase the deductible and maximum out-of-pocket amounts, increase the retiree copayment percentage and pass on future cost increases to the participants through increased contributions or decreased reimbursements.

The rates used in determining the actuarial present value of the accumulated benefit obligations were (i) discount rate - 7% (1992 - 7.75%), (ii) rate of increase in future compensation levels - 4% (1992 - 5%), (iii) rate of increase in future health care costs - 11% in 1994, gradually declining to 5% in 2000 and thereafter (1992 - 14% in 1993, gradually declining to 6% in 2000 and thereafter) and (iv) return on plan assets - 9% in both 1992 and 1993. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.4 million in 1993, and the actuarial present value of accumulated benefit obligations at December 31, 1993 would have increased by approximately $3.5 million.

	December 31,	
	1992	1993
	(In thousands)	
Actuarial present value of accumulated benefit obligations:		
Retiree benefits	$62,696	$61,686
Other fully eligible active plan participants	1,151	1,106
Other active plan participants	2,336	1,962
	66,183	64,754
Plan assets at fair value	7,640	8,095
Accumulated postretirement benefit obligations in excess of plan assets	58,543	56,659
Unrecognized net gain from experience different from actuarial assumptions	1,588	2,390
Unrecognized prior service credit	16,618	15,145
Total accrued postretirement benefits cost	76,749	74,194
Less current portion	4,988	5,872
Noncurrent accrued postretirement benefits cost	$71,761	$68,322

The components of the Company's net periodic postretirement benefit cost pursuant to SFAS No. 106 for 1992 and 1993 are set forth below:

	December 31,	
	1992	1993
	(In thousands)	
Interest cost on accumulated benefit obligations	$6,189	$ 4,911
Service cost benefits earned during the year	130	127
Expected return on plan assets	(650)	(647)
Net amortization and deferrals	-	(1,473)
	$5,669	$ 2,918

The aggregate net pay-as-you-go cost to the Company for these benefits approximated $7 million in 1991.

Note 12 - Shareholders' deficit:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
		(In thousands)	
Balance at December 31, 1990	66,839	2,704	64,135
Purchase of treasury shares	-	12,934	(12,934)
Balance at December 31, 1991	66,839	15,638	51,201
Purchase of treasury shares	-	311	(311)
Balance at December 31, 1992 and 1993	66,839	15,949	50,890

During 1990, NL's Board of Directors authorized the purchase of up to five million shares of NL's common stock over an unspecified period of time, to be held as treasury shares available for general corporate purposes. Pursuant to this authorization, the Company purchased 1.6 million and .3 million shares of its common stock in the open market at an aggregate cost of $21 million and $4 million in 1991 and 1992, respectively. In September 1991, the Company purchased 11.3 million shares of its common stock pursuant to a "Dutch auction" self-tender offer for an aggregate cost of $181 million, including 10.9 million shares purchased from Valhi for $175 million.

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options and SARs granted pursuant to similar plans which preceded the NL Option Plan ("the Predecessor Option Plans") remain outstanding at December 31, 1993, no additional options may be granted under the Predecessor Option Plans.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to 100% of the market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan.

Changes in outstanding options granted pursuant to the NL Option Plan and the Predecessor Option Plans are summarized in the table below. At December 31, 1993, options to purchase 610,081 shares were exercisable and options to purchase 259,000 shares become exercisable in 1994. At December 31, 1993, an aggregate of 3.5 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands,	except per share	amounts)
Outstanding at December 31, 1990	533	$ 8.65 - 26.17	$10,550
Granted	522	10.50	5,486
Exercised	(4)	8.65 - 11.66	(44)
Outstanding at December 31, 1991	1,051	8.65 - 26.17	15,992
Granted	237	9.31	2,207
Canceled or expired	(10)	9.31 - 26.17	(126)
Outstanding at December 31, 1992	1,278	8.65 - 24.19	18,073
Granted	451	5.00 - 7.00	2,645
Canceled or expired	(3)	8.65 - 10.78	(27)
Outstanding at December 31, 1993	1,726	$ 5.00 - 24.19	$20,691

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance.

Note 13 - Income taxes:

The components of (i) loss before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 34% in 1991 and 1992 and 35% in 1993, (iii) the provision for income taxes and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Pretax income (loss):			
U.S.	$(25,330)	$(52,724)	$(41,579)
Non-U.S.	6,368	9,710	(28,189)
	$(18,962)	$(43,014)	$(69,768)
Expected tax benefit	$ (6,447)	$(14,625)	$(24,419)
Non-U.S. tax rates	(4,681)	(11,224)	(15,620)
Rate difference on capital loss carryback and capital loss for which no carryback was available	14,351	-	-
Rate change adjustment of deferred taxes	-	-	6,823
Valuation allowance	-	20,237	40,827
Incremental tax on income of companies not included in the NL Tax Group	3,198	5,385	2,553
U.S. state income taxes	2,605	353	486
Other, net	(5,116)	333	2,063
	$ 3,910	$ 459	$ 12,713
Provision for income taxes:			
Current income tax expense (benefit):			
U.S. federal	$ (6,180)	$ (2,103)	$ (915)
U.S. state	2,604	(292)	870
Non-U.S.	14,904	21,803	14,083
	11,328	19,408	14,038
Deferred income tax expense (benefit):			
U.S. federal	7,658	(612)	244
U.S. state	-	645	(384)
Non-U.S.	(15,076)	(18,982)	(1,185)
	(7,418)	(18,949)	(1,325)
	$ 3,910	$ 459	$ 12,713

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Comprehensive tax provision (benefit) allocable to:			
Pretax loss	$ 3,910	$ 459	$12,713
Extraordinary items, principally deferred income taxes	(7,241)	-	-
Shareholders' deficit, principally deferred income taxes allocable to currency translation and marketable securities adjustments	1,023	(1,196)	(1,243)
	$(2,308)	$ (737)	$11,470

Changes in deferred income taxes related to the adoption of new accounting standards are disclosed in Note 19. During 1993, the Company's valuation allowance, in the aggregate, increased by $47 million. The components of the net deferred tax liability are summarized below:

	December 31,			
	1992		1993	
	Deferred tax		Deferred tax	
	Assets	Liabilities	Assets	Liabilities
	(In thousands)			
Tax effect of temporary differences relating to:				
Inventories	$ 3,823	$ (2,986)	$ 3,965	$ (2,532)
Property and equipment	261	(101,409)	2,694	(90,356)
Accrued postretirement benefits cost	26,112	-	25,955	-
Accrued pension cost	7,808	(9,770)	9,712	(9,224)
Accrued environmental costs	21,404	-	26,784	-
Other accrued liabilities and deductible differences	14,484	-	22,070	-
Other taxable differences	-	(95,892)	-	(104,940)
Tax on unremitted earnings of non-U.S. subsidiaries	619	(39,277)	577	(27,742)
Tax loss and tax credit carryforwards	112,212	-	137,706	-
Valuation allowance	(86,031)	-	(133,377)	
Gross deferred tax assets (liabilities)	100,692	(249,334)	96,086	(234,794)
Reclassification, principally netting by tax jurisdiction	(99,016)	99,016	(92,194)	92,194
Net total deferred tax assets (liabilities)	1,676	(150,318)	3,892	(142,600)
Net current deferred tax assets (liabilities)	1,676	(4,573)	3,315	(3,623)
Net noncurrent deferred tax assets (liabilities)	$ -	$(145,745)	$ 577	$(138,977)

The components of the provision for deferred income taxes for 1991 (a disclosure no longer required upon the adoption of SFAS No. 109) is summarized below.

	Year ended December 31, 1991
	(In thousands)
Depreciation	$ 2,525
Cash basis income and expense	(1,607)
Undistributed income of subsidiaries	(8,747)
Other, net	411
	$(7,418)

At December 31, 1993, the Company had $250 million of non-U.S. income tax loss carryforwards with no expiration dates. In addition, the Company had, for U.S. federal income tax purposes, capital loss carryforwards of $17 million which expire during 1996, net operating loss carryforwards of $30 million, of which $7 million expires in 2007 and $23 million expires in 2008, and an alternative minimum tax credit carryforward of $11 million with no expiration date.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany are being examined and tax authorities have proposed or may propose tax deficiencies. In June 1993, the German tax authorities issued assessment reports in connection with examinations of the Company's German income tax returns, disallowing the Company's claims for refunds, primarily for 1989 and 1990, aggregating DM 160 million ($92 million at December 31, 1993) and proposing additional taxes of DM 100 million ($58 million at December 31, 1993). The Company has applied for administrative relief from collection procedures and may grant a lien on certain German assets while the Company contests the proposed adjustments. Although the Company believes it will ultimately prevail, in June 1993, the Company reclassified refundable income tax claims of approximately DM 160 million ($92 million) from current assets to noncurrent assets due to the uncertain timing of a resolution. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. In July 1992, the Company paid $15 million of previously accrued interest and income taxes related to the settlement of examinations of the Company's U.S. federal income tax returns for the years ended December 31, 1979 through 1984.

In 1991, based upon revisions in the Company's estimate of liabilities for income taxes and related interest expense which may ultimately result from the examinations referred to above, the Company reduced its accrual for income tax related interest by $9 million. This change in estimate considered, among other things, the Company's settlement with the IRS of a matter related to the qualified status of certain of the Company's defined benefit pension plans, which plans were determined to be qualified with respect to the periods in question.

Note 14 - Other income, net:

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Currency transaction gains, net	$ 1,594	$ 1,735	$ 3,299
Technology fee income	-	-	2,048
Royalty income	2,547	1,014	2,016
Disposition of property and equipment	(1,009)	(1,419)	(199)
Other, net	3,911	(133)	2,685
	$ 7,043	$ 1,197	$ 9,849

Note 15 - Other items:

Research, development and sales technical support expense approximated $9 million in 1991, $11 million in 1992 and $10 million in 1993.

Interest capitalized in connection with long-term capital projects was $26 million in 1991, $9 million in 1992 and $1 million in 1993.

Note 16 - Extraordinary items:

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Gain (loss) on early extinguishment of indebtedness:			
7.5% sinking fund debentures	$ 282	$ -	$ -
Kronos Louisiana term loan and DM credit facility	-	-	(27,815)
Provision for income taxes	(6)	-	-
	276	-	(27,815)
Income tax benefit of utilization of tax loss and tax credit carryforwards	7,247	-	-
	$7,523	$ -	$(27,815)

The extraordinary loss in 1993 relates to the settlement of certain interest rate swap agreements for $20 million in cash in conjunction with repaying the Louisiana plant indebtedness and the write-off of deferred financing costs related to such repayment and the paydown of a portion of the DM bank credit facility.

Upon adoption of SFAS No. 109 in 1992, utilization of tax loss and tax credit carryforwards are not classified as extraordinary items.

Note 17 - Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business

combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company, the Company from time to time considers, reviews and evaluates, and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, and restrictions under the indentures and other agreements, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

During August 1991, the Company entered into a revolving demand loan agreement with Valhi in an amount not to exceed the lesser of $200 million or the amount Valhi has available under bank credit agreements. The Company advanced $150 million pursuant to this agreement which Valhi repaid in September 1991. Interest income on the amount advanced under the demand loan agreement was $.6 million in 1991.

Baroid Corporation, a former wholly-owned subsidiary of the Company and currently a subsidiary of Dresser Industries, Inc., and the Company are parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis subject to termination or renewal by mutual agreement. Management services fee expense pursuant to the Baroid ISA approximated $4.3 million in 1991, $2.3 million in 1992 and $.3 million in 1993.

The Company is a party to an intercorporate services agreement with Valhi (the "Valhi ISA") whereby Valhi provides certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi ISA was $1.5 million in 1991, $1.4 million in 1992 and $.7 million in 1993.

The Company was party to an intercorporate services agreement with Tremont (the "Tremont ISA") until June 1993 when the agreement was terminated. Under the terms of the contract, the Company provided certain management, financial and legal services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.3 million in 1991, $.5 million in 1992 and $.1 million in 1993.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.6 million in 1991, $.6 million in 1992 and $.4 million in 1993.

Sales to Baroid in the ordinary course of business were $1.8 million in 1991, $2.1 million in 1992 and $1.8 million in 1993.

Purchases in the ordinary course of business from unconsolidated joint ventures were approximately $9 million in 1991 and 1992 and $22 million in 1993.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (nil in 1991, 1992 and 1993) in a manner similar to accounting for SARs. At December 31, 1993, employees of the Company held options to purchase 365,000 shares (347,000 shares vested) of Valhi common stock at exercise prices ranging from $5 to $15 per share.

In conjunction with the formation of Baroid, the Company and Baroid entered into a Cross-Indemnification Agreement pursuant to which, as amended, the Company agreed to indemnify Baroid with regard to all liabilities not expressly assumed by Baroid and Baroid agreed to indemnify the Company with regard to all liabilities assumed by Baroid.

Net amounts payable to affiliates are summarized in the following table.

	December 31,	
	1992	1993
	(In thousands)	
Tremont Corporation	$4,056	$4,777
Louisiana Pigment Company, L.P.	-	4,789
Valhi, Inc.	30	-
	$4,086	$9,566

Note 18 - Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases. In addition, Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreements restrict the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expense aggregated $6 million in 1991, $9 million in 1992 and $8 million in 1993. At December 31, 1993, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1994	$ 1,234	$1,776
1995	1,306	1,413
1996	1,307	777
1997	1,291	548
1998	1,263	468
1999 and thereafter	13,193	15
	$19,594	$4,997

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental

Protection Agency's Superfund National Priorities List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. At December 31, 1993, the Company had accrued $70 million in respect of those environmental matters which are reasonably estimable. It is not possible to estimate the range of costs for certain sites. The upper end of the range of reasonably possible costs to the Company for sites which it is possible to estimate costs is approximately $105 million. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is involved in other litigation, including litigation regarding the Feed Materials Production Center in Ohio owned by the U.S. Department of Energy, formerly managed under contract by NLO, Inc., a wholly-owned subsidiary of the Company, and other matters.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Concentrations of credit risk

Sales of TiO_2 accounted for almost 90% of net sales during the past three years. TiO_2 is sold to the paint, paper and plastics industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. TiO_2 is sold to over 5,000 customers, none of which represents a significant portion of net sales. In the past three years, approximately one-half of the Company's TiO_2 sales by volume were to Europe and approximately one-third in 1991 and 1992 and 38% in 1993 of sales were attributable to North America.

Consolidated cash and cash equivalents includes $22 million and $64 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1992 and 1993, respectively. Such securities are held in trust for the Company by a single U.S. bank.

Note 19 - Changes in accounting principles:

In 1993, the Company adopted SFAS No. 115 (marketable securities) as of December 31, 1993. In 1992, the Company (i) elected early compliance with both SFAS No. 106 (OPEB) and SFAS No. 109 (income taxes) as of January 1, 1992; (ii) elected immediate recognition of the OPEB transition obligation; and (iii) elected to apply SFAS No. 109 prospectively and not restate prior years. The cumulative effect of changes in accounting principles adjustments are shown below.

	Amount reflected in	
	Earnings	Equity component
	(In thousands)	
Increase (decrease) in net assets at December 31, 1993 - SFAS No. 115:		
Marketable securities	$1,872	$(1,872)
Deferred income taxes	(655)	655
	$1,217	$(1,217)

	Amount
	(In thousands)
Increase (decrease) in net assets at January 1, 1992 - SFAS Nos. 106 and 109:	
Accrued postretirement benefits cost	$(74,918)
Deferred income taxes, net	43,114
	$(31,804)

Note 20 - Quarterly financial data (unaudited):

	Quarter ended,			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Year ended December 31, 1992:				
Net sales	$226,091	$235,603	$232,297	$199,474
Cost of sales	158,891	169,896	164,133	136,109
Operating income	25,610	26,302	29,282	29,539
Loss before cumulative effect of changes in accounting principles	$ (7,510)	$ (8,467)	$(11,331)	$(17,288)
Cumulative effect of changes in accounting principles	(31,804)	-	-	-
Net loss	$(39,314)	$ (8,467)	$(11,331)	$(17,288)
Per share of common stock:				
Loss before cumulative effect of changes in accounting principles	$ (.15)	$ (.17)	$ (.22)	$ (.34)
Cumulative effect of changes in accounting principles	(.62)	-	-	-
Net loss	$ (.77)	$ (.17)	$ (.22)	$ (.34)
Weighted average shares outstanding	50,959	50,890	50,890	50,890
Year ended December 31, 1993:				
Net sales	$198,518	$221,378	$202,096	$183,331
Cost of sales	142,506	171,671	156,894	141,296
Operating income	23,105	15,166	12,773	11,356
Loss before extraordinary item and cumulative effect of change in accounting principle	$(13,490)	$(28,002)	$(18,722)	$(22,997)
Extraordinary item	-	-	-	(27,815)
Cumulative effect of change in accounting principle	-	-	-	1,217
Net loss	$(13,490)	$(28,002)	$(18,722)	$(49,595)

	Quarter ended,			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Per share of common stock:				
Loss before extraordinary item and cumulative effect of change in accounting principle	$(.27)	$(.55)	$(.37)	$(.44)
Extraordinary item	-	-	-	(.55)
Cumulative effect of change in accounting principle	-	-	-	.02
Net loss	$(.27)	$(.55)	$(.37)	$(.97)
Weighted average shares outstanding	50,890	50,890	50,890	50,890

Note 21 - Subsequent event:

On February 24, 1994, the Company settled its lawsuit against Lockheed Corporation and its directors in connection with Lockheed's 1990 annual meeting of stockholders. Under the terms of the settlement, Lockheed made a cash payment to the Company of $27 million with net proceeds to the Company of approximately $20 million.

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for marketable securities, and in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND

Houston, Texas
February 9, 1994 except for
Note 21, as to which the
date is February 24, 1994

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I - MARKETABLE SECURITIES (a)

December 31, 1993

(In thousands)

Name of issuer and title of each issue	Number of shares/principal amount	Cost	Market value	Amount carried in balance sheet
Current assets:				
Trading securities - U.S. Treasury Securities	40,406	$40,993	$41,045	$41,045
Noncurrent assets:				
Available-for-sale - common stock:				
Lockheed Corporation	2	$ 83	$ 116	$ 116
Maxxam, Inc.	250	11,092	9,188	9,188
Keystone Consolidated Industries, Inc. (b)	326	4,240	3,342	3,342
Valhi, Inc.	1,186	5,931	5,782	5,782
		$21,346	$18,428	$18,428

(a) The Company adopted SFAS No. 115 effective December 31, 1993.
(b) A majority-owned subsidiary of Contran Corporation.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets

December 31, 1992 and 1993

(In thousands)

	1992	1993
Current assets:		
Cash and cash equivalents	$ 11,043	$ 11,107
Marketable securities	90,639	41,045
Accounts and notes receivable	2,319	2,088
Refundable income taxes	2,012	-
Receivable from subsidiaries and affiliates	-	980
Prepaid expenses	198	248
Total current assets	106,211	55,468
Other assets:		
Marketable securities	23,581	18,428
Notes receivable from subsidiary	-	352,627
Investment in subsidiaries	(8,388)	(156,615)
Other	2,412	10,713
Total other assets	17,605	225,153
Property and equipment, net	4,241	3,925
	$ 128,057	$ 284,546
Current liabilities:		
Current maturities of long-term debt	$ 4,374	$ -
Accounts payable and accrued liabilities	29,828	38,176
Payable to subsidiaries and affiliates	23,642	4,777
Income taxes	-	93
Deferred income taxes	2,506	3,627
Total current liabilities	60,350	46,673
Noncurrent liabilities:		
Long-term debt	10,000	352,627
Note payable to subsidiary	65,000	-
Deferred income taxes	28,091	27,182
Accrued pension cost	12,765	16,164
Accrued postretirement benefits cost	45,072	42,216
Other	53,072	64,479
Total noncurrent liabilities	214,000	502,668
Shareholders' deficit	(146,293)	(264,795)
	$ 128,057	$ 284,546

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Operations

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Revenues and other income:			
Equity in income (loss) of subsidiaries	$ 7,515	$(10,703)	$ (49,766)
Interest and dividends	4,714	2,829	3,622
Interest income from subsidiary	-	-	8,358
Securities transactions	(10,586)	2,691	3,637
Other income (expense), net	3,121	1,791	2,597
	4,764	(3,392)	(31,552)
Costs and expenses:			
General and administrative	48,042	45,243	44,113
Interest, net	(4,540)	1,598	13,771
	43,502	46,841	57,884
Loss before income taxes, extraordinary items and cumulative effect of changes in accounting principles	(38,738)	(50,233)	(89,436)
Income tax benefit	14,753	5,637	6,225
Loss before extraordinary items and cumulative effect of changes in accounting principles	(23,985)	(44,596)	(83,211)
Extraordinary items:			
Equity in income of subsidiaries	16,263	-	(27,815)
Income tax benefit of utilization of tax loss and tax credit carryforwards	(9,016)	-	-
Early extinguishment of indebtedness	276	-	-
	7,523	-	(27,815)
Cumulative effect of changes in accounting principles:			
NL	-	(30,546)	1,217
Equity in income of subsidiaries	-	(1,258)	-
	-	(31,804)	1,217
Net loss	$(16,462)	$(76,400)	$(109,809)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from operating activities:			
Net loss	$ (16,462)	$(76,400)	$(109,809)
Adjustments:			
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary items and cumulative effect of changes in accounting principles	(7,515)	10,703	49,766
Extraordinary items	(16,263)	-	27,815
Cumulative effect of changes in accounting principles	-	1,258	-
Distributions	317,000	54,000	-
Securities transactions	10,586	(2,691)	(3,637)
Cumulative effect of changes in accounting principles	-	30,546	(1,217)
Change in assets and liabilities, net	22,383	6,340	14,593
Other, net	(9,408)	1,243	242
Total adjustments	316,783	101,399	87,562
Net cash provided (used) by operating activities	300,321	24,999	(22,247)
Cash flows from investing activities:			
Purchases of marketable securities	(46,654)	(1,238)	(10,899)
Proceeds from disposition of marketable securities	93,646	6,735	69,232
Capital expenditures	(260)	(214)	(4)
Investment in subsidiary	(3,248)	(3,896)	(6,478)
Loans to affiliates and subsidiaries:			
Loans	(150,000)	-	(341,500)
Collections	150,000	-	-
Other, net	(126)	(768)	667
Net cash provided (used) by investing activities	43,358	619	(288,982)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows (Continued)

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from financing activities:			
Additions to (principal payments on):			
Long-term debt	$ (9,025)	$(14,873)	$ 335,688
Loans from affiliates	(100,526)	12,298	(16,047)
Deferred financing fees	-	-	(8,348)
Dividends paid	(34,724)	(17,807)	-
Purchases of treasury stock and other	(202,492)	(3,660)	-
Net cash provided (used) by financing activities	(346,767)	(24,042)	311,293
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	300,321	24,999	(22,247)
Investing activities	43,358	619	(288,982)
Financing activities	(346,767)	(24,042)	311,293
Net change from operating, investing and financing activities	(3,088)	1,576	64
Balance at beginning of year	12,555	9,467	11,043
Balance at end of year	$ 9,467	$ 11,043	$ 11,107

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III - CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Notes to Condensed Financial Information

Note 1 - Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 - Net payable to (receivable from) subsidiaries and affiliates:

	December 31,	
	1992	1993
	(In thousands)	
Current:		
Tremont Corporation	$ 4,056	$ 4,777
Valhi, Inc.	30	-
Kronos and Rheox:		
Income taxes	2,680	3,123
Other, net	16,876	(4,103)
	$23,642	$ 3,797
Noncurrent:		
Note payable (receivable) - Kronos	$65,000	$(352,627)

Note 3 - Long-term debt:

	December 31,	
	1992	1993
	(In thousands)	
11.75% Senior Secured Notes	$ -	$250,000
13% Senior Secured Discount Notes	-	102,627
7.5% sinking fund debentures	14,374	-
	14,374	352,627
Less current maturities	4,374	-
	$10,000	$352,627

See Note 10 of the Consolidated Financial Statements for a description of the Notes.

The aggregate maturities of the Company's long-term debt at December 31, 1993 are shown in the table below.

	Amount (In thousands)
Years ending December 31, 1999 and thereafter	$437,500
Less unamortized original issue discount on the Senior Secured Discount Notes	84,873
	$352,627

The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through January 1, 2001.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE V-PROPERTY AND EQUIPMENT

(In thousands)

Classification	Balance at beginning of year	Additions at cost	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1993:					
Land	$ 29,863	$ 7,221	$ (17,685)	$ (1,162)	$ 18,237
Buildings	208,056	2,592	(72,723)	(8,343)	129,582
Machinery and equipment	811,531	24,032	(287,419)	(33,054)	515,090
Mining properties	75,731	630	(27)	(3,623)	72,711
Construction in progress	21,042	13,511 (a)	(2,578)	(1,925)	30,050
	$1,146,223	$ 47,986	$(380,432)(c)	$(48,107)	$ 765,670
Year ended December 31, 1992:					
Land	$ 19,645	$ 11,493	$ (146)	$ (1,129)	$ 29,863
Buildings	150,235	74,924	(6,480)	(10,623)	208,056
Machinery and equipment	566,803	311,240	(28,403)	(38,109)	811,531
Mining properties	81,959	2,346	(491)	(8,083)	75,731
Construction in progress	338,685	(314,853)(a)	(407)	(2,383)	21,042
	$1,157,327	$ 85,150 (b)	$ (35,927)	$(60,327)	$1,146,223
Year ended December 31, 1991:					
Land	$ 19,096	$ 788	$ (103)	$ (136)	$ 19,645
Buildings	151,079	379	(258)	(965)	150,235
Machinery and equipment	547,077	31,368	(8,165)	(3,477)	566,803
Mining properties	81,363	1,718	(244)	(878)	81,959
Construction in progress	177,778	160,893 (a)	(426)	440	338,685
	$ 976,393	$ 195,146 (b)	$ (9,196)	$ (5,016)	$1,157,327

(a) Net of amounts transferred to applicable property and equipment accounts.
(b) Includes costs for chloride process TiO_2 plant in Lake Charles, Louisiana.
(c) Includes contribution of a chloride process TiO_2 plant in Lake Charles, Louisiana to the new manufacturing joint venture.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE VI-ACCUMULATED DEPRECIATION AND DEPLETION OF PROPERTY AND EQUIPMENT

(In thousands)

Classification	Balance at beginning of year	Additions charged to costs and expenses	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1993:					
Land	$ 6,375	$ 917	$ (785)	$ (448)	$ 6,059
Buildings	67,896	4,443	(3,096)	(4,302)	64,941
Machinery and equipment	263,771	35,549	(28,578)	(16,535)	254,207
Mining properties	62,204	2,568	(27)	(2,885)	61,860
	$400,246	$43,477	$(32,486)(a)	$(24,170)	$387,067
Year ended December 31, 1992:					
Land	$ 5,948	$ 841	$ -	$ (414)	$ 6,375
Buildings	75,038	4,531	(6,339)	(5,334)	67,896
Machinery and equipment	272,467	35,933	(25,124)	(19,505)	263,771
Mining properties	65,290	3,535	(478)	(6,143)	62,204
	$418,743	$44,840	$(31,941)	$(31,396)	$400,246
Year ended December 31, 1991:					
Land	$ 5,536	$ 473	$ (33)	$ (28)	$ 5,948
Buildings	72,666	3,125	(234)	(519)	75,038
Machinery and equipment	258,865	22,371	(6,643)	(2,126)	272,467
Mining properties	62,212	3,762	(244)	(440)	65,290
	$399,279	$29,731	$ (7,154)	$ (3,113)	$418,743

(a) Includes contribution of a chloride process TiO_2 plant in Lake Charles, Louisiana to the new manufacturing joint venture.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE VIII - VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Balance at end of year
Year ended December 31, 1993:					
Allowance for doubtful accounts and notes receivable	$ 2,385	$ 1,216	$ (476)(a)	$ (117)	$ 3,008
Amortization of intangibles	$ 9,792	$ 2,863	$ -	$ (714)	$ 11,941
Valuation allowance for deferred income taxes	$86,031	$50,562	$ -	$(3,216)	$133,377
Year ended December 31, 1992:					
Allowance for doubtful accounts and notes receivable	$ 1,749	$ 945	$ (190)(a)	$ (119)	$ 2,385
Amortization of intangibles	$ 7,270	$ 2,989	$ -	$ (467)	$ 9,792
Valuation allowance for deferred income taxes	$ -	$86,031	$ -	$ -	$ 86,031
Year ended December 31, 1991:					
Allowance for doubtful accounts and notes receivable	$ 2,107	$ 478	$ (846)(a)	$ 10	$ 1,749
Amortization of intangibles	$ 4,211	$ 2,850	$ -	$ 209	$ 7,270

(a) Amounts written off, less recoveries.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE IX - SHORT-TERM BORROWINGS

(In thousands, except percentages)

Category of aggregate short-term borrowings	Balance at end of year	Weighted average interest rate	Maximum amount outstanding during the year	Average amount outstanding during the year (a)	Weighted average interest rate during the year (b)
Bank credit agreements and other:					
Year ended December 31, 1992	$ 315	7.3%	$ 1,100	$ 239	8.4%
Year ended December 31, 1991	$ 429	9.8%	$ 40,746	$ 5,484	11.1%

(a) The average amount outstanding during the year is calculated based on the average of the month-end balances of short-term borrowings during the year.

(b) The weighted average interest rate during the year is calculated based on total interest expense on short-term borrowings divided by the average amount outstanding during the year.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE X - SUPPLEMENTARY INCOME STATEMENT INFORMATION

(In thousands)

	Years ended December 31,		
	1991	1992	1993
Maintenance and repairs	$81,201	$93,036	$80,580
Depreciation, depletion and amortization:			
Property and equipment	$29,731	$44,840	$43,477
Intangible assets	2,850	2,989	2,863
	$32,581	$47,829	$46,340
Taxes, other than payroll and income taxes	$12,748	$15,319	$ 6,811

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer – NL Industries, Inc.

Kenneth R. Peak
President – Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman – Valhi, Inc. (diversified industrial management company)

Harold C. Simmons
Chairman of the Board – NL Industries, Inc.
Chairman and Chief Executive Officer – Valhi, Inc.

Michael A. Snetzer
President – Valhi, Inc.

Dr. Lawrence A. Wigdor
President and Chief Executive Officer – Kronos and Rheox

Admiral Elmo R. Zumwalt, Jr. (retired)
President – Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee

Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee

Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President;
President and Chief Executive Officer – Kronos and Rheox

Joseph S. Compofelice
Vice President and Chief Financial Officer

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

SHAREHOLDER INFORMATION

Annual Meeting

The 1994 annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be marked, signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agency

First Chicago Trust Company of New York,
P.O. Box 2500, Jersey City, New Jersey 07303-2500.
Telephone (201) 324-0498.

Form 10-K Report

The Company's Annual Report on Form 10-K for the year ended December 31, 1993, filed with the Securities and Exchange Commission, is printed as part of this report. Additional copies are available to shareholders without charge. Requests should be addressed to NL Industries, Inc., Investor Relations Department, P.O. Box 60087, Houston, Texas 77205, or made by calling (800) 285-3519.

NL Industries, Inc.

1994

Annual

Report

NL Industries, Inc. is a worldwide manufacturer and marketer of titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. Rheox, Inc., NL's other operating subsidiary, is the world's largest producer of rheological additives for solvent-based systems and is also a supplier of rheological additives used in water-based systems. These products control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,100 people worldwide. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

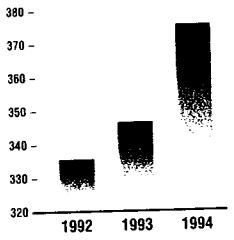
ANNUAL HIGHLIGHTS

($ in millions, except per share and volume data)	1992	1993	1994
Net sales	$ 893.5	$ 805.3	$ 888.0
Operating income	110.7	62.4	111.4
Loss before extraordinary item and cumulative effect of changes in accounting principles	(44.6)	(83.2)	(24.0)
Net loss	(76.4)	(109.8)	(24.0)
Loss per common share:			
Before extraordinary item and cumulative effect of changes in accounting principles	$ (.88)	$ (1.63)	$ (.47)
Net loss	(1.50)	(2.16)	(.47)
Capital expenditures	$ 85.2	$ 48.0	$ 36.9
Cash, cash equivalents and current marketable securities	$ 187.9	$ 147.6	$ 156.3
Total debt	$ 1,035.3	$ 870.9	$ 789.6
Net debt [1]	$ 847.7	$ 723.2	$ 633.4
EBITDA [2]	$ 115.1	$ 67.2	$ 101.3
Operational data (in metric tons):			
TiO_2 sales volumes	336,000	346,000	376,000
TiO_2 production volumes	358,000	352,000	357,000

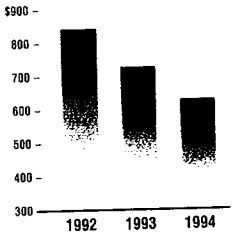
(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization.

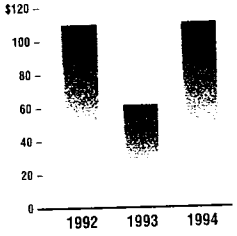
TiO_2 Sales Volume
(MT in thousands)



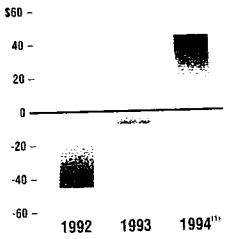
Net Debt
($ in millions)



Operating Income
($ in millions)



Cash Flow from Operating Activities
($ in millions)



[1] Excludes German tentative tax refunds.

TO OUR SHAREHOLDERS

The 1994 results for NL Industries, Inc. reflect the end of the cyclical downtrend in our titanium dioxide pigments ("TiO_2") market that began in early 1990. While our results of operations in 1994 were far from satisfactory, they represent a significant improvement over 1993.

The generally strong economic growth in the United States, Europe and the Far East helped push industry worldwide capacity utilization for TiO_2 to an estimated 92% in 1994. As a result, beginning in late 1993, TiO_2 product prices began to rise. During 1994, Kronos' average TiO_2 prices increased 3% over 1993 and, by the end of 1994, prices were 6% above year-end 1993 prices. It appears that the bottom of the last cycle was during the third quarter of 1993. Prices have risen 10% since then.

As a result of these price increases, TiO_2 sales volume growth and record operating income at Rheox, in the fourth quarter of 1994 we reported our first quarter of net income in three years.

As a result of price increases, TiO_2 sales volume growth and record operating income at Rheox, in the fourth quarter of 1994 we reported our first quarter of net income in three years.

During 1994, Kronos achieved record TiO_2 sales volumes of 376,000 metric tons, a 9% increase over 1993. Sales volume increases were experienced in the North American and European markets and other regions. The combination of slightly higher TiO_2 prices, sales volume increases and continued emphasis on cost controls enabled Kronos to increase its operating income by 123% in 1994.

In the last five years, Kronos invested over $375 million in capital expenditures in its TiO_2 business. Continuing the commitment to its TiO_2 business, the Board of Directors recently approved a $100 million capital expenditure program ($66 million spending in 1995) which includes $25 million related to a debottlenecking project at our Leverkusen, Germany chloride process facility that will add approximately 20,000 metric tons of annual capacity in 1997.

In 1994, Rheox achieved a record level of operating income of $31 million. Rheox continues to focus on new product introductions within the growing water-based applications market. In 1994, Rheox introduced 14 new water-based products, and water-based products now account for 16% of its worldwide sales revenues.

NL's balance sheet improved in 1994 as net debt was reduced by $90 million, aided by the receipt of $136 million in tentative tax refunds from the German government. A significant

portion of the refunds were used to reduce our DM revolving and term loan in Germany. The examination of our German tax returns is continuing and additional substantial proposed assessments are expected. Although we expect ultimately to prevail, the Company may have to grant additional security during what may be a lengthy process to resolve these tax matters. Our liquidity position has improved, with over $150 million in cash, cash equivalents and current marketable securities and $129 million in available credit capacity at year end. We remain focused on our goal of reducing debt levels.

While our belief that the TiO_2 industry has significant long-term growth potential has not wavered during the recent difficult years, it is a welcome relief to be beginning what we hope is an extended period of improving market conditions.

While our belief that the TiO_2 industry has significant long-term growth potential has not wavered during the recent difficult years, it is a welcome relief to be beginning what we hope is an extended period of improving market conditions. Recent debottlenecking announcements, including our own, appear to add a level of additional supply that should not change the near-term capacity utilization landscape.

We believe that capacity utilization should be in the high 90% level for the next several years and, as a result, the industry should do quite well. We expect these factors to enable NL to be profitable in 1995 and, if sustained for the next several years, we will be able to strengthen our financial position.

Harold Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

KRONOS

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2"), with annual production capacity of approximately 380,000 metric tons. TiO_2 provides whiteness, brightness and opacity to a wide range of end-use products, including paints, plastics, papers, textiles, inks and ceramics.

Kronos has played a leading role in the development of the worldwide TiO_2 industry, with its predecessors first commercializing TiO_2 during the early 1920s in both the United States and Europe. Since then, Kronos has refined its technology and expanded its manufacturing capabilities to include six manufacturing facilities located in five countries – Germany, Belgium, Norway, Canada and the United States, and an ilmenite mine located in Norway.

Kronos has 11% of the worldwide TiO_2 market. Its largest markets are in Europe and North America. These two markets are the world's largest consumers of TiO_2 and Kronos improved its market position in each during 1994. Kronos' improved sales volumes throughout the world were aided by a wide range of high quality products.

Kronos' operating profits are highly dependent on the selling price of TiO_2. Selling prices are strongly influenced by the supply and demand for TiO_2 and, historically, have been cyclical. These cycles generally last for several years. During 1994, the average selling price of TiO_2 began to rise for the first time in four years, and Kronos believes that the cyclical upturn should last for several years.

Kronos uses both the chloride and sulfate production processes to manufacture over forty grades of its TiO_2 for a broad range of applications. Approximately two-thirds of Kronos' production is based upon the chloride process. While the pigments produced by the two processes are generally interchangeable, chloride process pigments are generally preferred by Kronos' larger customers. Kronos is particularly strong in plastics applications where it has a widely-accepted product line.

Kronos operates a rock ilmenite mine in Norway that provides all of Kronos' feedstock for its European sulfate process pigment plants. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers, supplying nearly 40% of the Western European demand for sulfate process feedstock.

Kronos constantly works to improve both its chloride and sulfate technologies through focused research and development programs. During the past several years, Kronos increased output at each of its four chloride process pigment plants, including its 50%-owned Lake Charles, Louisiana plant, so that all plants exceed original design capacity. These plant improvements were accomplished with comparatively modest capital expenditures. Kronos plans to spend $25 million in capital expenditures over the next three years for a debottlenecking project at its Leverkusen, Germany chloride process plant that is expected to increase its annual attainable production capacity by approximately 20,000 metric tons in 1997.

Kronos' water treatment chemicals business has successfully developed an extensive sales program in Europe for the iron salts which result from both the chloride and sulfate processes. By converting the iron compounds to commercial products, disposal costs are reduced and additional revenue is generated.

RHEOX

Rheox manufactures and sells a wide variety of specialty chemicals to the paint, ink, lubricant, oil drilling, adhesives, sealants, household and personal care markets throughout the world. Rheox specialty chemicals are additives which modify the rheological properties of the many products sold in those markets. For example, Rheox products improve the appearance of trade paints and industrial finishes and make it possible to change oil into grease lubricants.

Rheox products are used to modify end-products made from either an oil or water base. Worldwide sales volume in 1994 increased 9% over 1993. The majority of the sales were solvent-based products. Rheox continues to place an increasing amount of emphasis on the development of products for the water-based markets. About 16% of Rheox's sales revenue worldwide are derived from this end use.

Rheox manufactures its products in five plants located in the United States and Europe, its key market areas. All five plants have the worldwide-respected quality approval of ISO 9001 or 9002. This quality status is highly desired by customers who are demanding more stringent quality performance throughout the world.

Rheox owns a mine in California which produces hectorite clays, a major raw material in our manufacturing process. The mine is believed to be the largest known commercial hectorite clay deposit in the world, assuring Rheox a stable low cost supply of this raw material. Quaternary amines, another primary raw material, are purchased from Enenco, a 50%-owned joint venture company.

A key Rheox strength is the extensive technical support given to customers from our laboratories in the United States and Germany. These laboratories are staffed with specialists from many of the industries served and they provide opportunities for our customers to develop improved products. An important part of the customer interface is a dedicated sales force in both North America and Europe. In addition, about 70 agents worldwide promote Rheox's products.

Rheox commercialized 14 new products in 1994 for the coatings, construction, ink, grease and oil drilling markets. Among the new introductions are products for water-based coatings which have zero organic volatiles ("no VOC") and a family of liquid thickeners for the industrial coatings and polyester markets which also have no VOC.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required] - For the fiscal year ended December 31, 1994

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-640

NL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	13-5267260 (IRS Employer Identification No.)
16825 Northchase Drive, Suite 1200, Houston, Texas (Address of principal executive offices)	77060 (Zip Code)

Registrant's telephone number, including area code: (713) 423-3300

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	New York Stock Exchange Pacific Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes X No ___

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

As of February 28, 1995, 51,052,443 shares of common stock were outstanding. The aggregate market value of the 15,091,253 shares of voting stock held by nonaffiliates as of such date approximated $179 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a New Jersey corporation in 1891, conducts its operations through its principal wholly-owned subsidiaries, Kronos, Inc. and Rheox, Inc. Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 52% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 90% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President and Chief Executive Officer of each of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company".

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2") with an estimated 11% share of the worldwide market. Approximately one-half of Kronos' 1994 sales volume was in Europe, where Kronos is the second largest producer of TiO_2. Kronos accounted for 87% of the Company's sales and 72% of its operating income in 1994. Rheox is the world's largest producer of rheological additives for solvent-based systems, supplying an estimated 40% of the worldwide market.

The Company's objectives are to (i) focus on continued cost control, (ii) deleverage during the current up cycle and (iii) invest in certain cost effective debottlenecking projects to increase TiO_2 production capacity.

Kronos

Industry

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide range of products, including paints, paper, plastics, fibers and ceramics. TiO_2 is considered to be a "quality-of-life" product with demand affected by the gross domestic product in various regions of the world.

Demand, supply and pricing of TiO_2 have historically been cyclical. The last cyclical peak for TiO_2 prices occurred in early 1990 with a cyclical low point reached in the third quarter of 1993. The Company's average selling prices for TiO_2 began an upward trend during 1994 and prices at the end of 1994 were about 10% higher than the 1993 low point, but were still approximately 26% below those of the last cyclical peak in 1990.

The Company believes that the TiO_2 industry has significant long-term potential. During the early 1990s, the TiO_2 industry operated at lower capacity utilization levels relative to the high utilization levels prevalent during the late 1980s, in part because of the slow recovery from the worldwide recession but primarily due to the impact of capacity additions since the late 1980s. The

Company expects that the TiO_2 industry will recover more slowly compared with the previous recovery in the late 1980s, primarily because of the more gradual nature of recent growth of the worldwide economy and the impact of capacity additions since the late 1980s. Recent improvements in economic growth rates have resulted in increased demand for TiO_2. Industry capacity utilization, which the Company believes was less than 90% during 1990 through 1993, was about 92% in 1994 and is continuing to rise due to improved demand.

Kronos has an estimated 18% share of European TiO_2 sales and an estimated 9% share of U.S. TiO_2 sales. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. If the economies in Eastern Europe, the Far East and China continue to develop, a significant market for TiO_2 could emerge in those countries and Kronos believes that it is well positioned to participate in growth in the Eastern European market. Geographic segment information is contained in Note 3 to the Consolidated Financial Statements.

Products and operations

The Company believes that there are no effective substitutes for TiO_2. However, extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used in a number of Kronos' markets. Generally, extenders are used to reduce to some extent the utilization of higher cost TiO_2. The use of extenders has not significantly affected TiO_2 consumption over the past decade because extenders generally have, to date, failed to match the performance characteristics of TiO_2. The Company believes that the use of extenders will not materially alter the growth of the TiO_2 business in the foreseeable future.

Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos' major customers include international paint, paper and plastics manufacturers.

Kronos is one of the world's leading producers and marketers of TiO_2. Kronos and its distributors and agents sell and provide technical services for its products to over 5,000 customers with the majority of sales in Europe, the United States and Canada.

Kronos' international operations are conducted through Kronos International, Inc. ("KII"), a German-based holding company formed in 1989 to manage and coordinate the Company's manufacturing operations in Germany, Canada, Belgium and Norway, and its sales and marketing activities in over 100 countries worldwide. The Company believes that KII's structure allows it to capitalize on expertise and technology developed in Germany over a 60-year period.

Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets. By volume, one-half of Kronos' 1994 TiO_2 sales were to Europe, with 36% to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ore (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived from co-products of the pigment production processes). Water treatment chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using either the chloride or sulfate pigment production process. Although most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred in certain segments of the coatings and plastics applications, and sulfate process pigments are generally preferred for paper, fibers and ceramics applications. Due to environmental factors and customer considerations, the proportion of TiO_2 industry sales represented by chloride process pigments has increased relative to sulfate process pigments in the past few years. Approximately two-thirds of Kronos' current production capacity is based on an efficient chloride process technology.

Kronos produced 357,000 metric tons of TiO_2 in 1994, compared to 352,000 metric tons in 1993 and 358,000 metric tons in 1992. Kronos believes its annual attainable production capacity is approximately 380,000 metric tons, including its one-half interest in the joint venture-owned Louisiana plant (see "TiO_2 manufacturing joint venture"). The Company plans to spend $25 million in capital expenditures over the next three years for a debottlenecking project at its Leverkusen, Germany chloride process plant that is expected to increase the Company's annual attainable production capacity by 20,000 metric tons to approximately 400,000 tons in 1997.

The primary raw materials used in the TiO_2 chloride production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and rutile. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Ltd. (South Africa), approximately 50% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp. Natural rutile ore is purchased primarily from suppliers located in Australia and Africa.

The primary raw materials used in the TiO_2 sulfate production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided all of Kronos' feedstock for its European sulfate process pigment plants in 1994. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe. The Company believes it supplies nearly 40% of the Western European demand, including the Company, for sulfate feedstock. Kronos also purchases sulfate grade slag under contracts negotiated annually with QIT and Tinfos Titanium and Iron K/S.

Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate in the near term; however, tightening supplies for the chloride process may be encountered in the late 1990s. Kronos does not anticipate experiencing any interruptions of its raw material supplies.

TiO_2 manufacturing joint venture

In October 1993, Kronos formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). The joint venture, which is equally owned by subsidiaries of Kronos and Tioxide (the "Partners"), owns and operates the Louisiana chloride process TiO_2 plant formerly owned by Kronos. Production from the plant is shared equally by Kronos and Tioxide pursuant to separate offtake agreements.

A supervisory committee, composed of four members, two of whom are appointed by each Partner, directs the business and affairs of the joint venture, including production and output decisions. Two general managers, one appointed and compensated by each Partner, manage the day-to-day operations of the joint venture acting under the direction of the supervisory committee.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity and customers generally were served on an allocation basis. During the early 1990s, supply exceeded demand, primarily due to new chloride process capacity coming on-stream. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980s, had a negative impact during the recent downward cycle. During 1994, demand growth resulting from improved economic conditions, coupled with limited capacity increases, improved industry capacity utilization to about 92% and resulted in increases in worldwide prices. During the last upturn cycle, which ended in early 1990, peak average TiO_2 prices were about 70% higher than the previous trough.

New plant capacity additions in the worldwide TiO_2 market are slow to develop because of the significant capital expenditures and substantial lead time (typically three to five years in the Company's experience) for, among other things, planning, obtaining environmental approvals and construction.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and substantially all of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada.

Kronos' principal competitors are E.I. du Pont de Nemours & Co. ("DuPont"); Imperial Chemical Industries PLC (Tioxide); Hanson PLC (SCM Chemicals); Kemira Oy; Ishihara Sangyo Kaisha, Ltd.; Bayer AG; Thann et Mulhouse; and Kerr-McGee Corporation. These eight competitors have estimated individual worldwide market shares ranging from 4% to 21%, and an estimated aggregate 74% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is Kronos' principal North American competitor.

Kronos has completed a major environmental protection and improvement program that commenced in the early 1980s to replace or modify its TiO_2 production facilities for compliance with various environmental laws by their respective effective dates. All of Kronos' plants now use either the low waste-yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Although these upgrades increased operating costs, they are expected to reduce future capital expenditures that Kronos would otherwise need to incur as environmental standards are increased. See "Regulatory and Environmental Matters".

Rheox

Products and operations

Rheological additives control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays which have been chemically reacted with organic chemicals and compounds. Rheox produces rheological additives for both solvent-based and water-based systems. Rheox believes it is the world's largest producer of rheological additives for solvent-based systems, supplying approximately 40% of the worldwide market, and is also a supplier of rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for 84% of Rheox's sales in 1994, with the remainder being principally rheological additives for water-based systems. Rheox introduced a number of new products during the past three years, many of which are for water-based systems, which currently represent a larger portion of the market than solvent-based systems. As a result, the portion of Rheox's sales representing additives for water-based systems has increased from 10% to 16% during the past few years. The Company believes water-based additives will account for an increasing portion of the market in the long term. Rheox also focused on product development for environmental applications with new products introduced for non-volatile additives in both water-based and solvent-based coatings.

Sales of rheological additives generally follow overall economic growth in Rheox's principal markets and are influenced by the volume of shipments of the worldwide coatings industry. Since Rheox's rheological additives are used in industrial coatings, plant and equipment spending has an influence on demand for this product line.

Manufacturing process and raw materials

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with a subsidiary of Dresser Industries, Inc. ("Dresser"), which has significant bentonite reserves in

Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future, and Dresser's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from Company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of hectorite clays in the world. Quaternary amines are purchased primarily from a joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Competition

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors for rheological additives for solvent-based systems are Laporte PLC and Sud-Chemie AG. Rheox's principal competitors for water-based systems are Rohm and Haas Company, Hercules Incorporated, The Dow Chemical Company and Union Carbide Corporation.

Research and Development

The Company's annual expenditures for research and development and technical support programs have averaged approximately $10 million annually during the past three years with Kronos accounting for approximately three-quarters of the annual spending. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are directed primarily toward improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to rheological additives are conducted primarily in the United States and are directed towards the development of new products for water-based systems, environmental applications and new end-use applications for existing product lines.

Patents and Trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the formation of the manufacturing joint venture with Tioxide, Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Use by each recipient of the other's technology in Europe is restricted until October 1996. See "Kronos - TiO_2 manufacturing joint venture".

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign Operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada, and approximately one-third of Rheox's sales in the past three years have been attributable to European production. Approximately three-quarters of the Company's 1994 consolidated sales were attributable to non-U.S. customers, including 13% attributable to customers in areas other than Europe and Canada. Foreign operations are subject to, among other things, currency exchange rate fluctuations and the Company's results of operations have in the past been both favorably and unfavorably affected by fluctuations in currency exchange rates. Effects of fluctuations in currency exchange rates on the Company's results of operations are discussed in Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Political and economic uncertainties in certain of the countries in which the Company operates may expose it to risk of loss. The Company does not believe that there is currently any likelihood of material loss through political or economic instability, seizure, nationalization or similar event. The Company cannot predict, however, whether events of this type in the future could have a material effect on its operations. The Company's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and Environmental Matters".

Customer Base and Seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1994, the Company employed approximately 3,100 persons (down from approximately 3,200 at December 31, 1993), excluding the joint venture employees, with approximately 400 employees in the United States and approximately 2,700 at sites outside the United States. Hourly employees in production facilities worldwide are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and Environmental Matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain past and current operations and products of the Company have the potential to cause environmental or other damage. The Company has implemented and continues to implement various policies and programs in an effort to minimize these risks. The policy of the Company is to achieve compliance with applicable environmental laws and regulations at all its facilities and to strive to improve its environmental performance. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could adversely affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. manufacturing operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants and the Louisiana plant owned and operated by the joint venture are in substantial compliance with applicable requirements of these laws. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the plants to operate. The Company believes that all its plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory denominator is provided by the European Union (the "EU"). Germany, Belgium and the United Kingdom, members of the EU, follow the initiatives of the EU. Norway, although not a member, generally patterns its environmental regulatory actions after the EU. The Company believes that Kronos is in substantial compliance with agreements reached with European environmental authorities and with an EU directive to control the effluents produced by TiO_2 production facilities. The Company believes that Rheox is in substantial compliance with the environmental regulations in Germany and the United Kingdom.

In order to reduce sulfur dioxide emissions into the atmosphere, Kronos is currently installing off-gas desulfurization systems at its German and Norwegian plants at an estimated cost of $32 million and expects to complete the systems in 1996. Kronos intends to install a $10 million off-gas desulfurization system at its Belgian plant by 1998. The manufacturing joint venture has installed a $17 million off-gas desulfurization system at the Louisiana plant which commenced operation in early 1995. In addition, Kronos expects to complete an $11 million water treatment chemical purification project at its Leverkusen, Germany facility in 1996.

Kronos' ilmenite mine near Hauge i Dalane had a permit for the offshore disposal of tailings through February 1994. In February 1994, Kronos completed an onshore disposal system to replace the offshore disposal of tailings.

The Quebec provincial government has environmental regulatory authority over Kronos' Canadian chloride and sulfate process TiO_2 production facilities in Varennes, Quebec. The provincial government regulates discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos' right to discharge effluents from its Canadian sulfate process TiO_2 plant into the St. Lawrence River until June 1994. Kronos completed a new $25 million waste acid neutralization facility and discontinued discharging waste acid effluents into the St. Lawrence River in June 1994. Notwithstanding the above-described agreement, in March 1993 Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate process TiO_2 production facility. The penalty for these violations, if proven, could be up to Canadian $15 million. Additional charges, if brought, could involve additional penalties. The Company has moved to dismiss the case. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above.

The Company's future capital expenditures related to its ongoing environmental protection and improvement program are currently expected to be approximately $57 million, including $33 million in 1995.

The Company has been named as a defendant, potentially responsible party ("PRP"), or both, pursuant to CERCLA and similar state laws, in approximately 80 governmental enforcement and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, many of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List or similar state lists. See Item 3 - "Legal Proceedings".

ITEM 2. PROPERTIES

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, Kronos has a facility in Varennes, Quebec, Canada and, through the manufacturing joint venture described above, a one-half interest in a plant in Lake Charles, Louisiana which commenced production in 1992. Certain of the Company's properties collateralize long-term debt agreements. See Note 10 to the Consolidated Financial Statements.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreement restrict Kronos' ability to transfer ownership or use of the Leverkusen facility.

All of Kronos' principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession with an unlimited term to operate its ilmenite mine in Norway.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany. All of such production facilities are owned.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. Considering the Company's previous involvement in the lead pigment and lead-based paint businesses, there can be no assurance that additional litigation, similar to that described below, will not be filed. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed that seek to (a) impose various obligations on present and former manufacturers of lead pigment and lead-based paint with respect to asserted health concerns associated with the use of such products and (b) effectively overturn court decisions in which the Company and other pigment manufacturers have been successful. One such bill that would subject lead pigment manufacturers to civil liability for damages caused by lead-based paint on the basis of market share, and that extends certain statutes of limitations, passed the Massachusetts House of Representatives in 1993. The same bill, reintroduced in the Massachusetts legislature in 1994 and defeated in the House of Representatives, was again reintroduced in 1995. No legislation or regulations have been enacted to date which are expected to have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability, if any, that may result is not reasonably capable of estimation.

In 1989 and 1990, the Housing Authority of New Orleans ("HANO") filed third-party complaints for indemnity and/or contribution against the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA") in 14 actions commenced by residents of HANO units seeking compensatory and punitive damages for injuries allegedly caused by lead pigment. The actions in the Civil District Court for the Parish of Orleans, State of Louisiana were dismissed by the district court in 1990. Subsequently, HANO agreed to consolidate all the cases and appealed eleven of them. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other eight cases included in the appeal, the court of appeals reversed the lower court decision dismissing the cases due to inadequate pleading of facts. These eight cases have been remanded to the district court for further proceedings. In November 1994, the district court granted defendants' motion for summary judgment in one of the eight remaining cases.

In December 1991, the Company received a copy of a complaint filed in the Civil District Court for the Parish of Orleans seeking indemnification and/or contribution against the Company and eight other defendants for approximately $4.5 million in settlements paid to HANO residents (*Housing Authority of New Orleans v. Hoechst Celanese Corp., et al.*, No. 91-28067). These claims appear to be based upon the same theories which HANO had previously filed. The Company has not been served.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability and denied the remainder of the motion. In January 1992, defendants appealed the denial. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In December 1992, plaintiffs filed a motion to stay the claims of the City of New York and the New York City Health and Hospitals Corporation pending resolution of the Housing Authority's claim. In May 1993, the Appellate Division of the Supreme Court affirmed the denial of the motion to dismiss plaintiffs' fraud, restitution, conspiracy and concert of action claims. In August 1993, the defendants' motion for leave to appeal was denied. In May 1994, the trial court granted the defendants' motion to dismiss the plaintiffs' restitution and indemnification claims, and plaintiffs have appealed. Defendants have moved for summary judgment on the remaining fraud claim.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the Philadelphia Housing Authority and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel has asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. In April 1994, the court granted defendants' motion for summary judgment and plaintiffs appealed that decision in June 1994.

In August 1992, the Company was named as a defendant and served with an amended complaint in *Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative

liability. In October 1992, the Company and the other defendants moved to dismiss the complaint with prejudice. In July 1993, the court dismissed the complaint. In December 1994, the Ohio Court of Appeals reversed the trial court dismissal and remanded the case to the trial court.

In November 1993, the Company was served with a complaint in *Brenner, et al. v. American Cyanamid, et al.*, Supreme Court, State of New York, Erie County alleging injuries to two children purportedly caused by lead pigment. The complaint seeks $24 million in compensatory and $10 million in punitive damages for alleged negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, and alternative liability. In January 1994, the Company answered the complaint, denying liability. Discovery is proceeding.

In January 1995, the Company was served with complaints in *Wright (Alvin)* and *Wright (Allen) v. Lead Industries, et. al.*, (Nos. 94-363042 and 363043), Circuit Court, Baltimore City, Maryland. Plaintiffs are two brothers (one deceased) who allege injuries due to exposure to lead pigment. Each complaint seeks more than $100 million in compensatory and punitive damages for alleged strict liability, breach of warranty, negligence, conspiracy and fraud claims.

The Company believes that the foregoing lead pigment actions are without merit and intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously.

The Company has filed declaratory judgment actions against various insurance carriers seeking costs of defense and indemnity coverage for certain of its environmental and lead pigment litigation. *NL Industries, Inc. v. Commercial Union Insurance Cos., et al.*, Nos. 90-2124, -2125 (HLS). In May 1990, the Company filed an action in the United States District Court for the District of New Jersey against Commercial Union Insurance Company ("Commercial Union") seeking to recover defense costs incurred in the *City of New York* lead pigment case and two other cases which have since been resolved in the Company's favor. In July 1991, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the Company's reasonable defense costs for such cases. In June 1992, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Commercial Union seeking to recover costs incurred in defending four additional lead pigment cases which have since been resolved in the Company's favor. In August 1993, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the reasonable costs of defending those cases. In July 1994, the court entered judgment on the order requiring Commercial Union to pay previously-incurred Company costs in defending those cases. Commercial Union has appealed. Other than a magistrate's recommendation to grant motions for summary judgment brought by two excess insurance carriers, which contended that their policies contained unique pollution exclusion language, and a grant by the court of certain motions regarding policy periods, the court has not made any rulings on defense costs or indemnity coverage with respect to the Company's pending environmental litigation or on indemnity coverage in the lead pigment litigation. No trial dates have been set. Other than rulings to date, the issue of whether insurance coverage for defense costs or indemnity or both will be found to exist depends upon a variety of factors, and there can be no assurance that such insurance coverage will exist in other cases. The Company has not considered any insurance recoveries for lead pigment or environmental litigation in determining related accruals.

Environmental matters and litigation

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws in approximately 80 governmental and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage, or both. Certain of these proceedings involve claims for substantial amounts. Although the Company may be jointly and severally liable for such costs, in most cases it is only one of a number of PRPs who are also jointly and severally liable. In addition to the matters noted above, certain current and former facilities of the Company, including several divested secondary lead smelter and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities.

The extent of CERCLA liability cannot be determined until the Remedial Investigation and Feasibility Study ("RIFS") is complete, the U.S. EPA issues a record of decision and costs are allocated among PRPs. The extent of liability under analogous state cleanup statutes and for common law equivalents are subject to similar uncertainties. The Company believes it has provided adequate accruals for reasonably estimable costs for CERCLA matters and other environmental liabilities. At December 31, 1994, the Company had accrued $87 million in respect of those environmental matters which are reasonably estimable. The Company determines the amount of accrual on a quarterly basis by analyzing and estimating the range of possible costs to the Company. Such costs include, among other things, remedial investigations, monitoring, studies, clean-up, removal and remediation. It is not possible to estimate the range of costs for certain sites. The Company has estimated that the upper end of the range of reasonably possible costs to the Company for sites for which it is possible to estimate costs is approximately $160 million. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future. More detailed descriptions of certain legal proceedings relating to environmental matters are set forth below.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

At Pedricktown, the U.S. EPA divided the site into two operable units. Operable unit one covers contaminated ground water, surface water, soils and stream sediments. The Company submitted the final RIFS for operable unit one to the U.S. EPA in May 1993. In July 1994, the U.S. EPA issued the Record of Decision for operable unit one. The U.S. EPA estimates the cost to complete operable unit one is $18.7 million. The U.S. EPA has not yet issued a notice or an order requiring implementation of operable unit one. In addition, the U.S. EPA has completed the fifth phase of a removal action on the soils and sediments of a stream at the site, at an estimated total cost of $2 million. The U.S. EPA issued a Unilateral Administrative Order (Index No. II-CERCLA 20205) with respect to operable unit two in March 1992 to the Company and 30 other PRPs directing immediate removal activities including the cleanup of waste, surface water and building surfaces. The Company has complied with the order, and the work with respect to operable unit two is nearing completion. The Company has paid approximately 50% of operable unit two costs, or $2.5 million.

At Granite City, the RIFS is complete, and in 1990 the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others (*United States of America v. NL Industries, Inc., et al.*, Civ. No. 91-CV 00578) with respect to the Granite City smelter. The complaint seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was invalid, arbitrary, capricious and not in accordance with law. The complaint also seeks recovery of past costs of $.3 million and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. In August 1994, when the U.S. EPA reinitiated the residential yard soils remediation in Granite City after an agreed-upon stay of the cleanup pending completion of a health study and reopening of the administrative record, the PRPs and the City of Granite City sought an injunction against the U.S. EPA to prevent further cleanup until after the record was reopened for submittal of additional comments on the selected remedy. In October 1994, the U.S. EPA issued its proposed plan for addressing residential yard soils in Granite City. The U.S. EPA presented no estimate of costs for this work. The administrative record was reopened for public comment, and the Company, along with other PRPs, submitted extensive comments on the proposed residential soils cleanup plan. In February 1995, the U.S. EPA issued its proposed plan for the Main Industrial Area, the remaining remote fill areas and ground water at the site, which is estimated by the U. S. EPA to cost approximately $9.2 million. The administrative record has been reopened for public comments on this phase of the cleanup.

Having completed the RIFS at Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc.*, Civ. No. 89-408, United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notices of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, which was initially estimated to cost approximately

$17 million, exclusive of administrative and overhead costs and any additional costs, for the disposition of recycled materials from the site. In January 1992, the U.S. EPA issued unilateral administrative orders Docket No. 1091-01-10-106 to the Company and six other PRPs directing the performance of the remedy. The Company and the other PRPs commenced performance of the remedy and, through December 31, 1994, the Company and the other PRPs had spent approximately $18 million. Based upon site operations to date, the remedy is not proceeding in accordance with engineering expectations or cost projections; therefore, the Company and the other PRPs have met with the U.S. EPA to discuss alternative remedies for the site. The U.S. EPA authorized the Company and the other PRPs to cease performing most aspects of the selected remedy. In September 1994, the Company and the other PRPs submitted a focused feasibility study ("FFS") to the U.S. EPA, which proposes alternative remedies for the site. The U.S. EPA is considering the alternatives proposed in the FFS. Pursuant to an interim allocation, the Company's share of remedial costs is approximately 50%. In November 1991, Gould, Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.*, No. 91-1091, United States District Court for the District of Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and $5 million in punitive damages. The court granted Gould's motion to amend the complaint to add additional defendants (adjoining current and former landowners) and third party defendants (generators). The amended complaint deletes the fraud and punitive damages claims asserted against NL; thus, the pending action is essentially one for reallocation of past and future cleanup costs. In March 1993, the parties agreed to a case management order limiting discovery until 1995. In December 1994, Gould amended its complaint adding approximately 15 additional generator defendants and two additional owner/operator defendants. Discovery is proceeding. A trial date has been tentatively set for September 1996.

There are several actions pending relating to alleged contamination at other properties formerly owned or operated by the Company or its subsidiaries or their predecessors. In one of those cases, suit was filed in November 1992 against the Company asserting claims arising out of the sale of a former business of the Company to Exxon Chemical Company (*Exxon Chemical Company v. NL Industries, Inc.*, United States District Court for the Southern District of Texas, No. H-92-3360). The action sought contractual indemnification, contribution under CERCLA for costs associated with the environmental assessment and cleanup at nine properties included in the sale, a declaration of liability for future environmental cleanup costs, and punitive damages for fraud. Plaintiff asserted that past and future cleanup costs, business interruption, and asset value losses and legal and site assessment costs were approximately $25 million. In December 1994, this matter was settled within previously accrued amounts.

The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc. A predecessor of the Company mined at the Baxter Springs subsite, where it is the largest viable PRP. The final RIFS was submitted to the U.S. EPA in May 1993. In August 1994, the U.S. EPA issued its proposed plan for the cleanup of the Baxter Springs and Treece sites in Cherokee County. The proposed remedy is estimated by U.S. EPA to cost $6 million.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois (*People of the State of Illinois v. NL Industries, et al.*, No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.3 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. In December 1993, the trial court denied the State's petition to reinstate the complaint, and dismissed the case with prejudice. The State's appeal of this ruling is pending.

In 1980, the State of New York commenced litigation against the Company in connection with the operation of a plant in Colonie, New York formerly owned by the Company. *Flacke v. NL Industries, Inc.*, No. 1842-80 ("Flacke I") and *Flacke v. Federal Insurance Company and NL Industries, Inc.*, No. 3131-92 ("Flacke II"), New York Supreme Court, Albany County. The plant manufactured military and civilian products from depleted uranium and was acquired from the Company by the U.S. Department of Energy ("DOE") in 1984. Flacke I seeks penalties for alleged violations of New York's Environmental Conservation Law, and of a consent order entered into to resolve these alleged violations. Flacke II seeks forfeiture of a $200,000 surety bond posted in connection with the consent order, plus interest from February 1980. The Company denied liability in both actions. The litigation had been inactive from 1984 until July 1993 when the State moved for partial summary judgment for approximately $1.5 million on certain of its claims in Flacke I and for summary judgment in Flacke II. In January 1994, the Company cross-moved for summary judgment in Flacke I and Flacke II. All summary judgment motions have been denied and both parties have appealed.

Residents in the vicinity of the Company's former Philadelphia lead chemicals plant commenced a class action allegedly comprised of over 7,500 individuals seeking medical monitoring and damages allegedly caused by emissions from the plant. *Wagner, et al. v. Anzon, Inc. and NL Industries, Inc.*, No. 87-4420, Court of Common Pleas, Philadelphia County. The complaint sought compensatory and punitive damages from the Company and the current owner of the plant, and alleged causes of action for, among other things, negligence, strict liability, and nuisance. A class was certified to include persons who resided, owned or rented property, or who work or have worked within up to approximately three-quarters of a mile from the plant from 1960 through the present. The Company answered the complaint, denying liability. In November 1994, the jury returned a verdict in favor of the Company. Plaintiffs have filed post-trial motions requesting a new trial. Residents also filed consolidated actions in the United States District Court for the Eastern District of Pennsylvania, *Shinozaki v. Anzon, Inc.* and *Wagner and Antczak v. Anzon and NL Industries, Inc.* Nos. 87-3441 and 87-3502. The consolidated action is a putative class action seeking CERCLA response costs, including cleanup and medical monitoring, declaratory and injunctive relief and civil penalties for alleged violations of the Resource Conservation and Recovery Act ("RCRA"), and also asserting pendent common law claims for strict liability, trespass, nuisance and punitive damages. The court dismissed the common law claims without prejudice, dismissed two of the three RCRA claims as against the Company with prejudice, and stayed the case pending the outcome of the state court litigation.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.*, Civ. No. 91-4098, seeking recovery of $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. The Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because it believed they were in conflict with California law. The Company answered the complaint denying liability. The government claims it expended in excess of $2.7 million for this matter. Trial was held in March and April 1993. In April 1994, the court entered final judgment in this matter directing the Company to pay $6.3 million plus interest. The court ruled that the Company was liable for approximately $2.7 million in response costs plus approximately $3.6 million in penalties for failure to comply with the administrative order. Both the Company and the government have appealed. In August 1994, this matter was referred to mediation, which is pending.

At a municipal and industrial waste disposal site in Batavia, New York, the Company and six others have been identified as PRPs. The U.S. EPA has divided the site into two operable units. Pursuant to an administrative consent order entered into with the U.S. EPA, the Company is conducting a RIFS for operable unit one, the closure of the industrial waste disposal section of the landfill. The Company's RIFS costs to date are approximately $2 million. In August 1994, the U.S. EPA issued the proposed plan for operable unit one, which is estimated by the U.S. EPA to cost approximately $12.3 million. The Company, along with other PRPs, submitted extensive comments on the proposed plan. With respect to the second operable unit, the extension of the municipal water supply, the U.S. EPA estimated the costs at $1 million plus annual operation and maintenance costs. The Company and the other PRPs are performing the work comprising operable unit two. The U.S. EPA has also demanded approximately $.9 million in past costs from the PRPs.

See Item 1 - "Business - Regulatory and Environmental Matters".

Other litigation

In January 1990, an action was filed in the United States District Court for the Southern District of Ohio against NLO, Inc., a subsidiary of the Company, and the Company on behalf of a putative class of former NLO employees and their families and former frequenters and invitees of the Feed Materials Production Center ("FMPC") in Ohio (*Day, et al. v. NLO, Inc.*, et al, No. C-1-90-067). The FMPC is owned by the DOE and was formerly managed under contract by NLO. The complaint seeks damages for, among other things, emotional distress and damage to personal property allegedly caused by exposure to radioactive and/or hazardous materials at the FMPC and punitive damages. This action was certified as a class action by the court. In July 1994, the parties reached a settlement agreement pursuant to which the DOE would pay all costs of the settlement and the Company and NLO were released.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses, and the disposition of past properties and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1994.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of February 28, 1995, there were approximately 10,000 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape. On February 28, 1995, the closing price of NL common stock according to the NYSE Composite Tape was $11-7/8.

	High	Low
Year ended December 31, 1993:		
First quarter	$ 6-1/8	$ 4-1/4
Second quarter	5-5/8	3-3/8
Third quarter	6-1/8	3-7/8
Fourth quarter	6	4-1/2
Year ended December 31, 1994:		
First quarter	$ 9-5/8	$ 4-3/8
Second quarter	9-1/2	6-1/8
Third quarter	11-7/8	8-3/8
Fourth quarter	13-1/4	9

The Company's Senior Notes generally limit the ability of the Company to pay dividends to 50% of consolidated net income, as defined, subsequent to October 1993. At December 31, 1994, no amounts were available for dividends.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1990	1991	1992	1993	1994
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$ 906.6	$ 840.3	$ 893.5	$ 805.3	$ 888.0
Operating income	251.1	139.0	110.7	62.4	111.4
Income (loss) from continuing operations	93.5	(24.0)	(44.6)	(83.2)	(24.0)
Net income (loss)	92.4	(16.5)	(76.4)	(109.8)	(24.0)
Per common share:					
Income (loss) from continuing operations	$ 1.42	$ (.40)	$ (.88)	$ (1.63)	$ (.47)
Net income (loss)	1.40	(.27)	(1.50)	(2.16)	(.47)
Cash dividends	$ .60	$ .60	$ .35	$ -	$ -
BALANCE SHEET DATA (at year-end):					
Cash, cash equivalents and current marketable securities	$ 443.1	$ 353.3	$ 187.9	$ 147.6	$ 156.3
Current assets	884.4	795.5	635.8	467.5	486.4
Total assets	1,966.7	1,831.0	1,472.1	1,206.5	1,162.4
Current liabilities	400.4	360.2	248.8	232.5	244.9
Long-term debt including current maturities	1,269.7	1,288.9	1,035.3	870.9	789.6
Shareholders' equity (deficit)	38.6	(58.3)	(146.3)	(264.8)	(293.1)
OTHER DATA:					
Net debt (1)	$ 867.4	$ 936.0	$ 847.7	$ 723.2	$ 633.4
EBITDA (2)	242.3	126.6	115.1	67.2	101.3
Interest expense, net (3)	60.7	59.9	104.3	95.1	78.9
Cash interest expense, net (4)	53.0	53.9	98.0	86.8	60.8
Capital expenditures	195.3	195.1	85.2	48.0	36.9
TiO_2 sales volumes (in thousands metric tons)	274	303	336	346	376
Average TiO_2 selling price index (1983=100)	175	147	139	127	131

(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization. EBITDA is presented because it is a widely accepted financial indicator of a company's ability to incur and service debt. However, EBITDA should not be considered as an alternative to (i) operating income or net income as an indicator of a company's operating performance or (ii) cash flows from operating activities as a measure of a company's liquidity.

(3) Interest expense, net represents interest expense less general corporate interest and dividend income.

(4) Cash interest expense, net represents interest expense, net less non-cash interest expense (deferred interest expense on the Senior Secured Discount Notes and amortization of deferred financing costs).

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

General

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. As discussed below, TiO_2 selling prices increased during 1994 after four consecutive years of a declining price trend. Kronos' operating income and margins improved significantly during 1994. Based on, among other things, the Company's near-term outlook for its TiO_2 business, the Company expects 1995 will be profitable with anticipated continuing improvements in TiO_2 prices and demand.

Net sales and operating income

	Years ended December 31,			% Change	
	1992	1993	1994	1993-92	1994-93
	(In millions)				
Net sales:					
Kronos	$784.6	$697.0	$770.1	-11%	+10%
Rheox	108.9	108.3	117.9	-1%	+9%
	$893.5	$805.3	$888.0	-10%	+10%
Operating income:					
Kronos	$ 81.9	$ 36.1	$ 80.5	-56%	+123%
Rheox	28.8	26.3	30.8	-9%	+17%
	$110.7	$ 62.4	$111.3	-44%	+78%
Percent change in TiO_2:					
Sales volume				+3%	+9%
Average selling prices (in billing currencies)				-8%	+3%

The improvement in Kronos' 1994 results was primarily due to higher average selling prices, higher production and sales volumes for TiO_2 and higher technology fee income. In billing currency terms, Kronos' 1994 average TiO_2 selling prices were approximately 3% higher than in 1993 and were 8% lower in 1993 compared to 1992. Average TiO_2 selling prices at year-end 1994 were 6% higher than year-earlier levels and were 10% above the low point reached in 1993.

Record sales volume of 376,000 metric tons of TiO_2 in 1994 represents an increase of 9% over 1993, with increases in Europe, North America and other regions. Due to increasing demand for TiO_2 and higher sales volumes, Kronos increased its capacity utilization to 94 after having reduced its TiO_2 production rates in response to weakened demand in late 1992 and 1993. TiO_2 sales volumes increased 3% in 1993 over 1992, as increases in North American sales volumes were partially offset by declining sales volumes in European markets. Approximately one-half of Kronos' 1994 TiO_2 sales, by volume, were attributable to markets in Europe with approximately 36% attributable to North America and the balance to other regions.

As a result of Kronos' continued emphasis on cost reduction and containment efforts, Kronos' unit production costs decreased slightly in 1994 and were only slightly higher in 1993 compared to year-earlier levels.

Demand, supply and pricing of TiO_2 have historically been cyclical and the last cyclical peak for TiO_2 prices occurred in early 1990. Kronos believes that its operating income and margins for 1995 will be higher than in 1994 due principally to the net effect of higher average TiO_2 selling prices and slightly higher sales and production volumes, offset in part by increased raw material costs.

Rheox's operating income improved in 1994 compared to 1993 due to higher sales volumes and lower operating costs. Operating costs increased during 1993 over 1992, contributing to the decline in Rheox's 1993 operating income. Changes in currency exchange rates had a slightly positive effect on sales and operating income in 1994 and a negative effect in 1993 compared to the respective prior year.

The Company has substantial operations and assets located outside the United States (principally Germany, Norway, Belgium and Canada). The U.S. dollar value of the Company's foreign sales and operating costs are subject to currency exchange rate fluctuations which may favorably or adversely impact reported earnings and effect the comparability of period to period operating results. A significant amount of the Company's sales are denominated in currencies other than the U.S. dollar (67% in 1994), principally major European currencies and the Canadian dollar. Certain raw materials, primarily titanium-containing feedstocks, are purchased in U.S. dollars, while labor and other production costs are primarily denominated in the local currency. Fluctuations in the value of the U.S. dollar relative to other currencies decreased 1994 sales by $2 million compared to 1993 and decreased 1993 sales by $45 million compared to 1992.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Change	
	1992	1993	1994	1993-92	1994-93
	(In millions)				
Securities earnings	$ 8.2	$ 8.5	$ 3.9	$ .3	$(4.6)
Corporate expenses, net	(43.4)	(41.5)	(44.7)	1.9	(3.2)
Interest expense	(118.5)	(99.1)	(83.9)	19.4	15.2
	$(153.7)	$(132.1)	$(124.7)	$21.6	$ 7.4

Securities earnings fluctuate in part based upon the amount of funds invested and yields thereon. Amounts available for investment have declined over the past two years. Corporate expenses, net, in 1994 were slightly higher compared with 1993 as a $20 million gain related to the first quarter 1994 settlement of the Company's lawsuit against Lockheed Corporation was offset by increases in provisions for environmental remediation and litigation costs. Corporate expenses were slightly lower in 1993 compared to 1992 as a $4 million increase in environmental remediation costs was more than offset by a $9 million reduction in certain proxy solicitation and litigation settlement expenses.

Interest expense

Lower levels of debt in 1993 and 1994, principally Kronos' Deutsche mark-denominated debt, and lower interest rates on such debt reduced interest expense in 1993 and 1994 compared to the respective prior-year periods. In addition, 1992 interest expense reflected the benefit of $9 million of capitalized interest related principally to the Louisiana plant completed in March 1992.

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In each of the past three years, the geographic mix, including losses in certain jurisdictions for which no current refund was available and in which recognition of a deferred tax asset is not currently considered appropriate, contributed significantly to the Company's effective tax rate varying from a normally-expected rate. The Company's deferred income tax status at December 31, 1994 is discussed in "Liquidity and Capital Resources".

Extraordinary item

See Note 16 to the Consolidated Financial Statements.

Changes in accounting principles

See Notes 2 and 19 to the Consolidated Financial Statements.

LIQUIDITY AND CAPITAL RESOURCES

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1992	1993	1994
		(In millions)	
Net cash provided (used) by:			
Operating activities	$ (44.7)	$ (7.3)	$ 181.7
Investing activities	234.9	181.9	(32.8)
Financing activities	(223.1)	(155.3)	(132.1)
Net cash provided (used) by operating, investing and financing activities	$ (32.9)	$ 19.3	$ 16.8

The TiO_2 industry is cyclical, with the previous peak in selling prices in early 1990 and the latest trough in the third quarter of 1993. During the recent TiO_2 down cycle, the Company's operations used significant amounts of cash. Receipt of the German tentative tax refund, discussed below, significantly increased the Company's cash flow from operating activities during 1994 and was a major factor in the Company's improved liquidity. The relative changes in the Company's inventories, receivables and payables (excluding the effect of currency translation) also contributed to the cash provided by operations. A $30 million technology exchange fee received from Tioxide in October 1993, which is being recognized as a component of operating income over three years, also favorably impacted cash flow from operating activities in 1993.

Cash provided (used) by investing activities includes capital expenditures in each period, and in 1993 included $161 million net cash generated from the formation of the manufacturing joint venture with Tioxide. Cash provided by investing activities also included net sales of marketable securities of $317 million in 1992 and $68 million in 1993, primarily used to fund debt repayments. In 1994, proceeds of $15 million from the sale of trading securities are a component of the cash provided from operations as a result of the adoption of SFAS 115.

The Company's capital expenditures during the past three years include an aggregate of $36 million related to the completion of the Louisiana chloride process TiO_2 plant and an aggregate of $63 million ($17 million in 1994) for the Company's ongoing environmental protection and compliance programs, including a Canadian waste acid neutralization facility, a Norwegian onshore tailings disposal system and off-gas desulfurization systems. The Company's estimated 1995 capital expenditures are $66 million and include $33 million in the area of environmental protection and compliance primarily related to the off-gas desulfurization systems and water treatment chemical purification systems. The Company plans to spend $25 million in capital expenditures ($7 million in 1995) related to a debottlenecking project at its Leverkusen, Germany chloride process TiO_2 facility that is expected to increase the Company's annual attainable production capacity by 20,000 metric tons. The capital expenditures of the manufacturing joint venture are not included in the Company's capital expenditures.

Net repayments of indebtedness in 1994 included a DM 225 million ($140 million when paid) reduction in the DM credit facility, $15 million paid on the Rheox bank term loan and $15 million paid on the joint venture term loan. In addition, the Company borrowed DM 75 million ($45 million) under the DM credit facility. Net repayments of indebtedness in 1993 included payments on the DM credit facility of DM 552 million ($342 million when paid), a $110 million net reduction in indebtedness related to the Louisiana plant and $350 million proceeds from the Company's public offering of debt. Net repayments of indebtedness in 1992 included payments on the DM term loan aggregating DM 350 million ($225 million when paid) and $61 million drawn under Kronos' Louisiana plant credit facilities. NL and Kronos have agreed, under certain conditions, to provide KII with up to an additional DM 125 million through January 1, 2001.

Financing activities also include dividends paid of $18 million in 1992. The Company suspended dividend payments in October 1992.

At December 31, 1994, the Company had cash, cash equivalents and current marketable securities aggregating $156 million (30% held by non-U.S. subsidiaries) including restricted cash and cash equivalents of $16 million. In addition, the Company's subsidiaries had $14 million and $195 million available for borrowing at December 31, 1994 under existing U.S. and non-U.S. credit facilities, respectively, of which $80 million of the non-U.S. amount is available only for (i) permanently reducing the DM term loan or (ii) paying future German income tax assessments, as described below.

The Company reduced its "net debt" (notes payable and long-term debt less cash, cash equivalents and current marketable securities) by $90 million during 1994. The Company currently expects to have sufficient liquidity to meet its obligations including operations, capital expenditures and debt service.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain assessment reports which had proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million), including interest, on a tentative basis. The Company applied DM 174 million ($108 million) of the German tentative tax refunds to reduce outstanding borrowings under its DM credit facility. The examination of the Company's German income tax returns is continuing and additional substantial proposed tax deficiency assessments are expected. Although the Company believes that it will ultimately prevail, the Company has granted a DM 100 million ($64 million at December 31, 1994) lien on its Nordenham, Germany TiO_2 plant, and may be required to provide additional security in favor of the German tax authorities until the assessments proposing tax deficiencies are resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operation or liquidity. Cash received for settlement of prior years' tax examinations aggregated $6 million in 1994 and the Company expects to make settlement payments of approximately $20 million in 1995.

At December 31, 1994, the Company had recorded net deferred tax liabilities of $175 million. The Company operates in numerous tax jurisdictions, in certain of which it has temporary differences that net to deferred tax assets (before valuation allowance). The Company has provided a deferred tax valuation allowance of $165 million, principally related to the U.S. and Germany, offsetting deferred tax assets which the Company believes may not currently meet the "more likely than not" realization criteria for asset recognition.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and other Contran subsidiaries.

The Company has been named as a defendant, PRP, or both, in a number of legal proceedings associated with environmental matters, including waste disposal sites or facilities currently or formerly owned, operated or used by the Company, many of which disposal sites or facilities are on the U.S. EPA's Superfund National Priorities List or similar state lists. On a quarterly basis, the Company evaluates the potential range of its liability at sites where it has been named as a PRP or defendant. The Company believes it has provided adequate accruals for reasonably estimable costs of such matters, but the Company's ultimate liability may be affected by a number of factors, including changes in remedial alternatives and costs and the allocation of such costs among PRPs. The Company is also a defendant in a number of legal proceedings seeking damages for personal injury and property damage arising out of the sale of lead pigments and lead-based paints. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability, if any, that may result is not reasonably capable of estimation. The Company currently believes the disposition of all claims and disputes, individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. There can be no assurance that additional matters of these types will not arise in the future. See Item 3 - "Legal Proceedings" and Note 18 to the Consolidated Financial Statements.

As discussed above, the Company has substantial operations located outside the United States for which the functional currency is not the U.S. dollar. As a result, the reported amount of the Company's assets and liabilities related to its non-U.S. operations, and therefore the Company's consolidated net assets, will fluctuate based upon changes in currency exchange rates. The carrying value of the Company's net investment in its German operations is a net liability due principally to its DM credit facility, while its net investment in its other non-U.S. operations are net assets.

The Company periodically evaluates its liquidity requirements, capital needs and availability of resources in view of, among other things, its debt service requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to refinance or restructure indebtedness, raise additional capital, restructure ownership interests, sell interests in subsidiaries, marketable securities or other assets, or take a combination of such steps or other steps to increase or manage its liquidity and capital resources.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 17 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1994 and the months of January and February 1995.

October 24, 1994 - reported items 5 and 7.
December 1, 1994 - reported items 5 and 7.
January 30, 1995 - reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Item No.	Exhibit Index
3.1	By-Laws, as amended on June 28, 1990 - incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2	Certificate of Amended and Restated Certificate of Incorporation dated June 28, 1990 - incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1	Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation - incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
4.2	Indenture dated October 20, 1993 governing the Registrant's 11.75% Senior Secured Notes due 2003, including form of Senior Note - incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.3	Senior Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.4	Senior Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.5	Third Party Pledge and Intercreditor Agreement dated October 20, 1993 between Registrant, Chase Manhattan Bank (National Association) and Chemical Bank - incorporated by reference to Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.6	Indenture dated October 20, 1993 governing the Registrant's 13% Senior Secured Discount Notes due 2005, including form of Discount Note - incorporated by reference to Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.7 Discount Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.8 Discount Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.1 Amended and Restated Loan Agreement dated as of October 15, 1993 among Kronos International, Inc., the Banks set forth therein, Hypobank International S.A., as Agent and Banque Paribas, as Co-agent - incorporated by reference to Exhibit 10.17 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.2 Amended and Restated Liquidity Undertaking dated October 15, 1993 by the Registrant, Kronos, Inc. and Kronos International, Inc. to Hypobank International S.A., as agent, and the Banks set forth therein - incorporated by reference to Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.3 Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents - incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.

10.4 Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents-incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on form 10-Q for the quarter ended June 30, 1992.

10.5 Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents - incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

10.6 Fourth and Fifth Amendments to the Credit Agreement, dated September 23, 1994 and December 15, 1994, respectively, between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents.

10.7 Credit Agreement dated as of October 18, 1993 among Louisiana Pigment Company, L.P., as Borrower, the Banks listed therein and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.8 Security Agreement dated October 18, 1993 from Louisiana Pigment Company, L.P., as Borrower, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.9 Security Agreement dated October 18, 1993 from Kronos Louisiana, Inc. as Grantor, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.10 KLA Consent and Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.11 Guaranty dated October 18, 1993, from Kronos, Inc., as guarantor, in favor of Lenders named therein, as Lenders, and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.12 Mortgage by Louisiana Pigment Company, L.P. dated October 18, 1993 in favor of Citibank, N.A. - incorporated by reference to Exhibit 10.16 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.13 Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.14 Contract dated September 9, 1971, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung concerning supplies and services (German language version and English translation thereof) - incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.15 Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) - incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.16 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.17 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.18 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.19 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.20 TCI/KCI Output Purchase Agreement dated as of October 18, 1993 between Tioxide Canada Inc. and Kronos Canada, Inc. - incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.21 TAI/KLA Output Purchase Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.22 Master Technology Exchange Agreement dated as of October 18, 1993 among Kronos, Inc., Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited - incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.23 Parents' Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos, Inc. - incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.24 Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos, Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.25* 1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.

10.26	Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.27*	1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.28	Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.29*	NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 - incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.30	Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1994 - incorporated by reference to Exhibit 10.29 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1993.
10.31	Intercorporate Services Agreement by and between Contran Corporation and the Registrant effective as of January 1, 1994 - incorporated by reference to Exhibit 10.30 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1993.
10.32	Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.33*	Description of terms of an executive severance agreement between the Registrant and Joseph S. Compofelice - incorporated by reference to the last paragraph of page 16 entitled "Employment Agreements" of the Registrant's definitive proxy statement dated March 30, 1994.
10.34*	Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin - incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.35*	Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991 - incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Accountants.
27.1	Financial Data Schedules for the year ended December 31, 1994.
99.1	Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 10-K/A to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1994.

* Management contract, compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL Industries, Inc.
(Registrant)

By /s/ J. Landis Martin
J. Landis Martin, March 6, 1995
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/s/ J. Landis Martin
J. Landis Martin, March 6, 1995
Director, President and
Chief Executive Officer

/s/ Harold C. Simmons
Harold C. Simmons, March 6, 1995
Chairman of the Board

/s/ Glenn R. Simmons
Glenn R. Simmons, March 6, 1995
Director

/s/ Michael A. Snetzer
Michael A. Snetzer, March 6, 1995
Director

/s/ Kenneth R. Peak
Kenneth R. Peak, March 6, 1995
Director

/s/ Dr. Lawrence A. Wigdor
Dr. Lawrence A. Wigdor, March 6, 1994
Director, President and Chief Executive
Officer of Kronos and Rheox

/s/ Elmo R. Zumwalt, Jr.
Elmo R. Zumwalt, Jr., March 6, 1995
Director

/s/ Joseph S. Compofelice
Joseph S. Compofelice, March 6, 1995
Vice President and
Chief Financial Officer

/s/ Dennis G. Newkirk
Dennis G. Newkirk, March 6, 1995
Vice President and Controller
(Principal Accounting Officer)

NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K

Items 8, 14(a) and 14(d)

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1993 and 1994, and the related consolidated statements of operations, shareholders' deficit, and cash flows for each of the three years in the period ended December 31, 1994. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1993 and 1994, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1994 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for certain investments in debt and equity securities in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, and in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes in accordance with SFAS Nos. 106 and 109, respectively.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 3, 1995

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1993 and 1994

(In thousands, except per share data)

ASSETS

	1993	1994
Current assets:		
Cash and cash equivalents	$ 106,593	$ 131,124
Marketable securities	41,045	25,165
Accounts and notes receivable, less allowance of $3,008 and $3,749	116,355	137,753
Refundable income taxes	386	1,162
Inventories	194,167	185,173
Prepaid expenses	5,637	3,878
Deferred income taxes	3,315	2,177
Total current assets	467,498	486,432
Other assets:		
Marketable securities	18,428	21,329
Refundable income taxes	91,994	-
Investment in joint ventures	190,787	187,480
Prepaid pension cost	16,307	19,329
Deferred income taxes	577	2,746
Other	42,355	37,267
Total other assets	360,448	268,151
Property and equipment:		
Land	18,237	20,665
Buildings	129,582	147,370
Machinery and equipment	515,090	582,138
Mining properties	72,711	87,035
Construction in progress	30,050	9,579
	765,670	846,787
Less accumulated depreciation and depletion	387,067	438,960
Net property and equipment	378,603	407,827
	$1,206,549	$1,162,410

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 1993 and 1994

(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' DEFICIT	1993	1994
Current liabilities:		
Current maturities of long-term debt	$ 35,716	$ 42,887
Accounts payable and accrued liabilities	177,265	168,327
Payable to affiliates	9,566	11,348
Income taxes	6,353	20,762
Deferred income taxes	3,623	1,590
Total current liabilities	232,523	244,914
Noncurrent liabilities:		
Long-term debt	835,169	746,762
Deferred income taxes	138,977	178,332
Accrued pension cost	72,606	76,242
Accrued postretirement benefits cost	68,322	65,299
Other	121,309	141,518
Total noncurrent liabilities	1,236,383	1,208,153
Minority interest	2,438	2,425
Shareholders' deficit:		
Preferred stock - 5,000 shares authorized, no shares issued or outstanding	-	-
Common stock - $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,281	759,281
Adjustments:		
Currency translation	(115,803)	(125,494)
Pension liabilities	(3,442)	(1,635)
Marketable securities	(2,164)	(12)
Accumulated deficit	(543,059)	(567,041)
Treasury stock, at cost (15,949 and 15,787 shares)	(367,963)	(366,536)
Total shareholders' deficit	(264,795)	(293,082)
	$1,206,549	$1,162,410

Commitments and contingencies (Notes 13 and 18)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1992, 1993 and 1994

(In thousands, except per share data)

	1992	1993	1994
Revenues and other income:			
Net sales	$893,465	$ 805,323	$887,954
Other, net	14,797	22,084	44,828
	908,262	827,407	932,782
Costs and expenses:			
Cost of sales	629,029	612,367	649,745
Selling, general and administrative	203,736	185,689	212,516
Interest	118,511	99,119	83,926
	951,276	897,175	946,187
Loss before income taxes, minority interest, extraordinary item and cumulative effect of changes in accounting principles	(43,014)	(69,768)	(13,405)
Income tax expense	459	12,713	9,734
Loss before minority interest, extraordinary item and cumulative effect of changes in accounting principles	(43,473)	(82,481)	(23,139)
Minority interest	1,123	730	843
Loss before extraordinary item and cumulative effect of changes in accounting principles	(44,596)	(83,211)	(23,982)
Extraordinary item	-	(27,815)	-
Cumulative effect of changes in accounting principles	(31,804)	1,217	-
Net loss	$(76,400)	$(109,809)	$(23,982)

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Years ended December 31, 1992, 1993 and 1994

(In thousands, except per share data)

	1992	1993	1994
Loss per share of common stock:			
Before extraordinary item and cumulative effect of changes in accounting principles	$ (.88)	$(1.63)	$ (.47)
Extraordinary item	-	(.55)	-
Cumulative effect of changes in accounting principles	(.62)	.02	-
Net loss	$(1.50)	$(2.16)	$ (.47)
Weighted average common shares outstanding	50,907	50,890	51,022

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT

Years ended December 31, 1992, 1993 and 1994

(In thousands, except per share data)

	Common stock	Additional paid-in capital	Adjustments			Accumulated deficit	Treasury stock	Total
			Currency translation	Pension liabilities	Marketable securities			
Balance at December 31, 1991	$8,355	$759,300	$(116,640)	$ -	$(5,925)	$(339,043)	$(364,322)	$ (58,275)
Net loss	-	-	-	-	-	(76,400)	-	(76,400)
Common dividends declared - $.35 per share	-	-	-	-	-	(17,807)	-	(17,807)
Adjustments	-	-	4,820	-	5,029	-	-	9,849
Purchases of treasury stock	-	-	-	-	-	-	(3,641)	(3,641)
Other, net	-	(19)	-	-	-	-	-	(19)
Balance at December 31, 1992	8,355	759,281	(111,820)	-	(896)	(433,250)	(367,963)	(146,293)
Net loss	-	-	-	-	-	(109,809)	-	(109,809)
Adjustments	-	-	(3,983)	(3,442)	(51)	-	-	(7,476)
Cumulative effect of change in accounting principle	-	-	-	-	(1,217)	-	-	(1,217)
Balance at December 31, 1993	8,355	759,281	(115,803)	(3,442)	(2,164)	(543,059)	(367,963)	(264,795)
Net loss	-	-	-	-	-	(23,982)	-	(23,982)
Treasury stock reissued	-	-	-	-	-	-	1,427	1,427
Adjustments	-	-	(9,691)	1,807	2,152	-	-	(5,732)
Balance at December 31, 1994	$8,355	$759,281	$(125,494)	$(1,635)	$ (12)	$(567,041)	$(366,536)	$(293,082)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from operating activities:			
Net loss	$(76,400)	$(109,809)	$(23,982)
Depreciation, depletion and amortization	47,829	46,340	34,592
Non-cash interest expense	6,270	8,309	18,071
Deferred income taxes	(18,949)	(670)	11,907
Cumulative effect of changes in accounting principles	31,804	(1,217)	-
Minority interest	1,123	730	843
Net (gains) losses from:			
Securities transactions	6,018	(4,363)	1,220
Disposition of property and equipment	1,419	199	1,981
Pension cost, net	(2,024)	(2,134)	(2,753)
Other postretirement benefits, net	1,830	(2,422)	(3,437)
Other, net	3,442	(1,349)	68
	2,362	(66,386)	38,510
Change in assets and liabilities:			
Accounts and notes receivable	(1,776)	(1,291)	(13,152)
Inventories	(33,814)	12,166	17,778
Prepaid expenses	207	(472)	3,221
Accounts payable and accrued liabilities	(6,111)	(4,132)	(17,343)
Income taxes	(13,501)	1,507	109,243
Accounts with affiliates	(4,106)	5,426	(2,024)
Other noncurrent assets	(1,006)	8,844	2,219
Other noncurrent liabilities	13,072	37,069	28,706
Marketable trading securities:			
Purchases	-	-	(870)
Dispositions	-	-	15,530
Net cash provided (used) by operating activities	(44,673)	(7,269)	181,818

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from investing activities:			
Capital expenditures	$ (85,150)	$ (47,986)	$ (36,931)
Marketable securities:			
Purchases	(156,573)	(11,053)	-
Dispositions	473,935	79,398	-
Proceeds from disposition of property and equipment	1,484	175,537	598
Investment in joint ventures, net	-	(14,405)	3,133
Loans to affiliates	-	(210)	-
Other, net	1,168	670	362
Net cash provided (used) by investing activities	234,864	181,951	(32,838)
Cash flows from financing activities:			
Indebtedness:			
Borrowings	61,722	452,694	44,490
Principal payments	(263,093)	(607,417)	(175,886)
Dividends paid	(17,807)	-	-
Other, net	(3,937)	(613)	(742)
Net cash used by financing activities	(223,115)	(155,336)	(132,138)
Net change during the year from operating, investing and financing activities	$ (32,924)	$ 19,346	$ 16,842

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash and cash equivalents:			
Net change during the year from:			
Operating, investing and financing activities	$(32,924)	$ 19,346	$ 16,842
Currency translation	(5,013)	(86)	7,689
	(37,937)	19,260	24,531
Balance at beginning of year	125,270	87,333	106,593
Balance at end of year	$ 87,333	$106,593	$ 131,124
Supplemental disclosures - cash paid (received) for:			
Interest, net of amounts capitalized	$137,996	$ 91,576	$ 66,801
Income taxes, net	31,369	11,897	(111,418)

See accompanying notes to consolidated financial statements.

Note 1 - Organization and basis of presentation:

NL Industries, Inc. conducts its operations primarily through its wholly-owned subsidiaries, Kronos, Inc. (titanium dioxide pigments ("TiO_2")) and Rheox, Inc. (specialty chemicals).

Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 52% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 90% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President, and Chief Executive Officer of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies.

Note 2 - Summary of significant accounting policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated. Certain prior year amounts have been reclassified to conform to the current year presentation. The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amount of revenues and expenses during the reporting period. Ultimate actual results may in some instances differ from previously estimated amounts.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments and the related income tax effects are accumulated in the currency translation adjustments component of shareholders' deficit. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less. Cash and cash equivalents includes $18 million and $16 million at December 31, 1993 and 1994, respectively, which are restricted for letters of credit and certain indebtedness agreements.

Marketable securities and securities transactions

Marketable securities are classified as either "available-for-sale" or "trading" and are carried at market based on quoted market prices. Unrealized gains and losses on trading securities are recognized in income currently. Unrealized gains and losses on available-for-sale securities, and the related deferred income tax effects, are accumulated in the marketable securities adjustment component of shareholders' deficit. See Note 4. Realized gains or losses are computed based on specific identification of the securities sold.

Prior to the adoption of Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities" as of December 31, 1993, marketable securities were generally carried at the lower of aggregate market or amortized cost and unrealized net gains were not recognized.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in joint ventures

Investments in 20% to 50%-owned entities are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted, not exceeding ten years.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to forty years for buildings and three to twenty years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Long-term debt

Long-term debt is stated net of unamortized original issue discount ("OID"). OID and deferred financing costs are amortized over the life of the applicable issue by the interest method.

Employee benefit plans

Accounting and funding policies for retirement plans and postretirement benefits other than pensions ("OPEB") are described in Note 11.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

Loss per share of common stock

Loss per share of common stock is based upon the weighted average number of common shares outstanding. Common stock equivalents are excluded from the computation because they are antidilutive or the dilutive effect is not material.

Note 3 - Business and geographic segments:

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and leveling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. General corporate assets consist principally of cash, cash equivalents and marketable securities. At December 31, 1994, the net amounts of non-U.S. subsidiaries included in consolidated net assets approximated $72 million.

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Business segments			
Net sales:			
Kronos	$ 784,568	$ 697,048	$770,077
Rheox	108,897	108,275	117,877
	$ 893,465	$ 805,323	$887,954
Operating income:			
Kronos	$ 81,941	$ 36,146	$ 80,515
Rheox	28,792	26,254	30,837
	110,733	62,400	111,352
General corporate income (expense):			
Securities earnings	8,216	8,467	3,855
Expenses, net	(43,452)	(41,516)	(44,686)
Interest expense	(118,511)	(99,119)	(83,926)
	$ (43,014)	$ (69,768)	$(13,405)
Capital expenditures:			
Kronos	$ 81,872	$ 46,913	$ 34,522
Rheox	3,064	1,069	2,283
General corporate	214	4	126
	$ 85,150	$ 47,986	$ 36,931
Depreciation, depletion and amortization:			
Kronos	$ 44,360	$ 42,877	$ 31,156
Rheox	3,184	3,176	3,153
General corporate	285	287	283
	$ 47,829	$ 46,340	$ 34,592
Geographic areas			
Net sales - point of origin:			
United States	$ 238,170	$ 270,288	$ 303,475
Europe	643,670	519,064	587,291
Canada	138,656	132,930	122,957
Eliminations	(127,031)	(116,959)	(125,769)
	$ 893,465	$ 805,323	$ 887,954

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Net sales - point of destination:			
United States	$ 204,270	$ 217,892	$ 238,568
Europe	518,711	418,072	468,915
Canada	72,692	76,078	64,374
Other	97,792	93,281	116,097
	$ 893,465	$ 805,323	$ 887,954
Operating income:			
United States	$ 629	$ 20,981	$ 49,358
Europe	81,805	19,658	50,273
Canada	28,299	21,761	11,721
	$ 110,733	$ 62,400	$ 111,352

	December 31,		
	1992	1993	1994
	(In thousands)		
Identifiable assets			
Business segments:			
Kronos	$1,246,186	$1,008,453	$ 950,200
Rheox	76,248	75,362	83,176
General corporate	149,673	122,734	129,034
	$1,472,107	$1,206,549	$1,162,410
Geographic segments:			
United States	$ 498,029	$ 326,831	$ 308,017
Europe	671,349	622,826	594,921
Canada	153,056	134,158	130,438
General corporate	149,673	122,734	129,034
	$1,472,107	$1,206,549	$1,162,410

Note 4 - Marketable securities and securities transactions:

	December 31,	
	1993	1994
	(In thousands)	
Trading securities - current U.S. Treasury securities:		
Unrealized gains (losses)	$ 52	$(1,124)
Cost	40,993	26,289
Aggregate market	$41,045	$25,165
Available-for-sale securities - noncurrent marketable equity securities:		
Unrealized gains	$ 33	$ 3,357
Unrealized losses	(2,951)	(3,374)
Cost	21,346	21,346
Aggregate market	$18,428	$21,329

Net gains and losses from securities transactions are composed of:

	Years ended December 31,		
	1992	1993	1994
		(In thousands)	
Unrealized gains (losses)	$ (565)	$3,520	$(1,177)
Realized gains (losses)	478	843	(43)
Writedown of noncurrent marketable equity securities	(5,931)	-	-
	$(6,018)	$4,363	$(1,220)

Note 5 - Inventories:

	December 31,	
	1993	1994
	(In thousands)	
Raw materials	$ 19,785	$ 30,118
Work in process	7,173	7,655
Finished products	135,102	112,410
Supplies	32,107	34,990
	$194,167	$185,173

Note 6 - Investment in joint ventures:

	December 31,	
	1993	1994
	(In thousands)	
TiO_2 manufacturing joint venture	$188,031	$185,122
Other	2,756	2,358
	$190,787	$187,480

In October 1993, Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, formed a manufacturing joint venture, Louisiana Pigment Company, L.P. ("LPC"), with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). LPC, which is equally owned by KLA and a subsidiary of Tioxide, owns and operates the Louisiana chloride process TiO_2 plant formerly owned by KLA. LPC has long-term debt that is collateralized by the partnership interests of the partners and substantially all of the assets of LPC. The long-term debt consists of two tranches, one attributable to each partner, and each tranche is serviced through (i) the purchase of the plant's TiO_2 output in equal quantities by the partners and (ii) cash capital contributions. KLA is required to purchase one-half of the TiO_2 produced by LPC. KLA's tranche of LPC's debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche. See Note 10.

LPC is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of LPC's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from LPC is sold, and its share of the interest expense is reported as a component of interest expense.

Summary balance sheets of LPC are shown below.

	December 31,	
	1993	1994
ASSETS	(In thousands)	
Current assets	$ 44,477	$ 38,052
Other assets	2,376	1,969
Property and equipment, net	347,344	344,806
	$394,197	$384,827
LIABILITIES AND PARTNERS' EQUITY		
Long-term debt, including current portion:		
Kronos tranche	$104,143	$ 88,715
Tioxide tranche	102,600	81,000
Other liabilities, primarily current	16,197	12,355
	222,940	182,070
Partners' equity	171,257	202,757
	$394,197	$384,827

Summary income statements of LPC are shown below.

	Period from October 18, 1993 to December 31, 1993	Year ended December 31, 1994
Revenues and other income:		
Kronos	$12,713	$ 70,492
Tioxide	12,617	67,218
Interest income	72	462
	25,402	138,172
Cost and expenses:		
Cost of sales	22,803	126,972
General and administrative	443	572
Interest	2,156	10,628
	25,402	138,172
Net income	$ -	$ -

Note 7 - Other noncurrent assets:

	December 31, 1993	December 31, 1994
	(In thousands)	
Intangible assets, net of accumulated amortization of $11,941 and $16,149	$15,317	$13,957
Deferred financing costs, net	18,954	16,079
Other	8,084	7,231
	$42,355	$37,267

Note 8 - Accounts payable and accrued liabilities:

	December 31, 1993	December 31, 1994
	(In thousands)	
Accounts payable	$ 89,010	$ 74,903
Accrued liabilities:		
Employee benefits	32,350	34,209
Environmental costs	14,517	10,433
Interest	6,933	6,485
Miscellaneous taxes	2,240	7,336
Other	32,215	34,961
	88,255	93,424
	$177,265	$168,327

Note 9 - Other noncurrent liabilities:

	December 31, 1993	December 31, 1994
	(In thousands)	
Environmental costs	$ 70,789	$ 93,655
Insurance claims expenses	10,299	14,716
Deferred technology fee income	26,881	18,305
Employee benefits	10,084	12,322
Other	3,256	2,520
	$121,309	$141,518

Note 10 - Long-term debt:

	December 31, 1993	December 31, 1994
	(In thousands)	
NL Industries:		
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	102,627	116,409
	352,627	366,409
Kronos:		
DM bank credit facility (DM 548,000 and DM 397,610, respectively)	316,032	255,703
LPC term loan	104,143	88,715
Other	14,513	10,507
	434,688	354,925
Rheox:		
Bank term loan	82,500	67,500
Other	1,070	815
	83,570	68,315
	870,885	789,649
Less current maturities	35,716	42,887
	$835,169	$746,762

The Company's $250 million principal amount of 11.75% Senior Secured Notes due 2003 and $188 million principal amount at maturity ($100 million proceeds at issuance) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes") are collateralized by a series of intercompany notes from Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, to NL, the terms of which mirror those of the respective Notes (the "Mirror Notes"). The Senior Secured Notes are also collateralized by a first priority lien on the stock of Kronos and a second priority lien on the stock of Rheox. The Senior Secured Notes and the Senior Secured Discount Notes are redeemable, at the Company's option, after October 2000 and October 1998, respectively, except that up to one-third of the aggregate principal amount of the Senior Secured Discount Notes are redeemable

(at 113% of the accreted value) upon any Common Stock Offering, as defined, prior to October 1996. For redemptions, other than redemptions pursuant to any Common Stock Offering, the redemption prices range from 101.5% (starting October 2000) declining to 100% (after October 2001) of the principal amount for the Senior Secured Notes and range from 106% (starting October 1998) declining to 100% (after October 2001) of the accreted value of the Senior Secured Discount Notes. In the event of a Change of Control, as defined, the Company would be required to make an offer to purchase the Notes at 101% of the principal amount of the Senior Secured Notes and 101% of the accreted value of the Senior Secured Discount Notes. The Notes are issued pursuant to indentures which contain a number of covenants and restrictions which, among other things, restrict the ability of the Company and its subsidiaries to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of its assets to, another entity. At December 31, 1994, there were no amounts available for payment for dividends pursuant to the terms of the indentures. The Senior Secured Discount Notes do not require cash interest payments for the first five years. The net carrying value of the Senior Secured Discount Notes per $100 principal amount at maturity was $54.73 and $62.08 at December 31, 1993 and 1994, respectively.

The DM credit facility, as amended, consists of a DM 398 million term loan due from March 1997 to September 1999 and a DM 250 million revolving credit facility due no later than September 2000. At December 31, 1994, all of the revolving credit facility was available for future borrowings by KII; however, DM 125 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments. Borrowings bear interest at DM LIBOR plus 1.625% (8.19% and 6.938% at December 31, 1993 and 1994, respectively). NL and Kronos have agreed, under certain circumstances, to provide KII with up to DM 125 million through January 1, 2001. The DM credit facility is collateralized by pledges of the stock of certain KII subsidiaries. The credit agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Borrowings under KLA's tranche of LPC's term loan bear interest at U.S. LIBOR plus 1.625% (5.01% and 8.125% at December 31, 1993 and 1994, respectively) and are repayable in quarterly installments through September 2000. See Note 6.

Rheox has a credit agreement providing for a seven-year term loan due in quarterly installments through December 1997 and a $15 million revolving credit/letter of credit facility due September 1995. Borrowings bear interest, at Rheox's option, at prime rate plus 1.5% or U.S. LIBOR plus 2.5% (5.83% and 9.01% at December 31, 1993 and 1994, respectively), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's ability to incur additional indebtedness, restricts its dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type. In connection with the credit agreement, Rheox had entered into interest rate swap agreements to mitigate the impact of changes in interest rates on the term loan. These swap agreements, which matured in December 1994, effectively converted the interest rate on $60 million of the loan from a variable rate to a fixed rate of 8.1%. At December 31, 1993, the effective interest rate on the term loan, including the impact of the swap agreements, was 7.3%.

Unused lines of credit available for borrowings under the Rheox U.S. facility and non-U.S. credit facilities totalled $14 million and $195 million, respectively, at December 31, 1994. Of the non-U.S. credit facilities available, $80 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments.

The aggregate maturities of long-term debt at December 31, 1994 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1995	$ 42,887
1996	41,308
1997	97,612
1998	101,354
1999	128,457
2000 and thereafter	449,122
	860,740
Less unamortized original issue discount on the Senior Secured Discount Notes	71,091
	$789,649

Note 11 - Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was $1.0 million, nil and $.3 million in 1992, 1993 and 1994, respectively.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations were (i) discount rates - 8.5% (1993 - 7% to 8.5%) and (ii) rates of increase in future compensation levels - nil to 6%. The expected long-term rates of return on assets used ranged from 8.5% to 9.0% (1993 - 8% to 10%). Plan assets are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

SFAS No. 87, "Employers' Accounting for Pension Costs" requires that an additional pension liability be recognized when the unfunded accumulated pension benefit obligation exceeds the unfunded accrued pension liability. Variances from actuarially-assumed rates, including the rate of return on pension plan assets, will result in additional increases or decreases in accrued pension liabilities, pension expense and funding requirements in future periods. At December 31, 1994, approximately 60% of the projected benefit obligations in excess of plan assets relate to non-U.S. plans.

	Assets exceed accumulated benefits December 31,		Accumulated benefits exceed assets December 31,	
	1993	1994	1993	1994
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$40,612	$43,248	$137,156	$132,317
Nonvested benefits	3,160	3,390	2,893	2,155
Accumulated benefit obligations	43,772	46,638	140,049	134,472
Effect of projected salary increases	6,235	5,938	17,664	19,620
Projected benefit obligations ("PBO")	50,007	52,576	157,713	154,092
Plan assets at fair value	63,565	66,293	88,881	108,377
Plan assets over (under) PBO	13,558	13,717	(68,832)	(45,715)
Unrecognized net loss (gain) from experience different from actuarial assumptions	774	2,876	(4,958)	(32,808)
Unrecognized prior service cost (credit)	3,121	3,195	(3,879)	(3,255)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(1,146)	(459)	2,586	2,606
Adjustment required to recognize minimum liability	-	-	(3,442)	(1,635)
Total prepaid (accrued) pension cost	16,307	19,329	(78,525)	(80,807)
Less current portion	-	-	(5,919)	(4,565)
Noncurrent prepaid (accrued) pension cost	$16,307	$19,329	$(72,606)	$(76,242)

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Service cost benefits	$ 4,272	$ 4,082	$ 4,905
Interest cost on PBO	13,804	14,430	15,371
Actual return on plan assets	(12,248)	(15,647)	(8,039)
Net amortization and deferrals	(1,346)	2,413	(5,940)
	$ 4,482	$ 5,278	$ 6,297

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. In 1989, the Company began phasing out such benefits for currently active U.S. employees over a ten-year period. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. The Company's policy is to fund medical claims as they are incurred, net of any contributions by the retirees. Effective January 1, 1993, the Company's postretirement medical plans were revised to, among other things, increase the deductible and maximum out-of-pocket amounts, increase the retiree copayment percentage and pass on future cost increases to the participants through increased contributions or decreased reimbursements.

The rates used in determining the actuarial present value of the accumulated benefit obligations were (i) discount rate - 8.5% (1993 - 7%), (ii) rate of increase in future compensation levels - 6% (1993 - 4%), (iii) rate of increase in future health care costs - 10% in 1995, gradually declining to 5% in 2000 and thereafter and (iv) expected return on plan assets - 9%. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.2 million in 1994, and the actuarial present value of accumulated benefit obligations at December 31, 1994 would have increased by approximately $2.0 million.

	December 31,	
	1993	1994
	(In thousands)	
Actuarial present value of accumulated benefit obligations:		
Retiree benefits	$61,686	$51,895
Other fully eligible active plan participants	1,106	1,229
Other active plan participants	1,962	1,797
	64,754	54,921
Plan assets at fair value	8,095	7,217
Accumulated postretirement benefit obligations in excess of plan assets	56,659	47,704
Unrecognized net gain from experience different from actuarial assumptions	2,390	9,251
Unrecognized prior service credit	15,145	13,672
Total accrued postretirement benefits cost	74,194	70,627
Less current portion	5,872	5,328
Noncurrent accrued postretirement benefits cost	$68,322	$65,299

The components of the Company's net periodic postretirement benefit cost are set forth below:

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Interest cost on accumulated benefit obligations	$6,189	$ 4,911	$ 4,338
Service cost benefits earned during the year	130	127	99
Expected return on plan assets	(650)	(647)	(688)
Net amortization and deferrals	-	(1,473)	(1,495)
	$5,669	$ 2,918	$ 2,254

Note 12 - Shareholders' deficit:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
	(In thousands)		
Balance at December 31, 1991	66,839	15,638	51,201
Purchase of treasury shares	-	311	(311)
Balance at December 31, 1992 and 1993	66,839	15,949	50,890
Treasury shares reissued	-	(162)	162
Balance at December 31, 1994	66,839	15,787	51,052

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options and SARs granted pursuant to similar plans which preceded the NL Option Plan ("the Predecessor Option Plans") remain outstanding at December 31, 1994, no additional options may be granted under the Predecessor Option Plans.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to or greater than 100% of the market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan. At December 31, 1994, 100,000 shares of common stock, restricted for periods up to 14 months, are included in common shares outstanding.

Changes in outstanding options granted pursuant to the NL Option Plan and the Predecessor Option Plans are summarized in the table below. At December 31, 1994, options to purchase 850,582 shares were exercisable and options to purchase 388,200 shares become exercisable in 1995. Of the exercisable options at December 31, 1994, options to purchase 468,912 shares had exercise prices less than the Company's December 31, 1994 quoted market price of $12.625 per share. At December 31, 1994, an aggregate of 2.7 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands, except per share amounts)		
Outstanding at December 31, 1991	1,051	$8.65 - 26.17	$15,992
Granted	237	9.31	2,207
Canceled or expired	(10)	9.31 - 26.17	(126)
Outstanding at December 31, 1992	1,278	8.65 - 24.19	18,073
Granted	451	5.00 - 7.00	2,645
Canceled or expired	(3)	8.65 - 10.78	(27)
Outstanding at December 31, 1993	1,726	5.00 - 24.19	20,691
Granted	673	8.69 - 10.69	6,297
Exercised	(13)	9.31 - 10.50	(119)
Canceled or expired	(13)	5.00 - 10.13	(114)
Outstanding at December 31, 1994	2,373	$5.00 - 24.19	$26,755

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance.

Note 13 - Income taxes:

The components of (i) loss before income taxes, minority interest, extraordinary item and cumulative effect of changes in accounting principles ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 35% (34% in 1992), (iii) the provision for income taxes and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Pretax income (loss):			
U.S.	$(52,724)	$(41,579)	$ (6,241)
Non-U.S.	9,710	(28,189)	(7,164)
	$(43,014)	$(69,768)	$(13,405)
Expected tax benefit	$(14,625)	$(24,419)	$ (4,692)
Non-U.S. tax rates	(11,224)	(15,620)	(7,108)
Rate change adjustment of deferred taxes	-	6,823	-
Valuation allowance	20,237	40,827	24,309
Settlement of U.S. tax audits	-	-	(5,437)
Incremental tax on income of companies not included in the NL Tax Group	5,385	2,553	790
Other, net	686	2,549	1,872
	$ 459	$ 12,713	$ 9,734
Provision for income taxes:			
Current income tax expense (benefit):			
U.S.	$ (2,395)	$ (45)	$ (4,747)
Non-U.S.	21,803	14,083	2,574
	19,408	14,038	(2,173)
Deferred income tax expense (benefit):			
U.S.	33	(140)	4,405
Non-U.S.	(18,982)	(1,185)	7,502
	(18,949)	(1,325)	11,907
	$ 459	$ 12,713	$ 9,734

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Comprehensive tax provision (benefit) allocable to:			
Pretax income (loss)	$ 459	$12,713	$9,734
Shareholders' deficit, principally deferred income taxes allocable to currency translation and marketable securities adjustments	(1,196)	(1,243)	7
	$ (737)	$11,470	$9,741

Changes in deferred income taxes related to the adoption of new accounting standards are disclosed in Note 19. The Company's valuation allowance increased in the aggregate (including the effect of foreign currency translation) by $47 million in 1993 and $31 million in 1994. The components of the net deferred tax liability are summarized below:

	December 31,			
	1993		1994	
	Deferred tax		Deferred tax	
	Assets	Liabilities	Assets	Liabilities
	(In thousands)			
Tax effect of temporary differences relating to:				
Inventories	$ 3,965	$ (2,532)	$ 4,275	$ (2,885)
Property and equipment	2,694	(90,356)	423	(102,817)
Accrued postretirement benefits cost	25,955	-	24,968	-
Accrued pension cost	9,712	(9,224)	9,363	(11,529)
Accrued environmental costs	26,784	-	34,108	-
Other accrued liabilities and deductible differences	22,070	-	32,031	-
Other taxable differences	-	(104,940)	-	(139,378)
Tax on unremitted earnings of non-U.S. subsidiaries	577	(27,742)	452	(22,416)
Tax loss and tax credit carryforwards	137,706	-	162,906	-
Valuation allowance	(133,377)	-	(164,500)	-
Gross deferred tax assets (liabilities)	96,086	(234,794)	104,026	(279,025)
Reclassification, principally netting by tax jurisdiction	(92,194)	92,194	(99,103)	99,103
Net total deferred tax assets (liabilities)	3,892	(142,600)	4,923	(179,922)
Net current deferred tax assets (liabilities)	3,315	(3,623)	2,177	(1,590)
Net noncurrent deferred tax assets (liabilities)	$ 577	$(138,977)	$ 2,746	$(178,332)

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain assessment reports which had proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million), including interest, on a tentative basis. The Company applied DM 174 million ($108 million) of the German tentative tax refunds to reduce outstanding borrowings under its DM credit facility. The examination of the Company's 1989 and 1990 income tax returns is continuing and additional substantial proposed tax deficiency assessments are expected. Although the Company believes that it will ultimately prevail, the Company has granted a DM 100 million ($64 million at December 31, 1994) lien on its Nordenham, Germany TiO_2 plant, and may be required to provide additional security in favor of the German tax authorities until the assessments proposing tax deficiencies are resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. In November 1994, the Joint Committee on Taxation (Congressional Review) approved the Company's settlement with the Internal Revenue Service regarding examinations of the Company's 1985 and 1986 U.S. federal income tax returns which resulted in a $5 million tax benefit. In 1995, the Company expects to make examination settlement payments of $20 million in final settlement of certain German tax examinations relating to tax years prior to 1989.

At December 31, 1994, the Company had approximately $300 million of income tax loss carryforwards with no expiration dates, primarily in Germany. As a result of the German tentative tax refunds and redetermination of prior year's U.S. tax liabilities, at December 31, 1994, the Company does not anticipate having any U.S. tax attributes, including net operating loss and alternative minimum tax credits, available for carryforward for U.S. federal income tax purposes.

Note 14 - Other income, net:

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Securities earnings:			
Interest and dividends	$14,234	$ 4,104	$ 5,075
Securities transactions	(6,018)	4,363	(1,220)
	8,216	8,467	3,855
Litigation settlement gains	-	-	22,978
Technology fee income	-	2,048	10,344
Currency transaction gains, net	1,735	3,299	1,735
Royalty income	1,014	2,016	1,508
Disposition of property and equipment	(1,419)	(199)	(1,981)
Other, net	5,251	6,453	6,389
	$14,797	$22,084	$44,828

Litigation settlement gains includes $20 million related to the Company's 1994 settlement of its lawsuit against Lockheed Corporation. Technology fee income is being amortized by the straight-line method over a three-year period beginning October 1993.

Note 15 - Other items:

Advertising costs, expensed as incurred, were $2.6 million in 1992, $2.1 million in 1993 and $1.9 million in 1994.

Research, development and sales technical support costs, expensed as incurred, approximated $11 million in 1992 and $10 million in both 1993 and 1994.

Interest capitalized in connection with long-term capital projects was $9 million in 1992 and $1 million in both 1993 and 1994.

Note 16 - Extraordinary item:

The extraordinary loss in 1993 relates to the settlement of certain interest rate swap agreements for $20 million in cash in conjunction with prepaying the Louisiana plant indebtedness and from the write-off of deferred financing costs related to such prepayment and the paydown of a portion of the DM bank credit facility. The Louisiana plant indebtedness loan agreement required the Company to enter into the interest rate swap agreements and both the debt and related swaps were collateralized by the Louisiana plant. The Company was required to prepay the Louisiana plant indebtedness and settle the swaps prior to the formation of LPC (thus making the swaps inseparable from the debt).

Note 17 - Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company, the Company from time to time considers, reviews and evaluates, and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, and restrictions under the indentures and other agreements, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

The Company is a party to an intercorporate services agreements with Valhi and Contran (the "Valhi and Contran ISAs") whereby Valhi and Contran provide certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi and Contran ISAs was $1.4 million in 1992, $.7 million in 1993 and $.6 million in 1994.

Baroid Corporation, a former wholly-owned subsidiary of the Company and a subsidiary of Dresser Industries, Inc., and the Company were parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis subject to termination or renewal by mutual agreement. Management services fee expense pursuant to the Baroid ISA approximated $2.3 million in 1992, $.3 million in 1993 and $.2 million in 1994.

The Company was party to an intercorporate services agreement with Tremont (the "Tremont ISA") until June 1993 when the agreement was terminated. Under the terms of the contract, the Company provided certain management, financial and legal services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.5 million in 1992 and $.1 million in 1993.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.6 million in 1992, $.4 million in 1993 and nil in 1994.

Sales to Baroid in the ordinary course of business were $2.1 million in 1992 and $1.8 million in both 1993 and 1994.

Purchases in the ordinary course of business from unconsolidated joint ventures, including LPC, were approximately $9 million in 1992, $22 million in 1993 and $74 million in 1994.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (nil in 1992 and 1993 and $64,000 in 1994) in a manner similar to accounting for SARs. At December 31, 1994, employees of the Company held options to purchase 365,000 shares (356,000 shares vested) of Valhi common stock at exercise prices ranging from $5 to $15 per share. At December 31, 1994, 30,000 of these options were exercisable at prices less than Valhi's quoted market price per share of $7.625.

The Company and TRE Insurance, a wholly-owned subsidiary of Tremont, are parties to an Insurance Sharing Agreement with respect to certain loss payments and reserves established by TRE Insurance that (i) arise out of claims against other entities for which the Company is responsible and (ii) are subject to payment by TRE Insurance under certain reinsurance contracts. Also, TRE Insurance will credit the Company with respect to certain underwriting profits or credit recoveries that TRE Insurance receives from independent reinsurers that relate to retained liabilities.

Net amounts payable to affiliates are summarized in the following table.

	December 31, 1993	December 31, 1994
	(In thousands)	
Tremont Corporation	$4,777	$ 4,780
LPC	4,789	6,565
Other	-	3
	$9,566	$11,348

Amounts payable to LPC are generally for the purchase of TiO_2 (see Note 6), and amounts payable to Tremont relate to the Company's Insurance Sharing Agreement described above.

Note 18 - Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreements restrict the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expense aggregated $9 million in 1992 and $8 million in both 1993 and 1994. At December 31, 1993, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1995	$ 1,782	$1,582
1996	1,550	1,083
1997	1,432	602
1998	1,455	325
1999	1,325	116
2000 and thereafter	13,200	17
	$20,744	$3,725

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities and certain others have been asserted as class actions. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. The Company has not accrued any amounts for the pending lead pigment litigation. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. At December 31, 1994, the Company had accrued $87 million in respect of those environmental matters which are reasonably estimable. It is not possible to estimate the range of costs for certain sites. The upper end of the range of reasonably possible costs to the Company for sites which it is possible to estimate costs is approximately $160 million. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of

amounts currently estimated by the Company to be required for such matters. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. Further, there can be no assurance that additional environmental matters will not arise in the future.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Concentrations of credit risk

Sales of TiO_2 accounted for almost 90% of net sales during the past three years. TiO_2 is sold to the paint, paper and plastics industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. TiO_2 is sold to over 5,000 customers, none of which represents a significant portion of net sales. In each of the past three years, approximately one-half of the Company's TiO_2 sales by volume were to Europe and approximately 33% in 1992, 38% in 1993 and 36% in 1994 of sales were attributable to North America.

Consolidated cash and cash equivalents includes $64 million and $80 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1993 and 1994, respectively, of which $56 million and $73 million, respectively, of such securities are held in trust for the Company by a single U.S. bank.

Note 19 - Changes in accounting principles:

In 1993, the Company adopted SFAS No. 115 (marketable securities) as of December 31, 1993. In 1992, the Company (i) elected early compliance with both SFAS No. 106 (OPEB) and SFAS No. 109 (income taxes) as of January 1, 1992; (ii) elected immediate recognition of the OPEB transition obligation; and (iii) elected to apply SFAS No. 109 prospectively and not restate prior years. The cumulative effect of changes in accounting principles adjustments are shown below.

	Amount reflected in	
	Earnings	Equity component
	(In thousands)	
Increase (decrease) in net assets at December 31, 1993 - SFAS No. 115:		
Marketable securities	$1,872	$(1,872)
Deferred income taxes	(655)	655
	$1,217	$(1,217)

	Amount
	(In thousands)
Increase (decrease) in net assets at January 1, 1992 - SFAS Nos. 106 and 109:	
Accrued postretirement benefits cost	$(74,918)
Deferred income taxes, net	43,114
	$(31,804)

Note 20 - Financial instruments:

Summarized below is the estimated fair value and related net carrying value of the Company's financial instruments.

	December 31, 1993		December 31, 1994	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In millions)			
Cash and cash equivalents	$ 106.6	$106.6	$ 131.1	$131.1
Marketable securities - classified as:				
Trading securities	41.1	41.1	25.2	25.2
Available-for-sale	18.4	18.4	21.3	21.3
Notes payable and long-term debt:				
Fixed rate with market quotes:				
Senior Secured Notes	$ 250.0	$260.0	$ 250.0	$247.1
Senior Secured Discount Notes	102.6	108.3	116.4	114.8
Rheox debt with rates fixed via interest rate swaps	60.0	61.0	-	-
Variable rate debt	458.3	458.3	423.2	423.2
Common shareholders' equity (deficit)	$(264.8)	$229.0	$(293.1)	$644.5

Fair value of the Company's marketable securities and Notes are based upon quoted market prices and the fair value of the Company's common shareholder's equity (deficit) is based upon quoted market prices for NL's common stock. The fair value of debt on which interest rates have been effectively fixed through the use of interest rate swaps (a portion of Rheox's U.S. term loans in 1993) is deemed to approximate the book value of the debt plus or minus the fair value of the related swaps. The fair value of Rheox's interest rate swaps is estimated to be a $1 million payable at December 31, 1993. Such fair value represents the estimated amount the Company would pay if it were to terminate the swap agreements at that date. The fair value of swap agreements is estimated by obtaining quotes from the counter party financial institutions. The fair value of variable interest rate debt is deemed to approximate book value. With the exception of certain interest rate cap agreements that have a carrying value of $.5 million and a fair value of nil, the Company holds no derivative financial instruments at December 31, 1994.

Note 21 - Quarterly financial data (unaudited):

	Quarter ended,			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Year ended December 31, 1993:				
Net sales	$198,518	$221,378	$202,096	$183,331
Cost of sales	142,506	171,671	156,894	141,296
Operating income	23,105	15,166	12,773	11,356
Loss before extraordinary item and cumulative effect of change in accounting principle	$(13,490)	$(28,002)	$(18,722)	$(22,997)
Extraordinary item	-	-	-	(27,815)
Cumulative effect of change in accounting principle	-	-	-	1,217
Net loss	$(13,490)	$(28,002)	$(18,722)	$(49,595)
Per share of common stock:				
Loss before extraordinary item and cumulative effect of change in accounting principle	$ (.27)	$ (.55)	$ (.37)	$ (.44)
Extraordinary item	-	-	-	(.55)
Cumulative effect of change in accounting principle	-	-	-	.02
Net loss	$ (.27)	$ (.55)	$ (.37)	$ (.97)
Weighted average shares outstanding	50,890	50,890	50,890	50,890
Year ended December 31, 1994:				
Net sales	$201,849	$237,113	$225,200	$223,792
Cost of sales	146,956	178,925	168,033	155,831
Operating income	22,313	26,242	27,093	35,704
Net income (loss)	$ (6,367)	$(15,534)	$ (4,578)	$ 2,497
Net income (loss) per share of common stock	$ (.12)	$ (.30)	$ (.09)	$ .05
Weighted average shares outstanding	50,965	51,040	51,040	51,045

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 19 to the consolidated financial statements, the Company changed its method of accounting for marketable securities in 1993 and, the Company changed its method of accounting for postretirement benefits other than pensions and income taxes in 1992. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 3, 1995

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets

December 31, 1993 and 1994

(In thousands)

	1993	1994
Current assets:		
Cash and cash equivalents	$ 11,107	$ 18,371
Marketable securities	41,045	25,165
Accounts and notes receivable	2,088	1,274
Receivable from subsidiaries	980	2,854
Prepaid expenses	248	747
Total current assets	55,468	48,411
Other assets:		
Marketable securities	18,428	21,329
Notes receivable from subsidiary	352,627	366,409
Investment in subsidiaries	(156,615)	(181,751)
Other	10,713	9,214
Total other assets	225,153	215,201
Property and equipment, net	3,925	3,732
	$ 284,546	$ 267,344
Current liabilities:		
Accounts payable and accrued liabilities	$ 38,176	$ 33,248
Payable to affiliates	4,777	4,783
Income taxes	93	186
Deferred income taxes	3,627	1,436
Total current liabilities	46,673	39,653
Noncurrent liabilities:		
Long-term debt	352,627	366,409
Deferred income taxes	27,182	9,546
Accrued pension cost	16,164	14,021
Accrued postretirement benefits cost	42,216	40,711
Other	64,479	90,086
Total noncurrent liabilities	502,668	520,773
Shareholders' deficit	(264,795)	(293,082)
	$ 284,546	$ 267,344

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Operations

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Revenues and other income:			
Equity in income (loss) of subsidiaries	$(10,703)	$ (49,766)	$ 7,925
Interest and dividends	2,829	3,622	2,538
Interest income from subsidiary	-	8,358	43,157
Securities transactions	2,691	3,637	(1,220)
Other income, net	1,791	2,597	3,135
	(3,392)	(31,552)	55,535
Costs and expenses:			
General and administrative	45,243	44,113	69,875
Interest	1,598	13,771	44,003
	46,841	57,884	113,878
Loss before income taxes, extraordinary item and cumulative effect of changes in accounting principles	(50,233)	(89,436)	(58,343)
Income tax benefit	5,637	6,225	34,361
Loss before extraordinary item and cumulative effect of changes in accounting principles	(44,596)	(83,211)	(23,982)
Extraordinary item - equity in income of subsidiaries	-	(27,815)	-
Cumulative effect of changes in accounting principles:			
NL	(30,546)	1,217	-
Equity in income of subsidiaries	(1,258)	-	-
	(31,804)	1,217	-
Net loss	$(76,400)	$(109,809)	$(23,982)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from operating activities:			
Net loss	$(76,400)	$(109,809)	$(23,982)
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary item and cumulative effect of changes in accounting principles	10,703	49,766	(7,925)
Extraordinary item	-	27,815	-
Cumulative effect of changes in accounting principles	1,258	-	-
Distributions	54,000	-	30,000
Non-cash interest expense	-	165	845
Deferred income taxes	843	1,510	(20,577)
Securities transactions	(2,691)	(3,637)	1,220
Cumulative effect of changes in accounting principles	30,546	(1,217)	-
Other, net	400	(1,268)	(3,836)
	18,659	(36,675)	(24,255)
Change in assets and liabilities, net	6,340	14,428	23,263
Marketable trading securities:			
Purchases	-	-	(870)
Dispositions	-	-	15,530
Net cash provided (used) by operating activities	24,999	(22,247)	13,668
Cash flows from investing activities:			
Investment in subsidiary	(3,896)	(6,478)	(6,630)
Capital expenditures	(214)	(4)	(126)
Loans to subsidiaries	-	(341,500)	-
Purchases of marketable securities	(1,238)	(10,899)	-
Proceeds from disposition of marketable securities	6,735	69,232	-
Other, net	(768)	667	402
Net cash provided (used) by investing activities	619	(288,982)	(6,354)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows (Continued)

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from financing activities:			
Borrowings of (principal payments on):			
Long-term debt	$(14,873)	$ 327,340	$ (170)
Loans from affiliates	12,298	(16,047)	-
Dividends paid	(17,807)	-	-
Other, net	(3,660)	-	120
Net cash provided (used) by financing activities	(24,042)	311,293	(50)
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	24,999	(22,247)	13,668
Investing activities	619	(288,982)	(6,354)
Financing activities	(24,042)	311,293	(50)
Net change from operating, investing and financing activities	1,576	64	7,264
Balance at beginning of year	9,467	11,043	11,107
Balance at end of year	$ 11,043	$ 11,107	$ 18,371

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Notes to Condensed Financial Information

Note 1 - Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 - Net payable to (receivable from) subsidiaries and affiliates:

	December 31,	
	1993	1994
	(In thousands)	
Current:		
Tremont Corporation	$ 4,777	$ 4,780
Other	-	3
Kronos and Rheox:		
Income taxes	3,123	1,043
Other, net	(4,103)	(3,897)
	$ 3,797	$ 1,929
Noncurrent:		
Note receivable - Kronos	$(352,627)	$(366,409)

Note 3 - Long-term debt:

	December 31,	
	1993	1994
	(In thousands)	
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	102,627	116,409
	$352,627	$366,409

See Note 10 of the Consolidated Financial Statements for a description of the Notes.

The aggregate maturities of the Company's long-term debt at December 31, 1994 are shown in the table below.

	Amount (In thousands)
Senior Secured Notes due 2003	$250,000
Senior Secured Discount Notes due 2005	187,500
	437,500
Less unamortized original issue discount on the Senior Secured Discount Notes	71,091
	$366,409

The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through January 1, 2001.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Balance at end of year
Year ended December 31, 1994:					
Allowance for doubtful accounts and notes receivable	$ 3,008	$ 1,141	$ (616)(a)	$ 216	$ 3,749
Amortization of intangibles	$ 11,941	$ 2,901	$ -	$ 1,307	$ 16,149
Valuation allowance for deferred income taxes	$133,377	$24,309	$ -	$ 6,814	$164,500
Year ended December 31, 1993:					
Allowance for doubtful accounts and notes receivable	$ 2,385	$ 1,216	$ (476)(a)	$ (117)	$ 3,008
Amortization of intangibles	$ 9,792	$ 2,863	$ -	$ (714)	$ 11,941
Valuation allowance for deferred income taxes	$ 86,031	$50,562(b)	$ -	$(3,216)	$133,377
Year ended December 31, 1992:					
Allowance for doubtful accounts and notes receivable	$ 1,749	$ 945	$ (190)(a)	$ (119)	$ 2,385
Amortization of intangibles	$ 7,270	$ 2,989	$ -	$ (467)	$ 9,792
Valuation allowance for deferred income taxes	$ -	$86,031(b)	$ -	$ -	$ 86,031

(a) Amounts written off, less recoveries.

(b) Includes (i) amounts recorded at the date of adoption of SFAS 109 in 1992 reported as a component of cumulative effect of changes in accounting principles and (ii) amounts recorded as part of extraordinary item in 1993.

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer – NL Industries, Inc.

Kenneth R. Peak
President – Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman – Valhi, Inc. (diversified industrial management company)

Harold C. Simmons
Chairman of the Board – NL Industries, Inc.
Chairman, Chief Executive Officer and President – Valhi, Inc.

Michael A. Snetzer
Chairman and Chief Executive Officer – Medite Corporation

Dr. Lawrence A. Wigdor
President and Chief Executive Officer – Kronos and Rheox

Admiral Elmo R. Zumwalt, Jr. (retired)
President – Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee

Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee

Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President; President and Chief Executive Officer – Kronos and Rheox

Joseph S. Compofelice
Vice President and Chief Financial Officer

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

SHAREHOLDER INFORMATION

Annual Meeting

The 1995 annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be marked, signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agency

First Chicago Trust Company of New York, P.O. Box 2500, Jersey City, New Jersey 07303-2500. Telephone (201) 324-0498.

Form 10–K Report

The Company's Annual Report on Form 10-K for the year ended December 31, 1994, filed with the Securities and Exchange Commission, is printed as part of this report. Additional copies are available to shareholders without charge. Requests should be addressed to Investor Relations Department, NL Industries, Inc., 16825 Northchase Drive, Suite 1200, Houston, Texas 77060, or made by calling (800) 285-3519.

NL Industries, Inc.

1995

Annual

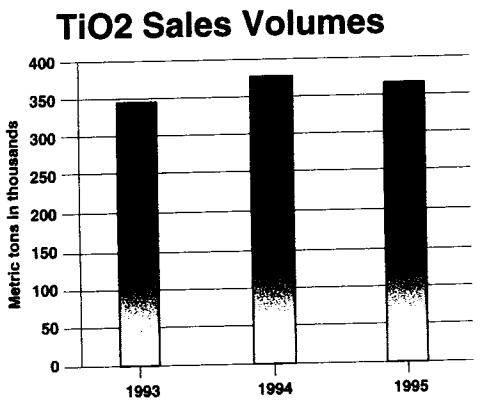
Report

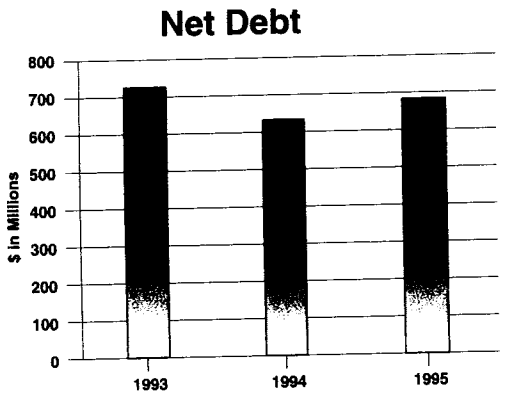
ANNUAL HIGHLIGHTS

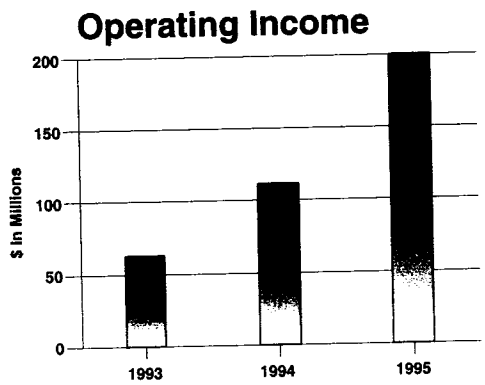
($ in millions, except per share and volume data)	1993	1994	1995
Net sales	$ 805.3	$888.0	$1,023.9
Operating income	62.4	111.4	199.7
Net income (loss)	(109.8)	(24.0)	85.6
Net income (loss) per common share	$ (2.16)	$ (.47)	$ 1.66
Capital expenditures	$ 48.0	$ 36.9	$ 64.2
Cash and current marketable securities	$ 147.6	$156.3	$ 141.3
Total debt	$ 870.9	$789.6	$ 822.9
Net debt [1]	$ 723.3	$633.3	$ 681.6
EBITDA [2]	$ 67.2	$101.3	$ 212.1
Operational data (in metric tons):			
TiO_2 sales volumes	346,000	376,000	366,000
TiO_2 production volumes	352,000	357,000	393,000

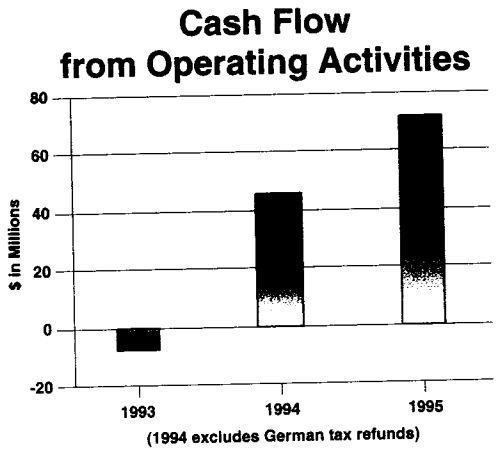
(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization.









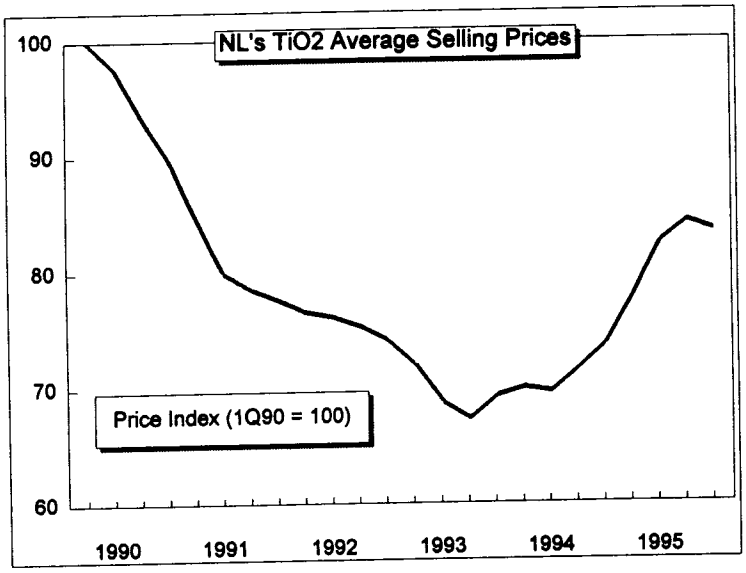
TO OUR SHAREHOLDERS

We are pleased to report solid financial results for NL in 1995. Improving performance by most of the world's economies during the past few years set the stage for an increase in TiO_2 prices beginning in the third quarter of 1993 through the first half of 1995. This price strength coupled with stringent management of our manufacturing costs and increased production volumes led to net income of $86 million in 1995 versus 1994's $24 million net loss. 1995 revenues climbed beyond the $1 billion level for the first time since 1989. Although we see some short-term softness in demand and pricing of TiO_2 in 1996, we remain optimistic about NL's continuing recovery over the longer term. Improvement would enable us to use our cash flow to reduce our debt levels and maintain our recently announced quarterly dividend of $.10 per share.

TiO_2 PRICING

Our operating results are closely tied to the selling price of TiO_2. While NL can affect minor components of the price equation, such as product differentiation, NL cannot control the major components. These include the strength of the economies in markets where we sell our product (i.e. demand) and industry capacity (i.e. supply).

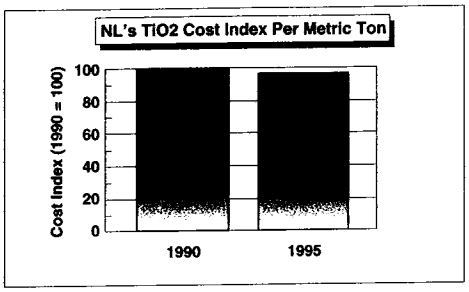
In the late 1980s industry capacity increased, partly in response to high TiO_2 prices. Unfortunately, much of this new capacity came on stream as worldwide economies cooled. As a result, prices decreased and NL's financial results suffered. In late 1993, prices began to rise as worldwide economies improved. Our customers built inventories in the latter part of 1994 and Kronos sold a record 376,000 metric tons of TiO_2 at prices that were 3% higher than 1993. Economies continued growing during the first half of 1995 and prices in the second quarter of 1995 were a full 13% higher than year-end 1994. During the last half of 1995, prices began to decline. NL's TiO_2 average prices in the fourth quarter of 1995 were 18% below the peak levels reached in the first quarter of 1990 indicating, we believe, that the industry may still have significant up-side potential.



The decrease in prices in the last half of 1995 appears to be attributable to a number of factors, including the following. First, price increases in the first half of the year outpaced economic conditions. Second, customers drew down inventories. And third, worldwide economies generally grew at a somewhat slower pace resulting in softened demand. Economic forecasts project lower gross domestic product growth rates in 1996 than 1995 in both Germany and the U.S. These factors, coupled with the increase in capacity resulting from major industry debottlenecking projects, causes us concern for pricing levels in 1996. However, over the longer term, we believe prices should rise as they are well below both the price level we believe is necessary to provide adequate returns to justify greenfield plant construction, and historical peaks.

CONTROLLING COSTS

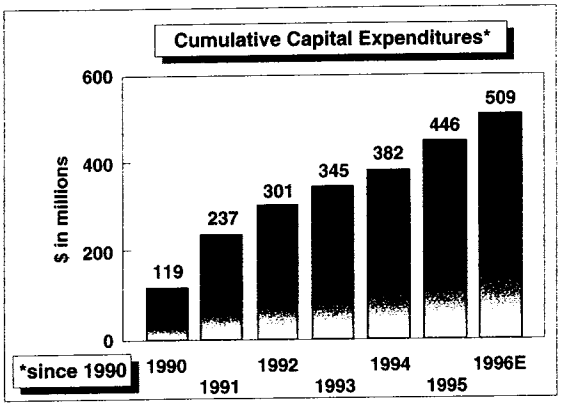
In 1995 we were able to operate our plants slightly above rated capacity, producing record volumes. In addition to having more product to sell, the cost per ton of product was reduced by spreading fixed annual costs over more tons produced. We have paid close attention to managing our expenses. Employment levels since 1990 have decreased 6%, and other costs have been kept in line as well. Because of higher selling prices, higher production volumes and lower unit costs, NL's TiO_2 operating margins rose from 10% in 1994 to 18% in 1995, although still well below peak operating margins of 34% reached in 1989. We have reduced production in 1996 to manage our inventory levels, and expect this will unfavorably impact financial results in 1996.

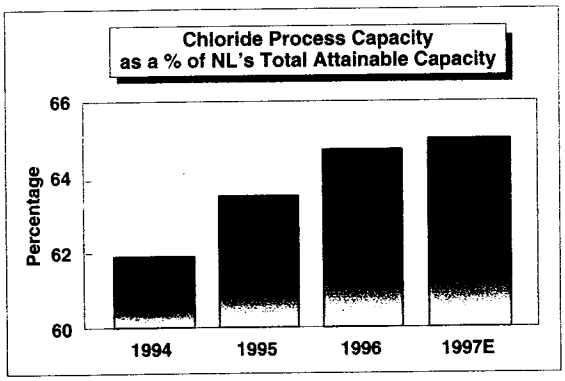


INVESTING IN THE FUTURE

NL invests its capital in two key areas. First, NL invests in plant expansions when the expected per ton return on assets is favorable. And second, NL invests in environmental improvements to comply with environmental regulations of the countries in which our manufacturing plants are located.

NL has continued to invest in plant expansions during the most recent downturn when investments made economic sense. Since 1990, NL has invested more than $400 million in capital projects and the annual attainable capacity has grown from 320,000 metric tons in 1990 to about 390,000 metric tons today. Currently, NL is spending $25 million on a 20,000 metric ton debottlenecking project that we expect to be fully on stream in 1997. This additional capacity will allow NL to more fully capitalize on cyclical upturns, without having to carry excessive fixed costs during future downturns. NL's new capacity is concentrated at our chloride process plants, where, most industry experts agree, the future growth of the industry lies. TiO_2 that is produced using the chloride process is preferred by most of our customers within the paint and plastic industries, and with the additional new capacity, approximately 65% of our production capacity will be from the chloride process.





NL's environmental investments are an important part of doing business in the world today, and we are committed to keeping our plants in regulatory compliance.

While we are excited and optimistic about the future of NL, we are cautious about the outlook for 1996 and are hopeful that economic conditions in our key markets will improve in the second half of 1996. Notwithstanding our near-term caution, the anticipated long-term trend should enable NL to make progress in deleveraging its balance sheet and strengthening its overall financial position.

Harold Simmons
Harold Simmons
Chairman of the Board

J. Landis Martin
J. Landis Martin
President and Chief Executive Officer

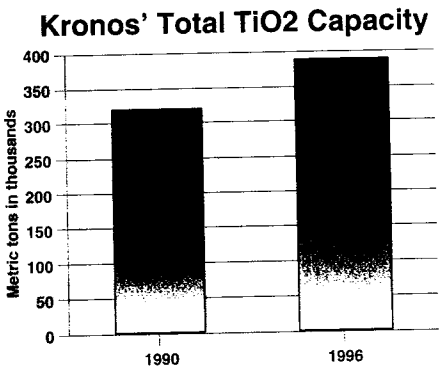
March 3, 1996

KRONOS

Operating income for Kronos in 1995 was $161.2 million, more than doubling its 1994 operating income of $80.5 million. This strong increase was primarily due to increased selling prices, which were 15% higher than the previous year. Although selling prices were significantly higher in 1995, average prices in the fourth quarter of 1995 were 1% lower than the third quarter. After a strong start in 1995, sales volumes for the year slipped 3% below 1994 due in part, we believe, to customers choosing to draw down inventories. Overall, Kronos accounted for 87% of NL's sales, and 81% of its operating income.

Kronos is the fourth largest producer of titanium dioxide pigments in the world with annual production capacity of 390,000 metric tons, and has played a leading role in the development of the titanium dioxide industry for more than 70 years. Titanium dioxide is a white pigment which provides whiteness, brightness, and opacity to a wide range of products used in everyday life, such as paints, plastics, paper, textiles, pharmaceuticals, cosmetics and inks. Titanium dioxide pigments are also used in health and personal care products. Kronos has an estimated 11% market share worldwide with its pigments sales concentrated primarily in the largest geographic markets for consumption of titanium dioxide pigments - Europe and North America. To serve these markets, Kronos has manufacturing facilities in Germany, Belgium, Norway, Canada, and the United States. Kronos' ilmenite mine in Norway provides the basic feedstock for a significant part of its production requirements for manufacturing sulfate process titanium dioxide pigments.

Kronos uses both chloride and sulfate technologies to manufacture more than 40 grades of titanium dioxide pigments for a broad range of applications. Approximately two-thirds of Kronos' capacity is based upon its own chloride process technology. Pigments produced by either method can be used in most applications, however, chloride pigments are preferred for plastics and high durability coatings. Kronos has a widely-accepted product line in plastics applications.

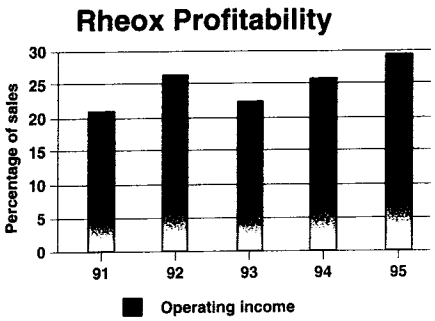


Kronos produced a record 393,000 metric tons of titanium dioxide pigments in 1995, with all chloride process plants exceeding previous records. Kronos maintains an active research and development program to improve both the sulfate and chloride technologies. Through this effort during the last four years, Kronos has increased the production capacity of its four chloride process plants so that each plant now exceeds its original design capacity by more than 25%. Currently underway is the expansion of its chloride process plant in Leverkusen, Germany. When completed in 1997, this project will bring Kronos' annual capacity to approximately 400,000 metric tons.

Kronos is committed to its policy of compliance with environmental regulations and laws, and of striving to improve its environmental performance. Kronos has successfully developed an extensive sales program in Europe for the iron salts resulting from both chloride and sulfate processes as waste water treatment chemicals used by municipal and industrial customers, and as a raw material for producing iron pigments. Early in 1996, Kronos completed an $11 million facility in Leverkusen, Germany to purify the iron salts from the chloride process, thereby widening their sales applications in the water treatment industry. Gypsum recovered in the neutralization of sulfate iron salts in Canada is sold to a local wallboard producer. Over the next two years Kronos estimates it will spend $30 million on environmental projects, primarily sulphur recovery units .

RHEOX

Operating income for 1995 increased $7.7 million over 1994 to a record of $38.5 million on higher sales volumes, higher prices, and lower operating costs. Worldwide sales increased 10% to $129.8 million in 1995.



Rheox manufactures and sells a wide variety of specialty chemical products to the coatings, ink, lubricant, oil drilling, adhesives, sealants, household and personal care markets throughout the world. Along with product quality, a key Rheox strength is its extensive customer technical service support system. Rheox's laboratories in the United States and Germany are staffed with employees and specialists trained in many of the industries Rheox serves, and provide opportunities for customers to develop improved products and applications. An important part of the customer interface is a dedicated sales force both in North America and Europe. In addition, about 70 agents worldwide promote Rheox products.

Rheox manufactures its products in five plants located in the United States, Germany, and the United Kingdom. All plants have achieved ISO 9001 or 9002 certification which is recognized worldwide as the standard of quality. This commitment to quality is highly desired by international customers.

Rheox's hectorite clay mine in California, believed to be the largest known commercial hectorite clay deposit in the world, gives Rheox a cost advantage in the manufacturing of its core organoclay product line. Quaternary amines, another primary raw material, are primarily purchased from a 50% owned joint venture company.

Rheox products are specialty chemicals used primarily to improve the flow characteristics of the end products of the markets into which it sells. For example, Rheox products improve the application and appearance of trade paints and industrial finishes, and make it possible to convert oils into greases. These specialty chemicals have applications in water and solvent-based systems. The majority of Rheox's sales were for use in solvent-based systems. However, Rheox continues to emphasize the development of products for water-based applications, with approximately 17% of Rheox's sales now derived from products compatible with water-based systems.

Since 1990, Rheox has expanded its global presence and has aggressively developed and introduced new products. Rheox commercialized 15 new products in 1995. Among them are additives for water-based coatings, which have no organic volatiles, additives for high solids systems, and a broadened oil field product line. Rheox continued to aggressively expand its business and technology base in 1995 by developing a specialty wax business, expanding its additives into the metal working fluid market and by marketing a novel line of specialty high performance defoamers, dispersants and dispersing agents.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

X ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required] - For the fiscal year ended December 31, 1995

OR

___ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-640

NL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	13-5267260 (IRS Employer Identification No.)
16825 Northchase Drive, Suite 1200, Houston, Texas (Address of principal executive offices)	77060 (Zip Code)

Registrant's telephone number, including area code: (713) 423-3300

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	New York Stock Exchange Pacific Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes X No ___

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. X

As of February 29, 1996, 51,093,118 shares of common stock were outstanding. The aggregate market value of the 14,571,028 shares of voting stock held by nonaffiliates as of such date approximated $202 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

Forward-Looking Information.

The statements contained in this Annual Report on Form 10-K ("Annual Report") which are not historical facts, including, but not limited to, statements found (i) under the captions "Kronos-Industry", "Kronos-Products and operations", "Kronos-Manufacturing process and raw materials", "Kronos-Competition", "Rheox-Products and operations", "Rheox-Manufacturing process and raw materials", "Patents and Trademarks", "Foreign Operations", and "Regulatory and Environmental Matters", all contained in Item 1. Business, (ii) under the captions "Lead pigment litigation" and "Environmental matters and litigation", both contained in Item 3. Legal Proceedings, and (iii) under the captions "Results of Operations" and "Liquidity and Capital Resources", both contained in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, are forward-looking statements that involve a number of risks and uncertainties. The actual results of the future events described in such forward-looking statements in this Annual Report could differ materially from those stated in such forward-looking statements. Among the factors that could cause actual results to differ materially are the risks and uncertainties discussed in this Annual Report, including, without limitation, the portions referenced above, and the uncertainties set forth from time to time in the Company's other public reports and filings and public statements.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a New Jersey corporation in 1891, conducts its operations through its principal wholly-owned subsidiaries, Kronos, Inc. and Rheox, Inc. Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 54% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 91% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President and Chief Executive Officer of each of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company".

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2") with an estimated 11% share of the worldwide market. Approximately one-half of Kronos' 1995 sales volume was in Europe, where Kronos is the second largest producer of TiO_2. In 1995, Kronos accounted for 87% of the Company's sales and 81% of its operating income. Rheox is the world's largest producer of rheological additives for solvent-based systems.

The Company's objective is to maximize total shareholder returns by (i) focusing on continued cost control, (ii) deleveraging during the current upturn of the TiO_2 industry and (iii) investing in certain cost effective debottlenecking projects to increase TiO_2 production capacity.

Kronos

Industry

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. TiO_2 is considered to be a "quality-of-life" product with demand affected by the gross domestic product in various regions of the world.

Demand, supply and pricing of TiO_2 have historically been cyclical. The last cyclical peak for TiO_2 prices occurred in early 1990, with a cyclical low in the third quarter of 1993. The Company believes the TiO_2 industry continues to have long-term potential. During the last TiO_2 downturn, industry capacity utilization dropped from almost 100% to approximately 85%. Industry utilization increased to about 91% in 1995, and Kronos' selling prices in fourth quarter of 1995 were about 24% above the 1993 low point. Although TiO_2 demand in Europe and the U.S. is expected to be relatively flat during the first half of 1996, the Company expects industry capacity utilization rates will increase over the next several years. The Company's expectations as to the future prospects of the TiO_2 industry are based upon several factors beyond the Company's control, principally continued worldwide growth of gross domestic product and the absence of

technological advancements in or modifications to TiO_2 processes that would result in material and unanticipated increases in production efficiencies. To the extent that actual developments differ from the Company's expectations, the Company's and the TiO_2 industry's future performance could be unfavorably affected.

Kronos has an estimated 18% share of European TiO_2 sales and an estimated 9% share of U.S. TiO_2 sales. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. If the economies in Eastern Europe, the Far East and China continue to develop, a significant market for TiO_2 could emerge in those countries. Kronos believes that, due to its strong presence in Western Europe, it is well positioned to participate in growth in the Eastern European market . Geographic segment information is contained in Note 3 to the Consolidated Financial Statements.

Products and operations

The Company believes that there are no effective substitutes for TiO_2. However, extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used in a number of Kronos' markets. Generally, extenders are used to reduce to some extent the utilization of higher cost TiO_2. The use of extenders has not significantly affected TiO_2 consumption over the past decade because extenders generally have, to date, failed to match the performance characteristics of TiO_2. The Company believes that the use of extenders will not materially alter the growth of the TiO_2 business in the foreseeable future.

Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos' major customers include international paint, plastics and paper manufacturers.

Kronos is one of the world's leading producers and marketers of TiO_2. Kronos and its distributors and agents sell and provide technical services for its products to over 5,000 customers with the majority of sales in Europe, the United States and Canada. Kronos' international operations are conducted through Kronos International, Inc., a German-based holding company formed in 1989 to manage and coordinate the Company's manufacturing operations in Germany, Canada, Belgium and Norway, and its sales and marketing activities in over 100 countries worldwide. Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets. By volume, one-half of Kronos' 1995 TiO_2 sales were to Europe, with 36% to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ore (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived from co-products of the pigment production processes). Water treatment chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using both the chloride process and the sulfate process. Approximately two-thirds of Kronos' current production capacity is based on its chloride process which generates less waste than the sulfate process. The waste acid resulting from the sulfate process is either neutralized or reprocessed at Kronos or third party facilities. Although most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred in certain coatings and plastics applications, and sulfate process pigments are generally preferred for paper, fibers and ceramics applications. Due to environmental factors and customer considerations, the proportion of TiO_2 industry sales represented by chloride process pigments has increased relative to sulfate process pigments in the past few years, and chloride process production facilities currently represent approximately 55% of industry capacity.

Kronos produced a record 393,000 metric tons of TiO_2 in 1995, compared to 357,000 metric tons in 1994 and 352,000 metric tons in 1993. Kronos believes its annual attainable production capacity is approximately 390,000 metric tons, including its one-half interest in the joint venture-owned Louisiana plant (see "TiO_2 manufacturing joint venture"). Following the completion of the $25 million debottlenecking expansion of its Leverkusen, Germany chloride process plant in 1997, the Company expects its worldwide annual attainable production capacity to increase to approximately 400,000 metric tons.

The primary raw materials used in the TiO_2 chloride production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and natural rutile ore. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Limited (South Africa), approximately 50% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp., under a long-term supply contract that expires in 2000. Natural rutile ore, another chloride feedstock, is purchased primarily from RGC Mineral Sands Limited (Australia), under a long-term supply contract that expires in 2000. Raw materials under these contracts are expected to meet Kronos' chloride feedstock requirements over the next several years.

The primary raw materials used in the TiO_2 sulfate production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided all of Kronos' feedstock for its European sulfate process pigment plants in 1995. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe. Kronos also purchases sulfate grade slag under contracts negotiated annually with QIT and Tinfos Titanium and Iron K/S.

Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate through the remainder of the decade. Kronos does not anticipate experiencing any interruptions of its raw material supplies because of its long-term supply contracts, although political and economic instability in the countries from which the Company purchases its raw material supplies could adversely affect the availability.

TiO_2 manufacturing joint venture

In October 1993, Kronos formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). The joint venture, which is equally owned by subsidiaries of Kronos and Tioxide (the "Partners"), owns and operates the Louisiana chloride process TiO_2 plant formerly owned by Kronos. Production from the plant is shared equally by Kronos and Tioxide pursuant to separate offtake agreements.

A supervisory committee, composed of four members, two of whom are appointed by each Partner, directs the business and affairs of the joint venture, including production and output decisions. Two general managers, one appointed and compensated by each Partner, manage the day-to-day operations of the joint venture acting under the direction of the supervisory committee.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity and customers generally were served on an allocation basis. During the early 1990s, supply exceeded demand, primarily due to new chloride process capacity coming on-stream. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980s, had a negative impact during the subsequent downturn. During 1994 and the first half of 1995, improved industry capacity utilization resulted in increases in worldwide TiO_2 prices. Average TiO_2 prices in the fourth quarter of 1995 were 14% higher than the fourth quarter of 1994, and were about 17% lower than the previous peak.

Capacity additions that are the result of construction of grassroot plants in the worldwide TiO_2 market require significant capital expenditures and substantial lead time (typically three to five years in the Company's experience) for, among other things, planning, obtaining environmental approvals and construction. No grassroot plants have been announced, but industry capacity in the next few years can be expected to increase as Kronos and its competitors complete debottlenecking projects at existing plants. Based on the factors described under the caption "Kronos-Industry" above, the Company expects that the average annual increase in industry capacity from announced debottlenecking projects will be less than the average annual demand growth for TiO_2 during the next few years.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and substantially all of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada.

Kronos' principal competitors are E.I. du Pont de Nemours & Co. ("DuPont"); Imperial Chemical Industries PLC (Tioxide); Hanson PLC (SCM Chemicals); Kemira Oy; Kerr-McGee Corporation; Ishihara Sangyo Kaisha, Ltd.; Bayer AG; and Thann et Mulhouse. These eight competitors have estimated individual worldwide market shares ranging from 4% to 21%, and an estimated aggregate 76% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is Kronos' principal North American competitor.

Rheox

Products and operations

Rheological additives control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays which have been chemically reacted with organic chemicals and compounds. Rheox produces rheological additives for both solvent-based and water-based systems. Rheox believes it is the world's largest producer of rheological additives for solvent-based systems and is also a supplier of rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for about 80% of Rheox's sales in 1995, with the remainder being principally rheological additives for water-based systems. Rheox introduced a number of new products during the past few years, the majority of which are for water-based systems, which represent a larger portion of the market than solvent-based systems. The Company believes water-based additives will account for an increasing portion of its sales in the long term.

Sales of rheological additives generally follow overall economic growth in Rheox's principal markets and are influenced by the volume of shipments of the worldwide coatings industry. Since Rheox's rheological additives are used in industrial coatings, plant and equipment spending has an influence on demand for this product line.

Manufacturing process and raw materials

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with a subsidiary of Dresser Industries, Inc. ("Dresser"), which has significant bentonite reserves in Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future, and Dresser's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from Company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of

hectorite clays in the world. Quaternary amines are purchased primarily from a joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Competition

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors for rheological additives for solvent-based systems are Laporte PLC and Sud-Chemie AG. Rheox's principal competitors for water-based systems are Rohm and Haas Company, Hercules Incorporated, The Dow Chemical Company and Union Carbide Corporation.

Research and Development

The Company's expenditures for research and development and technical support programs have averaged approximately $10 million annually during the past three years with Kronos accounting for approximately three-quarters of the annual spending. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are directed primarily toward improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to rheological additives are conducted primarily in the United States and are directed towards the development of new products for water-based systems, environmental applications and new end-use applications for existing product lines.

Patents and Trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the formation of the manufacturing joint venture with Tioxide, Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Use by each recipient of the other's technology in Europe is restricted until October 1996. The Company does not expect that the technology sharing arrangement with Tioxide will materially impact the Company's competitive position within the TiO_2 industry. See "Kronos - TiO_2 manufacturing joint venture."

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign Operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada, and approximately one-third of Rheox's sales in each of the past three years have been from European production. Approximately three-quarters of the Company's 1995 consolidated sales were to non-U.S. customers, including 12% to customers in areas other than Europe and Canada. Foreign operations are subject to, among other things, currency exchange rate fluctuations and the Company's results of operations have in the past been both favorably and unfavorably affected by fluctuations in currency exchange rates. Effects of fluctuations in currency exchange rates on the Company's results of operations are discussed in Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Political and economic uncertainties in certain of the countries in which the Company operates may expose it to risk of loss. The Company does not believe that there is currently any likelihood of material loss through political or economic instability, seizure, nationalization or similar event. The Company cannot predict, however, whether events of this type in the future could have a material effect on its operations. The Company's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and Environmental Matters."

Customer Base and Seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1995, the Company employed approximately 3,200 persons, excluding the joint venture employees, with approximately 400 employees in the United States and approximately 2,800 at sites outside the United States. Hourly employees in production facilities worldwide, including the TiO_2 joint venture, are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and Environmental Matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain past and current operations and products of the Company have the potential to cause environmental or other damage. The Company has implemented and continues to implement various

policies and programs in an effort to minimize these risks. The policy of the Company is to achieve compliance with applicable environmental laws and regulations at all its facilities and to strive to improve its environmental performance. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could adversely affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. manufacturing operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants and the Louisiana plant owned and operated by the joint venture are in substantial compliance with applicable requirements of these laws or compliance orders issued thereunder. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the plants to operate. The Company believes that all its plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory denominator is provided by the European Union (the "EU"). Germany, Belgium and the United Kingdom, each members of the EU, follow the initiatives of the EU. Norway, although not a member, generally patterns its environmental regulatory actions after the EU. The Company believes that Kronos is in substantial compliance with agreements reached with European environmental authorities and with an EU directive to control the effluents produced by TiO_2 production facilities. The Company also believes that Rheox is in substantial compliance with the environmental regulations in Germany and the United Kingdom.

In order to reduce sulfur dioxide emissions into the atmosphere consistent with applicable environmental regulations, Kronos is currently installing off-gas desulfurization systems at its Norwegian and German plants at an estimated cost of $30 million and expects to complete the systems in 1996 and 1997, respectively. The manufacturing joint venture has installed a $16 million off-gas desulfurization system at the Louisiana plant which commenced operation in 1995. In addition, Kronos expects to complete an $11 million water treatment chemical purification project at its Leverkusen, Germany facility in 1996.

The Quebec provincial government has environmental regulatory authority over Kronos' Canadian chloride and sulfate process TiO_2 production facilities in Varennes, Quebec. The provincial government regulates discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos'

right to discharge effluents from its Canadian sulfate process TiO_2 plant into the St. Lawrence River until June 1994. Kronos completed a waste acid neutralization facility and discontinued discharging waste acid effluents into the St. Lawrence River in June 1994. Notwithstanding the foregoing, in March 1993 Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate process TiO_2 production facility. The penalty for these violations, if proven, could be up to Canadian $15 million. Additional charges, if brought, could involve additional penalties. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above, and is vigorously contesting the charge.

The Company's capital expenditures related to its ongoing environmental protection and improvement programs are currently expected to be approximately $23 million in 1996 and $5 million in 1997.

The Company has been named as a defendant, potentially responsible party ("PRP"), or both, pursuant to CERCLA and similar state laws in approximately 80 governmental enforcement and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priorities List or similar state lists. See Item 3 - "Legal Proceedings".

ITEM 2. PROPERTIES

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, Kronos has a facility in Varennes, Quebec, Canada and, through the manufacturing joint venture described above, a one-half interest in a plant in Lake Charles, Louisiana. Certain of the Company's properties collateralize long-term debt agreements. See Note 10 to the Consolidated Financial Statements.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with almost one-third of Kronos' current TiO_2 production capacity, is located within an extensive manufacturing complex owned by Bayer AG, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement expiring in 2011, Bayer provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Both the lease and the supplies and services agreement restrict Kronos' ability to transfer ownership or use of the Leverkusen facility.

All of Kronos' principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession with an unlimited term to operate its ilmenite mine in Norway.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany. All of such production facilities are owned.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. Considering the Company's previous involvement in the lead pigment and lead-based paint businesses, there can be no assurance that additional litigation, similar to that described below, will not be filed. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed that seek to (a) impose various obligations on present and former manufacturers of lead pigment and lead-based paint with respect to asserted health concerns associated with the use of such products and (b) effectively overturn court decisions in which the Company and other pigment manufacturers have been successful. Examples of such proposed legislation include bills proposed in Massachusetts and Ohio which would permit civil liability for damages on the basis of market share and, in the case of Massachusetts, extend certain statutes of limitations. No legislation or regulations have been enacted to date which are expected to have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation in view of the inherent uncertainties involved in court and jury rulings in pending and possible future cases, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability that may result, if any, cannot reasonably be estimated.

In 1989 and 1990, the Housing Authority of New Orleans ("HANO") filed third-party complaints for indemnity and/or contribution against the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA") in 14 actions commenced by residents of HANO units seeking compensatory and punitive damages for injuries allegedly caused by lead pigment. The actions in the Civil District Court for the Parish of Orleans, State of Louisiana were dismissed by the district court in 1990. Subsequently, HANO agreed to consolidate all the cases and appealed. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other cases included in the appeal, the court of appeals reversed the lower court decision dismissing the cases. These cases were remanded to the District Court for further proceedings. In November 1994, the District Court granted defendants' motion for summary judgment in one of the remaining cases and in June 1995 the District Court granted defendants' motion for summary judgment in several of the remaining cases. After such grant, only two cases remained pending.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the

hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability and denied the remainder of the motion. In January 1992, defendants appealed the denial. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In May 1993, the Appellate Division of the Supreme Court affirmed the denial of the motion to dismiss plaintiffs' fraud, restitution, conspiracy and concert of action claims. In August 1993, the defendants' motion for leave to appeal was denied. In May 1994, the trial court granted the defendants' motion to dismiss the plaintiffs' restitution and indemnification claims, and plaintiffs have appealed. Defendants' motion for summary judgment on the remaining fraud claim was denied in August 1995; defendants have noticed an appeal. In December 1995, defendants moved for summary judgment on the basis that the fraud claim was time-barred; the motion is pending.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the Philadelphia Housing Authority and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel has asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. In April 1994, the court granted defendants' motion for summary judgment and the dismissal was affirmed by the Superior Court in October 1995. Plaintiffs sought review in the Pennsylvania Supreme Court in November 1995 and the request for review is pending.

In August 1992, the Company was served with an amended complaint in *Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative liability. In October 1992, the Company and the other defendants moved to dismiss the complaint with prejudice. In July 1993, the court dismissed the complaint. In December 1994, the Ohio Court of Appeals reversed the trial court dismissal and remanded the case to the trial court.

In November 1993, the Company was served with a complaint in *Brenner, et al. v. American Cyanamid, et al.*, (No. 12596-93) Supreme Court, State of New York, Erie County alleging injuries to two children purportedly caused by lead pigment. The complaint seeks $24 million in compensatory and $10 million in punitive damages for alleged negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, and alternative liability. In January 1994, the Company answered the complaint, denying liability. Discovery is proceeding.

In January 1995, the Company was served with complaints in *Wright (Alvin)* and *Wright (Allen) v. Lead Industries, et. al.*, (Nos. 94-363042 and 363043), Circuit Court, Baltimore City, Maryland. Plaintiffs are two brothers (one deceased) who allege injuries due to exposure to lead pigment. The complaints, as amended in April 1995, seek more than $100 million in compensatory and punitive damages for alleged strict liability, negligence, conspiracy, fraud and unfair and deceptive trade practices claims. In July 1995, the trial court granted, in part, the defendants' motion to dismiss, and dismissed the plaintiffs' fraud and unfair and deceptive trade practices claims. A trial date has been set in these consolidated cases for October 1996, and discovery is proceeding. In February 1996, the Company filed a motion for summary judgement, which is pending.

In November 1995, the Company was served with the complaint in *Jefferson v. Lead Industry Association, et. al.* (No. 95-2835), filed in the U.S. District Court for the Eastern District of Louisiana. The complaint asserts claims against the LIA and the lead pigment defendants on behalf of a putative class of allegedly injured children in Louisiana. The complaint purports to allege claims for strict liability, negligence, failure to warn, breach of alleged warranties, fraud and misrepresentation, and conspiracy, and seeks actual and punitive damages. The complaint asserts several theories of liability, including joint and several and market share liability. The Company moved to dismiss the complaint in February 1996.

In January 1996, the Company was served with a complaint on behalf of individual intervenors in *German, et. al. v. Federal Home Loan Mortgage Corp., et. al.*, (U.S. Dist. Court, Southern District of New York, Civil Action No. 93 Civ. 6941 (RWS)). This class action lawsuit had originally been brought against the City of New York and other landlord defendants. The intervenors' complaint alleges claims against the Company and other former manufacturers of lead pigment for medical monitoring, property abatement, and other injunctive relief, based on various causes of action, including negligent product design, negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, breach of express and implied warranties, and nuisance. The intervenors purport to represent a class of children and pregnant women who reside in New York City.

The Company believes that the foregoing lead pigment actions are without merit and intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously.

The Company has filed actions seeking declaratory judgment and other relief against various insurance carriers with respect to costs of defense and indemnity coverage for certain of its environmental and lead pigment litigation. *NL Industries, Inc. v. Commercial Union Insurance Cos., et al.*, Nos. 90-2124, -2125 (HLS) (District Court of New Jersey). The action relating to lead pigment litigation defense costs filed in May 1990 against Commercial Union Insurance Company ("Commercial Union") seeks to recover defense costs incurred in the *City of New York* lead pigment case and two other cases which have since been resolved in the Company's favor. In July 1991, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the Company's reasonable defense costs for such cases. In June 1992, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Commercial Union seeking to recover costs incurred in defending four additional lead pigment cases which have since been resolved in the Company's

favor. In August 1993, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the reasonable costs of defending those cases. In July 1994, the court entered judgment on the order requiring Commercial Union to pay previously-incurred Company costs in defending those cases. In September 1995, the U.S. Court of Appeals for the Third Circuit reversed and remanded for further consideration the decision by the trial court that Commercial Union was obligated to pay the Company's reasonable defense costs in certain of the lead pigment cases. The trial court had made its decision applying New Jersey law; the appeals court concluded that New York and not New Jersey law applied and remanded the case to the trial court for a determination under New York law. Other than granting motions for summary judgment brought by two excess liability insurance carriers, which contended that their policies contained unique pollution exclusion language, and certain summary judgment motions regarding policy periods, the court has not made any final rulings on defense costs or indemnity coverage with respect to the Company's pending environmental litigation. The Court has not made any final ruling on indemnity coverage in the lead pigment litigation. No trial dates have been set. Other than rulings to date, the issue of whether insurance coverage for defense costs or indemnity or both will be found to exist depends upon a variety of factors, and there can be no assurance that such insurance coverage will exist in other cases. The Company has not considered any potential insurance recoveries for lead pigment or environmental litigation in determining related accruals.

Environmental matters and litigation

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws in approximately 80 governmental and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. EPA's Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage, or both. Certain of these proceedings involve claims for substantial amounts. Although the Company may be jointly and severally liable for such costs, in most cases it is only one of a number of PRPs who are also jointly and severally liable. In addition to the matters noted above, certain current and former facilities of the Company, including several divested secondary lead smelter and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities.

The extent of CERCLA liability cannot be determined until the Remedial Investigation and Feasibility Study ("RIFS") is complete, the U.S. EPA issues a record of decision and costs are allocated among PRPs. The extent of liability under analogous state cleanup statutes and for common law equivalents are subject to similar uncertainties. The Company believes it has provided adequate accruals for reasonably estimable costs for CERCLA matters and other environmental liabilities. At December 31, 1995, the Company had accrued $100 million with respect to those environmental matters which are reasonably estimable. The Company determines the amount of accrual on a quarterly basis by analyzing and estimating the range of possible costs to the Company. Such costs include, among other things, remedial investigations, monitoring, studies, clean-up, removal and remediation. It is not possible to estimate the range of costs for certain sites. The Company has estimated that the upper end of the range of reasonably possible costs to the Company for sites for which it is possible to estimate costs is approximately $169 million. No assurance can be given that actual costs

will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future. More detailed descriptions of certain legal proceedings relating to environmental matters are set forth below.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

At Pedricktown, the U.S. EPA divided the site into two operable units. Operable unit one covers contaminated ground water, surface water, soils and stream sediments. The Company submitted the final RIFS for operable unit one to the U.S. EPA in May 1993. In July 1994, the U.S. EPA issued the Record of Decision for operable unit one. The U.S. EPA estimates the cost to complete operable unit one is $18.7 million. The U.S. EPA recently issued a notice requesting that the PRPs enter into an agreement to perform the remedial design phase of operable unit one. In addition, the U.S. EPA incurred past costs in the estimated amount of $4 million to $5 million. The U.S. EPA issued an order with respect to operable unit two in March 1992 to the Company and 30 other PRPs directing immediate removal activities including the cleanup of waste, surface water and building surfaces. The Company has complied with the order, and the work with respect to operable unit two is completed. The Company has paid approximately 50% of operable unit two costs, or $2.5 million.

At Granite City, the RIFS is complete, and in 1990 the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others (*United States of America v. NL Industries, Inc., et al.*, Civ. No. 91-CV 00578) with respect to the Granite City smelter. The complaint seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was invalid, arbitrary, capricious and not in accordance with law. The complaint also seeks recovery of past costs of $.3 million and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. In August 1994, when the U.S. EPA reinitiated the residential yard soils remediation in Granite City after an agreed-upon stay of the cleanup pending completion of a health study and reopening of the

administrative record, the PRPs and the City of Granite City sought an injunction against the U.S. EPA to prevent further cleanup until after the record was reopened for submittal of additional comments on the selected remedy. In September 1995, the U.S. EPA released its decision selecting cleanup remedies for the Granite City site. The cost of the remedies selected by the U.S. EPA aggregates, in its estimation, $40.8 million to $67.8 million, although its decision states that the higher amount is not considered to be representative of expected costs. The Company believes that certain components of the U.S. EPA's estimated costs may be erroneous and presently intends to challenge portions of the U.S. EPA's selection of the remedy. There is no allocation among the PRPs for these costs.

Having completed the RIFS at Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc.*, Civ. No. 89-408, United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notices of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, which was initially estimated to cost approximately $17 million, exclusive of administrative and overhead costs and any additional costs, for the disposition of recycled materials from the site. In January 1992, the U.S. EPA issued unilateral administrative orders to the Company and six other PRPs directing the performance of the remedy. The Company and the other PRPs commenced performance of the remedy. Based upon site operations to date, the remedy is not proceeding in accordance with engineering expectations or cost projections; therefore, the Company and the other PRPs have met with the U.S. EPA to discuss alternative remedies for the site. The U.S. EPA authorized the Company and the other PRPs to cease performing most aspects of the selected remedy. In September 1994, the Company and the other PRPs submitted a focused feasibility study to the U.S. EPA, which proposes alternative remedies for the site. In January 1996, the Company and the other PRP's submitted to U.S. EPA the Amended Remedy Document ("ARD"), recommending selection of a new remedy for the site. The U.S. EPA has indicated that it intends to notice the ARD for public comment in 1996 and will thereafter select a new remedy for the site. Pursuant to an interim allocation, the Company's share of remedial costs is approximately 50%. In November 1991, Gould, Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.*, No. 91-1091, United States District Court for the District of Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and punitive damages. The court granted Gould's motion to amend the complaint to add additional defendants (adjoining current and former landowners) and third party defendants (generators). The amended complaint deletes the fraud and punitive damages claims asserted against NL; thus, the pending action is essentially one for reallocation of past and future cleanup costs. Discovery is proceeding. A trial date has been tentatively set for September 1996.

The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc. A former subsidiary of the Company mined at the Baxter Springs subsite, where it is the largest viable PRP. The final RIFS was submitted to the U.S. EPA in May 1993. In August 1994, the U.S. EPA issued its proposed plan for the cleanup of the Baxter Springs and Treece sites in Cherokee County. The proposed remedy is estimated by U.S. EPA to cost $6 million.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois (*People of the State of Illinois v. NL Industries, et al.*, No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.3 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. In December 1993, the trial court denied the State's petition to reinstate the complaint, and dismissed the case with prejudice. In February 1996, the appeals court affirmed the dismissal. The time in which review by the state Supreme Court may be sought has not expired.

In 1980, the State of New York commenced litigation against the Company in connection with the operation of a plant in Colonie, New York formerly owned by the Company. *Flacke v. NL Industries, Inc.*, No. 1842-80 ("Flacke I") and *Flacke v. Federal Insurance Company and NL Industries, Inc.*, No. 3131-92 ("Flacke II"), New York Supreme Court, Albany County. The plant manufactured military and civilian products from depleted uranium and was acquired from the Company by the U.S. Department of Energy ("DOE") in 1984. Flacke I seeks penalties for alleged violations of New York's Environmental Conservation Law, and of a consent order entered into to resolve these alleged violations. Flacke II seeks forfeiture of a $200,000 surety bond posted in connection with the consent order, plus interest from February 1980. The Company denied liability in both actions. The litigation had been inactive from 1984 until July 1993 when the State moved for partial summary judgment for approximately $1.5 million on certain of its claims in Flacke I and for summary judgment in Flacke II. In January 1994, the Company cross-moved for summary judgment in Flacke I and Flacke II. All summary judgment motions have been denied and both parties have appealed.

Residents in the vicinity of the Company's former Philadelphia lead chemicals plant commenced a class action allegedly comprised of over 7,500 individuals seeking medical monitoring and damages allegedly caused by emissions from the plant. *Wagner, et al. v. Anzon, Inc. and NL Industries, Inc.*, No. 87-4420, Court of Common Pleas, Philadelphia County. The complaint sought compensatory and punitive damages from the Company and the current owner of the plant, and alleged causes of action for, among other things, negligence, strict liability, and nuisance. A class was certified to include persons who resided, owned or rented property, or who work or have worked within up to approximately three-quarters of a mile from the plant from 1960 through the present. The Company answered the complaint, denying liability. In December 1994, the jury returned a verdict in favor of the Company. Plaintiffs have appealed. Residents also filed consolidated actions in the United States District Court for the Eastern District of Pennsylvania, *Shinozaki v. Anzon, Inc.* and *Wagner and Antczak v. Anzon and NL Industries, Inc.* Nos. 87-3441, 87-3502, 87-4137 and 87-5150. The consolidated action is a putative class action seeking CERCLA response costs, including cleanup and medical monitoring, declaratory and injunctive relief and civil penalties for alleged violations of the Resource Conservation and Recovery Act ("RCRA"), and also asserting pendent common law claims for strict liability, trespass, nuisance and punitive damages. The court dismissed the common law claims without prejudice, dismissed two of the three RCRA claims as against the Company with prejudice, and stayed the case pending the outcome of the state court litigation.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.*, Civ. No. 91-4098, seeking recovery of $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. The Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because it believed they were in conflict with California law. The Company answered the complaint denying liability. The government claims it expended in excess of $2.7 million for this matter. Trial was held in March and April 1993. In April 1994, the court entered final judgment in this matter directing the Company to pay $6.3 million plus interest. The court ruled that the Company was liable for approximately $2.7 million in response costs plus approximately $3.6 million in penalties for failure to comply with the administrative order. Both the Company and the government have appealed. In August 1994, this matter was referred to mediation, which is pending.

At a municipal and industrial waste disposal site in Batavia, New York, the Company and six others have been identified as PRPs. The U.S. EPA has divided the site into two operable units. Pursuant to an administrative consent order entered into with the U.S. EPA, the Company conducted a RIFS for operable unit one, the closure of the industrial waste disposal section of the landfill. The Company's RIFS costs are approximately $2 million. In June 1995, the U.S. EPA issued the record of decision for operable unit one, which is estimated by the U.S. EPA to cost approximately $12.3 million. In September 1995, the U.S. EPA and certain PRPs entered into an administrative order on consent for the remedial design phase of the remedy for operable unit one. The Company and other PRPs entered into an interim cost sharing arrangement for this phase of work. With respect to the second operable unit, the extension of the municipal water supply, the U.S. EPA estimated the costs at $1.2 million plus annual operation and maintenance costs. The Company and the other PRPs are performing the work comprising operable unit two. The U.S. EPA has also demanded approximately $.9 million in past costs from the PRPs.

See Item 1 - "Business - Regulatory and Environmental Matters".

Other litigation

Rhodes, et al. v. ACF Industries, Inc., et al. (Circuit Court of Putnam County, West Virginia, No. 95-C-261). Twelve plaintiffs brought this action against the Company and various other defendants in July 1995. Plaintiffs allege that they were employed by demolition and disposal contractors, and claim that as a result of the defendants' negligence they were exposed to asbestos during demolition and disposal of materials from defendants' premises in West Virginia. Plaintiffs allege personal injuries and seek compensatory damages totaling $18.5 million and punitive damages totaling $55.5 million. The Company has filed an answer denying plaintiffs' allegations. Discovery is proceeding.

The Company has been named as a defendant in various lawsuits alleging personal injuries as a result of exposure to asbestos in connection with formerly-owned operations. Various of these actions remain pending. One such case, *In re: Monongalia Mass II*, (Circuit Court of Monongalia County, West Virginia, Nos. 93-C-362, et al.), involving approximately 1,800 plaintiffs, is scheduled to begin trial in August 1996. The Company is aware that claims on behalf of approximately 400 additional plaintiffs have been filed, but the Company has not yet been served with those claims. The Company intends to defend these matters vigorously.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses, and the disposition of past properties and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1995.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of February 29, 1996, there were approximately 9,500 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape. On February 29, 1996, the closing price of NL common stock according to the NYSE Composite Tape was $13 7/8.

	High	Low
Year ended December 31, 1994:		
First quarter	$ 9-5/8	$ 4-3/8
Second quarter	9-1/2	6-1/8
Third quarter	11-7/8	8-3/8
Fourth quarter	13-1/4	9
Year ended December 31, 1995:		
First quarter	$13-1/2	$11-3/4
Second quarter	16-5/8	11-7/8
Third quarter	17-1/2	13-1/2
Fourth quarter	16-5/8	10-7/8

The Company's Senior Notes generally limit the ability of the Company to pay dividends to 50% of consolidated net income, as defined, subsequent to October 1993. The Company did not pay a dividend in 1993, 1994 or 1995. At December 31, 1995, $6 million was available for dividends. On February 15, 1996, the Company announced the resumption of a regular quarterly dividend by declaring a $.10 per share cash dividend to be paid to shareholders of record on March 1, 1996. The declaration and payment of future dividends and the amount thereof will be dependent upon the Company's results of operations, financial condition, contractual restrictions and other factors deemed relevant by the Company's Board of Directors.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1991	1992	1993	1994	1995
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$ 840.3	$ 893.5	$ 805.3	$ 888.0	$1,023.9
Operating income	139.0	110.7	62.4	111.4	199.7
Income (loss) from continuing operations	(24.0)	(44.6)	(83.2)	(24.0)	85.6
Net income (loss)	(16.5)	(76.4)	(109.8)	(24.0)	85.6
Per common share:					
Income (loss) from continuing operations	$ (.40)	$ (.88)	$ (1.63)	$ (.47)	$ 1.66
Net income (loss)	(.27)	(1.50)	(2.16)	(.47)	1.66
Cash dividends	$ .60	$ .35	$ -	$ -	$ -
BALANCE SHEET DATA (at year-end):					
Cash, cash equivalents and current marketable securities	$ 353.3	$ 187.9	$ 147.6	$ 156.3	$ 141.3
Current assets	795.5	635.8	467.5	486.4	551.1
Total assets	1,831.0	1,472.1	1,206.5	1,162.4	1,271.7
Current liabilities	360.2	248.8	232.5	244.9	302.4
Long-term debt including current maturities	1,288.9	1,035.3	870.9	789.6	783.7
Shareholders' deficit	(58.3)	(146.3)	(264.8)	(293.1)	(209.4)
OTHER DATA:					
Net debt (1)	$ 936.0	$ 847.7	$ 723.2	$ 633.4	$ 681.6
EBITDA (2)	126.6	115.1	67.2	101.3	212.1
Interest expense, net (3)	59.9	104.3	95.1	78.9	75.4
Cash interest expense, net (4)	53.9	98.0	86.8	60.8	59.7
Capital expenditures	195.1	85.2	48.0	36.9	64.2
TiO_2 sales volumes (in thousands metric tons)	303	336	346	376	366
Average TiO_2 selling price index (1983=100)	147	139	127	131	150

(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization. EBITDA is presented as a supplement to the Company's operating income and cash flow from operations because the Company believes that certain parties find EBITDA a useful tool for measuring the Company's performance and ability to service debt. EBITDA is not a substitute for either operating income or cash flow from operations.

(3) Interest expense, net represents interest expense less general corporate interest and dividend income.

(4) Cash interest expense, net represents interest expense, net less non-cash interest expense (deferred interest expense on the Senior Secured Discount Notes and amortization of deferred financing costs).

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

General

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. As discussed below, TiO_2 selling prices increased during 1994 and the first nine months of 1995 after four consecutive years of a declining price trend. Kronos' operating income and margins improved significantly during 1994 and 1995.

Net sales and operating income

	Years ended December 31,			% Change	
	1993	1994	1995	1994-93	1995-94
	(In millions)				
Net sales:					
Kronos	$697.0	$770.1	$ 894.1	+10%	+16%
Rheox	108.3	117.9	129.8	+9%	+10%
	$805.3	$888.0	$1,023.9	+10%	+15%
Operating income:					
Kronos	$ 36.1	$ 80.6	$ 161.2	+123%	+100%
Rheox	26.3	30.8	38.5	+17%	+25%
	$ 62.4	$111.4	$ 199.7	+78%	+79%
Percent change in TiO_2:					
Sales volume				+9%	-3%
Average selling prices (in billing currencies)				+3%	+15%

The improvement in Kronos' 1995 results was primarily due to higher average TiO_2 selling prices and higher TiO_2 production volumes, partially offset by lower TiO_2 sales volumes. In billing currency terms, Kronos' 1995 average TiO_2 selling prices were approximately 15% higher than in 1994 and were 3% higher in 1994 compared to 1993. However, the majority of the 1995 increase in average selling prices occurred during the first half of the year and average TiO_2 selling prices in the fourth quarter of 1995 were 1% lower than the third quarter of 1995.

Sales volume of 366,000 metric tons of TiO_2 in 1995 decreased 3% compared to the record level of 1994, with declines in both Europe and North America, due to softening demand in the second half of 1995 and customers building inventories during 1994 and early 1995. Kronos increased its production to 94% of its capacity in 1994 and to full capacity in 1995. Kronos has curtailed production rates in early 1996 in response to soft demand and its high inventory levels. Kronos anticipates TiO_2 demand will remain soft during the first half of 1996, although industry capacity utilization rates are expected to increase over the next several years. Kronos' TiO_2 sales volumes increased 9% in 1994 over 1993, with increases in all major regions. Approximately one-half of Kronos' 1995 TiO_2 sales, by volume, were attributable to markets in Europe with approximately 36% attributable to North America and the balance to other regions.

Demand, supply and pricing of TiO_2 have historically been cyclical and the last cyclical peak for TiO_2 prices occurred in early 1990. Kronos believes that its operating margins for 1996 could be lower than in 1995 due principally to the net effect of higher sales volumes, offset by increased raw material costs, lower production volumes and lower technology fee income.

Rheox's operating income improved in 1995 compared to 1994 due to higher sales volumes and selling prices. Operating income increased during 1994 over 1993 due to higher sales volumes and lower operating costs.

The Company has substantial operations and assets located outside the United States (principally Germany, Norway, Belgium and Canada). The U.S. dollar value of the Company's foreign sales and operating costs are subject to currency exchange rate fluctuations which may slightly impact reported earnings and may effect the comparability of period to period operating results. A significant amount of the Company's sales are denominated in currencies other than the U.S. dollar (64% in 1995), principally major European currencies and the Canadian dollar. Certain purchases of raw materials, primarily titanium-containing feedstocks, are denominated in U.S. dollars, while labor and other production costs are primarily denominated in local currencies. Fluctuations in the value of the U.S. dollar relative to other currencies increased 1995 sales by $54 million compared to 1994 and decreased 1994 sales by $2 million compared to 1993.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Change	
	1993	1994	1995	1994-93	1995-94
	(In millions)				
Securities earnings	$ 8.5	$ 3.9	$ 7.4	$(4.6)	$ 3.5
Corporate expenses, net	(41.5)	(44.7)	(26.6)	(3.2)	18.1
Interest expense	(99.1)	(83.9)	(81.6)	15.2	2.3
	$(132.1)	$(124.7)	$(100.8)	$ 7.4	$23.9

Securities earnings fluctuate in part based upon the amount of funds invested and yields thereon. Corporate expenses, net were significantly lower in 1995 compared to 1994 due to lower provisions for environmental remediation and litigation costs. Corporate expenses in 1994 were slightly higher than 1993 as a $20 million gain related to the settlement of a lawsuit was offset by increases in provisions for environmental remediation and litigation costs.

Interest expense

Interest expense in 1994 and 1995 declined compared to the respective prior-year periods due to lower levels of debt, principally Kronos' Deutsche mark-denominated debt, and lower interest rates on such DM-denominated debt.

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In 1995, due to the Company's return to profitability, the Company recognized approximately $10 million of U.S. deferred tax assets which the Company believes satisfy the "more-likely-than-not" recognition criteria. During the fourth quarter of 1995, the Company recorded deferred tax benefits of $6.6 million due to the reduction in dividend withholding tax rates pursuant to ratification of the new U.S./Canada income tax treaty. In 1993 and 1994, the geographic mix of income, including losses in certain jurisdictions for which no current refund was available and recognition of a deferred tax asset was not considered appropriate, contributed to the Company's effective tax rate varying from a normally-expected rate. The Company's deferred income tax status at December 31, 1995 is discussed in "Liquidity and Capital Resources".

Extraordinary item

See Note 16 to the Consolidated Financial Statements.

Change in accounting principle

See Notes 2 and 19 to the Consolidated Financial Statements.

LIQUIDITY AND CAPITAL RESOURCES

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1993	1994	1995
	(In millions)		
Net cash provided (used) by:			
Operating activities	$ (7.3)	$ 181.7	$ 71.5
Investing activities	181.9	(32.8)	(62.2)
Financing activities	(155.3)	(132.1)	(3.3)
Net cash provided by operating, investing and financing activities	$ 19.3	$ 16.8	$ 6.0

The TiO_2 industry is cyclical, with the previous peak in selling prices in early 1990 and the latest trough in the third quarter of 1993. During the last TiO_2 downturn, the Company's operations used significant amounts of cash. Since the 1993 trough, the Company's cash provided by operating activities substantially improved as the Company's operating income improved. Changes in the Company's inventories, receivables and payables (excluding the effect of currency translation) also contributed to the cash provided by operations in 1993 and 1994; however, such changes used cash in 1995 primarily due to increased inventory levels. Receipt of the German tentative tax refund, discussed below, significantly increased the Company's cash flow from operating activities during 1994. A $30 million technology exchange fee received from Tioxide in October 1993, which is being recognized as a component of operating income over three years, also favorably impacted cash flow from operating activities in 1993.

Cash provided (used) by investing activities includes capital expenditures in each period, and in 1993 included $161 million net cash generated from the formation of the manufacturing joint venture with Tioxide. Cash provided by investing activities also included net sales of marketable securities of $68 million in 1993 primarily used to fund debt repayments. In 1994 and 1995, net proceeds of $15 million and $26 million, respectively, from the sale of trading securities are components of the cash provided from operations as a result of the adoption of SFAS No. 115.

The Company's capital expenditures during the past three years include an aggregate of $73 million ($26 million in 1995) for the Company's ongoing environmental protection and compliance programs, including a Canadian waste acid neutralization facility, a Norwegian onshore tailings disposal system and off-gas desulfurization systems. The Company's estimated 1996 and 1997 capital expenditures are $63 million and $56 million, respectively, and include $23 million and $5 million, respectively, in the area of environmental protection and compliance primarily related to the off-gas desulfurization systems and water treatment chemical purification project. The Company spent $9 million in 1995, and plans to spend an additional $11 million in 1996 and $5 million in 1997, in capital expenditures related to a debottlenecking project at its Leverkusen, Germany chloride process TiO_2 facility that is expected to increase the Company's worldwide annual attainable production to approximately 400,000 metric tons in 1997. The capital expenditures of the manufacturing joint venture are not included in the Company's capital expenditures.

Net repayments of indebtedness in 1995 included $30 million in payments on the Rheox bank term loan, including $10 million of prepayments, and $15 million in scheduled repayments on the joint venture term loan. In addition, the Company borrowed $51 million under DM-denominated short-term credit facilities of which $11 million was repaid. In 1994 the Company borrowed DM 75 million ($45 million when borrowed) under the DM credit facility. Repayments of indebtedness in 1994 included DM 225 million ($140 million when paid) paid on the DM credit facility, $15 million paid on the Rheox bank term loan and $15 million paid on the joint venture term loan. Net repayments of indebtedness in 1993 included payments on the DM credit facility of DM 552 million ($342 million when paid), a $110 million net reduction in indebtedness related to the Louisiana plant and $350 million proceeds from the Company's public offering of debt.

At December 31, 1995, the Company had cash and cash equivalents aggregating $141 million (25% held by non-U.S. subsidiaries) including restricted cash and cash equivalents of $10 million. In addition, the Company's subsidiaries had $5 million and $191 million available for borrowing at December 31, 1995 under existing U.S. and non-U.S. credit facilities, respectively, of which $87 million of the non-U.S. amount is available only for (i) permanently reducing the DM term loan or (ii) paying future German income tax assessments, as described below. In January 1996, the Company borrowed DM 30 million under the revolving credit portion of the DM credit facility.

Based upon the Company's expectations for the TiO_2 industry and anticipated demands on the Company's cash resources as discussed herein, the Company expects to have sufficient liquidity to meet its obligations including operations, capital expenditures and debt service. To the extent that actual developments differ from Company's expectations, the Company's liquidity could be adversely affected. On February 15, 1996, the Company announced the resumption of a regular quarterly dividend by declaring a $.10 per share cash dividend to be paid to shareholders of record on March 1, 1996.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million when received), including interest, on a tentative basis while examination of the Company's German income tax returns continued. The Company recently reached agreement in principle with the German tax authorities regarding such examinations which will resolve certain significant tax contingencies for years through 1990. The Company expects to finalize assessments and pay tax deficiencies of approximately DM 50 million ($35 million at December 31, 1995), including interest, in settlement of these issues during the first half of 1996. The Company considers the agreement in principle to be a favorable resolution of the contingencies and the anticipated payment is within previously-accrued amounts for such matters.

Certain other German tax contingencies remain outstanding and will continue to be litigated. No assurances can be given that this litigation will be resolved in the Company's favor in view of the inherent uncertainties involved in court rulings. Although the Company believes that it will ultimately prevail in the litigation, the Company has granted a DM 100 million ($70 million at December 31, 1995) lien on its Nordenham, Germany TiO_2 plant in favor of the German tax authorities until the litigation is resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

At December 31, 1995, the Company had net deferred tax liabilities of $157 million. The Company operates in numerous tax jurisdictions, in certain of which it has temporary differences that net to deferred tax assets (before valuation allowance). The Company has provided a deferred tax valuation allowance of $196 million at December 31, 1995, principally related to the U.S. and Germany, partially offsetting deferred tax assets which the Company believes do not currently meet the "more-likely-than-not" recognition criteria.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and other Contran subsidiaries.

The Company has been named as a defendant, PRP, or both, in a number of legal proceedings associated with environmental matters, including waste disposal sites or facilities currently or formerly owned, operated or used by the Company, many of which disposal sites or facilities are on the U.S. EPA's Superfund National Priorities List or similar state lists. On a quarterly basis, the Company evaluates the potential range of its liability at sites where it has been named as a PRP or defendant. The Company believes it has provided adequate accruals for reasonably estimable costs of such matters, but the Company's ultimate liability may be affected by a number of factors, including changes in remedial alternatives and costs and the allocation of such costs among PRPs. The Company is also a defendant in a number of legal proceedings seeking damages for personal injury and property damage arising out of the sale of lead pigments and lead-based paints. The Company has not accrued any amounts for the pending lead

pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability, that may result, if any, cannot reasonably be estimated. The Company currently believes the disposition of all claims and disputes, individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. There can be no assurance that additional matters of these types will not arise in the future. See Item 3 - "Legal Proceedings" and Note 18 to the Consolidated Financial Statements.

As discussed above, the Company has substantial operations located outside the United States for which the functional currency is not the U.S. dollar. As a result, the reported amount of the Company's assets and liabilities related to its non-U.S. operations, and therefore the Company's consolidated net assets, will fluctuate based upon changes in currency exchange rates. The carrying value of the Company's net investment in its German operations is a net liability due principally to its DM credit facility, while its net investment in its other non-U.S. operations are net assets.

The Company periodically evaluates its liquidity requirements, alternative uses of capital, capital needs and availability of resources in view of, among other things, its debt service and capital expenditure requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to reduce, refinance or restructure indebtedness, raise additional capital, modify its dividend policy, restructure ownership interests, sell interests in subsidiaries or other assets, or take a combination of such steps or other steps to manage its liquidity and capital resources. In the normal course of its business, the Company may review opportunities for the acquisition of businesses and assets in the chemicals industry. In the event of any future acquisition, the Company may consider using available cash, issuing equity securities or increasing its indebtedness to the extent permitted by the agreements governing the Company's existing debt. See Note 10 to the Consolidated Financial Statements.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 17 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1995 and thereafter through the date of this report.

October 19, 1995 - reported items 5 and 7.
January 25, 1996 - reported items 5 and 7.
February 15, 1996 - reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Exhibit Index

Item No.	
3.1	By-Laws, as amended on June 28, 1990 - incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2	Certificate of Amended and Restated Certificate of Incorporation dated June 28, 1990 - incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1	Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation - incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
4.2	Indenture dated October 20, 1993 governing the Registrant's 11.75% Senior Secured Notes due 2003, including form of Senior Note - incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.3	Senior Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.4	Senior Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.5	Third Party Pledge and Intercreditor Agreement dated October 20, 1993 between Registrant, Chase Manhattan Bank (National Association) and Chemical Bank - incorporated by reference to Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.6	Indenture dated October 20, 1993 governing the Registrant's 13% Senior Secured Discount Notes due 2005, including form of Discount Note - incorporated by reference to Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.7	Discount Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.8	Discount Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.1 Amended and Restated Loan Agreement dated as of October 15, 1993 among Kronos International, Inc., the Banks set forth therein, Hypobank International S.A., as Agent and Banque Paribas, as Co-agent - incorporated by reference to Exhibit 10.17 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.2 Amended and Restated Liquidity Undertaking dated October 15, 1993 by the Registrant, Kronos, Inc. and Kronos International, Inc. to Hypobank International S.A., as agent, and the Banks set forth therein - incorporated by reference to Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.3 Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents - incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.

10.4 Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents-incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on form 10-Q for the quarter ended June 30, 1992.

10.5 Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents - incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

10.6 Fourth and Fifth Amendments to the Credit Agreement, dated September 23, 1994 and December 15, 1994, respectively, between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents - incorporated by reference to Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1994.

10.7 Sixth and Seventh Amendments to the Credit Agreement, dated September 23, 1995 and February 2 1996, respectively, between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents.

10.8 Credit Agreement dated as of October 18, 1993 among Louisiana Pigment Company, L.P., as Borrower, the Banks listed therein and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.9 Security Agreement dated October 18, 1993 from Louisiana Pigment Company, L.P., as Borrower, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.10 Security Agreement dated October 18, 1993 from Kronos Louisiana, Inc. as Grantor, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.11 KLA Consent and Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.12 Guaranty dated October 18, 1993, from Kronos, Inc., as guarantor, in favor of Lenders named therein, as Lenders, and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.13 Mortgage by Louisiana Pigment Company, L.P. dated October 18, 1993 in favor of Citibank, N.A. - incorporated by reference to Exhibit 10.16 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.14 Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.15 Contract on Supplies and Services among Bayer AG, Kronos Titan-GmbH and Kronos International, Inc. dated June 30, 1995 (English translation from German language document) - incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1995.

10.16 Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) - incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.17 Richards Bay Slag Sales Agreement dated May 1, 1995 between Richards Bay Iron and Titanium (Proprietary) Limited and Kronos, Inc.

10.18 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.19 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.20 Amendment No. 1 to Joint Venture Agreement dated as of December 20, 1995 between Tioxide Americas Inc. and Kronos Louisiana, Inc.

10.21 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.22 Amendment No. 1 to Kronos Offtake Agreement dated as of December 20, 1995 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P.

10.23 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.24 Amendment No. 1 to Tioxide Americas Offtake Agreement dated as of December 20, 1995 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P.

10.25 TCI/KCI Output Purchase Agreement dated as of October 18, 1993 between Tioxide Canada Inc. and Kronos Canada, Inc. - incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.26 TAI/KLA Output Purchase Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.27 Master Technology Exchange Agreement dated as of October 18, 1993 among Kronos, Inc., Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited - incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.28 Parents' Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos, Inc. - incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.29	Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos, Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
10.30*	1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.
10.31	Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.32*	1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.33	Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.34*	NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 - incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.35	Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1995 - incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1995.
10.36	Intercorporate Services Agreement by and between Contran Corporation and the Registrant effective as of January 1, 1995 - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1995.
10.37	Intercorporate Services Agreement by and between Tremont Corporation and the Registrant effective as of January 1, 1995.
10.38	Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.

10.39*	Description of terms of an executive severance agreement between the Registrant and Joseph S. Compofelice - incorporated by reference to the last paragraph of page 16 entitled "Employment Agreements" of the Registrant's definitive proxy statement dated March 30, 1994.
10.40*	Description of terms of an executive severance agreement between the Registrant and Lawrence A. Wigdor - incorporated by reference to the last paragraph on page 16 entitled "Employment Agreements" of the Registrant's definitive proxy statement dated March 29, 1995.
10.41*	Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin - incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.42*	Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991 - incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.
10.43*	Agreement to Defer Bonus Payment dated December 28, 1995 between the Registrant and Lawrence A. Wigdor and related trust agreement.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Accountants.
27.1	Financial Data Schedules for the year ended December 31, 1995.
99.1	Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 10-K/A to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1995.

* Management contract, compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL Industries, Inc.
(Registrant)

By /s/ J. Landis Martin
J. Landis Martin, March 1, 1996
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/s/ J. Landis Martin
J. Landis Martin, March 1, 1996
Director, President and
Chief Executive Officer

/s/ Harold C. Simmons
Harold C. Simmons, March 1, 1996
Chairman of the Board

/s/ Glenn R. Simmons
Glenn R. Simmons, March 1, 1996
Director

/s/ Joseph S. Compofelice
Joseph S. Compofelice, March 1, 1996
Director, Vice President and
Chief Financial Officer

/s/ Kenneth R. Peak
Kenneth R. Peak, March 1, 1996
Director

/s/ Dr. Lawrence A. Wigdor
Dr. Lawrence A. Wigdor, March 1, 1996
Director, President and Chief
Executive Officer of Kronos and Rheox

/s/ Elmo R. Zumwalt, Jr.
Elmo R. Zumwalt, Jr., March 1, 1996
Director

/s/ Dennis G. Newkirk
Dennis G. Newkirk, March 1, 1996
Vice President and Controller
(Principal Accounting Officer)

NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K

Items 8, 14(a) and 14(d)

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1994 and 1995, and the related consolidated statements of operations, shareholders' deficit, and cash flows for each of the three years in the period ended December 31, 1995. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1994 and 1995, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1995 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for certain investments in debt and equity securities in accordance with Statement of Financial Accounting Standards No. 115.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 8, 1996

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1994 and 1995

(In thousands, except per share data)

ASSETS	1994	1995
Current assets:		
Cash and cash equivalents	$ 131,124	$ 141,333
Marketable securities	25,165	-
Accounts and notes receivable, less allowance of $3,749 and $4,039	137,753	147,428
Refundable income taxes	1,162	4,941
Inventories	185,173	251,630
Prepaid expenses	3,878	3,217
Deferred income taxes	2,177	2,522
Total current assets	486,432	551,071
Other assets:		
Marketable securities	21,329	20,944
Investment in joint ventures	187,480	185,893
Prepaid pension cost	19,329	22,576
Deferred income taxes	2,746	788
Other	37,267	31,165
Total other assets	268,151	261,366
Property and equipment:		
Land	20,665	22,902
Buildings	147,370	166,349
Machinery and equipment	582,138	648,458
Mining properties	87,035	97,190
Construction in progress	9,579	11,187
	846,787	946,086
Less accumulated depreciation and depletion	438,960	486,870
Net property and equipment	407,827	459,216
	$1,162,410	$1,271,653

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 1994 and 1995

(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' DEFICIT	1994	1995
Current liabilities:		
Notes payable	$ -	$ 39,247
Current maturities of long-term debt	42,887	43,369
Accounts payable and accrued liabilities	168,327	165,985
Payable to affiliates	11,348	10,181
Income taxes	20,762	40,088
Deferred income taxes	1,590	3,555
Total current liabilities	244,914	302,425
Noncurrent liabilities:		
Long-term debt	746,762	740,334
Deferred income taxes	178,332	157,192
Accrued pension cost	76,242	69,311
Accrued postretirement benefits cost	65,299	60,235
Other	141,518	148,511
Total noncurrent liabilities	1,208,153	1,175,583
Minority interest	2,425	3,066
Shareholders' deficit:		
Preferred stock - 5,000 shares authorized, no shares issued or outstanding	-	-
Common stock - $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,281	759,281
Adjustments:		
Currency translation	(125,494)	(126,934)
Pension liabilities	(1,635)	(1,908)
Marketable securities	(12)	(525)
Accumulated deficit	(567,041)	(481,432)
Treasury stock, at cost (15,787 and 15,748 shares)	(366,536)	(366,258)
Total shareholders' deficit	(293,082)	(209,421)
	$1,162,410	$1,271,653

Commitments and contingencies (Notes 13 and 18)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1993, 1994 and 1995

(In thousands, except per share data)

	1993	1994	1995
Revenues and other income:			
Net sales	$ 805,323	$887,954	$1,023,939
Other, net	22,084	44,828	22,241
	827,407	932,782	1,046,180
Costs and expenses:			
Cost of sales	612,367	649,745	676,184
Selling, general and administrative	185,689	212,516	189,477
Interest	99,119	83,926	81,617
	897,175	946,187	947,278
Income (loss) before income taxes, minority interest, extraordinary item and cumulative effect of change in accounting principle	(69,768)	(13,405)	98,902
Income tax expense	12,713	9,734	12,671
Income (loss) before minority interest, extraordinary item and cumulative effect of change in accounting principle	(82,481)	(23,139)	86,231
Minority interest	730	843	622
Income (loss) before extraordinary item and cumulative effect of change in accounting principle	(83,211)	(23,982)	85,609
Extraordinary item	(27,815)	-	-
Cumulative effect of change in accounting principle	1,217	-	-
Net income (loss)	$(109,809)	$(23,982)	$ 85,609

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Years ended December 31, 1993, 1994 and 1995

(In thousands, except per share data)

	1993	1994	1995
Income (loss) per share of common stock:			
Before extraordinary item and cumulative effect of change in accounting principle	$(1.63)	$ (.47)	$ 1.66
Extraordinary item	(.55)	-	-
Cumulative effect of change in accounting principle	.02	-	-
Net income (loss)	$(2.16)	$ (.47)	$ 1.66
Weighted average common shares outstanding	50,890	51,022	51,512

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	Common stock	Additional paid-in capital	Adjustments			Accumulated deficit	Treasury stock	Total
			Currency translation	Pension liabilities	Marketable securities			
Balance at December 31, 1992	$8,355	$759,281	$(111,820)	$ -	$ (896)	$(433,250)	$(367,963)	$(146,293)
Net loss	-	-	-	-	-	(109,809)	-	(109,809)
Adjustments	-	-	(3,983)	(3,442)	(51)	-	-	(7,476)
Cumulative effect of change in accounting principle	-	-	-	-	(1,217)	-	-	(1,217)
Balance at December 31, 1993	8,355	759,281	(115,803)	(3,442)	(2,164)	(543,059)	(367,963)	(264,795)
Net loss	-	-	-	-	-	(23,982)	-	(23,982)
Treasury stock reissued	-	-	-	-	-	-	1,427	1,427
Adjustments	-	-	(9,691)	1,807	2,152	-	-	(5,732)
Balance at December 31, 1994	8,355	759,281	(125,494)	(1,635)	(12)	(567,041)	(366,536)	(293,082)
Net income	-	-	-	-	-	85,609	-	85,609
Treasury stock reissued	-	-	-	-	-	-	278	278
Adjustments	-	-	(1,440)	(273)	(513)	-	-	(2,226)
Balance at December 31, 1995	$8,355	$759,281	$(126,934)	$(1,908)	$ (525)	$(481,432)	$(366,258)	$(209,421)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from operating activities:			
Net income (loss)	$(109,809)	$(23,982)	$ 85,609
Depreciation, depletion and amortization	46,340	34,592	38,989
Noncash interest expense	8,309	18,071	19,396
Deferred income taxes	(670)	11,907	(29,248)
Cumulative effect of change in accounting principle	(1,217)	-	-
Minority interest	730	843	622
Net (gains) losses from:			
Securities transactions	(4,363)	1,220	(1,175)
Disposition of property and equipment	199	1,981	2,713
Pension cost, net	(2,134)	(2,753)	(7,248)
Other postretirement benefits, net	(2,422)	(3,437)	(4,169)
Other, net	(1,349)	68	(477)
	(66,386)	38,510	105,012
Change in assets and liabilities:			
Accounts and notes receivable	(1,291)	(13,152)	(1,483)
Inventories	12,166	17,778	(57,378)
Prepaid expenses	(472)	3,221	1,148
Accounts payable and accrued liabilities	(4,132)	(17,343)	(17,700)
Income taxes	1,507	109,243	14,861
Accounts with affiliates	5,426	(2,024)	(4,059)
Other noncurrent assets	8,844	2,219	1,587
Other noncurrent liabilities	37,069	28,706	3,233
Marketable trading securities:			
Purchases	-	(870)	(762)
Dispositions	-	15,530	27,102
Net cash provided (used) by operating activities	(7,269)	181,818	71,561

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from investing activities:			
Capital expenditures	$ (47,986)	$ (36,931)	$(64,196)
Marketable securities:			
Purchases	(11,053)	-	-
Dispositions	79,398	-	-
Proceeds from disposition of property and equipment	175,537	598	182
Investment in joint ventures, net	(14,405)	3,133	1,793
Loans to affiliates	(210)	-	-
Other, net	670	362	-
Net cash provided (used) by investing activities	181,951	(32,838)	(62,221)
Cash flows from financing activities:			
Indebtedness:			
Borrowings	452,694	44,490	57,556
Principal payments	(607,417)	(175,886)	(61,128)
Other, net	(613)	(742)	264
Net cash used by financing activities	(155,336)	(132,138)	(3,308)
Net change during the year from operating, investing and financing activities	$ 19,346	$ 16,842	$ 6,032

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash and cash equivalents:			
Net change during the year from:			
Operating, investing and financing activities	$ 19,346	$ 16,842	$ 6,032
Currency translation	(86)	7,689	4,177
	19,260	24,531	10,209
Balance at beginning of year	87,333	106,593	131,124
Balance at end of year	$106,593	$ 131,124	$141,333
Supplemental disclosures - cash paid (received) for:			
Interest, net of amounts capitalized	$ 91,576	$ 66,801	$ 62,078
Income taxes, net	11,897	(111,418)	27,965

See accompanying notes to consolidated financial statements.

Note 1 - Organization and basis of presentation:

NL Industries, Inc. conducts its operations primarily through its wholly-owned subsidiaries, Kronos, Inc. (titanium dioxide pigments or "TiO_2") and Rheox, Inc. (specialty chemicals).

Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 54% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 91% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President, and Chief Executive Officer of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies.

Note 2 - Summary of significant accounting policies:

Principles of consolidation and management's estimates

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated. Certain prior year amounts have been reclassified to conform to the current year presentation. The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amount of revenues and expenses during the reporting period. Ultimate actual results may in some instances differ from previously estimated amounts.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments and the related income tax effects are accumulated in the currency translation adjustment component of shareholders' deficit. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less. Cash and cash equivalents includes $16 million and $10 million at December 31, 1994 and 1995, respectively, which are restricted for letters of credit and certain indebtedness agreements.

Marketable securities and securities transactions

Marketable securities are classified as either "available-for-sale" or "trading" and are carried at market based on quoted market prices. Unrealized gains and losses on trading securities are recognized in income currently. Unrealized gains and losses on available-for-sale securities, and the related deferred income tax effects, are accumulated in the marketable securities adjustment component of shareholders' deficit. See Note 4. Realized gains or losses are computed based on specific identification of the securities sold.

Prior to the adoption of Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities" as of December 31, 1993, marketable securities were generally carried at the lower of aggregate market or amortized cost and unrealized net gains were not recognized.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in joint ventures

Investments in 20% to 50%-owned entities are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted, not exceeding ten years.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to forty years for buildings and three to twenty years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Long-term debt

Long-term debt is stated net of unamortized original issue discount ("OID"). OID is amortized over the period during which interest is not paid and deferred financing costs are amortized over the life of the applicable issue, both by the interest method.

Employee benefit plans

Accounting and funding policies for retirement plans and postretirement benefits other than pensions ("OPEB") are described in Note 11.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

Income (loss) per share of common stock

Income (loss) per share of common stock is based on the weighted average number of common shares and equivalents outstanding. Common stock equivalents, consisting of nonqualified stock options, are excluded from the computation when their effect is antidilutive.

Note 3 - Business and geographic segments:

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and leveling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. General corporate assets consist principally of cash, cash equivalents and marketable securities. At December 31, 1994 and 1995, the net assets of non-U.S. subsidiaries included in consolidated net assets approximated $72 million and $121 million, respectively.

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Business segments			
Net sales:			
Kronos	$ 697,048	$ 770,077	$ 894,149
Rheox	108,275	117,877	129,790
	$ 805,323	$ 887,954	$1,023,939
Operating income:			
Kronos	$ 36,146	$ 80,515	$ 161,175
Rheox	26,254	30,837	38,544
	62,400	111,352	199,719
General corporate income (expense):			
Securities earnings	8,467	3,855	7,419
Expenses, net	(41,516)	(44,686)	(26,619)
Interest expense	(99,119)	(83,926)	(81,617)
	$ (69,768)	$ (13,405)	$ 98,902
Capital expenditures:			
Kronos	$ 46,913	$ 34,522	$ 60,699
Rheox	1,069	2,283	3,464
General corporate	4	126	33
	$ 47,986	$ 36,931	$ 64,196
Depreciation, depletion and amortization:			
Kronos	$ 42,877	$ 31,156	$ 35,706
Rheox	3,176	3,153	3,089
General corporate	287	283	194
	$ 46,340	$ 34,592	$ 38,989
Geographic areas			
Net sales - point of origin:			
United States	$ 270,288	$ 303,475	$ 339,568
Europe	519,064	587,291	703,206
Canada	132,930	122,957	139,341
Eliminations	(116,959)	(125,769)	(158,176)
	$ 805,323	$ 887,954	$1,023,939

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Net sales - point of destination:			
United States	$ 217,892	$ 238,568	$ 258,850
Europe	418,072	468,915	580,794
Canada	76,078	64,374	60,472
Other	93,281	116,097	123,823
	$ 805,323	$ 887,954	$1,023,939
Operating income:			
United States	$ 20,981	$ 49,358	$ 75,650
Europe	19,658	50,273	103,096
Canada	21,761	11,721	20,973
	$ 62,400	$ 111,352	$ 199,719

	December 31,		
	1993	1994	1995
	(In thousands)		
Identifiable assets			
Business segments:			
Kronos	$1,008,453	$ 950,200	$1,063,369
Rheox	75,362	83,176	83,620
General corporate	122,734	129,034	124,664
	$1,206,549	$1,162,410	$1,271,653
Geographic segments:			
United States	$ 326,831	$ 308,017	$ 311,374
Europe	622,826	594,921	690,353
Canada	134,158	130,438	145,262
General corporate	122,734	129,034	124,664
	$1,206,549	$1,162,410	$1,271,653

Note 4 - Marketable securities and securities transactions:

	December 31, 1994	December 31, 1995
	(In thousands)	
Trading securities - current U.S. Treasury securities:		
Unrealized losses	$(1,124)	$ -
Cost	26,289	-
Aggregate market	$25,165	$ -
Available-for-sale securities - noncurrent marketable equity securities:		
Unrealized gains	$ 3,357	$ 1,962
Unrealized losses	(3,374)	(2,770)
Cost	21,346	21,752
Aggregate market	$21,329	$20,944

Net gains and losses from trading securities are composed of:

	Years ended December 31, 1993	1994	1995
		(In thousands)	
Unrealized gains (losses)	$3,520	$(1,177)	$1,125
Realized gains (losses)	843	(43)	50
	$4,363	$(1,220)	$1,175

Note 5 - Inventories:

	December 31, 1994	December 31, 1995
	(In thousands)	
Raw materials	$ 30,118	$ 35,075
Work in process	7,655	9,132
Finished products	112,410	172,330
Supplies	34,990	35,093
	$185,173	$251,630

Note 6 - Investment in joint ventures:

	December 31, 1994	December 31, 1995
	(In thousands)	
TiO_2 manufacturing joint venture	$185,122	$183,129
Other	2,358	2,764
	$187,480	$185,893

In October 1993, Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, formed a manufacturing joint venture, Louisiana Pigment Company, L.P. ("LPC"), with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). LPC, which is equally owned by KLA and a subsidiary of Tioxide, owns and operates the Louisiana chloride process TiO_2 plant formerly owned by KLA. LPC has long-term debt that is collateralized by the partnership interests of the partners and substantially all of the assets of LPC. The long-term debt consists of two tranches, one attributable to each partner, and each tranche is serviced through (i) the purchase of the plant's TiO_2 output in equal quantities by the partners and (ii) cash capital contributions. KLA is required to purchase one-half of the TiO_2 produced by LPC. KLA's tranche of LPC's debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche. See Note 10.

LPC is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of LPC's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from LPC is sold, and its share of the interest expense is reported as a component of interest expense.

Summary balance sheets of LPC are shown below.

	December 31, 1994	December 31, 1995
	(In thousands)	
ASSETS		
Current assets	$ 38,027	$ 49,398
Other assets	1,969	1,553
Property and equipment, net	344,806	335,254
	$384,802	$386,205
LIABILITIES AND PARTNERS' EQUITY		
Long-term debt, including current portion:		
Kronos tranche	$ 88,715	$ 73,286
Tioxide tranche	81,000	59,400
Other liabilities, primarily current	12,330	17,719
	182,045	150,405
Partners' equity	202,757	235,800
	$384,802	$386,205

Summary income statements of LPC are shown below.

	Period from October 18, 1993 to December 31, 1993	Years ended December 31, 1994	1995
	(In thousands)		
Revenues and other income:			
Kronos	$12,713	$ 70,492	$ 76,365
Tioxide	12,617	67,218	75,241
Interest income	72	462	653
	25,402	138,172	152,259
Cost and expenses:			
Cost of sales	22,803	126,972	140,103
General and administrative	443	572	385
Interest	2,156	10,628	11,771
	25,402	138,172	152,259
Net income	$ -	$ -	$ -

Note 7 - Other noncurrent assets:

	December 31, 1994	1995
	(In thousands)	
Intangible assets, net of accumulated amortization of $16,149 and $20,562	$13,957	$11,803
Deferred financing costs, net	16,079	13,199
Other	7,231	6,163
	$37,267	$31,165

Note 8 - Accounts payable and accrued liabilities:

	December 31, 1994	1995
	(In thousands)	
Accounts payable	$ 74,903	$ 68,734
Accrued liabilities:		
Employee benefits	34,209	49,884
Environmental costs	10,433	6,000
Interest	6,485	6,633
Miscellaneous taxes	7,336	2,557
Other	34,961	32,177
	93,424	97,521
	$168,327	$165,985

Note 9 - Other noncurrent liabilities:

	December 31, 1994	December 31, 1995
	(In thousands)	
Environmental costs	$ 93,655	$112,827
Insurance claims expenses	14,716	12,088
Deferred technology fee income	18,305	8,456
Employee benefits	12,322	13,148
Other	2,520	1,992
	$141,518	$148,511

Note 10 - Notes payable and long-term debt:

	December 31, 1994	December 31, 1995
	(In thousands)	
Notes payable (DM 56,000)	$ -	$ 39,247
NL Industries:		
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	116,409	132,034
	366,409	382,034
Kronos:		
DM bank credit facility (DM 397,610)	255,703	276,895
LPC term loan	88,715	73,286
Other	10,507	13,672
	354,925	363,853
Rheox:		
Bank term loan	67,500	37,263
Other	815	553
	68,315	37,816
	789,649	783,703
Less current maturities	42,887	43,369
	$746,762	$740,334

The Company's $250 million principal amount of 11.75% Senior Secured Notes due 2003 and $188 million principal amount at maturity ($100 million proceeds at issuance) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes") are collateralized by a series of intercompany notes from Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, to NL, the terms of which mirror those of the respective Notes (the "Mirror Notes"). The Senior Secured Notes are also collateralized by a first priority lien on the stock of Kronos and a second priority lien on the stock of Rheox. The Senior Secured Notes and the Senior Secured Discount Notes are redeemable, at the Company's option, after October 2000 and October 1998, respectively, except that up to one-third of the aggregate principal amount of the Senior Secured Discount

Notes are redeemable (at 113% of the accreted value) upon any Common Stock Offering, as defined, prior to October 1996. For redemptions, other than redemptions pursuant to any Common Stock Offering, the redemption prices range from 101.5% (starting October 2000) declining to 100% (after October 2001) of the principal amount for the Senior Secured Notes and range from 106% (starting October 1998) declining to 100% (after October 2001) of the accreted value of the Senior Secured Discount Notes. In the event of a Change of Control, as defined, the Company would be required to make an offer to purchase the Notes at 101% of the principal amount of the Senior Secured Notes and 101% of the accreted value of the Senior Secured Discount Notes. The Notes are issued pursuant to indentures which contain a number of covenants and restrictions which, among other things, restrict the ability of the Company and its subsidiaries to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of its assets to, another entity. At December 31, 1995, there was $6 million available for payment for dividends pursuant to the terms of the indentures. The Senior Secured Discount Notes do not require cash interest payments for the first five years. The net carrying value of the Senior Secured Discount Notes per $100 principal amount at maturity was $62.08 and $70.42 at December 31, 1994 and 1995, respectively. At December 31, 1995, the quoted market price of the Senior Secured Notes was $107.06 per $100 principal amount and the quoted market price of the Senior Secured Discount Notes was $80.95 per $100 principal amount (1994 - $98.80 and $61.30, respectively).

The DM credit facility, as amended, consists of a DM 398 million term loan due from March 1997 to September 1999 and a DM 250 million revolving credit facility due no later than September 2000. At December 31, 1995, all of the revolving credit facility was available for future borrowings by KII; however, DM 125 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments. In January 1996, the Company borrowed DM 30 million under the revolving credit facility. Borrowings bear interest at DM LIBOR plus 1.625% (6.938% and 5.5% at December 31, 1994 and 1995, respectively). NL and Kronos have agreed, under certain circumstances, to provide KII with up to DM 125 million through January 1, 2001. The DM credit facility is collateralized by pledges of the stock of certain KII subsidiaries. The credit agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Borrowings under KLA's tranche of LPC's term loan bear interest at U.S. LIBOR plus 1.625% (8.125% and 7.315% at December 31, 1994 and 1995, respectively) and are repayable in quarterly installments through September 2000. See Note 6.

Rheox has a credit agreement providing for a seven-year term loan due in quarterly installments through December 1997 and a $5 million revolving credit facility due September 1996. Borrowings bear interest, at Rheox's option, at the prime rate plus 1.5% or U.S. LIBOR plus 2.5% (9.01% and 8.32% at December 31, 1994 and 1995, respectively), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's ability to incur additional indebtedness, restricts its dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type.

Notes payable at December 31, 1995 consists of DM 56 million of short-term borrowings due in 1996 from non-U.S. banks with interest rates ranging from 4.25% to 4.856%.

Unused lines of credit available for borrowings under the Rheox U.S. facility and non-U.S. credit facilities totalled $5 million and $191 million, respectively, at December 31, 1995. Of the non-U.S. credit facilities available, $87 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments.

The aggregate maturities of long-term debt at December 31, 1995 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1996	$ 43,369
1997	97,585
1998	110,602
1999	138,031
2000	11,845
2001 and thereafter	437,737
	839,169
Less unamortized original issue discount on the Senior Secured Discount Notes	55,466
	$783,703

Note 11 - Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was nil in 1993, $.7 million in 1994 and $.8 million in 1995.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended, and the Retirement Protection Act of 1994. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations were (i) discount rates - 7% and 8.5% (1994 - 8.5%) and (ii)

rates of increase in future compensation levels - 3.5% to 6% (1994 - 5% to 6%). The expected long-term rates of return on assets used ranged from 8% to 9% (1994 - 8.5% to 9%). Plan assets are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

SFAS No. 87, "Employers' Accounting for Pension Costs" requires that an additional pension liability be recognized when the unfunded accumulated pension benefit obligation exceeds the unfunded accrued pension liability. Variances from actuarially-assumed rates, including the rate of return on pension plan assets, will result in additional increases or decreases in accrued pension liabilities, pension expense and funding requirements in future periods. A one percentage point decrease in the discount rate would increase the projected benefit obligations at December 31, 1995 by $31 million. At December 31, 1995, 67% of the projected benefit obligations in excess of plan assets relate to non-U.S. plans.

	Assets exceed accumulated benefits December 31,		Accumulated benefits exceed assets December 31,	
	1994	1995	1994	1995
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$43,248	$47,181	$132,317	$156,275
Nonvested benefits	3,390	3,744	2,155	2,562
Accumulated benefit obligations	46,638	50,925	134,472	158,837
Effect of projected salary increases	5,938	7,885	19,620	22,373
Projected benefit obligations ("PBO")	52,576	58,810	154,092	181,210
Plan assets at fair value	66,293	71,345	108,377	124,632
Plan assets over (under) PBO	13,717	12,535	(45,715)	(56,578)
Unrecognized net loss (gain) from experience different from actuarial assumptions	2,876	7,155	(32,808)	(20,643)
Unrecognized prior service cost (credit)	3,195	3,147	(3,255)	(2,711)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(459)	(261)	2,606	2,517
Adjustment required to recognize minimum liability	-	-	(1,635)	(1,908)
Total prepaid (accrued) pension cost	19,329	22,576	(80,807)	(79,323)
Less current portion	-	-	(4,565)	(10,012)
Noncurrent prepaid (accrued) pension cost	$19,329	$22,576	$(76,242)	$(69,311)

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Service cost benefits	$ 4,082	$ 4,905	$ 4,325
Interest cost on PBO	14,430	15,371	17,853
Return on plan assets	(15,647)	(8,039)	(16,574)
Net amortization and deferrals	2,413	(5,940)	(2,399)
	$ 5,278	$ 6,297	$ 3,205

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. In 1989, the Company began phasing out such benefits for currently active U.S. employees over a ten-year period. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. The Company's policy is to fund medical claims as they are incurred, net of any contributions by the retirees.

The rates used in determining the actuarial present value of the accumulated benefit obligations were (i) discount rate - 7.5% (1994 - 8.5%), (ii) rate of increase in future compensation levels - 4.5% (1994 - 6%), (iii) rate of increase in future health care costs - 9% in 1996, gradually declining to 5% in 2000 and thereafter and (iv) expected return on plan assets - 9%. Variances from actuarially-assumed rates will result in additional increases or decreases in accrued OPEB cost, net periodic OPEB cost and funding requirements in future periods. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.3 million in 1995, and the actuarial present value of accumulated benefit obligations at December 31, 1995 would have increased by approximately $2.9 million. A one percentage point decrease in the discount rate would increase the actuarial present value of accumulated benefit obligations at December 31, 1995 by approximately $4 million.

	December 31,	
	1994	1995
	(In thousands)	
Actuarial present value of accumulated benefit obligations:		
Retiree benefits	$51,895	$53,211
Other fully eligible active plan participants	1,229	1,228
Other active plan participants	1,797	2,322
	54,921	56,761
Plan assets at fair value	7,217	7,103
Accumulated postretirement benefit obligations in excess of plan assets	47,704	49,658
Unrecognized net gain from experience different from actuarial assumptions	9,251	4,676
Unrecognized prior service credit	13,672	12,199
Total accrued postretirement benefits cost	70,627	66,533
Less current portion	5,328	6,298
Noncurrent accrued postretirement benefits cost	$65,299	$60,235

The components of the Company's net periodic postretirement benefit cost are set forth below:

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Interest cost on accumulated benefit obligations	$ 4,911	$ 4,338	$ 4,415
Service cost benefits earned during the year	127	99	101
Return on plan assets	(647)	(688)	(637)
Net amortization and deferrals	(1,473)	(1,495)	(1,870)
	$ 2,918	$ 2,254	$ 2,009

Note 12 - Shareholders' deficit:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
		(In thousands)	
Balance at December 31, 1992 and 1993	66,839	15,949	50,890
Treasury shares reissued	-	(162)	162
Balance at December 31, 1994	66,839	15,787	51,052
Treasury shares reissued	-	(39)	39
Balance at December 31, 1995	66,839	15,748	51,091

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options granted pursuant to a similar plan which preceded the NL Option Plan ("the Predecessor Option Plan") remain outstanding at December 31, 1995, no additional options may be granted under the Predecessor Option Plan.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to or greater than 100% of the market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan. At December 31, 1995, 50,000 shares of common stock, restricted until February 1996, are included in common shares outstanding.

In addition to the NL Option Plan, the Company maintains a stock option plan for its non-employee directors. At December 31, 1995, there were options to acquire 8,000 shares of common stock outstanding of which 6,000 were fully vested.

Changes in outstanding options granted pursuant to the NL Option Plan, the Predecessor Option Plan and the non-employee director plan are summarized in the table below. At December 31, 1995, options to purchase 1,189,907 shares were exercisable and options to purchase 548,798 shares become exercisable in 1996. Of the exercisable options at December 31, 1995, options to purchase 693,237 shares had exercise prices less than the Company's December 31, 1995 quoted market price of $12.125 per share. At December 31, 1995, an aggregate of 2.7 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands, except per share amounts)		
Outstanding at December 31, 1992	1,272	$ 8.13 - 24.19	$18,013
Granted	453	4.81 - 7.00	2,655
Canceled	(7)	5.00 - 9.31	(44)
Outstanding at December 31, 1993	1,718	4.81 - 24.19	20,624
Granted	675	8.69 - 10.69	6,315
Exercised	(13)	9.31 - 10.50	(120)
Canceled	(6)	5.00 - 9.31	(46)
Outstanding at December 31, 1994	2,374	4.81 - 24.19	26,773
Granted	94	11.81 - 14.81	1,150
Exercised	(39)	5.00 - 10.78	(282)
Canceled	(36)	5.00 - 11.81	(320)
Outstanding at December 31, 1995	2,393	$ 4.81 - 24.19	$27,321

The Company expects to elect the disclosure alternative prescribed by SFAS No. 123 "Accounting for Stock-Based Compensation" and to continue to account for stock-based employee compensation in accordance with Accounting Principles Board Opinion No. 25 ("APBO"), "Accounting for Stock Issued to Employees" and its various interpretations. Under APBO No. 25, no compensation cost is generally recognized for fixed stock options in which the exercise price is not less than the market price on the grant date. Under the disclosure alternative of SFAS No. 123, the Company will disclose, starting with the year ended December 31, 1996, its pro forma net income and earnings per share as if the fair value based accounting method of SFAS No. 123 had been used to account for stock-based compensation cost for all awards granted after January 1, 1995.

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance.

Note 13 - Income taxes:

The components of (i) income (loss) before income taxes, minority interest, extraordinary item and cumulative effect of change in accounting principle ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 35%, (iii) the provision for income taxes and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1993	1994	1995
		(In thousands)	
Pretax income (loss):			
U.S.	$(41,579)	$ (6,241)	$ 43,125
Non-U.S.	(28,189)	(7,164)	55,777
	$(69,768)	$(13,405)	$ 98,902
Expected tax expense (benefit)	$(24,419)	$ (4,692)	$ 34,616
Non-U.S. tax rates	(15,620)	(7,108)	(7,016)
Rate change adjustment of deferred taxes	6,823	-	(6,593)
Valuation allowance	40,827	24,309	(9,588)
Settlement of U.S. tax audits	-	(5,437)	-
Incremental tax on income of companies not included in the NL Tax Group	2,553	790	499
U.S. state income taxes	486	534	721
Other, net	2,063	1,338	32
	$ 12,713	$ 9,734	$ 12,671
Provision for income taxes:			
Current income tax expense (benefit):			
U.S. federal	$ (915)	$ (5,222)	$ 249
U.S. state	870	475	2,135
Non-U.S.	14,083	2,574	39,535
	14,038	(2,173)	41,919
Deferred income tax expense (benefit):			
U.S. federal	244	4,058	(9,005)
U.S. state	(384)	347	(1,026)
Non-U.S.	(1,185)	7,502	(19,217)
	(1,325)	11,907	(29,248)
	$ 12,713	$ 9,734	$ 12,671
Comprehensive tax provision (benefit) allocable to:			
Pretax income (loss)	$12,713	$9,734	$12,671
Shareholders' deficit, principally deferred income taxes allocable to currency translation and marketable securities adjustments	(1,243)	7	10
	$11,470	$9,741	$12,681

The Company's valuation allowance increased in the aggregate by $47 million in 1993 and $31 million in each of 1994 and 1995. During 1995, both the Company's gross deferred tax assets and the offsetting valuation allowance were increased by $34 million as a result of recharacterizations of certain tax attributes primarily due to changes in certain tax return elections. In addition, the valuation allowance was reduced by approximately $10 million due to recognition of the future tax benefit of certain tax credits which the Company believes satisfies the "more-likely-than-not" recognition criteria as a result of the Company's return to profitability. The components of the net deferred tax liability are summarized below:

	December 31,			
	1994		1995	
	Deferred tax		Deferred tax	
	Assets	Liabilities	Assets	Liabilities
	(In thousands)			
Tax effect of temporary differences relating to:				
Inventories	$ 4,275	$ (2,885)	$ 5,277	$ (5,644)
Property and equipment	423	(97,421)	574	(109,418)
Accrued postretirement benefits cost	24,691	-	23,200	-
Accrued pension cost	9,363	(11,529)	8,978	(14,942)
Accrued environmental costs	34,108	-	38,214	-
Other accrued liabilities and deductible differences	32,308	-	26,496	-
Other taxable differences	-	(144,774)	-	(101,621)
Tax on unremitted earnings of non-U.S. subsidiaries	452	(22,416)	281	(22,526)
Tax loss and tax credit carryforwards	162,906	-	189,263	-
Valuation allowance	(164,500)	-	(195,569)	-
Gross deferred tax assets (liabilities)	104,026	(279,025)	96,714	(254,151)
Reclassification, principally netting by tax jurisdiction	(99,103)	99,103	(93,404)	93,404
Net total deferred tax assets (liabilities)	4,923	(179,922)	3,310	(160,747)
Net current deferred tax assets (liabilities)	2,177	(1,590)	2,522	(3,555)
Net noncurrent deferred tax assets (liabilities)	$ 2,746	$(178,332)	$ 788	$(157,192)

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million), including interest, on a tentative basis while examination of the Company's German income tax returns continued. The Company recently reached agreement in principle with

the German tax authorities which will resolve certain significant tax contingencies for years through 1990. The Company expects to finalize assessments and pay tax deficiencies of approximately DM 50 million ($35 million at December 31, 1995), including interest, in settlement of these issues during the first half of 1996. The Company considers the agreement in principle to be a favorable resolution of the contingencies and the anticipated payment is within previously-accrued amounts for such matters.

Certain other German tax contingencies remain outstanding and will continue to be litigated. No assurances can be given that this litigation will be resolved in the Company's favor in view of the inherent uncertainties involved in court rulings. Although the Company believes that it will ultimately prevail in the litigation, the Company has granted a DM 100 million ($70 million at December 31, 1995) lien on its Nordenham, Germany TiO_2 plant in favor of the German tax authorities until the litigation is resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

During the fourth quarter of 1995, the Company recorded tax benefits of $6.6 million due to the reduction in dividend withholding tax rates pursuant to ratification of the new U.S./Canada income tax treaty.

During 1995, the Company utilized $14 million of foreign tax credit carryforwards and U.S. net operating loss carryforwards from prior years to reduce its 1995 U.S. federal income tax expense. At December 31, 1995, for U.S. federal income tax purposes, the Company had approximately $27 million of foreign tax credit carryforwards expiring during 1997 through 1999 and approximately $9 million of alternative minimum tax credit carryforwards with no expiration date. The Company also had approximately $350 million of income tax loss carryforwards in Germany with no expiration date.

Note 14 - Other income, net:

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Securities earnings:			
Interest and dividends	$ 4,104	$ 5,075	$ 6,244
Securities transactions	4,363	(1,220)	1,175
	8,467	3,855	7,419
Litigation settlement gains	-	22,978	-
Technology fee income	2,048	10,344	10,660
Currency transaction gains, net	3,299	1,735	561
Royalty income	2,016	1,508	-
Disposition of property and equipment	(199)	(1,981)	(2,713)
Other, net	6,453	6,389	6,314
	$22,084	$44,828	$22,241

Litigation settlement gains includes $20 million related to the Company's 1994 settlement of its lawsuit against Lockheed Corporation. Technology fee income is being amortized by the straight-line method over a three-year period beginning October 1993.

Note 15 - Other items:

Advertising costs, expensed as incurred, were $2.1 million in 1993, $1.9 million in 1994 and $2.1 million in 1995.

Research, development and sales technical support costs, expensed as incurred, approximated $10 million in each of 1993 and 1994, and $11 million in 1995.

Interest capitalized in connection with long-term capital projects was $1 million in each of 1993, 1994 and 1995.

Note 16 - Extraordinary item:

The extraordinary loss in 1993 relates to the settlement of certain interest rate swap agreements for $20 million in cash in conjunction with prepaying the Louisiana plant indebtedness and from the write-off of deferred financing costs related to such prepayment and the paydown of a portion of the DM bank credit facility. The Louisiana plant indebtedness loan agreement required the Company to enter into the interest rate swap agreements and both the debt and related swaps were collateralized by the Louisiana plant. The Company was required to prepay the Louisiana plant indebtedness and settle the swaps prior to the formation of LPC.

Note 17 - Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company other than as set forth in this Annual Report on Form 10-K, the Company from time to time considers, reviews and evaluates and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, and restrictions under the indentures and other agreements, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

The Company is a party to an intercorporate services agreements with Valhi and Contran (the "Valhi and Contran ISAs") whereby Valhi and Contran provide certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi and Contran ISAs was $.7 million in 1993, $.6 million in 1994 and $.5 million in 1995.

Baroid Corporation, a former wholly-owned subsidiary of the Company and a subsidiary of Dresser Industries, Inc., and the Company were parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis. The agreement was terminated in 1994. Management services fee expense pursuant to the Baroid ISA approximated $.3 million in 1993, $.2 million in 1994.

The Company is party to an intercorporate services agreement with Tremont (the "Tremont ISA"). Under the terms of the contract, the Company provides certain management and financial services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.1 million in 1993, nil in 1994 and $.1 million in 1995.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.4 million in 1993 and nil in each of 1994 and 1995.

Sales to Baroid in the ordinary course of business were $1.8 million in 1993 and 1994, and $1.6 million in 1995.

Purchases in the ordinary course of business from unconsolidated joint ventures, including LPC, were approximately $22 million in 1993, $74 million in 1994 and $79 million in 1995.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (income) (nil in 1993, $64,000 in 1994 and $(25,000) in 1995) in a manner similar to accounting for SARs. At December 31, 1995, employees of the Company held options to purchase 365,000 shares (362,000 shares vested) of Valhi common stock at exercise prices ranging from $4.76 to $14.66 per share. At December 31, 1995, 27,000 of the vested options were exercisable at prices less than Valhi's quoted market price per share of $6.375.

The Company and TRE Insurance, a wholly-owned subsidiary of Tremont, are parties to an Insurance Sharing Agreement with respect to certain loss payments and reserves established by TRE Insurance that (i) arise out of claims against other entities for which the Company is responsible and (ii) are subject to payment by TRE Insurance under certain reinsurance contracts. Also, TRE Insurance will credit the Company with respect to certain underwriting profits or credit recoveries that TRE Insurance receives from independent reinsurers that relate to retained liabilities.

Net amounts payable to affiliates are summarized in the following table.

	December 31, 1994	December 31, 1995
	(In thousands)	
Tremont Corporation	$ 4,780	$ 3,525
LPC	6,565	6,677
Other	3	(21)
	$11,348	$10,181

Amounts payable to LPC are generally for the purchase of TiO_2 (see Note 6), and amounts payable to Tremont relate to the Company's Insurance Sharing Agreement described above.

Note 18 - Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement expiring in 2011, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Both the lease and the supplies and services agreements restrict the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expense aggregated $8 million in 1993 and 1994, and $9 million in 1995. At December 31, 1995, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1996	$ 2,097	$1,869
1997	1,722	1,250
1998	1,721	649
1999	1,544	203
2000	934	17
2001 and thereafter	13,818	-
	$21,836	$3,988

Capital expenditures

At December 31, 1995, the estimated cost to complete capital projects in process approximated $49 million, including $41 million related to environmental protection and compliance programs and a debottlenecking expansion project at the Company's Leverkusen, Germany chloride process TiO_2 facility.

Purchase commitments

The Company has long-term supply contracts that provide for the Company's chloride feedstock requirements through 2000. The agreements require the Company to purchase certain minimum quantities of feedstock with average minimum annual purchase commitments aggregating approximately $115 million.

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities and certain others have been asserted as class actions. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. The Company has not accrued any amounts for the pending lead pigment litigation. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the

Company may be jointly and severally liable for such costs, in most cases it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. At December 31, 1995, the Company had accrued $100 million in respect of those environmental matters which are reasonably estimable. It is not possible to estimate the range of costs for certain sites. The upper end of the range of reasonably possible costs to the Company for sites which it is possible to estimate costs is approximately $169 million. The Company's estimates of such liabilities have not been discounted to present value, and the Company has not recognized any potential insurance recoveries. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. Further, there can be no assurance that additional environmental matters will not arise in the future.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Concentrations of credit risk

Sales of TiO_2 accounted for almost 90% of net sales during the past three years. TiO_2 is sold to the paint, plastics and paper industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. TiO_2 is sold to over 5,000 customers, none of which represents a significant portion of net sales. In each of the past three years, approximately one-half of the Company's TiO_2 sales by volume were to Europe and approximately 38% in 1993 and 36% in both 1994 and 1995 of sales were attributable to North America.

Consolidated cash and cash equivalents includes $80 million and $103 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1994 and 1995, respectively, of which $73 million and $88 million, respectively, of such securities are held in trust for the Company by a single U.S. bank.

Note 19 - Change in accounting principle:

In 1993, the Company adopted SFAS No. 115 (marketable securities) as of December 31, 1993. The cumulative effect of change in accounting principle adjustments are shown below.

	Amount reflected in	
	Earnings	Equity component
	(In thousands)	
Increase (decrease) in net assets at December 31, 1993 - SFAS No. 115:		
Marketable securities	$1,872	$(1,872)
Deferred income taxes	(655)	655
	$1,217	$(1,217)

Note 20 - Financial instruments:

Summarized below is the estimated fair value and related net carrying value of the Company's financial instruments.

	December 31, 1994		December 31, 1995	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In millions)			
Cash and cash equivalents	$ 131.1	$131.1	$ 141.3	$141.3
Marketable securities - classified as:				
Trading securities	25.2	25.2	-	-
Available-for-sale	21.3	21.3	20.9	20.9
Notes payable and long-term debt:				
Fixed rate with market quotes:				
Senior Secured Notes	$ 250.0	$247.1	$ 250.0	$267.7
Senior Secured Discount Notes	116.4	114.8	132.0	151.8
Variable rate debt	423.2	423.2	440.9	440.9
Common shareholders' equity (deficit)	$(293.1)	$644.5	$(209.4)	$619.5

Fair value of the Company's marketable securities and Notes are based upon quoted market prices and the fair value of the Company's common shareholder's equity (deficit) is based upon quoted market prices for NL's common stock. The Company held no derivative financial instruments at December 31, 1994 and 1995.

Note 21 - Quarterly financial data (unaudited):

	Quarter ended			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Year ended December 31, 1994:				
Net sales	$201,849	$237,113	$225,200	$223,792
Cost of sales	146,956	178,925	168,033	155,831
Operating income	22,313	26,242	27,093	35,704
Net income (loss)	$ (6,367)	$(15,534)	$ (4,578)	$ 2,497
Net income (loss) per share of common stock	$ (.12)	$ (.30)	$ (.09)	$ .05
Weighted average shares outstanding	50,965	51,040	51,040	51,045
Year ended December 31, 1995:				
Net sales	$250,875	$283,474	$255,339	$234,251
Cost of sales	169,768	187,896	169,058	149,462
Operating income	41,968	57,549	50,590	49,612
Net income	$ 13,062	$ 21,002	$ 17,426	$ 34,119(a)
Net income per share of common stock	$ .26	$ .41	$ .34	$ .66(a)
Weighted average shares outstanding	51,176	51,552	51,628	51,486

(a) Income tax benefits in the fourth quarter of 1995 include the recognition of $10 million of deferred tax assets related to the expected realization of the tax benefit of certain tax credits resulting from the Company's return to profitability and $6.6 million related to the reduction in U.S./Canada dividend withholding tax rates. See Note 13.

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 19 to the consolidated financial statements, the Company changed its method of accounting for marketable securities in 1993. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 8, 1996

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets

December 31, 1994 and 1995

(In thousands)

	1994	1995
Current assets:		
Cash and cash equivalents	$ 18,371	$ 40,080
Marketable securities	25,165	-
Accounts and notes receivable	1,274	203
Receivable from subsidiaries	2,854	4,273
Refundable income taxes	-	1,662
Prepaid expenses	747	729
Total current assets	48,411	46,947
Other assets:		
Marketable securities	21,329	20,944
Notes receivable from subsidiary	366,409	382,034
Investment in subsidiaries	(181,751)	(89,395)
Other	9,214	7,582
Total other assets	215,201	321,165
Property and equipment, net	3,732	3,562
	$ 267,344	$ 371,674
Current liabilities:		
Accounts payable and accrued liabilities	$ 33,248	$ 28,116
Payable to affiliates	4,783	3,498
Income taxes	186	-
Deferred income taxes	1,436	1,905
Total current liabilities	39,653	33,519
Noncurrent liabilities:		
Long-term debt	366,409	382,034
Deferred income taxes	9,546	10,211
Accrued pension cost	14,021	10,835
Accrued postretirement benefits cost	40,711	37,430
Other	90,086	107,066
Total noncurrent liabilities	520,773	547,576
Shareholders' deficit	(293,082)	(209,421)
	$ 267,344	$ 371,674

Contingencies (Note 4)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Operations

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Revenues and other income:			
Equity in income (loss) of subsidiaries	$ (49,766)	$ 7,925	$ 99,734
Interest and dividends	3,622	2,538	2,739
Interest income from subsidiary	8,358	43,157	45,551
Securities transactions	3,637	(1,220)	1,175
Other income, net	2,597	3,135	460
	(31,552)	55,535	149,659
Costs and expenses:			
General and administrative	44,113	69,875	27,079
Interest	13,771	44,003	45,842
	57,884	113,878	72,921
Income (loss) before income taxes, extraordinary item and cumulative effect of change in accounting principle	(89,436)	(58,343)	76,738
Income tax benefit	6,225	34,361	8,871
Income (loss) before extraordinary item and cumulative effect of change in accounting principle	(83,211)	(23,982)	85,609
Extraordinary item - equity in income of subsidiaries	(27,815)	-	-
Cumulative effect of change in accounting principle - NL	1,217	-	-
Net income (loss)	$(109,809)	$(23,982)	$ 85,609

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from operating activities:			
Net income (loss)	$(109,809)	$(23,982)	$ 85,609
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary item and cumulative effect of change in accounting principle	49,766	(7,925)	(99,734)
Extraordinary item	27,815	-	-
Distributions from subsidiaries	-	30,000	15,000
Noncash interest expense	165	845	842
Deferred income taxes	1,510	(20,577)	1,411
Securities transactions	(3,637)	1,220	(1,175)
Cumulative effect of change in accounting principle	(1,217)	-	-
Other, net	(1,268)	(3,836)	(5,819)
	(36,675)	(24,255)	(3,866)
Change in assets and liabilities, net	14,428	23,263	8,042
Marketable trading securities:			
Purchases	-	(870)	(762)
Dispositions	-	15,530	27,102
Net cash provided (used) by operating activities	(22,247)	13,668	30,516
Cash flows from investing activities:			
Investment in subsidiary	(6,478)	(6,630)	(9,062)
Capital expenditures	(4)	(126)	(33)
Loans to subsidiaries	(341,500)	-	-
Purchases of marketable securities	(10,899)	-	-
Proceeds from disposition of marketable securities	69,232	-	-
Other, net	667	402	10
Net cash used by investing activities	(288,982)	(6,354)	(9,085)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows (Continued)

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from financing activities:			
Borrowings of (principal payments on):			
Long-term debt	$ 327,340	$ (170)	$ -
Loans from affiliates	(16,047)	-	-
Other, net	-	120	278
Net cash provided (used) by financing activities	311,293	(50)	278
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	(22,247)	13,668	30,516
Investing activities	(288,982)	(6,354)	(9,085)
Financing activities	311,293	(50)	278
Net change from operating, investing and financing activities	64	7,264	21,709
Balance at beginning of year	11,043	11,107	18,371
Balance at end of year	$ 11,107	$18,371	$40,080

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Notes to Condensed Financial Information

Note 1 - Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 - Net receivable from (payable to) subsidiaries and affiliates:

	December 31,	
	1994	1995
	(In thousands)	
Current:		
Tremont Corporation	$ (4,780)	$ (3,525)
Other	(3)	27
Kronos and Rheox:		
Income taxes	(1,043)	567
Other, net	3,897	3,706
	$ (1,929)	$ 775
Noncurrent:		
Note receivable - Kronos	$366,409	$382,034

Note 3 - Long-term debt:

	December 31,	
	1994	1995
	(In thousands)	
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	116,409	132,034
	$366,409	$382,034

See Note 10 of the Consolidated Financial Statements for a description of the Notes.

The aggregate maturities of the Company's long-term debt at December 31, 1995 are shown in the table below.

	Amount (In thousands)
Senior Secured Notes due 2003	$250,000
Senior Secured Discount Notes due 2005	187,500
	437,500
Less unamortized original issue discount on the Senior Secured Discount Notes	55,466
	$382,034

The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through January 1, 2001.

Note 4 - Contingencies:

See *Legal proceedings* in Note 18 to the Consolidated Financial Statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Other	Balance at end of year
Year ended December 31, 1995:						
Allowance for doubtful accounts and notes receivable	$ 3,749	$ 289	$ (166)(a)	$ 167	$ -	$ 4,039
Amortization of intangibles	$ 16,149	$3,241	$ -	$ 1,172	$ -	$ 20,562
Valuation allowance for deferred income taxes	$164,500	$(9,588)	$ -	$ 6,451	$34,206(c)	$195,569
Year ended December 31, 1994:						
Allowance for doubtful accounts and notes receivable	$ 3,008	$ 1,141	$ (616)(a)	$ 216	$ -	$ 3,749
Amortization of intangibles	$ 11,941	$ 2,901	$ -	$ 1,307	$ -	$ 16,149
Valuation allowance for deferred income taxes	$133,377	$24,309	$ -	$ 6,814	$ -	$164,500
Year ended December 31, 1993:						
Allowance for doubtful accounts and notes receivable	$ 2,385	$ 1,216	$ (476)(a)	$ (117)	$ -	$ 3,008
Amortization of intangibles	$ 9,792	$ 2,863	$ -	$ (714)	$ -	$ 11,941
Valuation allowance for deferred income taxes	$ 86,031	$50,562(b)	$ -	$(3,216)	$ -	$133,377

(a) Amounts written off, less recoveries.
(b) Includes amounts recorded as part of extraordinary item.
(c) Direct offset to the increase in gross deferred income tax assets resulting from recharacterization of certain tax attributes due primarily to changes in certain income tax return elections.

BOARD OF DIRECTORS

Harold C. Simmons
Chairman of the Board - NL Industries, Inc.
Chairman, Chief Executive Officer and President - Valhi, Inc.

Joseph S. Compofelice
Vice President and Chief Financial Officer - NL Industries, Inc.

J. Landis Martin
President and Chief Executive Officer - NL Industries, Inc.

Kenneth R. Peak
President - Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman - Valhi, Inc.

Dr. Lawrence A. Wigdor
President and Chief Executive Officer - Kronos, Inc. and Rheox, Inc.

Admiral Elmo R. Zumwalt, Jr. (retired)
President - Admiral Zumwalt Consultants, Inc. (consulting)
Retired United States Navy Admiral and Chief of Naval Operations

BOARD COMMITTEES

Audit Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee

Glenn R. Simmons, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

Stock-Based Compensation Committee

Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President; President and Chief Executive Officer - Kronos, Inc. and Rheox, Inc.

Joseph S. Compofelice
Vice President and Chief Financial Officer

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

SHAREHOLDER INFORMATION

Annual Meeting

The 1996 annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be marked, signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agent

First Chicago Trust Company of New York
P. O. Box 2500, Jersey City, New Jersey 07303-2500.
Telephone (201) 324-1225
Internet address:
http:/ / www.fctc.com
E-Mail address:
FCTC@delphi.com

ABOUT THE COMPANY

NL Industries, Inc. is a worldwide manufacturer and marketer of titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. Rheox, Inc., NL's other operating subsidiary, is the world's largest producer of rheological additives for solvent-based systems, and is also a supplier of rheological additives used in water-based systems.

NL is headquartered in Houston, Texas, and employs approximately 3,200 people worldwide. NL's common stock is traded on the New York and Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

FORWARD-LOOKING INFORMATION

The statements contained in this Annual Report to Shareholders which are not historical facts, including, without limitation, statements found in the Letter to Shareholders, are forward-looking statements that involve a number of risks and uncertainties and actual results could differ materially from those stated in such forward-looking statements. The factors that could cause actual results to differ include future global economic conditions, global titanium dioxide pigment productive capacity, competitive products and prices and the risks and uncertainties discussed in the Annual Report on Form 10-K for the year ended December 31, 1995 and in the Company's other securities filings.

Jay F. Young
Principal Environmental Engineer

NL

March 17, 1997

VIA FEDERAL EXPRESS

California EPA
Department of Toxic Substances Control
700 Heinz Avenue
Suite 200
Berkeley, CA 94710-2737

Attn: Ms. Monica Gan

Re: Bay Area Drum Site Request for Information

Dear Ms. Gan:

Enclosed, please find NL's response to the Department's December 9, 1996 Request for Information regarding the Bay Area Drum Site. If you have any questions regarding this matter please call me or NL's National Environmental Counsel, Mr. Marcus Martin. Mr. Martin can be reached at 303-592-3189.

Sincerely,

Jay Young

cc: Marcus Martin, Esq.

NL Industries, Inc.
Corporate Environmental Services
P.O. Box 1090, Hightstown, N.J. 08520 Tel. (609) 443-2407
Telecopier (609) 443-2374

Bay Area Drum Information Request

Responses to Questions

1. Provide all information relating to your hazardous substances management practices for all hazardous substances including any petroleum refinery products, that were used, generated, stored, treated, disposed of, or otherwise handled in or at your facility for the years 1948 -1987. The description of hazardous substances management practices should include:

A. For all hazardous substances, including any petroleum refinery products, obtained for your facility's operations in drums, identify:

- The nature of the hazardous substances in the drum
- The number of drums obtained per month
- The type and capacity of each drum
- The disposition of the drums after the hazardous substances were used
- The residual level left in each drum after the hazardous substances were used
- The methods used to determine the residual levels in each drum.

B. For all hazardous substances, including any petroleum refinery products, stored in drums at your facility, identify:

- The nature of the hazardous substances contained in the drum
- The number of drums stored per month
- The type and capacity of each drum
- The disposition of the drums after the substance was used
- The residual left in each drum after the hazardous substances was used
- The methods used to determine the residual levels in each drum.

C. For all hazardous substances, including any petroleum refinery products, disposed of in drums by your facility at the Site, identify:

- The nature of the hazardous substances contained in the drum
- The number of drums disposed of per month
- The type and capacity of each drum
- The disposition of the drums after the hazardous substances were disposed of
- The residual levels left in each drum after the hazardous substances were disposed of
- The methods used to determine the residual levels in each drum.

D. For all drums that once contained hazardous substances, including an petroleum refinery products, that were sent from our facility to the Site and that you assert contained no hazardous substances when they left your facility, identify:

- The nature of the hazardous substances originally contained in each drum
- The number of drums disposed of per month
- The type and capacity of each drum
- The disposition of the drums after the hazardous substances were disposed of
- The method used to remove all residual hazardous substances from the drum
- The method used to determine that no hazardous substances remained in the drum.

Response: After a diligent search NL has found no information describing the handling of hazardous substances at the facility. Information including disposal estimates is included in Exhibit 1.

NL has found in its files three vouchers identifying the purchase of drums by NL's Vernon California Plant from Myers Drum Co located at 5400 So. Soto Street in Los Angeles. These vouchers appear to account for the purchase and delivery of 62 drums during the year 1978. See Exhibit 2.

NL continues it's search for responsive information and reserves the right to supplement this response.

2. Identify all persons who have knowledge or information about the generation, use, storage, treatment, disposal, or other handling of hazardous substances at your facility. If you have reasons to believe that there may be persons able to provide a more detailed or complete response to any question contained herein, or who may be able to provide additional responsive documents, identify such persons and the additional information or documents they may have.

Response: The San Francisco paint plant operated under NL ownership from about 1928 to 1971. Because the facility was shut down in about 1971, NL currently has no employees who have knowledge of the generation, use, storage, treatment, disposal or handling of substances at the San Francisco facility. Former employees who may have information are as follows:

Richard Marklin
Western Division Paint Division Manager
FX-6 Personal Privacy
[redacted]

Harry M. Brennan
Varnish Plant Superintendent
FX-6 Personal Privacy
[redacted]

Carl F. Moore
Western Region Plant Engineer
FX-6 Personal Privacy
[redacted]

John G. Trager
Purchasing Agent, Pacific Branch
FX-6 Personal Privacy
[redacted]

NL is attempting to identify other former employees of the San Francisco facility. If successful, NL will supplement its response to this information request.

3. Describe the legal organization of Dutch Boy, Inc., (e.g. corporation, limited partnership) including:

- A history of the organizational structure
- A listing of all current and past subsidiaries and operations and parent corporations
- Corporate officers, names, titles and responsibilities for each corporate entity
- Dates of incorporation and dissolution for each corporate entity
- Dates of any name changes of the corporate entities
- Copies of articles of incorporation, partnership documents, or other organic documents for each corporate entity.

Attach all copies of any documentation of requested information to your response to this letter.

Response: NL has found no information identifying the existence of Dutch Boy, Inc.. Nor has NL located to date any information which describes a Dutch Boy organization. The Dutch Boy Trade Mark was a label applied to paints and other materials manufactured at various locations throughout the United States by the National Lead Company predecessor to NL Industries, Inc. The earliest use of the Dutch Boy Trade Mark is believed to have been sometime between 1904 and 1906. The National Lead Company was incorporated in 1891. On April 15, 1971, NL filed a "Certificate of Amendment of Certificate of Organization of [the] National Lead Company". At that time National Lead Company began doing business as NL Industries, Inc. Information regarding the history of Dutch Boy products, organization and manufacturing facilities and information which describes the history and growth of National Lead and NL Industries, Inc. is included in Exhibit 3.

4. Provide the net assets of your company and annual revenues of your company for each of the last five years. Attach financial statements, audits and other documents that support these figures.

Response: Net assets and other financial parameters are described in the attached annual

reports for years 1991 through 1995. See Exhibit 4.

5. Provide a descriptive list of all insurance policies held by your company currently and during any period of your operations during which drums were sent from your facility to the Site that may provide coverage for liability stemming from our disposal of hazardous substances. The description should include:

- The effective date(s) of the policy
- The policy number
- The name and address of the insurance company
- The amount of coverage under the policy

Attach copies of all such policies to your response to this letter.

Response: NL believes this request exceeds the scope of DTSC's authority under applicable law.

6. Provide any known information on property condition, operations, chemical usage, and releases to the environment by other parties that you may be aware of at the Site. Also provide all information on any other person who may have sent hazardous substances to the Site.

Response: After a diligent search, NL has found no information which would describe the operations chemical usage and releases at the Bay Area Drum Site.

7. Document each person and all files and records reviewed to answer the above questions.

Response: NL has searched its Corporate Environmental Files located in Hightstown, New Jersey. In addition, NL has conducted a search of its archived Corporate files files in Houston, Texas, and it's contract archived file manager, Pierce Leahy also located in Houston Texas. NL has consulted with its National Environmental Counsel Bartlit Beck Herman Palenchar & Scott, its outside contract counsel, Kirkland & Ellis, and its Vice President and General Counsel for Rheox (an NL subsidiary) in efforts to locate information potentially responsive to these requests. Individuals contacted in the search for responsive information include:

Ms. Lisa Broomas
Secretary to NL's General Counsel
and File Manager
Two Greenspoint Plaza
16825 Northchase Drive, Suite 1200
Houston, Texas 77060

Mr. John Hager
Dresser Industries, Inc.
File Manager of Contract Archived File Storage
at Pierce Leahy Inc.
Sam Houston, Parkway
Houston, Texas 77038

Marcus Martin, Esq.
Bartlit Beck Herman Palenchar & Scott
(NL National Environmental Counsel)
511 Sixteenth Street Suite 700
Denver, Colorado 08202

James Schink, Esq.
Kirkland & Ellis
(NL Contract Counsel)
200 East Randolph Drive
Chicago, IL

William Bronner
Rheox Inc.
Wyckoffs Mill Road
Hightstown, New Jersey 08520

8. Identify the person(s) answering questions on your behalf.

Jay Young
NL Industries, Inc.
Principal Environmental Engineer
Wyckoffs Mill Rd.
Hightstown, New Jersey 08520

Exhibits

Exhibit 1

CONFIDENTIAL

MEMORANDUM

To: File

FROM: Barry L. Sams

DATE: August 21, 1992

SUBJ: Harry M. Brennan
Bay Area Drum Site

On August 19, 1992 I interviewed Harry M. Brennen to develop an understanding of the NL San Francisco (SF) paint division operations. Harry was employed by NL from 1935 to 1970. He started with NL as a chemist in a laboratory. During most of his career, he was a superintendent at the paint, varnish or lacquer departments in SF. Harry was at Perth Amboy in 1946-1947 when that paint plant opened. Harry is [redacted] years old and somewhat senile. Harry now lives at [redacted]

Harry thought NL used Bedini since about the WWII period until the SF operations shut down in 1970. Upon inquiry, Harry advised the only other drum reconditioner NL possibly used was Myers. Harry knew Ernie Bedini personally. He thought the drum reconditioning would have been awarded competitively but doubted if there was ever a contract with Bedini. Harry estimated that Bedini picked up a load of dirty varnish drums every week to ten days with approximately 50 drums per load. Following Harry's estimate I showed him the estimate from the Nicholas report (108 drums x 360 days x 12 years), Harry disagreed with the Nicholas report. He estimated the truck held a total of 47-50 drums, (stacked 3 drums high) and the pick ups were perhaps weekly.

Plant operations were 5 days/week (part of the varnish plant operated 3 shifts). In some years the whole plant would shut down for the Christmas/New Years holiday season, perhaps 1 or 2 weeks. The drums that were sent out were mostly varnish or resin drums.

Harry was not aware of any NL operations at Main Street. Harry saw the Bedini site in the Bayview area (BAD Site is in the Bayview area) in 1970. He could not recall anything unique about the site. He thinks the Bedini business was only cleaning and repairing drums.

Harry was not familiar with the names Jack Hamilton or David Cannon. A competitor of NL who may have used the site was Fuller. The only other person (beyond Moore & Marklin) which Harry though might be helpful was the former purchasing manager John Trager.

cc: J. D. Smith
BLS/psc/bls-4101

STATE OF CALIFORNIA)
ss:.
COUNTY OF SAN MATEO)

AFFIDAVIT OF HARRY M. BRENNAN

Harry M. Brennan, being duly sworn, hereby deposes and says:

1. I was employed by the National Lead Company ("National Lead") from 1935 to 1970.

2. I worked at the San Francisco paint and varnish plant located on 24th Street from 1935 to 1970 with the exception of about a one year period in 1946 - 1947.

3. From 1947 until closure of the 24th Street plant in 1970, I was the varnish plant superintendent. As the superintendent, part of my job responsibilities involved periodically arranging for the reconditioning of used varnish or resin drums. Either my foreman or myself would do this.

4. The only drum reconditioner used by the 24th Street plant was Bedini/Myers.

5. Typically, Bedini/Myers would pick up drums every seven to ten days. I estimate that their truck held a maximum of forty-seven to fifty drums. The drums were stacked three layers high on their truck.

6. The plant production schedule was five days a week. In some years the plant closed one or two weeks for the Christmas/New Years holiday season.

7. I have reviewed portions of the Nicholls Investigative Agency, Inc. July 1, 1992 interview of a Jack Hamilton. Some of the statements therein are inaccurate.

8. National Lead did not have a lacquer plant on Main Street, San Francisco.

9. Hamilton estimated that National Lead sent 466,560 drums (108 drums x 360 days x 12 years) to Bedini/Myers from 1958-1970. It is my opinion that Mr. Hamilton's estimate is wrong.

10. I estimate that Bedini/Myers made a pick up from National Lead's 24th Street plant every seven to ten days or approximately forty-one times a year, allowing for a two week holiday shut down, over a twelve year period. Thus, Bedini/Myers picked up drums from National Lead approximately four hundred ninety-two times. Since each truckload held about forty-seven to fifty drums, the total number of drums collected was approximately 23,862.

11. I believe that my estimate is the maximum number of drums collected by Bedini/Myers from National Lead.

_____ _____

Date Harry M. Brennan

Sworn to me this _____ day of September, 1992.

_____

Notary Public

My Commission expires on _____, 19

Barry L. Sams
Principal Environmental Engineer

NL

VIA FACSIMILE

October 30, 1992

Nicholas W. van Aelstyn
Heller, Ehrman, White & McAuliffe
333 Bush Street
San Francisco, California 94104-2878

Re: Bay Area Drum Site

Dear Mr. van Alestyn:

During the October 28, 1992 conference call, PRPs were requested to direct potential questions for former employees of the Bay Area Drum Site to you. During the upcoming re-interview of David Cannon, and/or Jack Hamilton, we should ascertain how many work days there were in a work week. My concern stems from the July 1, 1992 Jack Hamilton interview wherein he indicated picking up drums 50 weeks a year from Dutch Boy. As you may recall from my correspondence of September 22, 1992, there is uncertainty as to how may pick up days that corresponds to on an annualized basis.

Sincerely,

Barry L. Sams

Barry L. Sams

BLS/6017

bcc: J.D. Smith

NL Industries, Inc.
Corporate Environmental Services
P.O. Box 1090, Hightstown, N.J. 08520 Tel. (609) 443-2410
Telecopier (609) 443-2374

Barry L. Sams
Principal Environmental Engineer

September 22, 1992

Nicholas W. van Aelstyn
Heller, Ehrman, White & McAuliffe
333 Bush Street
San Francisco, California 94104-2878

Re: Bay Area Drum Site
Notes of Hamilton Interview

Dear Mr. van Aelstyn:

I have reviewed a photocopy of the hand written July 1, 1992 Jack Hamilton interview notes prepared by the Nicholls Agency, and the typed report which Nicholls submitted on July 3, 1992. Set forth herein are my comments.

In the July 3, 1992 report, Nicholls calculated the number of barrels picked up from National Lead by Bedini/Myers as follows; 108 drums x 360 days x 12 years = 466,560 drums. As set forth below, Nicholls' calculation of the number of barrels from National Lead, based on extrapolations of Mr. Hamilton's statements, contains mathematical errors. This letter corrects the miscalculations so that the number of barrels attributed to National Lead by Hamilton can be corrected for the upcoming interim assessment. Although we strongly dispute the substance of Hamilton's statement, at this time, we will restrict our comments to correction of the arithmetic, reserving for a later time a substantive critique.

NL Industries, Inc.
Corporate Environmental Services
P.O. Box 1090, Hightstown, N.J. 08520 Tel. (609) 443-2410
Telecopier (609) 443-2374

Issue	Nicholls Report 7/3/92	Hamilton Interview Notes 7/3/92	Comments
Time Period	12 years	1958-1965	The time period Hamilton defined is 7 years, not 12 years.
Frequency of drum pick up	360 days/yr	50 weeks a year	Hamilton did not say he made pick ups 360 days/year. The plant operated approximately 50 weeks a year, 5 days/week or 250 days/year.
Size of load	Full load a day (108 drums)	108 Drums	The basis for the statement "Full" is unknown.

Conservatively applying the statements attributed to Jack Hamilton in the 7/1/92 notes, the calculated number of drums from National Lead is as follows; 108 drums x 250 days x 7 years = 189,000 drums.

I would appreciate your prompt attention in correcting Column 6 "Jack Hamilton Estimates" of the table titled "Indication of Bay Area Drums PRP Generator Volumes".

Sincerely,

Barry L. Sams/dm

Barry L. Sams

BLS/dm/5020

HELLER, EHRMAN, WHITE & McAULIFFE
ATTORNEYS
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

333 BUSH STREET · SAN FRANCISCO, CALIFORNIA 94104-2878
CABLE HELPOW · TELEX 184-996 · FACSIMILE (415) 772-6268
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601 SOUTH FIGUEROA STREET
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1201 PACIFIC AVENUE
TACOMA, WASHINGTON 98402-4308
FACSIMILE (206) 572-6743
TELEPHONE (206) 572-6666

550 WEST 7TH AVENUE
ANCHORAGE, ALASKA 99501-3571
FACSIMILE (907) 277-1920
TELEPHONE (907) 277-1900

WRITER'S DIRECT DIAL NUMBER
(415) 772-6566

September 23, 1992

19431-0001

CONFIDENTIAL COMMUNICATION -- This communication is protected by the attorney work product and attorney-client privileges and is not to be released for any purpose, including discovery.

Barry L. Sams
Principal Environmental Engineer
Corporate Environmental Services
NL Industries, Inc.
P.O Box 1090
Hightstown, NJ 08520

RECEIVED
SEP 29

Bay Area Drum Site, San Francisco

Dear Mr. Sams:

I am in receipt of your letter dated September 22, 1992, containing your comments regarding the July 3, 1992 Nicholls Investigative Agency ("NIA") report on the first Jack Hamilton interview and the handwritten July 1, 1992 NIA interview notes. I believe that much of the second of your three comments can be incorporated into the calculations for the upcoming Group assessment, but feel that the other two would require a departure from policies adopted by the Group at the September 14 Allocation Meeting.

With regard to your second comment concerning the frequency of drum pick-ups, I believe that "fifty weeks a year" is the proper variable and not "360 days/year." This appears to be one of the many minor errors contained in the NIA report; 50

weeks contain 350 days, not 360 days. After your last phone call on this subject, I directed a legal assistant to double-check all of the NIA figures, and found that many contained errors in arithmetic. Corrections have been made and incorporated into the revised volumetric matrix. However, I do not believe that using a five day week instead of a seven day week would also constitute a mere correction of arithmetic. The NIA report consistently employs a 365 day year, and I do not feel that I have a mandate from the Group to depart from this.

I believe that your other two comments would require similar departures from the NIA documents as they have been construed by the Group thus far. With regard to your first comment concerning the time periods, I believe that the NIA report explains the discrepancy between the seven and twelve year periods that you note. The first full paragraph on page 2 of the report explains that the estimates for the first group of generators were given for the Bedini period (1958-1965), but remained the same during the Myers period (1965-1970):

> Hamilton supplied the following information relative to the customers of BEDINI/MEYERS (1958-1970). Hamilton stated that the clients of BEDINI stayed as clients for MEYERS so the totals remained the same. [**NOTE: Those customers which did have differing volumes are noted on each individual account.**] [Bracketed passage in bold original.]

In light of this paragraph, I feel that a change in the time periods for Hamilton's first group of generators, which includes NL Industries, would require a policy decision by the Group which has not been made.

With regard to the your third comment concerning the size of the loads, I believe that one may reasonably infer from both the NIA report and the NIA notes that the basis for the statement "full" is that 108 drums constituted a full truckload. 108 is the number used throughout the report and the notes to indicate one load, and therefore appears to be equivalent to the term "one full load." As you noted in your comments, this does not affect the calculations.

In light of the above, I believe that the calculated number of drums estimated by Jack Hamilton to have been sent to the Site should be calculated as follows:

108 drums x 350 days x 12 years = 453,600 drums.

The above figure will be used in the next assessment. I do not dispute that both the Jack Hamilton estimates and the NIA calculations may include errors and may be subject to differing interpretations. However, absent a direct mandate from the Group, I believe that common counsel lacks the authority to construe the NIA documents in a manner that would be inconsistent with prior constructions. Such issues are to be addressed by the Group's Allocation Subcommittee, which is the appropriate forum in which to challenge the weaknesses in the existing databases. Whatever changes the Subcommittee decides upon will be incorporated into the next assessment. In the meantime, the Group has decided to utilize the existing construction of the documents for the current assessment.

I hope that this letter responds to all of your concerns. Please do not hesitate to call me if I can answer any further questions.

Very truly yours,

Nicholas W. van Aelstyn

Nicholas W. van Aelstyn

CONFIDENTIAL

MEMORANDUM

To: File

FROM: Barry L. Sams

DATE: August 21, 1992

SUBJ: Richard J. Marklin
Bay Area Drum Site

On August 18, 1992 I interviewed Richard J. Marklin to develop an understanding of the former NL Western Region Paint Division and the San Francisco (SF) operations. Richard started with NL in 1942, in about 1976 upon the sale of the division he became an ELT Inc. employee. He retired from ELT about 2 months before it was acquired by Sherwin-Williams. Richard now lives at FX-6 Personal Privacy FX-6 Personal Privacy I found Richard to be in good health and helpful.

Richard became the Western Region Paint Division production manager in approximately 1968. He is familiar with numerous former NL sites. He mentioned the Portland Warehouse, the Seattle plant (was purchased in the 1950's) and the Los Angeles (LA) paint plant which was built in 1946. Richard managed the LA plant from 1963 to approximately 1968. He had also been in the Chicago, Perth Amboy and Philadelphia plants and seemed aware of their history, management structure and operations. Bill Bronner had spoken with Richard during the Synanon litigation.

NL bought the SF 24th Street plant in approximately 1926 from Basshueter. The 24th Street facility stopped production in 1970 or 1971 at which time all equipment, paint, etc. was removed. Production needs were transferred to Seattle (which shut down in the late 1970's or early 1980's) and LA. Offices remained at the SF site for about 6 months after production stopped. Richard estimated the SF production had been 3 million gallons per year. The end product was shipped from the site in containers ranging in size from less than a pint to 50 gallons. The 24th Street facility was essentially comprised of 2 departments, the paint department, and a varnish/vehicles department.

Richard had never heard of NL having operations on "Main Street". Due to the explosive nature of lacquer NL produced the lacquer at a nearby SF facility located at the corner of Marin and Kansas. The Marin site also served to warehouse the production from 24th Street facility.

Upon inquiry Richard indicated that a Mr. Brennan had worked for him until he retired him in about 1969 or 1970. Harry M. Brennan was the supervisor of the 24th St. varnish department. Richard indicated Harry Brennan is retired and living south of SF Richard was also familiar with a Mr. Crowen. Mr. William Crowen was a union employee who worked at the Marin lacquer plant and reported to Harry Brennan.

Upon inquiry Richard indicated that drums were used at the

site and then sent out for reconditioning to Bedini. He said they used a lot of drums for interdepartmental transfers of varnish to the paint department at 24th Street. After a drum was used it was generally sent out for cleaning, due to a variety of concerns including grades of materials in the drums, "skins" which could form in a drum etc. When I showed Richard the drum quantity estimate from the Jack Hamilton interview (108 drums x 360 days x 12 years) he indicated it did not seem unreasonable. Richard thought that Bedini was sometimes in the plant more than once a day picking up drums. Richard never saw the Bedini site but thought it was close by. He showed me on a map the section of the city where he thought the Bedini site was, and it corresponded to the Bay Area Drum Site. Richard thought he may have heard of the Myers Drum Company but was unsure. Upon inquiry Richard indicated that the former NL purchasing manager John G.Trager, now retired in La Habra, CA may recall more details. When the SF operations shut down, purchasing records may have been transferred to LA. Old SF pictures and other memorabilia went to Walter Shult (sp) in West Caldwell, NJ.

Richard was not sure if anyone other than Bedini was used for drum reconditioning. He speculated that the drum cleaning was competitively bid. He indicated there was always difficulty in balancing the Bedini account for the number of drums sent out vs. the number of reconditioned drums returned. NL sold Bedini black drum paint which he used in the reconditioning process.

I showed Richard the May 29, 1992 PRP list distributed by Joseph Armao and asked Richard if he could think of any other paint and varnish companies which might have used the BAD site. Richard suggested Fuller O'Brian, a company still in operation.

Richard had never heard of Jack Hamilton or David Cannon who were reportedly former operations/owners at the BAD site, nor had he heard of Romic (one of the larger PRP's).

cc: J.D. Smith
BLS/psc/4100

CONFIDENTIAL

MEMORANDUM

To: File

FROM: Barry L. Sams

DATE: August 21, 1992

SUBJ: Carl F. Moore
Bay Area Drum Site

On August 19, 1992 I interviewed Carl F. Moore to develop an understanding of the NL San Francisco (SF) paint division operations. Carl was employed by NL from 1945 to 1970, for most of his career he was the Western Region Plant Engineer. Carl now lives at [redacted] FX-6 Personal Privacy

[redacted] FX-6 Personal Privacy I found Carl to be in fair health and helpful.

Carl indicated Bedini use to pick up drums from NL once a day, typically 100 to 115 drums at a time, 5 or 6 days a week. Generally the drums were the open top type. Carl did not ever recall Sunday work at the plant. Carl was very familiar with the SF facility at 24th but never heard of a Main Street facility. Carl pointed out that there had been an NL warehouse and lacquer plant on Marin Street. We leased the lacquer plant to Thomson until the mid 1950's. Most of the drums generated would have been from the 24th Street plant. Carl never visited the Bedini site.

Another one of our competitors who may have used Bedini was Fuller. Fuller made paints, varnishes and white lead (NL produced white lead at its Oakland Plant). Fuller has since been sold.

Carl expected that we probably shipped and received about an equal number of drums to Bedini.

BLS/psc/4102
cc J.D. Smith

MEMORANDUM

CONFIDENTIAL

TO: File

FROM: Barry L. Sams

DATE: September 10, 1992

SUBJ: John G. Trager
Bay Area Drum Site

On September 9, 1992, I conducted a telephone interview of John G. Trager to develop an understanding of the former NL San Francisco (SF) paint division operation. John started with NL in 1937, in about 1976 upon the sale of the division, he became an ELT Inc. employee. John returned in 1979. From 1937 until December 1970, he worked out of the 24th Street SF Facility. In December 1970, he was transferred to Los Angeles. In SF he was an assistant purchasing agent from 1937 to 1946, in 1946 he became the purchasing manager for the Pacific Branch. John now lives in La Habra, CA FX-6 Personal Privacy

John had not heard of NL having a facility on Main Street, SF. The lacquer plant on Marin maybe employed 6-8 people and the warehouse about 6 people. He thought the operations were on a one shift basis at Marin. John provided four names of companys with which NL conducted drum business. California Cooperage, located in south SF, from whom NL probably purchased second hand drums. Rheem who sold NL new drums. Myers in Oakland which NL used intermittently. NL bought 5 gallon pails from Myers, Myers did some drum cleaning for NL. Bedini brothers were located in Hunters Point (the BAD Site is in the Hunters Point area). John only know of one Bedini site. A former General Paint purchasing manager, Knox Price had established the business at the end of WWII, which Bedini bought. John thought there were three Bedini brothers, and he knew Joe Bedini personally. Sometimes one of the Bedini brothers would personally drive the truck for the drum pick up. The drums sent out for reconditioning were generally varnish or resin drums of the 50 gallon size. Thinner drums had a deposit on them, and thus were not sent out for reconditioning. The varnish plant would have generated about 95% of the drums sent out for reconditioning.

John estimated that a shipment of drums consisted of 80-100 drums. Drums were stacked 2 or 3 drums high on a stake truck which was less than thirty feet in length. Drum pick up occurred every one to three days, and varied based on the plant production. John indicated they would not have ever picked up drums on Sunday, and doubted if Saturday pick up occurred either. Ordinarily, the plant did not work on Saturday. The plant may have shut down for 2 or 3 days around Christmas.

Upon inquiry, John indicated some familiarity with the names of Jack Hamilton and David Cannon, he thought that perhaps they were truck drivers.

John thought Bedini kept "loose financial records". Joe Bedini was audited by the IRS for reporting "low profits". John had seen the Bedini site on multiple occasions. He noted nothing unusual in appearance at the site. He did not know how Bedini would handle wastes which may have been generated in the process of reconditioning drums.

cc: Janet D. Smith

Sams → J.D. Smith

NICHOLLS
INVESTIGATIVE AGENCY, INC.

41 Sutter Street
Suite 1230
San Francisco, CA 94104

CA 800.640.1611
USA 800.472.2345
Fax 800.253.0246

Fax Transmission

DATE: 9/11/92 TIME: 10:00 ☒ A.M. ☐ P.M. NUMBER OF PAGES (INCLUDING COVER): 24

TO: Nicholas Van Aelstyn FROM: Glenna Griffen

CO. NAME Heller Ehrman et al. VERIFYING NO. above

FAX NO. 415-772-6268 FAX NO. above

SUBJECT B. A. D.

Please Deliver Immediately!

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12:00 7/1/92 : JACK HAMILTON →
Employment History

Hamilton
Bedini Nov. 1958 - Driver >

1965 Meyers bought > Driver

1970 Bedini > Driver

1977 Left Drum Pedaler

1980 BAD Cannon & Hamilton

1987

ONLY
" Chaining - ~~[illegible]~~ for rust removal

①

TOPS FORM
7524

Litho in U.S.A.

PPP's

*1958 - 1965 Bedini > NATIONAL LOAD

I DUTCH BOY PAINT 24TH ST Varnish Plant
Mains Lacquer Plant

1 Load Day / 1 load every

108 Drums - Varnish greatest

50 Weeks a year / Sup. MR. Brennan -
Sup @ LACQUER - MR. CRONE

II. BRAUNT KNECHT & HIEMAN (Van Water & Rogers)
16TH Street in S.F. → Brisbane

1 or 2 loads a week - full loads
Sup: NORM RHODES in
Brisbane

III. PENNZOIL - ALAMEDA
1 LOAD WEEK - FULL LOADS / Sup:?

IV - GAMBEN Chemical - S.S.F. - Jim Andreius
Every 2 week p/u 50, Drop off 50

V - KLIX Chemical - S.S.F. - Mr. Hayden or
MEL

2-3 week 80 Drums.

TOPS FORM
7524

Litho in U.S.A.

Industrial Chemical - S.F. Martin, owner
80/90 2-3 weeks.

MAC LAC (SAME AS RJ McLENNAN) Bill Murphy or McLENNAN
2 WKS 80/90

* Penninsula Oil - Ruben or Walt
1-1½ WKS 108/120 (switched to 1962/63

* Shell Oil Co - S.F. (Jobber of Shell
50 ~~wg~~ 2 MOS

* HOCKWOLD Chemical - ~~[illegible]~~ S.F 116TH ST -
moved to Brisbane
108/A MOS.

* DEWEY & ALMY Chemical - San Leandro (DAVIS ST.
100 eng 6 weeks/

* DUPONT - SSF
100 eng 6 weeks.

* Mare Island Naval Shipyard -
100 Drums a month / Supply Depot

* Meyers Metal - S.F.
Raychem - Menlo Park
Western Chemical - SF -> Burlingame
100 Drums eng 2 mos.

TOPS FORM 7524
Litho in U.S.A.

~~Bank account is low~~

WILLARD PRODUCTS. - RWC
50 @ MONTH

LOCKHEED AIRCRAFT -
on bid basis
1000 - 2000 / over 2-3 mos. period
pretty consistently

McLellan AFB
2000 / 6 MOS 2 @ year

Hamilton AFB -
2000 / 6 MOS 2 @ year

Hunters Point
same as above.

Travis - same

Aerojet / SACTO
2000 / 6 MOS.

ROUGH & READY ISLAND - (NAVAL) Olive Cho
2000 / 6 MOS.

TOPS FORM
7524

Litho in U.S.A.

SEP-11-1992 12:20 FROM

Jim - Foreman

* Chem - Central / - Same as ~~[illegible]~~ CENTRAL-SOLVENT Bob Denine - Sup
1 load a week @ end of 1965 / 120 per week
~~[illegible]~~
108 2/3 weeks /

~~Industrial Chemical - SSF~~
~~1 load / 3 weeks~~

* Organic Coating (now D.J. Simpson) - SSF
1 load (80) every 6 weeks. Don Simpson or " Quinn

* Place on Linden Ave - During time frame of Meyers
(General Printing, Inc.) > made ink →
240 / 2 mos.

* Diamond Shamrock - RWCITY - Tom RAMALEY Dick WELLS
Full Load / 50 @ week /

Pedaler - A.C. BRANDEIS, would sometimes pick-up and sell to Bedini

* EUREKA CHEMICAL - 16TH → SSF
1 LOAD / 2 MOS. MR. Jones

TOPS FORM 7524

Litho in U.S.A.

* McKesson Chemical
1 load 6 week "Bol"

1965-1970 - MEYER'S -

* Fuller-O'Brien - SSF (
Semi-loads, sometimes 2 loads a week (at one week)
240/ (Two bol-Tails 130/120)

* Van Waters - Rogers - Norm Rose or Les.
2 loads week / 130-132

Dupont - Low Vol.
100/ 6 WEEKS

HOUGHTON OIL Co. (main Co. back east) → SSF
1 LOAD WEEK / 132 - Meyer only)

Industrial Chem - SF ✓ Martin
Mare Island - ✓
Raychem - M Park 50 drums / 2 weeks ✓
MACLAC ✓
Hockwell, Brisbane - ✓
OLYMPIA OIL - SSF - LINDEN ALE
50 / 2 WEEKS

TOPS FORM 7524
Litho in U.S.A.

1970 - 1980 / Redini also

"STITCH" - Foreman

Glidden -
2 loads a week / 200 each

Spencer - Kellog - San Carlos Bob
1 load / 132 a week

Kelly Moore - San Carlos
50 / week

Mare Island
2000 birds / 6 mos.

Lockheed - same

Diamond Shamrock
50 drums a week /

Ashland Chemical -
Load a week / 130-132

Industrial Chemical
1 load every 2 mos. / 130-132

TOPS FORM
7524

Litho in U.S.A.

SEP-11-1992 12:22 FROM

Bour - Cooperage
Ted Gladden prior
to Bedini

TOPS FORM
7524

Litho in U.S.A.

SEP-11-1992 12:22 FROM

During [illegible]

FORD MOTOR COMPANY MUPITAS
120/LOADS Open Tops under
[illegible] in bids
2000 eng / 2-3 mos.

During 65-70 Meyers had 25 Drivers
← TOM ROSE - now a peddler has a
waste hauler's license
Mike SUTTON -
GEORGE WARD
GREGORY
GEORGE SORIGE (Brother of another
Sorige Drum / Bucket)

Anecdotal

TOPS FORM
7524

Litho in U.S.A.

Fireworks Factory → was the prior company →?

*Union Oil - Hamilton, not sure -

Great Western Chemical - Bedini (Wagnine did more business w/ them)

BAD 1980-84 / Bedini once/three /

Alondale Mowel Air / more from here than anywhere else
5000 / Air fuel, thinner,

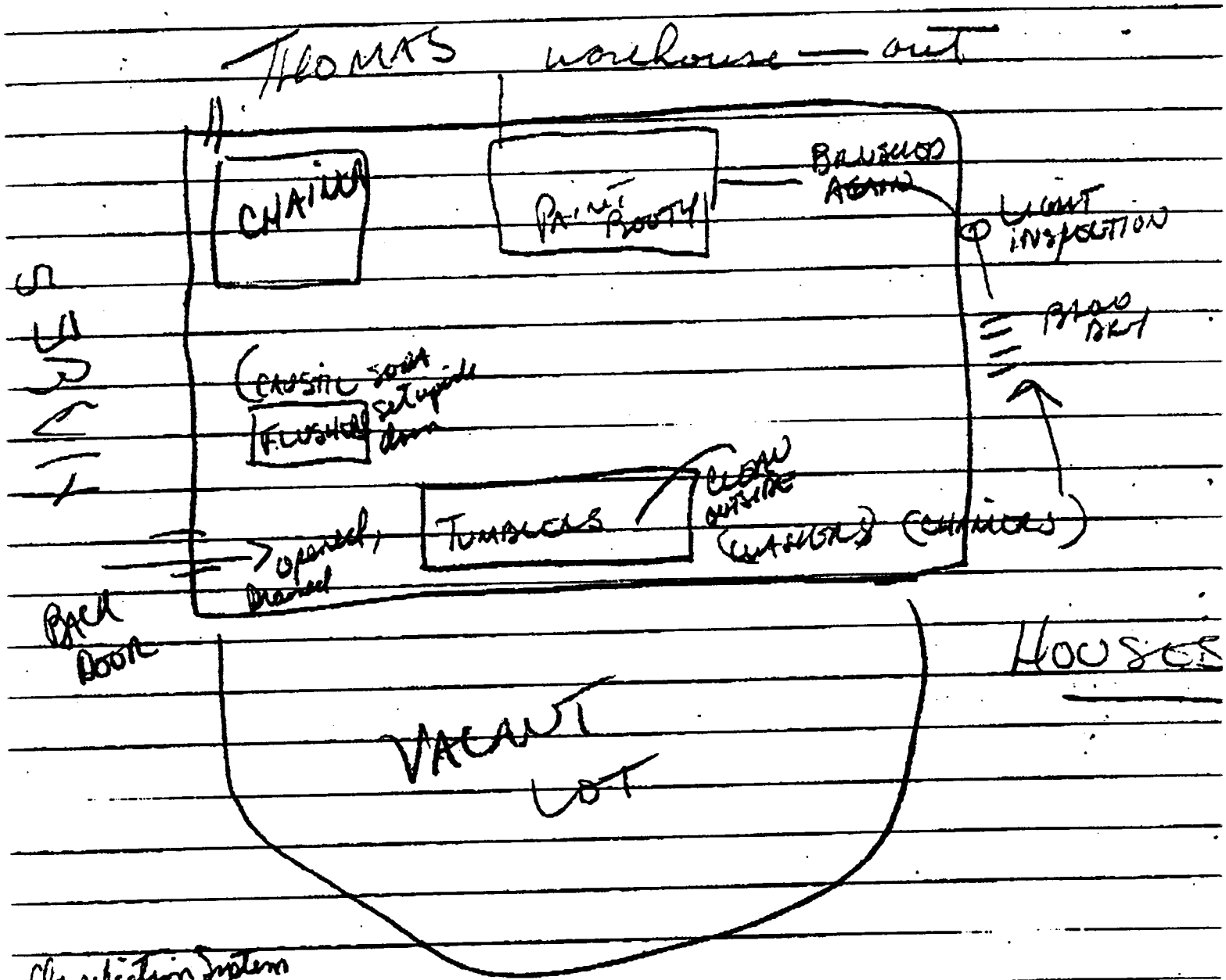
Mather AFB -
1000 / LOT

70-80

65-70 (meyers)

TOPS FORM
7524

Litho in U.S.A.



Classification System

#1 –

#2 – Chaining was only done on barrels that were rusted.

#3 –

TOPS FORM 7524

Litho in U.S.A.

(Printers) 72-80/as Broker
Stelchatron & Smith - Second ST. SF
40-50/WK

City & County of SF - Maint Yarn 1200 Harrison
20/30 @ mos. Harry GLENO
(auto/paint man)
D'Angelo & Sons - Ellis St. - Bill Snow
20 drums / @ 3 weeks

SF AR
PSA - Art McKinney
30/40 drums @ 2 mos
Delta -
TWA - Joe Dempsey
Western Airlines "CHET"
United -

Eureka Fluid Works - Embalming Fluid - 15TH ST/SF
40-50/@ 3 mos

SF General Hosp. Alan Tillman
20/30 @ 3 mos

Kellogs - San Leandro Jess LUCA LEDUE
150 @ 4/5 mos.

Continental Can (Kaiser) - Union City

TOPS FORM 7524

Litho in U.S.A.

* Miracle Auto Painting - SSF Al Swain
30 drums @ 2 mos

* Tap Plastics - ① San Leandro -> ② SALTO
prior 150 @ 1-1.5 mos. (2-3 yrs) 150/ @ 1-1.5 MOS
↳ poss. another name - JIMCO?

* Todd Shipyard
50 drums @ 6 mos Grover DAVID

* -> AAA SHIPYARD
~~AAA Machine Shop~~ - (Al Engels ~~the~~ old place
on pier) 100-150 @ 3/4 mos.

Regents of Univ of Calif: ① E.C. Masterson.
- Lawrence Berkeley Lab - ② Tom FUNG.
- @ Campus / STORE ROOM - ③ JOHN TRUJILLO
A.C. BRANDEIS 72-83 ↓ 50 @ 3 MOS
MAD 65-72

CALWOOD DOOR - NOVATO
72 -> 150 @ 4 MOS.

Stanford Univ. - Chemistry Dept. R.C. HANSON
30-40 @ 3 weeks.

TOPS FORM
7524

Litho in U.S.A.

CARNATION Co. /
7 LOADS @ 152 TOTAL

ITT Continental Baking - BRYANT ST. SF
30/40 @ 1-2 weeks.

GREYHOUND - 7TH ST. maint yard
80 @ 3 mos -

TOPS FORM
7524

Litho in U.S.A.

* River Bank - out of Modesto - Norse?
Industries - made Shells
1972-78

Grease drums - open
240 a load / 1 a month

Inc. 80-84
Benet Oil - Salto -

58-65 65-70

* Plex Chemical - SF - now in Union City
50/1½-2 weeks

Standard Oil Co. (recons 16 gua SD) - primarily inbound
~~[illegible]~~ none coming out

* Castro Oil / 16th & 3rd
75/Mos - 1½ Mos.

* Willard Products - Penninsula
25/30 @ 2 Mos

TOPS FORM 7124

* Pioneer Soap - SF.
75-80/@ 2 Mos.

TRANSPORTERS -
- A. C. BRANDEIS - now decid (1972)
- Exxon drums came in (more not known)
58-65 every 6 mos 60-80.

WAYNIRE
Fred Schwartz - local guy -
ED HOWDY SHELL - lived in Marin County

Kelly Pickering Chemical - Meyer ?

Laurence Livermore Lab - 80-83 DOD
500 - 1000 Drums -

Solvent Service - Yes - Meyer & Bedini - low vol

Donaldson 72-83 - Bedini didn't have.
25 Drums / @ 2 mos

Carmonee Chemical (C. L. DUNCAN) - in Bedini time
(off Hochmuth) 40-50 / @ 2 mos 58-65

TOPS FORM
7524

Line in U.S.A.

Hewlett-Packard - Bedini - low) couple loads
- 1972 - 78 loads / avg 50/60 @ 2 weeks

Intel - low vol. during Meyers.

Interstate Oil - Sacto - ANDY? Terry ANDREWS
200 LOAD / Drug back 1 + 1½ mos

Quaker State - not prior to 1980

United Air Lines -

all oil drums were residual oils; military facilities had most

Reichold - Meyers 65-70
132 @ week

*Reynolds Metal Co. → Harold HOLLENSHEAD
HOLLEN SHEAD
Bedini (1972 - 3/4 LOADS)
→ 1972 → Vaporise) 1 load avg 8-10 weeks /
→ now Continental Can Co.

*Kaiser Aluminum -
Most were open-heads, went to L.A. for refuse -
10% stayed here - 90% went to L.A.
150 @ 1 mos.

TOPS FORM 7524 1000 in 3 days

Litho in U.S.A.

174 is on open Top

Only drums you wash are soap, oil, /
washed some poly drums/

Bedini time, used burns and blasters - burned on site (Meyers removed it!) So, open heads weren't done after that.

Syntex U.S.A. Was Hamilton's client 72-83 - LARRY FRANK
80 drums @ 2 mos. / 50% went to LA / 30% to BAD

U.C. Med Center - Bedini is BAD
- VERY SMALL - 3 LOADS/ 60

W. R. GRACE - Bedini
DEWY-ALMY CHEMICAL

W. R. MEADOWS - Bedini had / same volume as BAD
after 70-78

TOPS FORM 7524

Litho in U.S.A.

Far West Corp. (in Richmond needs to
speak up Common) across from Golden Gate
Fields - in Meyers Lane

TOPS FORM
7524

Line in U.S.A.

Schlage Lock: 58-65
50 @ 3 mos.

Misc File:

① BRUCE BRATFIELD 320-333 11TH ST. SF 94103
626-2498

② Plant in Pittsburgh (as per exit)
pos. DOW - 240 4/5 LOADS TOTAL

③ LIBBY, McNEIL, LIBBY is Tomato Paste

④ INMOT PAINT
Michael BAILON — PO Box 158 SAMOA
⑤ Louisianna Pacific Corp ~~Sausalito~~ Ca. 9556
~~480~~ Drums 72-78
DORWARD & Sons Company. - Marine Terminals
⑥ Dorwood & Sons. Pt. RICHMOND
152 10 LOADS

TOPS FORM 7524

Litho in U.S.A.

* General Motors — also big w/ Meyers
(LUCITE PAINTS)

H+H Ship - Dwo had

LYTTON Industries - Early Bedini
100 / 2 loads

Plastic Mart - Oakland - Bedini picked up during Meyers Time.

Dees Candies - Bedini picked up

Shasta Beverages - (Hayward)
Early Bedini

Wells Fargo Bank - SF main
10-15 @ time / 5-6 times | Bedini prior to Meyers.

Western Omega - Union City DALE KORNBLITH
80-100 / 5 LOADS 489-8111 72-78

[illegible]

TOPS FORM 7524

Litho in U.S.A.

Steve Morrill was exec w/ Chevron Oil Co.
> investor w/ Wagmire

TOPS FORM
7524

Litho in U.S.A.

Piddler's

Evans / Tonis / Ron BATISTONI (Ernies nephew)

~~Mary Davis /~~

~~Freita Smith~~

~~" Coleman~~

TOPS FORM
7524

Litho in U.S.A.

TOTAL P.24

Exhibit 2

OAKLAND
(415) 652-6847
LOS ANGELES
(213) 581-6141
PORTLAND
(503) 255-0553
TUCSON
(602) 624-2585

MYERS DRUM COMPANY

SUBSIDIARY OF KAISER STEEL CORPORATION

REMIT TO:

MYERS DRUM CO. P. O. BOX 37375 SAN FRANCISCO, CALIF. 94137

INVOICE NO.	PAGE
L38788	1

CUSTOMER NO.	INVOICE DATE
11000	3/07/78

SOLD TO
N.L. INDUSTRIES
2700 SOUTH INDIANA

LOS ANGELES, CA 90023

SHIP TO
SAME
SAME

CUSTOMER REFERENCE	SHIP VIA	DATE SHIPPED	ORDER NO.	SLS. NO.	FREIGHT			
4513	WILL CALL	3/06/78	6891	29	PREPAID	X	COLLECT	

PRODUCT CODE	DESCRIPTION	U/M	QUANTITY		AMOUNT
59 83213	RECONDITIONED USED DRUMS ON 55 GAL	EA	12	12.250	147.00
				Calif Tax	8.82

RECEIVED
MAR 13 1978
ACCOUNTS PAYABLE
NL INDUSTRIES, INC.

TERMS:
THE CASH DISCOUNT SHOWN AT THE RIGHT WHERE APPLICABLE MAY BE TAKEN ON INVOICES ISSUED BETWEEN THE 1ST AND 15TH IF PAID BY 25TH OF THAT MONTH, AND ON INVOICES ISSUED BETWEEN 16TH AND 31ST IF PAID BY THE 10TH OF THE FOLLOWING MONTH

.00

TOTAL 155.82 ~~147.00~~

PAY THIS AMOUN

ORIGINAL

SALE SUBJECT TO CONDITIONS ON REVERSE

This instrument confirms the terms and conditions of sale of the products described on the face hereof. In the event Buyer's purchase order states terms additional to or different from these Conditions of Sale, then this instrument shall be deemed a notification of objection to such additional and/or different terms, or in the event such purchase order expressly limits acceptance to its terms then this instrument shall be deemed a rejection of Buyer's offer to purchase, and in either such event this instrument shall constitute an offer to sell which may be accepted only in accordance with its terms and without modification, addition or alteration. Buyer's acceptance of delivery of the products described on the face hereof shall be deemed an acceptance hereof and a contract shall be formed only upon the within Conditions of Sale.

A. PRICE; PAYMENT.

1. The prices stated herein are subject to adjustment to Seller's schedule of prices in effect at the time of each shipment.

2. Prices specified do not include sales, excise, or other taxes payable on account of this transaction, and all taxes now in effect and/or hereafter levied, which are applicable to this transaction, are in addition to such prices and shall be paid by Buyer.

3. Payments shall be made in cash thirty days from date of delivery of products sold hereunder, unless otherwise expressly provided on the face hereof. All orders and contracts are subject to approval of Seller's Credit Department and Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. If Buyer fails to comply with any terms of payment, Seller reserves the right to withhold further deliveries or terminate the agreement of sale upon written notice and any unpaid amount shall thereupon become due.

4. If payment is not made according to the terms stated herein, interest will be charged on any overdue portion at the highest lawful rate.

B. MANUFACTURING; WARRANTY.

1. Seller expressly warrants title and that its new products (single trip) comply with the U. S. Department of Transportation specification number, if any, embossed upon the particular product in effect on the date said product is manufactured. If linings are supplied with new products, Seller warrants such linings will be comparable in quality with and applied in the same manner as the sample tested and approved by Buyer. With respect to used products reconditioned by Seller, Seller warrants only that the products meet Seller's testing procedures and reconditioning workmanship standard in the industry. All other used products are sold "as is where is". Except for such express warranties, Seller makes no warranty of any kind whatsoever, express or implied, and all warranties of merchantability, fitness for a particular purpose, and other warranties of whatever kind, are hereby disclaimed by Seller and excluded.

2. Seller assumes no liability for any failure of Buyer's specification to meet Buyer's requirements. Seller makes no guarantee and assumes no liability with respect to the content of any labeling data and Buyer is solely responsible for the accuracy and adequacy thereof to meet Buyer's requirements or to comply with any general or specific laws or regulations pertaining to labeling of the products sold hereunder.

C. DELIVERY AND SHIPMENT.

1. Where delivery is by means of common carrier or is effected by Buyer, all risk of loss, damage and all incidents of title and ownership shall pass to Buyer upon delivery at Seller's plant. Except as provided above, risk of loss, damage and all incidents of title and ownership shall pass from Seller to Buyer at the destination designated on the face hereof.

2. In order to secure Buyer's performance until payment in full is received, Seller retains: (i) the right at any time to identify the products to the contract; (ii) the rights to divert or stop in transit; (iii) the right to resell, and (iv) a purchase money security interest as defined in Cal. Commercial Code No. 9107 in the products described herein and the proceeds or products thereof.

3. To avoid congestion and delays in loading, the mode of transportation and routing of shipments shall be selected by Seller.

D. GENERAL LIABILITY.

In no event shall Seller be liable for failure or delay in performance or delivery when such failure or delay results from or in connection with strikes, lockouts, boycotts or other labor troubles of any kind; participation by Seller or an affiliate of Seller at the request or urging of any government or governmental corporation, agency or bureau in any plan, policy or program of general public interest respecting priorities, allocations, limitations or other restraints which affect manufacture of steel or steel products or delivery hereunder; or any other cause or occurrence beyond Seller's control, including, but not limited to, riots, wars (declared or undeclared), acts of the public enemy, fires, inclement weather, earthquakes, or other acts of God, damage, destruction or breakdowns of any kind of Seller's equipment or facilities necessary for performance hereunder arising from any cause whatsoever; delays or failures of usual sources of supply of materials, equipment or transportation; shortage of transportation facilities or equipment, shortage of labor, fuel or other materials; any present or future laws, orders, regulations, directives of policies enacted, adopted, instituted or sponsored by any government or governmental corporation, agency or bureau effecting mandatory restrictions, limitations, priorities, allotments, allocations, prorations or substitutions which delay, restrict or prevent the manufacture or delivery of steel or steel products, or otherwise affect performance hereunder; or any other cause or occurrence beyond Seller's control delaying, restricting or preventing Seller's performance hereunder, whether or not like or similar to the causes or occurrences specifically enumerated above.

E. CLAIMS.

1. Except for breach of the express warranties specified in Article D above, Seller shall not under any circumstances be liable on account of any imperfection, deviation from specifications, standard tolerances, improper workmanship, or other defect impairing the quality, value, or suitability for any purpose of any product sold hereunder whether caused by Seller's negligence or otherwise. Seller's liability under the sale contemplated hereby, or under any term, warranty or representation in connection therewith, or the manufacture or delivery of any products covered hereby, whether based upon Seller's negligence or otherwise, shall in no event exceed the purchase price of the particular product. In no event shall Seller be liable for consequential, special or contingent damages.

2. Buyer shall fully specify all claimed defects or nonconformity by written notice to Seller promptly after Buyer's receipt of the products, and Buyer shall give Seller an opportunity to investigate. Products claimed to be defective shall not be returned without Seller's written consent.

F. MISCELLANEOUS CONDITIONS.

1. The waiver by Seller of any term, provision or condition herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition, or provision, nor shall it be deemed a waiver of any conditions in any subsequent order.

2. This instrument confirms the sole and entire agreement between Buyer and Seller and none of the terms and conditions contained herein may be added to, deleted, modified or altered except by a written instrument signed by Seller. There are no oral understandings, representations or agreements relative to this instrument which are not fully expressed herein.

3. The laws of the State of California shall govern the validity, interpretation and enforcement hereof.

(Rev. 11-23-71)

ACCOUNTING DEPT.

PURCHASE ORDER / REQUISITION

No. 24518

VENDOR: Myers Drums
5400 So. Soto
LA
581-6141 - Mark

SHIP TO: [redacted]

E.D.A.

TAXABLE	F.O.B. (DESTINATION UNLESS SPECIFIED)	PREPAID	ORDER PLACED WITH VENDOR BY	DATE	DELIVERY REQUIRED
✓			Sm	3-3-78	3/6/78
RESALE	SHIP VIA: Will Call/OT	COLLECT			TERMS

QUANTITY RECEIVED	QUANTITY ORDERED	DESCRIPTION	PRICE	DISCOUNT
	12 ea	55 gal Drums - LIDS with ring/Sealer clean used drums	12.25 ea	
	for	Alumin dross -		

DELIVER MATERIAL TO: RGEININGA

COST CENTER TO BE CHARGED: 170

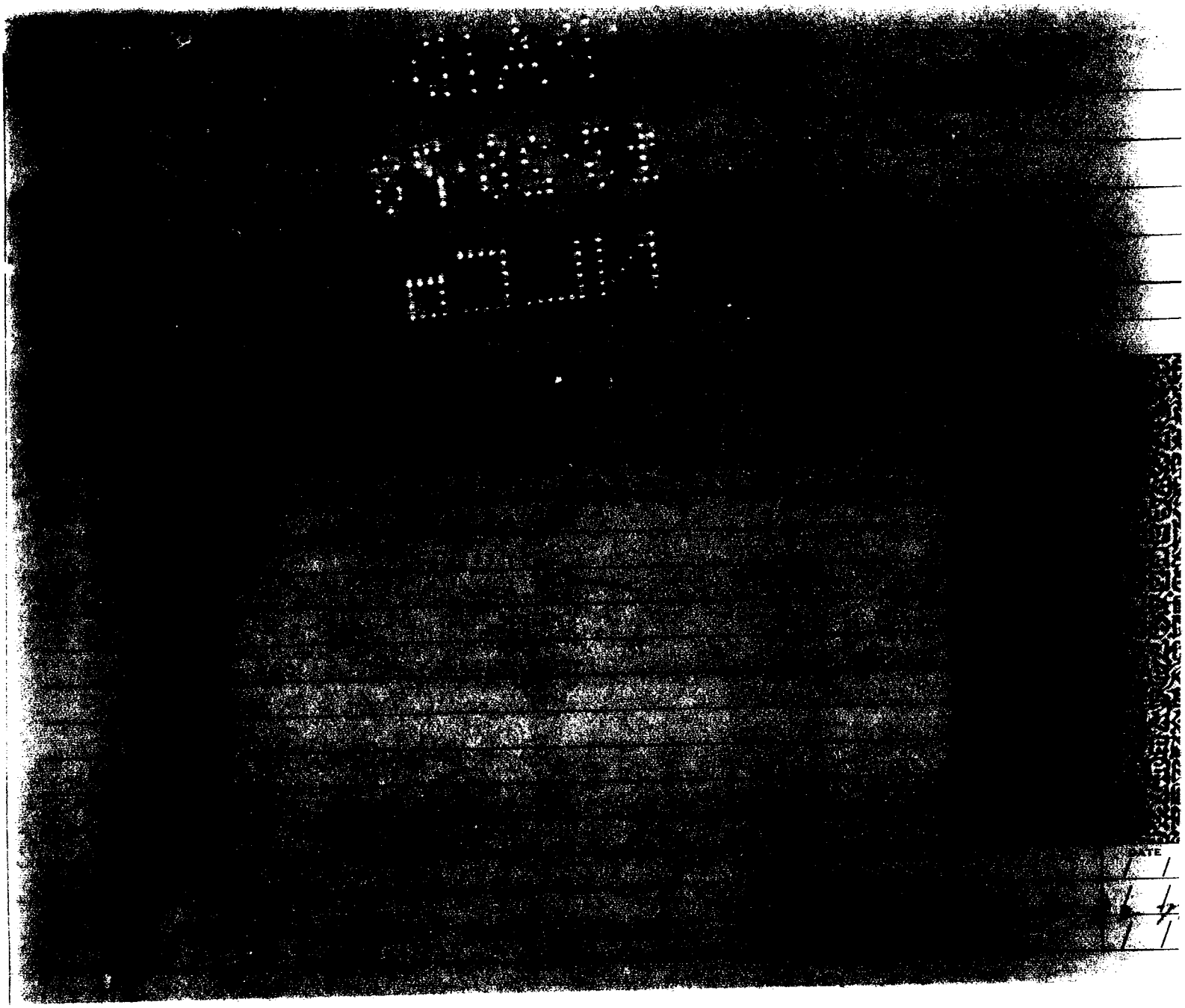
MATERIAL TO BE USED FOR (CHECK ONE): REPAIR | REPLACEMENT ✓ | STOCK | NEW ADDITION

09-80-170-45310-3900

REQUESTED BY: DATE / /

APPROVED BY: KM Rutter DATE 3/2/78

RECEIVED BY: DATE / /



FROM MYERS DRUM COMPANY At Vernon, Calif.

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

THIS BILL OF LADING NUMBER MUST APPEAR ON ALL W/B'S AND F/B'S

SHIPPER'S NO. & B/L NO. J 38788

SALES ORDER NO.	CUSTOMER ORDER NO.	INVOICE DATE
LA-6891	24518	

lading. If this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Myers Drum Company

(Signature of consignor.)

Received $

to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced: $

If charges are to be prepaid, write or stamp here, "To be Prepaid."

CONSIGNED TO NL Inds.
2700 S. Indiana

DESTINATION LA., CA.

DATE SHIPPED 3/6/78

CAR INITIALS will call

SHIPPED VIA

CAR NO.

PREPAID ☐ COLLECT ☐

UNITS	PRODUCT DESCRIPTION	WT. SUB. TO COR.	CLASS OR RATE	✓
	55 GAL. OIL DRUMS, USED			
12	55 GAL. OPEN TOP DRUMS, USED blk/white, gask inst bolt rings			

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

MYERS DRUM COMPANY, Shipper

2

office address of shipper, 6549 SAN PABLO AVE., OAKLAND, CALIF.

AGENT MUST DETACH AND RETAIN THIS SHIPPING ORDER AND MUST SIGN THE ORIGINAL BILL OF LADING

MI-8364

Accounts Payable Entry Form

NL Metals

DATE A/P BATCH NO.

MAR 24 1978 0 7 2

METAL DIV. - WESTERN DIV.

Cd. Id.	Trans	Sp. Hd.	Vendor Number	Reference Or Invoice Number	Due Date Mo.	Due Date Day	Due Date Yr.	Gross Amount Or Prepaid Check No.
1	5	6	7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22	23 24	25 26	27	28 29 30 31 32 33 34 35 36
2	1	E	232055	L38788	03	24	78	155 82

Location Codes Div.	Location Codes Loc.	Cost Center Dept.	Cost Center Sub. Dept.	General Ledger Account	Sub Account	Qty Y.D	Quantity/Description	Distributed Amounts Debit Amount	Distributed Amounts Credit Amount
37 38	39 40	41 42 43	44 45 46	47 48 49 50 51	52 53 54 55	56 57	58 59 60 61 62 63 64 65 66 67 68 69 70 71	72 73 74 75 76 77 78 79 80	72 73 74 75 76 77 78 79 80
0 9	80	170		45531/10	3900			155 82	

OAKLAND
(415) 652-6847
LOS ANGELES
(213) 581-6141
PORTLAND
(503) 255-0553
TUCSON
(602) 624-2585

MYERS DRUM COMPANY

SUBSIDIARY OF KAISER STEEL CORPORATION

REMIT TO:

MYERS DRUM CO. P. O. BOX 37375 SAN FRANCISCO, CALIF. 94137

INVOICE NO.	PAGE
L46162	1

CUSTOMER NO.	INVOICE DATE
11000	10/16/78

SOLD TO
N.L. INDS.
2700 S. INDIANA
LOS ANGELES, CA 90052

SHIP TO
SAME
SAME

CUSTOMER REFERENCE	SHIP VIA	DATE SHIPPED	ORDER NO.	SLS. NO.	FREIGHT			
6648	MYERS TRUCK	10/09/78	6162	13	PREPAID	X	COLLECT	

PRODUCT CODE	DESCRIPTION	U/M	QUANTITY		AMOUNT
11 81233	OH LUBRICANT DRUMS	EA	50	7.400	370.00
13 81292	DELIVERY CHARGES	EA	50	.150	7.50

RECEIVED
OCT 23 1978
ACCOUNTS PAYABLE
NL INDUSTRIES, INC.

TERMS:
THE CASH DISCOUNT SHOWN AT THE RIGHT WHERE APPLICABLE MAY BE TAKEN ON INVOICES ISSUED BETWEEN THE 1ST AND 15TH IF PAID BY 25TH OF THAT MONTH, AND ON INVOICES ISSUED BETWEEN 16TH AND 31ST IF PAID BY THE 10TH OF THE FOLLOWING MONTH

1.85

TOTAL 377.50
-185
375.65
PAY THIS AMOUNT

6162

ORIGINAL

SALE SUBJECT TO CONDITIONS ON REVERSE

This instrument confirms the terms and conditions of sale of the products described on the face hereof. In the event Buyer's purchase order states terms additional to or different from these Conditions of Sale, then this instrument shall be deemed a notification of objection to such additional and/or different terms, or in the event such purchase order expressly limits acceptance to its terms then this instrument shall be deemed a rejection of Buyer's offer to purchase, and in either such event this instrument shall constitute an offer to sell which may be accepted only in accordance with its terms and without modification, addition or alteration. Buyer's acceptance of delivery of the products described on the face hereof shall be deemed an acceptance hereof and a contract shall be formed only upon the within Conditions of Sale.

A. PRICE; PAYMENT.

1. The prices stated herein are subject to adjustment to Seller's schedule of prices in effect at the time of each shipment.

2. Prices specified do not include sales, excise, or other taxes payable on account of this transaction, and all taxes now in effect and/or hereafter levied, which are applicable to this transaction, are in addition to such prices and shall be paid by Buyer.

3. Payments shall be made in cash thirty days from date of delivery of products sold hereunder, unless otherwise expressly provided on the face hereof. All orders and contracts are subject to approval of Seller's Credit Department and Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. If Buyer fails to comply with any terms of payment, Seller reserves the right to withhold further deliveries or terminate the agreement of sale upon written notice and any unpaid amount shall thereupon become due.

4. If payment is not made according to the terms stated herein, interest will be charged on any overdue portion at the highest lawful rate.

B. MANUFACTURING; WARRANTY.

1. Seller expressly warrants title and that its new products (single trip) comply with the U. S. Department of Transportation specifications number, if any, embossed upon the particular product in effect on the date said product is manufactured. If linings are supplied with new products, Seller warrants such linings will be comparable in quality with and applied in the same manner as the sample tested and approved by Buyer. With respect to used products reconditioned by Seller, Seller warrants only that the products meet Seller's testing procedures and reconditioning workmanship standard in the industry. All other used products are sold "as is where is". Except for such express warranties, Seller makes no warranty of any kind whatsoever, express or implied, and all warranties of merchantability, fitness for a particular purpose, and other warranties of whatever kind, are hereby disclaimed by Seller and excluded.

2. Seller assumes no liability for any failure of Buyer's specification to meet Buyer's requirements. Seller makes no guarantee and assumes no liability with respect to the content of any labeling data and Buyer is solely responsible for the accuracy and adequacy thereof to meet Buyer's requirements or to comply with any general or specific laws or regulations pertaining to labeling of the products sold hereunder.

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2. In order to secure Buyer's performance until payment in full is received, Seller retains: (i) the right at any time to identify the products to the contract; (ii) the rights to divert or stop in transit; (iii) the right to resell, and (iv) a purchase money security interest as defined in Cal. Commercial Code No. 9107 in the products described herein and the proceeds or products thereof.

3. To avoid congestion and delays in loading, the mode of transportation and routing of shipments shall be selected by Seller.

D. GENERAL LIABILITY.

In no event shall Seller be liable for failure or delay in performance or delivery when such failure or delay results from or in connection with strikes, lockouts, boycotts or other labor troubles of any kind; participation by Seller or an affiliate of Seller at the request or urging of any government or governmental corporation, agency or bureau in any plan, policy or program of general public interest respecting priorities, allocations, limitations or other restraints which affect manufacture of steel or steel products or delivery hereunder; or any other cause or occurrence beyond Seller's control, including, but not limited to, riots, wars (declared or undeclared), acts of the public enemy, fires, inclement weather, earthquakes, or other acts of God, damage, destruction or breakdowns of any kind of Seller's equipment or facilities necessary for performance hereunder arising from any cause whatsoever; delays or failures of usual sources of supply of materials, equipment or transportation; shortage of transportation facilities or equipment, shortage of labor, fuel or other materials; any present or future laws, orders, regulations, directives of policies enacted, adopted, instituted or sponsored by any government or governmental corporation, agency or bureau effecting mandatory restrictions, limitations, priorities, allotments, allocations, prorations or substitutions which delay, restrict or prevent the manufacture or delivery of steel or steel products, or otherwise affect performance hereunder; or any other cause or occurrence beyond Seller's control delaying, restricting or preventing Seller's performance hereunder, whether or not like or similar to the causes or occurrences specifically enumerated above.

E. CLAIMS.

1. Except for breach of the express warranties specified in Article D above, Seller shall not under any circumstances be liable on account of any imperfection, deviation from specifications, standard tolerances, improper workmanship, or other defect impairing the quality, value, or suitability for any purpose of any product sold hereunder whether caused by Seller's negligence or otherwise. Seller's liability under the sale contemplated hereby, or under any term, warranty or representation in connection therewith, or the manufacture or delivery of any products covered hereby, whether based upon Seller's negligence or otherwise, shall in no event exceed the purchase price of the particular product. In no event shall Seller be liable for consequential, special or contingent damages.

2. Buyer shall fully specify all claimed defects or nonconformity by written notice to Seller promptly after Buyer's receipt of the products, and Buyer shall give Seller an opportunity to investigate. Products claimed to be defective shall not be returned without Seller's written consent.

F. MISCELLANEOUS CONDITIONS.

1. The waiver by Seller of any term, provision or condition herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition, or provision, nor shall it be deemed a waiver of any conditions in any subsequent order.

2. This instrument confirms the sole and entire agreement between Buyer and Seller and none of the terms and conditions contained herein may be added to, deleted, modified or altered except by a written instrument signed by Seller. There are no oral understandings, representations or agreements relative to this instrument which are not fully expressed herein.

3. The laws of the State of California shall govern the validity, interpretation and enforcement hereof.

ACCOUNTING DEPT.

PURCHASE ORDER / REQUISITION

No. 26648

VENDOR: Myers Drum
5400 So Soto
Vernon
Jim

SHIP TO:

E.D.A. 10-6-78

TAXABLE	F.O.B. (DESTINATION UNLESS SPECIFIED)	PREPAID	ORDER PLACED WITH VENDOR	DATE	DELIVERY REQUIRED
RESALE	SHIP VIA: their truck	COLLECT	Jim	9-27-78	TERMS

QUANTITY RECEIVED	QUANTITY ORDERED	DESCRIPTION	PRICE	DISCOUNT
	50	16 Gals. 20 Gauge Black Drums	7.40	
			+ .15	delic Chg
		w/Lids		
		For Packing Tin Shots		
		$377.50		

DELIVER MATERIAL TO: MM

COST CENTER TO BE CHARGED: 211

MATERIAL TO BE USED FOR (CHECK ONE)	REPAIR	REPLACEMENT	STOCK	NEW ADDITION
		✓		

REQUESTED BY: Joe D. Cahoney — DATE 9/27/78

APPROVED BY: [illegible] — 9/27/78

RECEIVED BY: — / /

THIS SHIPPING ORDER or in Carbon, and retained by the Agent.

RECEIVE, subject to the classifications and tariffs in effect on the date of the issue of this shipping order,

FROM MYERS DRUM COMPANY At Vernon, Calif.

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

THIS BILL OF LADING NUMBER MUST APPEAR ON ALL W/B'S AND F/B'S

SHIPPER'S NO. & B/L NO. L2 - 46162

SALES ORDER NO.	CUSTOMER ORDER NO.	INVOICE DATE
V-6162	26648	

CONSIGNED TO N L INDS

DESTINATION 2700 S INDIANA L.A., CA

DATE SHIPPED 10/9

CARRIER OUR TRUCK

CAR NO.

Time in

Time out

PREPAID ☐ COLLECT ☐

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Myers Drum Company

(Signature of consignor.)

Received $

to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced: $

If charges are to be prepaid, write or stamp here, "To be Prepaid."

UNITS	PRODUCT DESCRIPTION	WT. SUB. TO COR.	CLASS OR RATE	✓
50	NEW DRUM 16 gal., 20 ga., LUG GREASE, FLOWED, BLACK			

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per

MYERS DRUM COMPANY, Shipper

Per

Permanent post-office address of shipper, 6649 SAN PABLO AVE., OAKLAND, CALIF.

2

AGENT MUST REVIEW AND RETAIN THIS SHIPPING ORDER AND MUST SIGN THE ORIGINAL BILL OF LADING

MI-8364

Accounts Payable Entry Form

NL Metals

R. WOODS
OCT 25 1978

DATE A/P BATCH NO.

OCT 26 1978 261

METAL DIV. - WESTERN 909

Cd. Id.	Trans	Sp. Hd.	Vendor Number	Reference Or Invoice Number	Due Date Mo.	Due Date Day	Due Date Yr.	Gross Amount Or Prepaid Check No.
1	5	6	7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22	23 24	25 26	27	28 29 30 31 32 33 34 35 36
2	1		232055	L46162	10	26	8	375 65

Location Codes Div.	Location Codes Loc.	Cost Center Dept.	Cost Center Sub. Dept.	General Ledger Account	Sub Account	QTNY.D	Quantity/Description	Distributed Amounts Debit Amount	Distributed Amounts Credit Amount
37 38	39 40	41 42 43	44 45 46	47 48 49 50 51	52 53 54 55 56 57	58	59 60 61 62 63 64 65 66 67 68 69 70 71	72 73 74 75 76 77 78 79 80	72 73 74 75 76 77 78 79 80
0 9	80	211	350	45310	3590			375 65	

OR 10/25/78

OAKLAND
(415) 652-6847
LOS ANGELES
(213) 581-6141
PORTLAND
(503) 255-0553
TUCSON
(602) 624-2585

MYERS DRUM COMPANY

SUBSIDIARY OF KAISER STEEL CORPORATION

REMIT TO:

MYERS DRUM CO. P. O. BOX 37375 SAN FRANCISCO, CALIF. 94137

INVOICE NO.	PAGE
L38456	1

CUSTOMER NO.	INVOICE DATE
11000	2/14/78

SOLD TO
N L INDUSTRIES
2700 S INDIANA

LOS ANGELES,CA 90023

SHIP TO
SAME
SAME

CUSTOMER REFERENCE	SHIP VIA	DATE SHIPPED	ORDER NO.	SLS. NO.	FREIGHT			
246	WILL CALL	2/09/78	6186	29	PREPAID	X	COLLECT	

PRODUCT CODE	DESCRIPTION	U/M	QUANTITY		AMOUNT
9 83213	RECONDITIONED USED DRUMS OH55GAL	EA	10	12.250	122.50

RECEIVED
ACCOUNTS PAYABLE
NL INDUSTRIES, INC.

TERMS:
THE CASH DISCOUNT SHOWN AT THE RIGHT WHERE APPLICABLE MAY BE TAKEN ON INVOICES ISSUED BETWEEN THE 1ST AND 15TH IF PAID BY 25TH OF THAT MONTH, AND ON INVOICES ISSUED BETWEEN 16TH AND 31ST IF PAID BY THE 10TH OF THE FOLLOWING MONTH

.00

TOTAL 122.50

PAY THIS AMOUNT

INAL

SALE SUBJECT TO CONDITIONS ON REVERSE

This instrument confirms the terms and conditions of sale of the products described on the face hereof. In the event Buyer's purchase order states terms additional to or different from these Conditions of Sale, then this instrument shall be deemed a notification of objection to such additional and/or different terms, or in the event such purchase order expressly limits acceptance to its terms then this instrument shall be deemed a rejection of Buyer's offer to purchase, and in either such event this instrument shall constitute an offer to sell which may be accepted only in accordance with its terms and without modification, addition or alteration. Buyer's acceptance of delivery of the products described on the face hereof shall be deemed an acceptance hereof and a contract shall be formed only upon the within Conditions of Sale.

A. PRICE; PAYMENT.

1. The prices stated herein are subject to adjustment to Seller's schedule of prices in effect at the time of each shipment.

2. Prices specified do not include sales, excise, or other taxes payable on account of this transaction, and all taxes now in effect and/or hereafter levied, which are applicable to this transaction, are in addition to such prices and shall be paid by Buyer.

3. Payments shall be made in cash thirty days from date of delivery of products sold hereunder, unless otherwise expressly provided on the face hereof. All orders and contracts are subject to approval of Seller's Credit Department and Seller may at any time require payment in advance or satisfactory security that invoices will be paid when due. If Buyer fails to comply with any terms of payment, Seller reserves the right to withhold further deliveries or terminate the agreement of sale upon written notice and any unpaid amount shall thereupon become due.

4. If payment is not made according to the terms stated herein, interest will be charged on any overdue portion at the highest lawful rate.

B. MANUFACTURING; WARRANTY.

1. Seller expressly warrants title and that its new products (single trip) comply with the U. S. Department of Transportation specification number, if any, embossed upon the particular product in effect on the date said product is manufactured. If linings are supplied with new products, Seller warrants such linings will be comparable in quality with and applied in the same manner as the sample tested and approved by Buyer. With respect to used products reconditioned by Seller, Seller warrants only that the products meet Seller's testing procedures and reconditioning workmanship standard in the industry. All other used products are sold "as is where is". Except for such express warranties, Seller makes no warranty of any kind whatsoever, express or implied, and all warranties of merchantability, fitness for a particular purpose, and other warranties of whatever kind, are hereby disclaimed by Seller and excluded.

2. Seller assumes no liability for any failure of Buyer's specification to meet Buyer's requirements. Seller makes no guarantee and assumes no liability with respect to the content of any labeling data and Buyer is solely responsible for the accuracy and adequacy thereof to meet Buyer's requirements or to comply with any general or specific laws or regulations pertaining to labeling of the products sold hereunder.

C. DELIVERY AND SHIPMENT.

1. Where delivery is by means of common carrier or is effected by Buyer, all risk of loss, damage and all incidents of title and ownership shall pass to Buyer upon delivery at Seller's plant. Except as provided above, risk of loss, damage and all incidents of title and ownership shall pass from Seller to Buyer at the destination designated on the face hereof.

2. In order to secure Buyer's performance until payment in full is received, Seller retains: (i) the right at any time to identify the products to the contract; (ii) the rights to divert or stop in transit; (iii) the right to resell, and (iv) a purchase money security interest as defined in Cal. Commercial Code No. 9107 in the products described herein and the proceeds or products thereof.

3. To avoid congestion and delays in loading, the mode of transportation and routing of shipments shall be selected by Seller.

D. GENERAL LIABILITY.

In no event shall Seller be liable for failure or delay in performance or delivery when such failure or delay results from or in connection with strikes, lockouts, boycotts or other labor troubles of any kind; participation by Seller or an affiliate of Seller at the request or urging of any government or governmental corporation, agency or bureau in any plan, policy or program of general public interest respecting priorities, allocations, limitations or other restraints which affect manufacture of steel or steel products or delivery hereunder; or any other cause or occurrence beyond Seller's control, including, but not limited to, riots, wars (declared or undeclared), acts of the public enemy, fires, inclement weather, earthquakes, or other acts of God, damage, destruction or breakdowns of any kind of Seller's equipment or facilities necessary for performance hereunder arising from any cause whatsoever; delays or failures of usual sources of supply of materials, equipment or transportation; shortage of transportation facilities or equipment, shortage of labor, fuel or other materials; any present or future laws, orders, regulations, directives of policies enacted, adopted, instituted or sponsored by any government or governmental corporation, agency or bureau effecting mandatory restrictions, limitations, priorities, allotments, allocations, prorations or substitutions which delay, restrict or prevent the manufacture or delivery of steel or steel products, or otherwise affect performance hereunder; or any other cause or occurrence beyond Seller's control delaying, restricting or preventing Seller's performance hereunder, whether or not like or similar to the causes or occurrences specifically enumerated above.

E. CLAIMS.

1. Except for breach of the express warranties specified in Article D above, Seller shall not under any circumstances be liable on account of any imperfection, deviation from specifications, standard tolerances, improper workmanship, or other defect impairing the quality, value, or suitability for any purpose of any product sold hereunder whether caused by Seller's negligence or otherwise. Seller's liability under the sale contemplated hereby, or under any term, warranty or representation in connection therewith, or the manufacture or delivery of any products covered hereby, whether based upon Seller's negligence or otherwise, shall in no event exceed the purchase price of the particular product. In no event shall Seller be liable for consequential, special or contingent damages.

2. Buyer shall fully specify all claimed defects or nonconformity by written notice to Seller promptly after Buyer's receipt of the products, and Buyer shall give Seller an opportunity to investigate. Products claimed to be defective shall not be returned without Seller's written consent.

F. MISCELLANEOUS CONDITIONS.

1. The waiver by Seller of any term, provision or condition herein stated shall not be construed to be a waiver of any other term, condition or provision hereof, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition, or provision, nor shall it be deemed a waiver of any conditions in any subsequent order.

2. This instrument confirms the sole and entire agreement between Buyer and Seller and none of the terms and conditions contained herein may be added to, deleted, modified or altered except by a written instrument signed by Seller. There are no oral understandings, representations or agreements relative to this instrument which are not fully expressed herein.

3. The laws of the State of California shall govern the validity, interpretation and enforcement hereof.

ACCOUNTING DEPT.

PURCHASE ORDER / REQUISITION

No. 24246

VENDOR: Meyers Drum Co
5400 South Soto
Los angeles, California 90058
Steve Stull 581-6141

SHIP TO:

E.D.A. N/C

TAXABLE	F.O.B. (DESTINATION UNLESS SPECIFIED)	PREPAID	ORDER PLACED WITH VENDOR BY	DATE	DELIVERY REQUIRED
✓					
RESALE	SHIP VIA Our Truck	COLLECT	[illegible]	2-6-78	TERMS

QUANTITY RECEIVED	QUANTITY ORDERED	DESCRIPTION	PRICE	DISCOUNT
	10	Drums with Covers and bolt Rings	12.25	

DELIVER MATERIAL TO: 170

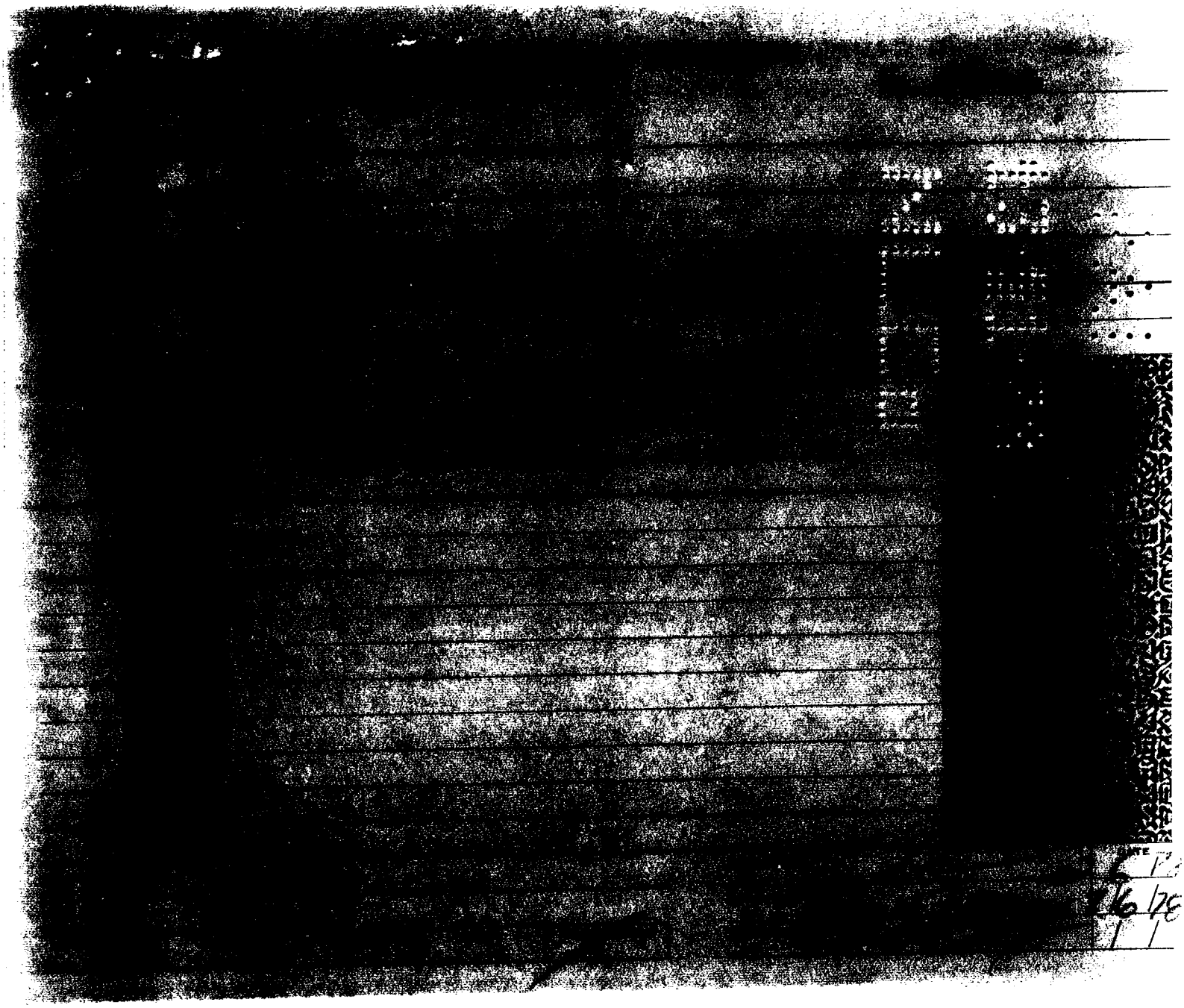
COST CENTER TO BE CHARGED: 170

MATERIAL TO BE USED FOR (CHECK ONE)	REPAIR	REPLACEMENT	STOCK	NEW EDITION
				X

REQUESTED BY: [signature] DATE 2/6/78

APPROVED BY: Philip M Fellman 2/6/78

RECEIVED BY: / /



THIS RECEIVED FROM

MYERS DRUM COMPANY At Vernon, Calif.

Subject to the classifications and lawful tariffs in effect on the date hereof, the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

THIS BILL OF LADING NUMBER MUST APPEAR ON ALL W/B'S AND F/B'S

SHIPPER'S NO. & B/L NO. J 38456

SALES ORDER NO. LA 6186

CUSTOMER ORDER NO. 24246

INVOICE DATE

CONSIGNED TO N.L. INDS

DESTINATION 2700 S. INDIANA
L.A., CA 90023

DATE SHIPPED 2/9/78

CAR INITIALS WILL CALL

SHIPPED VIA

CAR NO.

PREPAID ☐ COLLECT ☐

ditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

Myers Drum Company

(Signature of consignor.)

Received $ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier.

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced: $

If charges are to be prepaid, write or stamp here, "To be Prepaid."

UNITS	PRODUCT DESCRIPTION	WT. SUB. TO COR.	CLASS OR RATE	✓
	55 GAL. OIL DRUMS, USED			
10	55 GAL. OPEN TOP DRUMS, USED BLACK & WHITE, GASKETS INSTALLED, BOLT RINGS.			

†The fibre boxes used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Consolidated Freight Classification.

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is carrier's or shipper's weight. NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

per R. Schu

MYERS DRUM COMPANY, Shipper

Per

Permanent post-office address of shipper, 6549 SAN PABLO AVE., OAKLAND, CALIF.

2

AGENT MUST DETACH AND RETAIN THIS SHIPPING ORDER AND MUST SIGN THE ORIGINAL BILL OF LADING

MI-8364

Accounts Payable Entry Form

NL Metals

DATE A/P BATCH NO.

FEB 23 1978 069

METAL DIV. - WESTERN 909

Cd. Id.	TRANS	Sp. Hd.	Vendor Number	Reference Or Invoice Number	Due Date Mo.	Due Date Day	Due Date Yr.	Gross Amount Or Prepaid Check No.
1	5	6	7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22	23 24	25 26	27	28 29 30 31 32 33 34 35 36
2	1		232055	4384556	03	06	8	12250

LOCATION CODES Div.	Loc.	Cost Center Dept.	Sub. Dept.	General Ledger Account	Sub Account	QTY.D.	Quantity/Description	Distributed Amounts Debit Amount	Credit Amount
37 38	39 40	41 42 43	44 45 46	47 48 49 50 51	52 53 54 55 56 57	58	59 60 61 62 63 64 65 66 67 68 69 70 71	72 73 74 75 76 77 78 79 80	72 73 74 75 76 77 78 79 80
09	80	170	350	45310	3590			12250	

Exhibit 3

KAPLAN FILES #13

SYNANON V. FOXCROFT

OBTAINED AT ARTRA 6/7/85

Dutch Boy Paint salesman manual

PAINT MANUAL
DUTCH BOY

#13

KAPLAN, STUART M
SYNANON V. FOXCROFT - DOCS.
OBTAINED AT ARTRA 6/7/85

KAPLAN, STUART M.
Synanon v. Foxcroft - Docs.
Obtained at ARTRA 6/7/85

IMPORTANT

THIS MANUAL is the property of the Paint Sales Department, National Lead Company, 111 Broadway, New York City 6, and is assigned to you as assistance in your work as a Dutch Boy Salesman. Please do not allow it to be in the possession of any other individual at any time.

If you leave the services of the Company, you must return this Manual intact to your Branch Manager before final settlement of your affairs can be made.

No. 157 ASSIGNED TO Mr. P. J. Andrews

Modern packaging

Nominated for packaging's Hall of Fame. Story on Page 128

April 1949

Dutch Boy

Reprinted from the April 1949 Issue of MODERN PACKAGING
Copyrighted. All rights reserved.

Courtesy of National Lead Company

FOURTH OF A SERIES

Dutch Boy

"Bright as the 'Dutch Boy's' bright blue cap . . . sparkling as the sun on his golden hair . . . lasting as his cheery smile . . ." Thus begins an ad, extolling the virtues of Dutch Boy ready-mixed paints, appearing in current issues of national consumer magazines. Thus does the National Lead Co., after 42 years, continue to capitalize on the winning personality of one of America's most famous, most durable and most heavily promoted trademarks.

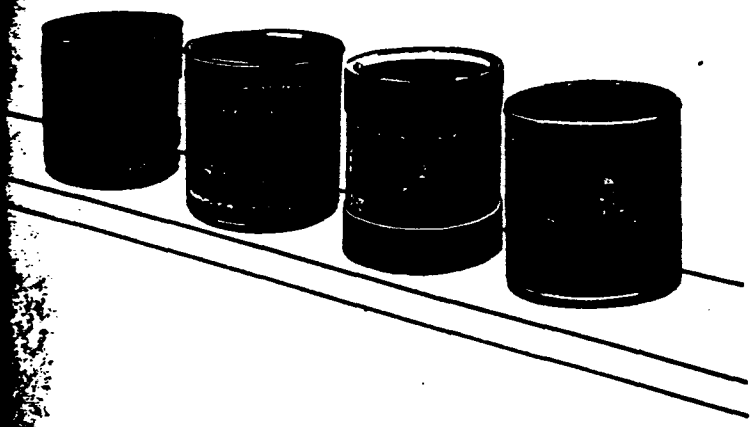
The apple-cheeked, bobbed-hair Dutch Boy is more than a symbol. Specifically charged with the job in 1907, he succeeded in welding together some 20 heterogeneous trade names. These were local and sectional brands inherited when National Lead Co. was formed by bringing together a number of manufacturers of white lead doing business in different sections of the country. Overcoming local pride and deep-rooted tradition (one member of the National Lead family had been doing business in an Eastern city continuously since 1772), he gradually submerged all local names to one strong national brand and contributed materially to the building of a $320,000,000 annual business.*

The original Dutch Boy—created on canvas by the famed protrait painter Lawrence Carmichael Earle in 1907—looks down today, from his gold frame, over the long board of directors' table in National Lead Co.'s headquarters in downtown Manhattan. There is an unsubstantiated story that directors customarily face the painting and bow ever so slightly before sitting down to go over the latest profit reports.

So valuable is the painting considered that it is never permitted to be removed from its place of honor on the wall; lithographers and printers charged with reproduction of the trademark must haul in their equipment and do the work in the spot. It is, in fact, a painting of considerable artistic merit, often compared, in serious critiques, to Gainsborough's "Blue Boy" and other famous "boy" portraits.

* 1948 sales of National Lead Co., including paint, lead and related products; from the Annual Report dated March 10, 1949.

DUTCH BOY packaging has progressed through the years from the oak keg to the steel keg (pioneered by National Lead Co.) and finally to the colorful consumer line, of which the new Wonsover interior paint is a typical example. For 42 years the Dutch Boy has been the identifying feature of all of National Lead Co.'s paints.



On the strength of the great fame and success of its trademark, the Dutch Boy package was a unanimous nominee for this Hall of Fame series. But beyond that, the principle of uniting diverse brands under a single powerful trademark is as good today as it was in 1907; the conditions which led to this solution are conditions still frequently encountered and the detailed story of Dutch Boy is full of valuable tips for today's packagers.

How it began

Incorporated in 1891, the National Lead Co. found itself by 1907 marketing 21 different brands of white lead—all substantially the same product. Each of

EARLIEST EXAMPLE of the Dutch Boy trademark is this 1907 oak keg, holding 100 lbs. of white lead. The masterful portrait by George Carmichael Earle (see cover illustration) was painted for the purpose in that year and the first label was a metal plate on the wood keg above.

CONCEPTION of the now-famous trademark is found in these rough sketches done in 1904 to 1906. Framed sketch at right was actually adopted as trademark and used in advertising in 1906; it served as the basis for the oil painting by Earle in 1907.

these brands was popular in some section of the country, but none was sold nationally.

The dawn of the twentieth century had marked a distinct trend to national marketing, backed by national advertising. The basic purpose of the National Lead Co.'s formation was to unify and extend the marketing of white lead. Lucius A. Cole, second president of the company (1896–1910), saw the possibilities of national advertising, but was handicapped by the profusion of brand names he had to promote. To advertise each separately in the locality where it was marketed was both costly and inefficient. To advertise all 21 brand names together, nationally, would be unwieldy and might only lead to confusion in consumers' minds. To drop the local brands precipitately, in favor of a single national brand, was unthinkable, because it would sacrifice the prestige built up individually by each brand—some going back over 100 years at that time.

President Cole and his long-time famous advertising manager, O. C. Harn, thereupon conceived the idea of a dominant trademark which would be common to all 21 brands without loss of their individual trade names and distinguishing features.

The Dutch Boy was adopted primarily because at the time of his conception as a trademark, most white lead was manufactured by a Dutch process which had been standard for centuries. The Dutch were famous for the quality of their paints and for the spic-and-span whiteness of their buildings. Holland was a quaint, romantic country and pictures of the wooden-shoed natives fascinated school children then as they do today. Putting the boy, with his wooden keg and brush, in the attitude of a house painter, gave animation to the subject, tied him up with the product and suggested that the quality of the paint was so good that even a child could use it. Finally—what may or may not have been foreseen at the time—a character in quaint, traditional dress could survive unchanged for generations, whereas a more topical figure would have to be changed frequently to keep in step with styles.

BLUE AND WHITE LABEL, with prominent full-color figure of the boy, distinguishes the new consumer line of exterior and interior paints, which were introduced late in 1941. Despite the familiarity of the trademark, Dutch Boy paints had not previously been merchandised direct to consumers. The quart, gallon and five-gallon cans with paper labels were a new departure and Designer Georges Wilmet was retained to do a thoroughly modern job for them.

ORANGE AND BLACK colors, lithographed in most cases directly on the metal containers, have since 1916 marked the master-painter products. Not as showy as the consumer packages, these containers nevertheless provide excellent brand identification. The steel keg for white lead, which National Lead Co. pioneered, was a notable packaging development of 1909.

Mr. Harn gave specifications of his idea to a Dutch artist named Rudolph Yook, an employee of the George Batten Co., advertising agency, who drew some pencil sketches used at first only as ad illustrations several years prior to 1907. One of Mr. Yook's sketches was actually formulated into a trademark which, adopted by the board of directors in 1906, was never actually used on a package. This sketch (shown in an accompanying illustration) was comparatively crude, but it did show a Dutch boy in exactly the same pose and much the same costume as today. Mr. Cole suggested that this sketch be turned into really fine art as a permanent trademark for all National Lead products. He authorized Mr. Harn to commission the finest portrait painter available and the job was turned over to Lawrence Carmichael Earle.

Details of the painting's execution were disclosed by chance, long after Mr. Earle's death in 1921, when the "Dutch Boy" model—who turned out to be a New Jersey Irish lad named Michael Brady—was discovered working as a cartoonist for the *Brooklyn Eagle*. Mr. Brady told how, as a boy of 9, he was playing near his home in Montclair, N. J., when Mr. Earle passed by, studied him, talked with him and employed him as a model. Twenty-four years later, when a photograph of Mr. Brady in his 30s was reproduced in *The Dutch Boy Painter*, National Lead house organ, his resemblance to the painting was still striking—an expressive face suggesting a combination of mischievousness and seriousness of purpose, which, as that of the Dutch Boy, has endeared itself to millions.

Legend has it that Artist Earle paid off his model in ice cream sodas, but Mr. Brady (now dead), insisted that he was paid every day at the rate of $2 an hour, which he promptly spent on candy and soda—resulting, before the painting was finished—in a Gargantuan stomach ache. Mr. Earle worked in the studio of his friend, George Inness, not far from the Brady home in Montclair. Meticulous as to detail, Mr. Earle bought young Brady wooden shoes, blue overalls and cap, and had him wear them for several days at play so they would acquire a "lived in" look.

An amusing sidelight on the story came to light last year in a letter written from Los Gatos, Calif., by Lawrence H. Earle, son of the artist, requesting an enlargement of the original Dutch Boy and saying:

"My father painted the Dutch Boy in Montclair, N. J., when I was a kid and when the little local newsboy he used for a model quit the job I took over, donned the sabots, the wig and the costume and posed, at 50 cents a sitting, while my buddies were out playing sandlot baseball so that Dad could finish the commission. I therefore have a claim to being the original Dutch Boy . . . The wooden shoes I wore (sabots) were brought to me from Sweden by our old cook, Christine, on her return from a visit to her old home and I used to wear them to school, much to the delight of my schoolmates and the distress of my teachers.

"As I remember it, it was in mid-summer when I posed, hot as Hades, and I was most uncomfortable, but the 50 cents was a potent inducement and I stuck it out."

THREE CHOICES were offered by designer when consumer label was introduced in 1941. Center version was chosen as the most effective and workable arrangement of various elements.

The gay, lovable personality of the boy that Mr. Earle's talented brush reproduced on canvas—and that lithographers, engravers and printers subsequently reproduced in advertising and on labels—immediately caught the public's fancy. Although at first used on packages merely as an adjunct to the local brand name, popular fancy and the power of national advertising soon put the prestige of the Dutch Boy trademark in the ascendancy over the various local trademarks. As soon as this was obvious, steps were taken to subordinate the local brands to the Dutch Boy. Local trademarks were relegated to the lids of white lead kegs and the Dutch Boy name and illustration were used prominently on the sides of the kegs. Today the Dutch Boy has completely replaced all local paint brands and has made secure his place as one of America's most acceptable trademarks.

In fact, as National Lead Co. has grown and expanded into metals and many diverse products, the Dutch Boy has become a symbol for many products entirely unrelated to paint. His familiar figure and the company name are virtually inseparable.

It was soon discovered that the facial expression and quaint costume of the Dutch Boy so impressed themselves on the public that he could be readily recognized in postures other than the familiar trademark position, with paint brush at work. Unlike most trademarks, he has over the years been used in advertising and promotion in hundreds—perhaps thousands—of different poses. Whether painting a house, waving his cap, playing baseball or standing on his head, he is instantly identifiable as the National Lead Co. trademark and his warm, honest personality inspires confidence in his wares.

History of packaging

It is a tribute to National Lead Co.'s advertising and promotion that, although polls for years have shown the Dutch Boy to be among the trademarks best known to

consumers in every walk of life, he had never appeared as a dominant figure on a consumer package until a few years ago, when the company introduced nationally the first in its line of ready-mixed paints in sizes designed for direct consumer purchase. Mixed paints have been marketed on the West Coast by National Lead Co.'s Pacific Coast branch for about 20 years.

In fact, until about 10 years ago, he had never appeared in full color on a paper label, on a nationally distributed product, for the larger sizes of bulk paints and paint products supplied to master painters—which previously comprised the company's entire paint line—do not lend themselves to that type of labeling.

Until 1941, the intensive consumer advertising and promotion of Dutch Boy painting materials had been aimed principally at building prestige for the name and influencing consumers to specify the brand when contracting for painting work. When National Lead decided to move into the house-paint market nationally, its trademark was ready-made and its acceptance assured.

Although white lead kegs are usually not thought of as a merchandising package, National Lead has repeatedly shown originality and a strong merchandising sense in their handling. Up until 1909 the paint package had been much the same as it was in the Middle Ages: a stout oaken keg, such as the Dutch Boy carries in the trademark illustration. In fact, the new trademark, shortly after its adoption in 1907, was first applied by National Lead branches to just such a wooden keg.

In 1909, however, coincident with early promotion of the new trademark, National Lead announced the solution of another packaging problem on which it had long been working: the first successful metal white lead keg. Metal packages had been attempted by rival companies for some time and painters were clamoring for the improvement, but the early versions were expensive and had a bad habit of splitting at the seams when filled with 50 or 100 lbs. of white lead.

National Lead Co. engineers worked out a process of drawing seamless containers from a single sheet of steel, and built and equipped their own factory to supply them—at no extra cost. The new steel kegs came in sizes to hold 12½, 25, 50 and 100 lbs. of lead. The smaller sizes had sloping sides and were fitted with bails. The 100-lb. size, designed to be moved by rolling, had parallel sides.

The steel containers (still referred to in the paint industry as "kegs") were finished in a dull, gunmetal black. On the side of the keg was found the new Dutch Boy trademark and under it an oblong label guaranteeing purity and full net weight of contents.

The steel kegs were a great improvement and an instant hit. They kept the white lead in perfect condition (with no soaking of oil into wood and consequent hardening of the lead paste around the edges), allowed every bit of the pigment to be removed, were smaller and lighter and made excellent paint pails.

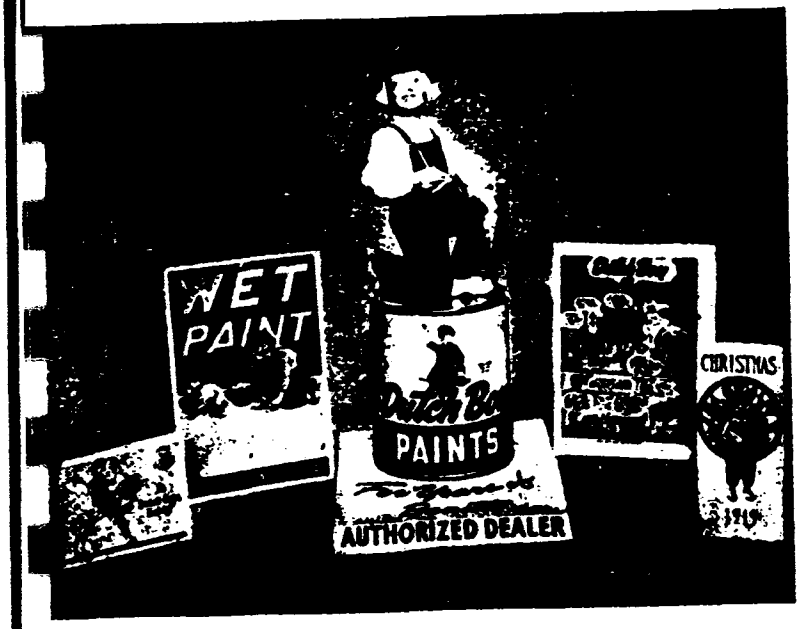
These packages remained essentially the same until 1916, when the company realized that it needed better brand identification. If the small trademark happened to be turned away from the viewer, the package was not distinguishable from that of any other brand. Therefore, pioneering a thoroughly modern principle, National Lead applied orange stripes, top and bottom, all around the container and, in addition to the trademark on the face, put the words "Dutch Boy White Lead" in two lines of bold orange block letters on two sides. The April, 1916, issue of *The Dutch Boy Painter* demonstrated to painters how, in addition to having distinctive orange and black colors, this package could be recognized by its lettering when viewed from any angle.

No further basic change was required until 1943, when, like all paint manufacturers, National Lead was forced to find a wartime substitute for steel. The containing of heavy, penetrative white lead was one of the toughest assignments for wartime paper packaging. National Lead Co. worked it out—with a heavy, all-fibre drum holding up to 100 lbs. of lead. The product, however, has now been switched back to the all-metal container.

With the recent introduction of the consumer line of blended, ready-to-use paints, the Dutch Boy paint packages now comprise two distinct groups.

The master painters' products (white and red lead, linseed oil, driers, colors and other paint materials) still follow the simple orange and black color scheme adopted in 1916, although with modernization of details. Paper labels are not ordinarily used in this group; the labeling is generally lithographed directly on the metal containers which, in 25-, 50-, and 100-lb. sizes, are still produced in the company's own plant.

PROMOTION of the trademark has taken many forms over many years. Typical are the statuette counter display (center); the bronze paperweight souvenir (lower right); the children's paint book (upper right), a feature for many years; the 1919 Christmas card; the old "wet paint" sign.



Introduction of the consumer line (1-qt. to 5-gal. sizes) required more complete and more colorful labeling and the company therefore turned to conventional paper-labeled cans and pails. The blue and white label which distinguishes this line was designed by Georges Wilmet. From three sketches presented by Mr. Wilmet, the present label (see cover) was chosen as giving the most straightforward presentation of the priceless trademark and name, the type of paint and white space for imprinting of number and color.

Success of the new label is attested to by the fact that it has been retained, with a mere change of wording, as the consumer line has expanded from straight house paint to include sash and trim, porch and deck and primer types. It is used also for the new "Wonsover," a single-coat, oil wall paint which marks Dutch Boy's entry into the interior-paint field on a national basis.

Advertising and promotion

Behind every successful product and package lies an advertising and promotion story. The lesson is particularly clear in the case of Dutch Boy products which, without intensive and continuous efforts to popularize the trademark figure among the general public, could scarcely have attained anything like the volume they represent today.

Yet, judging from available figures, the direct advertising expenditure on Dutch Boy has not been exceptional. Tables compiled from American Newspaper Publishers Assn. figures show that from 1939 to 1947, inclusive, national advertising of this brand in magazines, newspapers and radio totaled only $1,694,944—an average of $166,105 a year. The bulk of this was spent in magazines.

Naturally with products largely adapted to master painter's use, an important part of Dutch Boy advertising was also directed to trade papers. Even now, despite a line of paint products which appeal to consumers as well as painters, a large portion of National Lead Co.'s advertising goes to trade publications. However, as far back as 1909, top-notch consumer magazines appeared on the advertising schedule. A 1909 issue of *The Dutch Boy Painter* reproduces a double-truck from the *Saturday Evening Post*, which, it says, "has received much favorable comment."

In addition to national advertising, the company has consistently supported dealers' local advertising. But the really unusual and effective media of Dutch Boy promotion have been:

1. Supplying of samples, souvenirs, costumes, statuettes, signs, calendars, window displays and every other conceivable means of popularizing the Dutch Boy.
2. Continuous publication for 41 years of *The Dutch Boy Painter* (one of industry's oldest house organs), constantly exhorting the trade to the most effective use of this promotion of the trademark.

Nobody knows how many millions of lithographed reproductions of the Earle painting have been passed out; at one time the framed picture was as familiar in the parlor as "God Bless Our Home." Thousands of homes and offices still have souvenir figures in the form of paperweights, statuettes, etc.

The appeal was particularly strong to children and the company has never overlooked the opportunity to plant the trademark image in young and receptive minds. One of the most successful promotions for many years was a children's paint book containing paper chips of paint from which the pictures (including, of course, several Dutch Boys) could be colored. A coupon in the book invited parents to write in for a booklet on house painting.

The company still will loan a Dutch Boy costume—cap, wig, shirt, overalls and wooden shoes—to any person who writes in and asks for it for any reasonable purpose, and the little painter has graced thousands of parades and masquerades.

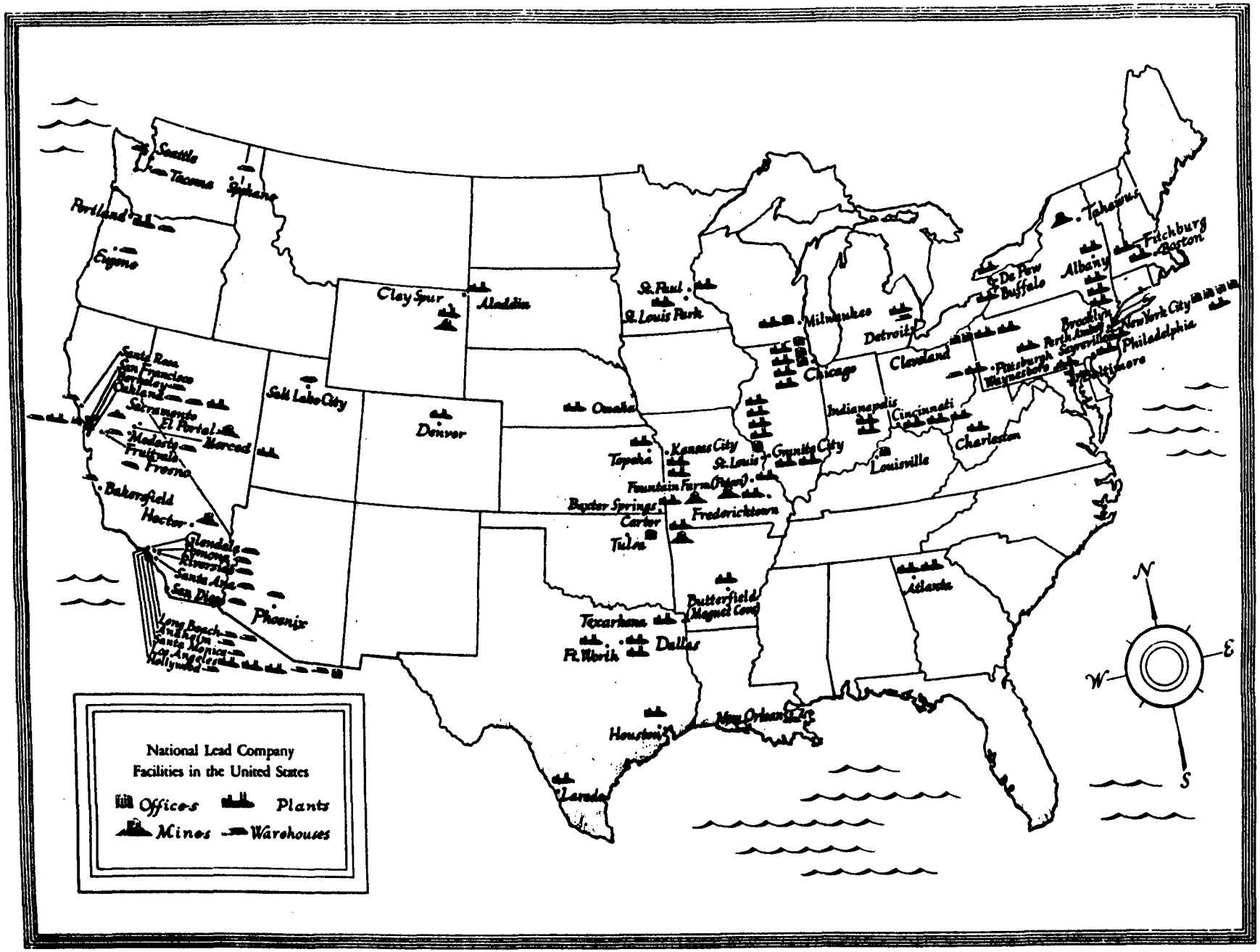
National Lead Co. has given the world a lesson in trademark development and prestige building, and the wisdom of its conception is a contributing factor to the continuous growth of net sales—from $80,000,000 in 1939 to more than $320,000,000 in 1948.

THE DUTCH BOY TRADE-MARK

(Registered in U.S. Pat. Off.)

The original portrait of the Dutch Boy, reproduced above, was painted in 1907 by Lawrence Carmichael Earle. Mr. Earle, who died in 1921, was a distinguished portrait and character painter. His Dutch Boy is admired by art critics as a boy portrait of unusual merit.

To the American buying public, the Dutch Boy is a familiar figure. He appears in the national advertising and on many of the products of National Lead Company . . . a symbol of quality and reliability.


National Lead Company
Facilities in the United States
Offices
Plants
Mines
Warehouses
Seattle
Tacoma
Spokane
Portland
Eugene
Santa Rosa
San Francisco
Berkeley
Oakland
Sacramento
El Portal
Modesto
Fruitvale
Fresno
Merced
Bakersfield
Hector
Glendale
Pomona
Riverside
Santa Ana
San Diego
Phoenix
Long Beach
Anaheim
Santa Monica
Los Angeles
Hollywood
Salt Lake City
Clay Spur
Aladdin
Denver
Omaha
St. Paul
St. Louis Park
Topeka
Kansas City
Fountain Farm (Potosi)
Baxter Springs
Carter
Tulsa
Fredericktown
St. Louis
Granite City
Milwaukee
Chicago
Detroit
Cleveland
Indianapolis
Cincinnati
Louisville
Charleston
Pittsburgh
Waynesboro
De Pew
Buffalo
Albany
Tahawus
Fitchburg
Boston
Brooklyn
Perth Amboy
Sayreville
New York City
Philadelphia
Baltimore
Atlanta
Butterfield (Magnet Cove)
Texarkana
Ft. Worth
Dallas
Houston
New Orleans
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INTRODUCTION

SALESMANSHIP is one of the greatest and most important of the professions. Every man who succeeds in his line is almost invariably a first-class salesman.

This is true of many professions, as well as those engaged in the business of selling products or services—all must be salesmen to win success.

There are many factors that make for successful selling, but among the most essential are a thorough knowledge of one's company and its products and services. With such information well in mind, it is then equally important to know the product needs of each type of prospect and how to meet them with our products.

It was with the best interests of our salesmen constantly before us that we prepared this Manual. It is our sincere belief that we have developed information and suggestions of the greatest possible assistance to our field representatives. Additions, of course, will be made as the demand arises or the necessary information is developed.

All the information in this Manual has been carefully checked by the proper authorities—those responsible for Company policies, sales, advertising, manufacturing, laboratory activities, technical questions and, in fact, all phases of our problems.

This Manual provides the salesman with some of the necessary working tools, such as background information about National Lead Company and its policies; technical data on pigments and vehicles, competitive as well as our own; sales policies; a discussion of prospective customers and their needs; and suggestions as to what is expected of a successful salesman.

There is much of interest and value in this edition of the Manual, even to the Old Timer. Whether experienced or new to the job, every salesman will profit by giving the material most careful study.

It is also suggested that an occasional review of the Manual information which is most pertinent to the job would be helpful to the salesman.

Still another policy followed by successful salesmen is to have not only the Manual but the supplementary sales and technical material constantly at hand for ready reference in making contacts. The latter material should be organized and indexed in a handy brief case or folder for quick and easy reference during an interview.

It has been observed that every successful salesman is constantly asking for selling aids and it is our belief that he will welcome this Manual and the Company's literature as useful and helpful selling tools.

PART I

THE COMPANY

OUR COMPANY—*Its Past, Present and Future*

OUR COMPANY—*Its Far-Flung Interests*

OUR RESEARCH LABORATORIES

OUR PRODUCTION DEPARTMENT

OUR PAST PRESIDENTS

HEADQUARTERS EXECUTIVES *You Should Know*

ABOUT EXECUTIVES WITH WHOM YOU WORK

OUR COMPANY . . .

ITS PAST, PRESENT AND FUTURE

The average employee of National Lead Company knows vaguely that he works for a company with far flung interests, with a widely diversified line of products, of financial stability and with a reputation for integrity and honest dealing.

This at first blush would seem to be sufficient to cause the most cynical employee to feel a sense of personal pride in his company and in his job. But such is not always the case.

No employee is satisfied with generalities. He wants to know definitely the "whyfors and wherefors" of the component parts of National Lead Company, its resources, its products, its policies—everything that has contributed to the present-day leadership of our company in its field.

Even its history is of vital interest and importance to the intelligent, wide-awake employee. And by "history" we do not mean dates of incorporation and the like, but instead the humble "beginnings" that are so closely identified with the early struggles of American industry, the successful effort to bring order out of chaos that existed in the white lead industry during the early nineties, the steps taken to broaden the company's markets and keep it abreast of industrial progress—facts that make clear how National Lead Company weathered America's many financial storms and brought our Company to its present-day greatness.

It is the purpose of this chapter and Supplement No. 1 to give such information in sufficient detail to make every Dutch Boy salesman feel not only a pride in his company but a sense of security that will free him to concentrate on his job to the best of his abilities.

Complete knowledge of a salesman's company is as essential to his well-being, poise and self-confidence as is complete knowledge of his Company's products and services.

LEADING A LEADING INDUSTRY

The story of National Lead Company is not unlike that of other large American corporations which were organized late in the Nineteenth Century. It was formed as a combination of small white lead manufacturing units which had found that union meant strength in a period of rapid industrial expansion.

That this was a wise move is borne out by the fact that ever since its incorporation in December, 1891, National Lead Company has maintained leadership in what has become one of the country's most important industries—the lead industry—the products of which today probably have as great a diversity of use as those of any other American industry.

"Lead, the Precious Metal" is the well-deserved title of a book by O. C. Harn, former Advertising Manager of National Lead Company. In this book, which, by the way, is mighty interesting reading, you will find refutation of the widely mistaken idea that lead is used only in lead pipe and a few other products which are obviously made of the metal. It is not even generally known that white lead is nothing but pure metallic lead, corroded and processed.

Products Widely Diversified

The lead industry, in fact, has made great strides in diversification of products since the Nineties when National Lead Company was launched. And what is of special interest to us, is that our Company always has been among the leaders in product development and merchandising. A brief consideration of some of the many uses of lead and its compounds cannot fail to impress all of us as to the metal's importance in our modern way of life.

We might still be cranking our automobiles and using gas lights on them if it were not for the peculiar electro-chemical properties of lead and its oxides utilized in storage batteries. This same kind of battery propels submarines under water and electrifies airplanes in the skies, lights and air-conditions railway cars, is used in telephone communication, provides emergency power in utility plants and lights miners' lamps.

The corrosion resistance of lead, together with its flexibility, accounts for its broad use as sheathing for power and telephone cable, underground and strung on poles, on land and on ships at sea. In this case, a seamless lead sheath is extruded around the insulated conductors which form a core.

Lead Resists Acids

Sulphuric acid and other corrosive chemicals are essential in the production of thousands of modern necessities and conveniences, from high explosives to rayon, from synthetic rubber and gasoline to fertilizers for the farm and garden. Equipment and pipe lines made of or lined with lead, which resists the fiery attack of these corrosives, make possible the economical production of many of these modern chemical wonders.

The protective qualities, malleability and flexibility of lead foil are largely responsible for its wide use in packaging products that need protection from moisture and light.

Lead as an alloying element is found in bronze bearings and babbits and, as the principal ingredient of lead-base bearing alloys, has reduced costs and removed our dependence on imported tin for this purpose. These alloys are found in all kinds of vehicles on land, sea and in the air, and wherever machinery is used. Even more universal in use are the soft solders, which are alloys of lead and tin usually, but may be alloys of lead and other metals.

Important to X-Ray and Atomic Energy

The x-ray is vitally important to medicine and is rapidly assuming equal industrial importance as a means of detecting hidden flaws in products. Except in cases where the voltage is a million or more the high density and atomic weight of lead make it the most efficient material economically to confine these rays to the places where they are useful and to protect operators against their harmful effects. Lead is likewise the best protection against radium. Lead bricks and sheet lead are used extensively in atomic energy plants to provide protection against dangerous rays.

Red lead paint is a standard protection for modern steel structures of many kinds and white lead is the basic paint pigment used in the protection and beautification of our homes.

Tetraethyl lead in gasoline has been a major factor in making possible the tremendous power of our airplane and automobile engines, while litharge is used to remove corrosive sulphur from motor fuel, which otherwise would shorten the life of these engines. Litharge and red lead are ingredients in synthetic rubber.

Use of lead and lead-alloy coatings to prolong the life of iron and steel is a development. They are being used on a variety of steel products from telephone pole-line hardware to sheets for duct work. Lead coated steel is ideal for products that must be formed because the lead acts as a lubricant in the dies. Lead added as an ingredient in steel is another development that has improved the machining properties of steel greatly, speeding production and increasing the life of tools astonishingly. Lead is also added to brass and aluminum alloys for the same reason.

Unusual Uses in Construction

In all sorts of building construction, lead has its part in the plumbing and water distribution systems and electrical installations. Sheet lead is used, too, for roofing, flashing and other waterproofing on many structures, including refrigerator room linings on ships. Lead is sometimes used for its non-sparking properties alone. Floors in plants where explosive substances are manufactured offer a good example. It is also used to insulate against vibration both under building and machinery foundations.

The plastic industry makes extensive use of lead as molds. These are made by several processes, including die-casting and dipping steel patterns into molten lead, the lead solidifying on the steel. Molds are used once and remelted.

Pulverized metallic lead is added to grease for heavy duty machinery. It provides lubrication at heavy loads and prevents the grease from being thrown off open gears at high rates of revolution.

Probably one of the least known uses of lead is in the manufacture of the highest grade glassware, lenses and in glazing pottery.

Lead Goes To War

All of the foregoing are wartime as well as peacetime uses, but here are a few that are of a little more direct value in a war. Bullet cores make use of lead's density and ease of fabrication. Lead provides the necessary ballistic characteristics, stability in flight, to small arms ammunition, that is, up to .50 calibre. It is used in ammunition for rifles, carbines, pistols, machine guns, submachine guns and other small arms. The lead is first extruded as rod, cut into short lengths, swaged to the approximate shape of the bullet core and then pressed into the jacket. Pure lead and antimonial lead containing up to 2½% antimony are employed.

Lead enters into ammunition in many other ways. Lead azide, a chemical compound of lead and nitrogen, is used as a detonator in explosives. Antimonial lead die-castings form the bodies of practice bombs, and frangible bullets made of lead powder and thermosetting plastics are used to train bomber gunners in actual firing at attacking planes. Lead gaskets are used in certain types of shells. Lead counterweights are employed in torpedo mechanisms.

Lead, for its weight alone, finds many war uses in addition to torpedo mechanisms. It is employed for counter-weights in many kinds of guns, large and small. Submarine and other naval vessels employ it for ballast. It is used to provide perfect balance in airplanes and gliders and in that case is usually applied in the form of strip. Depending upon shape and other conditions counter-weights are generally either cast, or extruded and cut to size.

Lead Used in Most Industries

There are numerous other uses of lead not included in the preceding discussion but, coupled with the fact that there is scarcely an American industry of any importance which does not use the metal in one form or another, the evidence is sufficient to give us a feeling of stability and a justifiable pride in an industry of which we of National Lead Company are such an important part.

NATIONAL LEAD COMPANY—ITS ACHIEVEMENTS

So much for the importance of the lead industry and the prominent role we play in it, but let's examine some of the reasons why National Lead Company with its beginnings in pre-Revolutionary times in the East and in Pioneer Days in the Frontier States, has made a record of achievement and courageous planning that few American companies even less venerable can match.

Faced Many Problems

During the first decade after incorporation, much of the management's efforts were devoted to the improvement of the existing properties, to the increase and betterment of production facilities and to the elimination of uneconomical units. This resulted in a reduction of operating costs and was financed entirely out of earnings or with the proceeds of property sold.

Diversified Products

Comparatively soon after the turn of the Twentieth Century, National Lead Company launched a program of expansion and diversification of products. This became a fixed policy of our company and has been brought to its present high state of effectiveness through research in our Laboratories, purchase of patents and through ownership of all or part of the capital stock

of other companies. An examination of the list of products at the back of this Manual will show how widely the policy of diversifying our products has been developed.

It was during the early 1900's that the Company acquired the United Lead Company, manufacturers of metallic lead and lead alloy products, thus broadening this field. In the same period was purchased the entire capital stock of Carter White Lead. This made available a new and quicker white lead process. Also added to the fold were the Magnus Metal Company, the United States Cartridge Company and Heath & Milligan, a concern making mixed paints and varnishes. The latter two companies were sold later.

Entered New Markets

New modern plants were erected in Chicago, Cincinnati, Philadelphia, Pittsburgh and St. Louis to replace eleven outmoded factories in these same cities. The National Lead Company of California was organized to take over manufacturing properties near San Francisco and our West Coast business was launched. Later this was further extended to include Morris P. Kirk & Sons, makers of metallic lead products, and the Bass-Hueter Company, mixed paint and varnish manufacturers. The latter products are now sold under the Dutch Boy trademark.

This policy of adding fields of operation and of experimenting with new products has continued throughout the years. It is a method that has always been conservatively exercised, however, and with minor exceptions the various companies have been so developed that they have added substantial profits to the Company's earnings.

Established Financial Stability

The resulting diversification of products has also aided the management to ride out successfully the various periods of poor business that have affected the United States since National Lead Company was incorporated. For example, in the 1931 Annual report there was a listing of the losses of various departments of the Company over business of the previous year. They ranged as high as 44% yet the average was only 17%, a direct advantage of not having all our "eggs in one basket." The Company's financing has, of course, kept pace with its expansion in holdings. In 1891 the authorized capital stock was $30,000,000. This was increased in 1905 to $50,000,000 and in 1927 to $100,000,000. Reserves have been built up and maintained to protect the interests of the Company and its employees.

The soundness of these policies, backed by conservative but effective merchandising, is best proven by the record of sales and profits, which, except during depression years, have advanced steadily.

New Products in Line with Experience

Among the more important products that have been added to the Company's line since its beginning in 1891 are titanium pigments, paints, special paint oils, special castor oils, traps, bends, valves and fittings, bearings, bearing metals, printers' metals, tellurium lead products, barytes products and brass bearings.

It should be noted that all these products are either made, wholly or in part, from lead or else they can be classified in a marketing sense as belonging to fields already served by some division of our Company. In this way full advantage has always been taken of our management's knowledge of a given market and the financial risks of venturing into the completely unknown have been largely eliminated.

Research an Important Factor

Research is another important activity of the Company that was started about a year after its incorporation and which has also had a great deal to do with product diversification. To research may be credited the development of new products as well as the improvement of existing products in all divisions of our activities. And progress through research is continually going on. Since 1892, when the late Dr. G. W. Thompson became Chief Chemist of the Company and

founded our General Laboratories, several millions have been spent in research to good purpose. Our Laboratories in Brooklyn, which in 1906 had grown to a staff of six employees, now employ over 100, and their work is supplemented throughout the Company by many other plant and division laboratories. Research has ever been a constantly growing force in the Company and an effective hedge against being left behind in the fast-moving procession of the day.

Kept Abreast of Industrial Development

The field now served by National Lead Company is greatly broadened since the Nineties when white lead was the chief product manufactured. From the narrow outlet represented by the limited paint market of that day it has spread to practically every major field including railroad, automobile, agriculture, rubber, glass, chemical, electrical and airplane manufacture. Some of those activities were, of course, unknown in 1891. Others were just in their early stages. So it can be said that the Company has grown with the country. It has kept abreast of the great industrial development during the period of its existence, retaining its important place financially and productively among the leaders of the day.

Stock Ownership Unique

Such is the National Lead Company today. Its owners may well be proud. And who are these owners?

Back in 1891 it could be said that fewer than 130 individuals represented the stock ownership of the original companies. Over the years, this small number has multiplied many times so that today there are upwards of 18,000 owners of National Lead Company.

The interesting fact about this group is not the number. Some concerns have stockholders running into the hundreds of thousands. But of the approximately 12,000 holders of National Lead Company's common stock about 65% are owners of 100 shares or less and the same is true of nearly 90% of the preferred stockholders. Another interesting fact is that approximately 47% of the total stockholders are women who own about one million shares of stock, including the preferred.

There is also a high representation of preferred stock holdings for trusts and estates due, naturally, to the investment rather than the speculative nature of the stock. Another healthy sign is that the employees of the Company, and particularly the rank and file, are well represented in the stockholding body.

Personnel Policies Progressive

The Company's policy toward employees has been one of the most enlightened among industrial concerns. Even back during the Company's beginning, in an era when little attention was paid to this phase of business management, there was a definite policy of fair treatment.

At first this took the form of safeguarding the workers' health. In this the Company was always ahead of statutory requirements. At considerable expense, factories were renovated to incorporate such improvements as showers, well-equipped washrooms, restaurants where good food could be purchased at low prices, rest rooms and separate lockers for the workmen. Other safety factors such as respirators and goggles were furnished and suction equipment for eliminating dust was installed. The Company was among the first in employing plant physicians.

But there is also a feeling for what might be termed the mental well-being of the employee, giving him the peace of mind and sense of security that makes for loyalty, efficiency and clear thinking.

Adopted Retirement Plan

As early as 1912 the Company established a formal pension system for taking care of the employees who had or were beginning to reach the retirement age. This system was continued with various revisions of detail until 1937, when the present Retirement Annuity Plan was started with the approval of the Company's stockholders.

Under this plan all employees thirty-five years of age and over may contribute toward the purchase of an annuity payable at the age of sixty-five. The Company, however, contributes two-thirds of the cost, thus giving the employees the annuity at a very low rate.

Also allowed for in this plan is credit for service prior to 1937 whereby the employee is to be paid at the rate of 1% of salary or wages received during 1936 multiplied by the number of years of service prior to 1937. This, of course, starts at the retirement date and is paid concurrently with the amount due under the Retirement Annuity.

Offered Welfare Plans

Since 1914 the Company has also carried life insurance for employees. In the words of the annual report of that year, "The intent of your Board of Directors is to convey the idea that our relation to those comprising our official family is not ended when the day's work is done or life's work is over, but extends to those dependent upon them." The present insurance plan offers employees a greater amount of insurance at less cost than that of practically any other large American Corporation.

At various times in the Company's history employees have been offered the opportunity of purchasing stock on a three-year payment basis. This was done to encourage thrift and also give the employee a sense of ownership in the company he served. These offerings were always well subscribed and that they had their desired effect is indicated in the present high percentage of employee stockholders. Stock can be purchased today on an installment basis by applying to the Treasurer of the Company through the respective Branch Manager.

The Profit Sharing Plan, launched in 1945, is an important addition to the Company's policy of continually giving consideration to the welfare of its employees.

Recognized Long Service

In 1940 there was inaugurated another recognition by the Company of the loyalty of its employees. Each employee who has completed twenty-five years in the service of the Company or its subsidiaries receives a suitably engraved gold watch to commemorate the occasion.

At the original presentation three hundred and ninety-eight watches were given out. Thirty-three of these were to employees who had served from forty to fifty years and three were over fifty years.

In October of 1940 the management announced that employees entering the U. S. Military Service, either as volunteers or in accordance with the National Guard Mobilization Act or the Selective Service Act, would receive reinstatement in the Retirement Annuity and Past Service Pension Plan when reemployed and also, while in service, the maintenance of insurance protection for one year. About 83 per cent of the returning veterans gave evidence of their loyalty to the Company by re-entering its employ upon being discharged from the armed forces of World War II.

In normal times the Company employs about ten thousand men and women in its various branches and subsidiaries. Of these there are over forty-five per cent who are thirty-five years of age and over, which is an indication of the low labor turnover which the Company has always enjoyed.

Directors Elected from Employees

Included among the employee group are the directors of the Company, all of whom are or have been connected with the Company's business as working executives of its various divisions. This has a two-fold advantage. An intimate working knowledge of our business gained through the marketing, financial and personnel problems of the division each represents. This, we believe, is rather a unique situation with a corporation of our size. So many times the directors represent outside interests rather than the direct business of the Company they manage. However, since its earliest days, National Lead Company has been run by the men in the Company. Their future was intimately bound up with the Company's future, a condition which has certainly helped to foster solidity and integrity.

The sound and forward-looking policies that have brought the Company through troublous times in the past are still alive today. They are not and never have been policies that change with every shift in the economic wind. But they are, as always, administered by resourceful men who have learned to adapt them to changing conditions.

In looking forward to the future, the Company is just as conscious as ever of the trust of its stockholders and the loyalty of its employees.

Company Met War-Time Demands

Since its incorporation National Lead Company's role in America's wars has been one of vital necessity to the prosecution of the undertakings.

This has been true especially during World Wars I and II. Thanks to the nature and diversity of its peace-time goods and services, National Lead Company has been able to join in each historic undertaking and to shoulder a share of the burden—not only in its familiar role as a manufacturer of essential metal and paint products, but also in numerous other fields of activity vital to the success of the war program.

For World War I

For instance, in World War I our Government needed more tin than was possible to import from England, to which country most of the ore from the Bolivian mines was shipped for smelting. National Lead Company, at the request of the Government, met the crisis by building and operating successfully a tin smelter of adequate capacity. Our Company also expanded materially the ammunition factories of the U. S. Cartridge Company, a then partially owned subsidiary. These projects were, of course, in addition to a greatly increased production of several metal, paint and pigment products of vital necessity to the war efforts.

For World War II

The same expanded demand for many of our peace-time products was met early in World War II and, at the request of the Government, our Company also assumed the responsibility for several special projects of great importance to the success of the war program.

Long before Pearl Harbor, America's mining industry was changing over from a peace to a war basis. The Government encouraged reworking long-abandoned ore deposits and the development of new mines to reduce imports and lighten the shipping burden. National Lead Company made several valuable contributions along these lines.

Developed Mining

A noteworthy example was the MacIntyre Development, a large mining project in the heart of New York State's Adirondack Mts. Begun in May 1941, and completed one year later, this mine produced annually several hundred thousand tons of ilmenite, a titanium-containing ore previously imported from India, as well as an even larger amount of magnetite iron ore, an essential to the nation's steel industry in its effort to meet war-swollen demands.

The Company also made important additions to the nation's stock piles of needed war metals by more intensive working of our lead and zinc mines in Missouri, Kansas and Oklahoma.

Salvaged Metal

As one of the country's largest peace-time buyers and processors of non-ferrous secondary metals, National Lead Company assisted the Government in the fullest exploitation of America's scrap resources salvaging tin, antimony, lead and zinc in our metal-recovery plants. Starting in 1942, our Company acted as agent for the Metal Reserve Company in the purchase and processing of non-ferrous metals from various sources.

OTHER WHITE HIDING PIGMENTS

Titanium Pigments

Titanium dioxide (TiO_2), although known as early as 1790, did not become important commercially as a pigment until the 1920's.

Titanium pigments are made in different types and grades. Those known as "pure pigments" may vary in hiding power, whiteness, chalking resistance, etc., due to differences in crystal structure and from the addition of very small quantities of certain chemicals. A group of composite types are also available. They consist of mixtures of 30 percent titanium dioxide with 70 percent of either barium sulphate, calcium sulphate or magnesium silicate.

Titanium pigments are characterized by high brightness and whiteness. The straight titanium pigments are very opaque and have the highest hiding power of any of the white pigments. The effective hiding power of titanium oxide in paints depends on the manner in which it is used, i.e., type of paint, concentration of pigment, etc. The introduction of titanium dioxide furnished the paint industry with a pigment that was five to seven times stronger in hiding power than the more common white pigments. The hiding power of titanium dioxide is sufficiently high, so that when used in composite pigments to an extent of 30%, the resulting pigments have greater hiding power than other white pigments with the exception of pure zinc sulphide.

Titanium dioxide is unreactive chemically and resistant to attack by acids and alkalies, and to discoloration by gases. For the same reason titanium dioxide does not react chemically with paint vehicles. This means that the pure untreated types, of which the original characteristics have not been changed by the addition of chemicals, do not form soaps with the oil in exterior paints. Titanium dioxide in combination with zinc oxide imparts self-cleaning properties to an exterior house paint.

The high opacity, brightness and whiteness, as well as the non-reactivity, of titanium pigments have led to their wide use in interior and exterior paints and enamels, paper, rubber, ink, oil cloth, rayon, linoleum, plastic and other products. They also are used in ceramics and welding rod coatings for their chemical properties rather than their physical characteristics.

Zinc Oxide

Zinc oxide is one of the oldest white opaque pigments and is made by two processes. In one process, known as the French process, metallic zinc is heated in a special furnace and vaporized. The zinc vapor on contact with air forms the zinc oxide. In the other process, known as The American process, zinc oxide is made directly from zinc ore by roasting a mixture of ore and coal in a special furnace. French process zinc oxide particles are rounded or spherical. American process zinc oxide is available with either rounded or acicular particles predominating.

In the paint industry zinc oxide is used chiefly in white and light colored exterior house paint in combination with titanium dioxide and white lead. Zinc oxide provides a cleaning action in the mixed pigment paints so that the paint sheds accumulated dirt. About 10 to 20 per cent zinc oxide in the pigment portion will provide this cleaning action. Larger amounts of zinc oxide are to be avoided because of the tendency of zinc oxide to cause cracking and scaling. Zinc oxide is a basic pigment and reacts with most paint vehicles. If the zinc oxide content of paint is high or if the vehicle is especially reactive with zinc oxide, the excessive amount of reactive products formed cause the film to be hard and inelastic which results in cracking and scaling on exposure to the weather. Small percentages (5 to 10%) are also used in white industrial coatings to prevent yellowing.

Leaded Zinc Oxide

Leaded zinc oxide is a white pigment which is composed of basic lead sulphate and zinc oxide. It is made either directly from a lead and zinc containing ore by a process similar to the American zinc oxide process or by mechanically blending zinc oxide and basic lead sulphate pigments. The pigment produced by the first mentioned process is termed "cofumed" and by the latter process "blended."

The lead zinc ores as they are mined are best suited to producing a pigment containing about 35% basic lead sulphate and about 65% zinc oxide. The 35% grade of leaded zinc oxide is therefore sold in greatest quantities. However, a 5% grade and a 50% grade are commercially available.

Practically the entire production of leaded zinc oxide is used in exterior house paints as a source of both lead and zinc pigments where low cost is of primary importance.

Zinc Sulfide Pigments

Lithopone is the oldest and most widely used zinc sulfide pigment. It is composed of about 28% zinc sulfide and 72% barium sulfate. It is made by forming these compounds by the interaction of zinc sulfate and barium sulfide solutions. When the two solutions are combined the insoluble zinc sulfide and barium sulfate are precipitated together.

Lithopone is used in interior oil and emulsion paints and in enamels. Its use in exterior paint is limited to the cheaper grades as it does not have good weathering properties. The use of lithopone in interior paints is decreasing constantly with the increased use of titanium pigments.

The production of pure zinc sulfide as a pigment was a later development. It is a very opaque pigment and has greater hiding power than any of the white pigments except titanium oxide. Pure zinc sulfide is used in interior paints and enamels.

Zinc sulfide barium pigment and zinc sulfide magnesium pigment contain about 50% zinc sulfide. The zinc sulfide barium pigment is made by chiefly adding zinc sulfide to Lithopone and is used in interior paints. Zinc sulfide magnesium pigment is made by blending zinc sulfide and selected magnesium silicate and is used to some extent in the cheaper grades of exterior paints.

Antimony Oxide

Antimony oxide, Sb_2O_3, is a white pigment which is used chiefly in white and light colored industrial coatings to increase the durability of the coating, particularly to decrease chalking. Antimony oxide is also used in fire-retarding coatings in combination with chloride compounds. Under heat, antimony chloride is formed which tends to retard combustion.

WHITE BASIC LEAD SULFATE

Commercial white basic lead sulfate is a pigment used widely in mixed pigment paints. It is known also as "basic sulfate white lead" and "sublimed white lead."

The commercial product is not a single compound; it is a composition of basic lead sulfate and uncombined, or free, normal lead sulfate. The various grades are distinguished both by method of manufacture and the lead monoxide (PbO) content.

White basic lead sulfate is made by fume processes and also by a chemical process.

Two Fume Processes

In one fume process, lead sulfide ore (galena) is subjected to a high temperature in an oxidizing atmosphere. In another process, molten lead is sprayed into a jet of ignited fuel gas in the presence of sulfur dioxide gas. In both processes the basic lead sulfate is formed in furnaces as a fume, which is drawn through a cooling system to a bag room, where it is collected.

Chemical Process

In the chemical process, metallic lead is first atomized. The finely divided, partially oxidized lead is then mixed with water. Sulfuric acid is then added to form white basic lead sulfate.

Depend on Method of Manufacture

The physical and chemical properties of white basic lead sulfate depend upon the method of manufacture and the PbO content of the pigment. The chemical process basic lead sulfate is higher in PbO content, whiter, higher in hiding power and produces thicker paints than the fume process basic lead sulfates. It has needle-like, or acicular, particles.

Compared with basic lead carbonate, white basic lead sulfate has a lower specific gravity and therefore a higher bulking value. The typical chemical composition is as follows:

	Fume Type	Chemical Type
Lead sulfate ($PbSO_4$)	85%	72%
Lead monoxide (PbO)	15%	28%

Physical Properties

Physical properties of white basic lead sulfate, of both general types, are as follows:

	Fume Type	Chemical Type
Specific Gravity	6.3	6.4
Bulking Values		
Pounds per solid gallon	52	53
Oil Absorption	9–12	14
Tinting Strength*	85–100	130
Hiding Power (Sq. ft. per lb.)	10–13	16

IN EXTERIOR PAINTS

Practically all of the commercial white basic lead sulfate made is used, in combination with other pigments, in prepared exterior paints. In most instances, it is used only as part of the lead pigment portion, the balance being white lead carbonate.

*Based on standard sample Dutch White Lead 100.

When used in paints, white basic lead sulfate exhibits properties somewhat similar to those of white lead carbonate. It is not as effective, however, as may be deduced from its inability to produce a single pigment paint suitable for exterior use.

Effect on Films

The paint films produced with white basic lead sulfate are softer, and chalk more readily and more heavily than those produced with white lead. This means that although dirt is shed more readily by the basic lead sulfate film, the tint retention is poorer, and the durability is lower.

The lead monoxide content of basic lead sulfate is an important index of its quality, since it indicates the relative proportions of basic lead sulfate and normal lead sulfate. The latter has little value as a pigment and should be kept at a minimum. The chemical process is preferred to the fume processes because it permits production of white basic lead sulfate with a lead monoxide content of 25 to 28 per cent at which the most satisfactory pigment properties are exhibited.

RED LEAD

Red lead is a brilliant orange red pigment used widely in metal protective paints. It is an oxide of lead and its chemical formula is Pb_3O_4 (4 parts of oxygen to 3 parts of lead). Technically, it may be called trilead tetroxide.

Commercial red lead contains some litharge, or lead monoxide (PbO), and is generally graded according to the "true red lead," or Pb_3O_4 content. Thus there are four grades—85%, 95%, 97% and 98% red lead, all of which are used commercially for various purposes.

Red Lead is made by heating litharge (PbO) in a furnace at a temperature of from 900° to 950° Fahrenheit. Within this temperature range the litharge takes on additional oxygen from the air and becomes red lead. The reaction starts at a rapid rate, but as the litharge acquires a layer of red lead, its active surface is decreased and the reaction slows down. It takes about 24 hours to make the 85% grade, but a longer time—48 hours or more—is required for the higher grades.

The kind of litharge used influences the oil absorption, paint thickening power, particle size and other properties of the red lead produced. Red lead of higher oil absorption and paint thickening power is obtained when fume litharge is used. This type is called fume red lead.

Character and Properties

The essential properties and functions of a metal protective primer that will provide maximum protection are: (1) the inclusion of a constituent which inhibits and stifles corrosion by preventing the reactions causing corrosion; (2) the formation of a continuous film to exclude from the metal the environment which can cause corrosion; (3) the maintenance of flexibility in the film so that it can conform with the stresses set up by temperature changes; and (4) the retention of good bonding properties so that adhesion of the paint film will be maintained, not only initially but for a maximum period of time.

STANDARD OF PROTECTIVE PAINTS

Red lead, used either as a single pigment or combined with other paint pigments, possesses properties which enable it to fulfill the requirements of each one of these specifications. It ranks high as an inhibitor pigment and it also imparts additional qualities to a paint which promote adhesion, toughness, and elasticity in the paint film. In fact, red lead's durability and long service under difficult conditions has become a generally accepted standard of performance for metal protective paints the world over.

Authorities agree that, for the priming coat or coats, a paint should be rust inhibitive if it is to give satisfactory performance.

There have been many tests conducted, both in the field and in the laboratory, to show very definitely and conclusively that red lead is an inhibitive pigment and its presence, therefore, imparts important protective qualities to a paint for metal.

Forms Tough Films That Adhere

When mixed with linseed oil or other suitable paint vehicles red lead has the ability to form tough, elastic and tenacious paint films which remain on the metal, as a closely adhering, unbroken coating for a long period of time. This is due in large measure to the fact that the red lead reacts with the fatty acids in the vehicle, forming lead soaps which strengthen both the paint film and the bond between the film and the surface.

Another factor that contributes to the excellent rust inhibitive properties of red lead is its alkaline nature which creates an alkaline environment over the metal surface on which the red lead paint is used. It is well known that iron and steel do not corrode in an alkaline environment.

The oxidizing properties of red lead also influence its ability to inhibit corrosion.

Red lead is readily mixed with linseed oil and other paint vehicles. Paints made with it, according to generally accepted formulas, show excellent brushing qualities.

Fume Red Lead

Fine particle size is another characteristic of red lead. Fume red lead is even finer in particle size than regular furnace red lead. It shows somewhat higher oil absorption, and has greater paint-thickening power; in other words, it is particularly suitable for use when it is desired to prepare a full-bodied paint with a minimum amount of pigment.

The bright orange red color of red lead has led some individuals to inquire concerning its suitability for use as a finishing coat, or as the base for deeper reds such as brick red. Red lead upon exposure tends to fade rather quickly, because the surface of the film carbonates, due to reaction with the carbon dioxide and moisture in the air. The carbonate is white, and this in many instances makes it unsuitable to use red lead as a finishing *color,* though it does not detract in the least from the durability and protective value of the film.

TYPES AND PHYSICAL PROPERTIES OF RED LEAD

Type Red Lead	*% True Red Lead Pb_3O_4*	*Lbs. Per Solid Gallon*	*Oil Absorption*
85% Regular	85–87	75.0	5.0–7.0
95% Regular	95–96	74.0	5.0–7.0
95% Fumed	95–96	74.0	7.0–9.0
97% Regular	97–98	74.0	5.0–7.0
97% Fumed	97–98	74.0	7.0–9.0
98% Regular	98–98.7	73.5	5.0–7.0
98% Fumed	98–98.7	73.5	7.0–9.0

The 85% grade of red lead should be kept in dry form. It should not be mixed with the paint vehicle until just before the paint is to be used. The 95% grade, mixed into paste with raw linseed oil, can be stored for about a month before it begins to harden. When paste is to be stored for longer periods of time, it should be made with the 97% or 98% grades.

USES

Approximately a third of all the red lead manufactured is used in metal protective paints, either alone or in combination with other pigments. It is available in three forms; dry, paste and paint.

For many years the only vehicle used with red lead was linseed oil—raw, boiled or a combination of the two. Concurrent with the development of synthetic resin vehicles, however, special quick drying red lead paints were formulated and have given excellent results.

Engineers usually specify the composition of red lead-linseed oil paint on the basis of the number of pounds of dry red lead used with one gallon of linseed oil. Standard high quality red lead-linseed oil paint contains 33 pounds of red lead to the gallon of oil. This has given excellent results for many years and is still being used to a considerable extent. However, even lighter paints have been found thoroughly satisfactory for use on structural steel.

Quick Drying Red Lead

Quick drying red lead paints are in considerable demand for marine painting and also for certain industrial operations where time is a vital factor. Alkyd resin and phenolic resin varnish, properly selected so as to avoid excessive reaction with the red lead, may be used in the vehicles of such paints. Only the more highly oxidized red leads—the 97% or the 98% grades—should be used for such paints.

ORANGE MINERAL

Orange mineral is identical with red lead in composition. However, it is somewhat brighter in color and finer in texture.

The manufacture of orange mineral differs from the manufacture of red lead in only one respect. Whereas, in the latter instance the process starts with litharge, the manufacture of orange mineral starts with basic carbonate white lead. White lead is roasted or calcined in a reverberatory furnace, where it releases water and carbon dioxide and takes on oxygen, yielding a red lead of high Pb_3O_4 content—95% or more.

Character and Qualities

Orange mineral is very similar in character and qualities to red lead. Its outstanding quality is its color, which is a very clear orange red, and is very uniform. Orange mineral is finer in pigment particle size than ordinary red lead, though some regular type red lead equals it in this respect.

HOW USED

Orange mineral is used principally in the manufacture of vermilions and printing inks. Its excellent tone, high degree of purity of color, fineness, fluffiness and high degree of oxidation make it particularly desirable for these purposes.

ZINC CHROMATE (ZINC YELLOW)

Zinc chromate (zinc yellow) is a greenish yellow pigment that is most frequently used as a corrosion inhibitive ingredient in the manufacture of metal protective paint primers.

It is made by mixing a solution of potassium dichromate with a soluble zinc compound, such as zinc sulphate or zinc chloride. The mixing in a tank equipped with an agitator continues for about twelve hours when zinc chromate is formed. After several washings to reduce the soluble sulphates or chlorides to a minimum, the resulting solution is filtered, dried and ground, whereupon the zinc chromate is ready for the market in dry form.

Physical Properties

The particle size of zinc chromate is very small and among its other physical properties are the following:

Specific Gravity	3.4
Bulking Value	
Pounds per solid gallon	29
Color	Greenish Yellow
Color Retention	Excellent
Tinting Strength	Poor

USES

When used in the manufacture of metal protective paint primers, zinc chromate is usually combined with other pigments, such as iron oxide and silicates.

Zinc Chromate's effectiveness as a corrosion inhibitive pigment is due, primarily, to its soluble chromate compounds which result in the formation of a protective film on the surface of the metal. It is usually mixed with a resin type vehicle rather than straight linseed oil. This is necessary because zinc chromate needs the added control in its rate of solubility that is provided by a resin type vehicle.

Zinc chromate is also used in the formulation of bright green sash and trim paints, which are mixtures of zinc yellow and a blue pigment.

BLUE BASIC LEAD SULFATE

Blue basic lead sulfate, sometimes called "blue lead" or "sublimed blue lead," is a slate gray pigment obtained by heating lead ore in special furnaces which are a development of the Scotch hearth furnace used to produce metallic lead.

Blue basic lead sulfate is composed of a mixture of basic lead sulfate, lead sulfide, lead sulfite and carbon. It may also contain a small percentage of zinc oxide. The slate gray color is derived from the lead sulfide and carbon content. The product may vary in composition due to differences in the ore from which it is made.

Properties

Blue basic lead sulfate chemically inhibits corrosion and is an anti-corrosive pigment. In this regard, however, it is less effective than red lead. Blue basic lead sulfate has good paint making properties in that it grinds and mixes well with linseed oil and other paint vehicles. It is of fine particle size and has good hiding power.

The physical properties of blue basic lead sulfate representative of overage production are shown in the following table.

Color	Slate Gray
Bulking Value	
Pounds per solid gallon	34
Oil Absorption	
Pounds of oil per 100 pounds pigment	9.0

USES

The use of blue basic lead sulfate is almost entirely limited to structural metal priming paints, particularly the lower priced gray primers. It does not hold its gray color sufficiently well to be satisfactory for use in finish coat paints. Blue basic lead sulfate has higher bulking properties and sells for less per pound than red lead, which make it a lower cost inhibitive pigment. However, the amount of blue basic lead sulphate used is only about one tenth the amount of red lead used for metal protective paints.

DRYING OILS

As is well known, paints and varnishes are fluid materials. They are used to provide protection and/or decoration to innumerable objects. Applied in thin coats and exposed to the atmosphere, they undergo changes which cause them to solidify to the extent where they form "dry" films. This transformation from "wet" coat to "dry" films is called drying. Drying may be due to different causes. In general it results either from evaporation or from chemical conversion while in many cases a combination of both takes place.

Drying by evaporation is simple. It occurs when solutions are used, for instance a resin solution such as shellac and alcohol. Applied in thin coats and exposed to the atmosphere, the alcohol will evaporate and deposit the solid resin as a dry film.

Drying by chemical conversion is more complex. However, the reaction which may be considered as contributing most to the desired effect is one of oxidation. This occurs when liquid materials are used which have the ability to absorb oxygen from the atmosphere and in so doing are transformed into a solid state producing "dry" films.

Products which possess the characteristic of being able to absorb oxygen are commonly called drying oils. Of these there are many different types varying in drying, as well as in other properties.

IN PAINT AND VARNISH INDUSTRY

Drying oils may be vegetable oils or fish oils. Their use in the paint and varnish industry is extensive. Each individual type has particular characteristics which are not limited to variations in drying capacity.

These special properties are important because oil does not only function as an agent to convert a "wet" coat into a "dry" film but it also may contribute specific qualities to a film to meet definite requirements.

In general oils are a combination of glycerine and fatty acids. Glycerine is a somewhat thick, sweet tasting, colorless liquid. It has a variety of uses and is employed in manufacture of cosmetics, medicines, plastics, explosives. Fatty acids are substances which when combined with lye or any other such material will make soap, including the ordinary laundry variety.

The differences in performance of the oils depend greatly on the types of combined fatty acid they contain and the proportion of each kind present. The acids vary a great deal in their ability and capacity to absorb oxygen.

Subjected to Many Tests

In order to identity an oil or to examine its qualities for particular purposes, many physical and chemical tests have been devised. They include such determinations as specific gravity, color, viscosity, acid number, iodine number and a host of others.

Of these the iodine number is probably the most widely known constant. It represents the result of a test designed to obtain some insight into an oil's drying power. Since oils dry mainly by oxidation, the amount of oxygen which an oil takes up might be interpreted as a measure of its ability to dry. To simplify and speed up matters in laboratory tests, oxygen is replaced with iodine. Hence "Iodine Number," which expresses the number of miligrams of iodine absorbed by one gram of oil. Although the result of such a test can provide valuable information, one should never judge the quality of an oil by this constant alone.

In addition to tests on oils, methods to examine the character of resulting films have been developed. They include gloss, hardness, flexibility and many other determinations.

OILS GROUPED AND THEIR USES

The combined results of years of testing and experimentation seem to justify the grouping of vegetable and fish oils into three categories:

Drying Oils
Semi-Drying Oils
Non-Drying Oils

The drying oils may be divided into

Hard Drying Oils
Soft Drying Oils

The paint and varnish industry is interested in the hard and the soft oils and also in the semi-drying oils.

The hard oils dry to a hard film. They are used mainly in varnishes and in enamel vehicles. In most cases these oils also show good water and alkali resistance which makes them particularly suitable in industrial finishes for use on iceboxes, automobiles, etc.

Soft oils produce a softer film than the hard oils. They are consequently more flexible. For that reason they are useful in making coatings for materials which are subject to substantial expansion and contraction. Moreover, this type of oil shows good resistance against the normal influence of the atmosphere, particularly in combination with some reactive pigments. Naturally the oils in this group are widely used in house paint.

The semi-drying oils, as the designation implies, take a long time to dry. They also form soft films. However, they do find a place in the industry. Their slow drying is due to their composition. The proportion of high oxygen absorbing constituents is low. This offers the advantage that they are less subject to yellowing. Moreover, some of the oils in this group are obtainable at reasonable prices.

Here follows a more detailed description of the best known and most used varieties of drying oils.

LINSEED OIL

The oil which is most widely used for making paints and varnishes, particularly the former, is linseed oil.

Linseed oil is a vegetable oil obtained from the seeds of the flax plant. Flax is grown in many parts of the world. The largest sources of supply in the order of their importance are:

South America (Argentina and Uruguay)
North America (U. S. A. and Canada)
Russia
India

There are many other places which produce smaller quantities. Since there are so many countries with such great variations in crop conditions, and since differences in demand may be considerable, it is understandable that prices are subject to sudden and substantial fluctuations. This places flaxseed and linseed oil among the most speculative of commodities.

The oil is separated from the seed in hydraulic presses, or in expellers and more recently by solvent extraction. The product is yellow in color and of characteristic taste and odor.

Linseed oil is one of the better known drying oils which in its raw state can be used in paint. In other words, *raw linseed oil* has good film forming properties. It belongs to the soft drying oils and consequently produces flexible films.

May Be Treated

Raw linseed oil may be refined and otherwise treated. This is done to accentuate one or more of its particular characteristics, to instill properties it does not possess in its raw state and in general to adapt it to meet specific requirements.

Raw linseed oil dries in from 72 to 96 hours. Although the addition of pigment, notably reactive lead pigments, will speed up the drying process substantially, drying agents are generally used with all drying oils, including linseed oil. These drying accelerators consist of metal compounds, mostly lead, cobalt and manganese derivatives. They are dissolved in a volatile solvent and marketed as *"liquid driers."*

Boiled

In order to simplify matters for the user, particularly the painter who mixes his own paint and to meet consumer preference in some parts of the country, linseed oils to which driers have been added are available. These products are known as *"boiled oils."* They are made by dissolving metallic drying compounds directly in the oil at elevated temperatures.

Bleached

Raw linseed oil may be subjected to a number of refining processes. The simplest is the bleaching earth treatment. This results in *bleached oils* which are very pale in color, a desirable property for making both varnishes and white and light tinted paints.

Acid Refined

Linseed oil may be treated with acid. These *acid refined oils* possess excellent wetting qualities. They are particularly useful in the paint factory as this property helps to reduce the mixing and grinding time of many paint products. Moreover, in paints in combination with reactive pigments, acid refined oils have a tendency to produce larger quantities of soap which may be beneficial to the performance of a paint film.

Alkali Refined

Linseed oil may also be treated with alkali. *Alkali refined oils* are practically neutral. When subjected to high heat treatments they can be converted into excellent products. For that reason they are very popular in the varnish industry.

Naturally these refining processes may be applied with variations. Moreover, an oil can be treated chemically in addition to being bleached. Under those circumstances it is understandable that many different types of refined oil are available.

Needs Pigment

A linseed oil film by itself is not too resistant under atmospheric influences. However, the length of its useful life may be extended or its durability increased by either adding reactive pigments or by effecting changes in the chemical structure of the oil.

The use of pigments in the making of paint and the performance of this latter product are discussed elsewhere in this Manual. The changing of an oil's chemical structure may be the result of treatments to which it has been subjected.

Heat Bodied

When linseed oil is heated at fairly high temperatures for any length of time *heat bodied oils* are produced. In the process an increase in viscosity is effected, that is to say they have taken on body. This is due to the chemical changes resulting from the treatment.

Heat bodied oils possess good durability; they also have better wetting qualities and improved flow and gloss as compared to raw linseed oil. Moreover, due to their heavy body, they do not readily penetrate porous surfaces and so provide sealing and minimize absorption of subsequent coats.

Heat bodied oils are extensively used in varnishes. They are combined with resins in different proportions so that the desired properties such as hardness, gloss, durability, etc., are obtained. The resin hardens the oil but it is also true that the oil plasticizes the resin.

This, of course, also depends on the exact type of raw material used. The resin oil solution is further dissolved in a volatile thinner, resulting in a varnish. Special paint and enamel vehicles are made in very much the same way.

New Processes

In recent years new processes have been found or are in a fairly advanced stage of development which promise to make the oil adaptable for many other uses.

For instance, chemical conversion called conjugation permits the production of a type of linseed oil which could be reasonably classed in the lower brackets of the group of hard drying oils.

Moreover, methods are being developed whereby the glycerine in an oil may be removed and replaced with products of a similar chemical character but possessing different qualities. This opens up a wide range of possibilities of which the future importance cannot yet be predicted to its fullest extent.

From the foregoing it is quite obvious that linseed oil is a most flexible raw material. It can be adapted for many uses, and as it is usually readily available, it is understandably a most popular material in the paint and varnish industry.

TUNG OIL

Tung Oil, also known as China Wood Oil, is a vegetable oil obtained from the nuts of the tung tree. This tree, of which there are many varieties, is native to China and Japan. A number of years ago it was imported into our own country where it now grows in some of the Southern states.

The main sources of supply are of course the Asiatic countries, but care in its production have made the American variety of wood oil of greater uniformity and more reliable quality.

Raw wood oil is an amber colored liquid. At reduced temperatures (around freezing point) it solidifies into a yellow wax-like material. Cooking the oil at about 500° F. destroys this property.

Properly treated tung oil belongs in the class of hard drying oils. It rapidly forms hard films which show excellent water and alkali resistance. For that reason it is used extensively in quick drying finishes such as furniture varnishes, floor paints and in some types of baking enamels.

Incidentally tung oil offers an example where an "iodine number" might be misleading, as referred to previously. Notwithstanding the fact that wood oil dries extremely fast its iodine number is relatively low.

SOYBEAN OIL

Soybean oil is extracted from soybeans. The soy plant is grown in many parts of the world including the United States, where each year a substantial acreage is given over to it.

Soybean oil belongs to the semi-drying oils. In paint it cannot be used as the only oil of the vehicle. However, it can be successfully blended with more rapid drying types.

Soybean oil films possess good resistance to yellowing. With the development of new refining process it shows promise of more extensive use and a more prominent place in the paint and varnish industry.

DEHYDRATED CASTOR OIL

Raw castor oil, which is extracted from the castor bean, is a non-drying oil. However, its chemical composition permits its conversion into a drying oil, which is dehydrated castor oil.

This oil is very pale and belongs in the group of soft drying oils. As far as its other qualities are concerned it may be classified in between tung oil and linseed oil.

Because of its good color it is especially suitable for making pale varnishes and widely used in white enamel vehicles.

PAINT THINNERS

In all types of paint and enamel, liquids that evaporate after the film is applied are often used to reduce the consistency without changing the predetermined proportions of pigment and non-volatile vehicle. These volatile liquids are commonly called "paint thinners."

The most important function of the thinner in a paint is to regulate the brushing or spraying consistency without affecting the composition of the finished film. In the priming coat on new work and the first coat on repaint work, the thinner performs an additional function—it assists in the penetration of the oil vehicle and insures better mechanical anchorage of the paint film.

TURPENTINE

There are four types of turpentine: gum spirits of turpentine, steam distilled wood turpentine, sulfate wood turpentine and destructively distilled turpentine.

Gum spirits and steam distilled wood turpentine are produced in greatest quantities and are used by the consumers of paints and enamels. They are sold in paint stores in bulk or in sealed cans. Gum spirits of turpentine is produced by distillation of the crude gum obtained from pine trees. Steam distilled wood turpentine is made from pine wood, which is subjected to live steam in a digestor.

Sulfate wood turpentine, used to a very limited extent in paints, is obtained in the preparation of wood pulp by alkaline treatment. The pulp is boiled with a mixture of various chemical compounds and the steam evolved contains turpentine and other compounds.

Destructively distilled wood turpentine, obtained by the direct destructive distillation of pine and fir wood has a pungent, penetrating odor that limits its use in paints.

PETROLEUM SPIRITS

"Petroleum spirits" is the general name applied to the various types of volatile petroleum products used in the paint industry. The two types most widely used are mineral spirits and V.M. and P. naphtha (varnish makers' and painters' naphtha). Mineral spirits has a rate of evaporation similar to turpentine. It is widely used in the manufacture of house paints and is also carried by stores for consumer use. V.M. and P. naphtha is more volatile than mineral spirits, and is used by the manufacturer of paint and varnish, rather than by the painter.

The manufacture of these products is a highly specialized procedure involving distillation and refining. Petroleum contains various mixtures of hydrocarbons which are first separated according to boiling point into the five main groups. The low boiling point thinners naturally evaporate first. As the temperature is raised gradually, the higher boiling point hydrocarbons evaporate. Ingenious equipment makes it possible to control, very critically, the separation of the different portions.

Petroleum spirits of various types are available in considerable variety, and can be obtained from most manufacturers to meet specifications submitted by the consumer.

RESINS

The word "resin" is used as a group name for a multitude of organic compounds of complex composition. Since the term "resin" includes a wide variety of materials, such as varnish resins, plastics and rubbers, a simple definition covering the entire range can not be given.

Resins most useful in the protective coating industry in general answer the following descriptions.

Varnish resins are transparent or translucent solids or semisolids, usually yellowish to brown in color. Many of them soften and melt when heated and, with a few exceptions, they are soluble in oil or volatile organic liquids (solvents).

Resins may be of natural origin or artificially synthesized (built up). The natural products may originate from tree exudation as in the case of Kauri gum and ordinary gum resin. Others, such as shellac, find their origin in insect secretion. Also some natural resins have been formed by plant decomposition of which some types of asphaltum are examples. Many different types are found in each of these classes.

The synthetic resins cover an even wider field than the natural materials and as time goes on they are becoming more numerous with further development.

The most generally known synthetic resins are phenolics, which include Bakelites. They are, to a considerable extent, condensation products of phenol and formaldehyde. Other much used synthetic resins are the alkyds which are reaction products of glycerine and phthalic anhydride.

Resins are combined with oils and volatile solvents to produce varnishes or enamel vehicles. The use of natural resins was prompted by a desire for better gloss and greater hardness than could be obtained with oil alone.

The synthetics more recently developed also provide faster drying and generally better durability to enamel and varnish films.

There are great variations in the different resins in their ability to impart certain specific properties. Their value and usefulness depend on their solubility, color, hardness, chemical resistance and numerous other characteristics.

To the painter, the phenolics and the alkyds are of greatest interest. The use of phenolics has markedly increased the durability of spar varnishes. The alkyds have made it possible to produce improved architectural enamels and trim paints. In addition, synthetic resins find wide application in industrial finishes, such as those used on automobiles, refrigerators and other manufactured products.

SUPPLEMENT ONE

THE FOUNDERS—*A Tribute*

THE FOUNDERS

A Tribute

In the first chapter of this Manual we concentrated on the policies that have made our Company great in peace and war times and that have been responsible for maintaining its leadership in the lead industry. But of interest and significance are the humble "beginnings."

As in the biography of any great man, credit is given to his parentage and antecedents for many of his qualities of greatness, so should this Manual pay tribute to the rugged individualists who founded National Lead Company. The companies which they brought into the newly founded national organization were, many of them, pioneers in white lead manufacture in their respective communities. Several could lay claim to upwards of a half century of successful white lead business, and the history of one of the founding companies stems back to Revolutionary days.

When incorporated in 1891, with W. P. Thompson as its first President, National Lead Company included about 25 concerns, the most important and strongest of which had their headquarters in nine large cities—Boston, Buffalo, Chicago, Cincinnati, Cleveland, New York, Philadelphia, Pittsburgh and St. Louis.

The historical sketches on the following pages are confined mainly to founding companies about which we have been able to locate interesting material. The order in which they appear was determined by the age of the founding companies in the respective cities.

PHILADELPHIA

Back to Revolutionary Days

While still the brilliant British red-coats swaggered through the streets of Colonial Philadelphia and shortly before the first Continental Congress met in Carpenter's Hall, a certain young gentleman, one Mordecai Lewis, was duly taken into the firm of Neave and Harmon, changing its name to Neave, Harmon and Lewis—importers of white lead, red lead and other merchandise. That was in 1772.

This was the first step in the creation of the business which now bears the name of John T. Lewis & Bros. Company—our Philadelphia Branch—a business that expanded beyond the dreams of its founders.

Thus was established in business the founder of a family of able executives who have not only guided the destinies of the Lewis Company but have had an important part in the development of National Lead Company.

Has Oldest Bank Account

In addition to its being the oldest of the founding companies of National Lead Company, John T. Lewis & Bros. Co. has another claim to longevity honors in its possession of the oldest bank account in the oldest bank in the United States. The account was opened January 16, 1781, in the bank of North America, which was chartered by an Act of Congress only nine days previously, and has been kept open continuously since then.

By 1781, the year the British Commander, Lord Cornwallis, surrendered and the Colonies became an independent nation, Mordecai Lewis assumed full control of the firm, changing its name to Mordecai Lewis & Company.

An interesting memento of the times is an original bill dated May 1, 1787, which discloses the sale of "twelve hundred-weight of ground white lead" to the Pennsylvania Hospital at 90 shillings per hundred weight or 21½ cents per pound.

When Mordecai Lewis died in 1799 the business was carried on under the old name by his sons, Mordecai and Samuel Neave Lewis. In 1806 they formed a partnership, M. & S. N. Lewis, who acted as independent selling agents for Mordecai Lewis & Company.

White lead and oxides were first manufactured in 1820 and shortly afterwards linseed oil and colors, setting a rigorous standard for purity that has never been lowered since.

John T. Lewis Incorporated

It was in 1856 that John T. Lewis, grandson of Mordecai Lewis, consolidated the Mordecai Lewis and M. & S. Lewis concerns under the firm name of John T. Lewis and Brothers, which in 1888 was incorporated.

Edward F. Beale, son-in-law of John T. Lewis, entered the Company in 1875 and was elected President in 1889. Financial control passed to National Lead Company when it was organized in 1891 and Mr. Beale was elected as a member of its first Board of Directors.

The other founding company located in Philadelphia was the Western White Lead Company, about which little is known today.

NEW YORK

First Incorporation and a Mystery

The Brooklyn White Lead Company, one of the four strong New York companies that helped found National Lead Company, was incorporated in 1825, thus becoming the first white lead business in the United States to take advantage of this form of organization. But probably its most important claim on our interest is based on the unique characters who were among the incorporators. Even a mystery is disclosed in the lives of two of the founders. All were men of prominence in their day, public spirited and strong individualists.

The venture which led to the formation of the Brooklyn White Lead Company originated about 1800 when two chemistry professors, Dr. Federal Vanderbergh of Albany, N. Y. and Dr. Josiah Noyes of Clinton, N. Y., began experimenting in the manufacture of white lead and chemicals.

By 1823 the experimental work had included actual manufacturing of white lead in a small way and it was on June 13 of that year when a co-partnership agreement was signed by Augustus Graham, David Leavitt and Elijah Humphreys with Josiah Noyes & Company. Two years later Augustus Graham and Mr. Leavitt bought out their associates in the Noyes firm and incorporated under the name of The Brooklyn White Lead Company, with an authorized capital of $100,000 of which only $52,800 was issued. David Leavitt was elected president, a position he held until his death in 1879.

Failure of the company's efforts to manufacture a product equal in quality to the white lead imported from England, this country's chief source of supply at that time, finally moved August Graham to study English methods first hand. He went there in 1832 and got the information he sought while employed as a workman in one of the best factories in England. Upon his return to America the English methods were adopted, to the immediate improvement in the company's white lead and its profits.

Outdid Damon and Pythias

Among the most interesting of the strong personalities who founded the Brooklyn White Lead Company were John B. and Augustus Graham, whose successful and honorable careers were made unique with mystery, romance and a business and personal relationship that outdid that of Damon and Pythias. The "brothers" Graham were not related and their names were not Graham. John Graham was born John Bell somewhere in the North of Ireland in 1784 and came to America at

Editor Sells White Lead Interest

Mr. Charless had founded "The Missouri Gazette" in 1808, a weekly newspaper that was the first to be published west of the Mississippi River. He sold his interest in the white lead business to Mr. Blow in 1844. The Blow Factory was unfortunately in the path of the great fire of 1849, with the following results as reported in the Fire Department records:

> "The extensive white lead, castor and linseed oil and vinegar manufactory of Henry T. Blow, on the corner of Tenth Street and Clark Avenue, was almost entirely consumed. The loss was $100,000; insured for $48,000."

Mr. Blow rebuilt the plant in 1850 and the company was reorganized taking the name of Collier Works, apparently because George Collier, although not actively engaged in manufacturing, furnished most of the capital.

Collier Incorporated

The Collier White Lead and Oil Company was incorporated on September 1, 1851, with a capital stock of $150,000, to carry on the business of "manufacturing, buying and selling of white lead, red lead, litharge, castor oil, linseed oil and vinegar."

Mr. Blow was President until 1861, when he resigned and Colonel Thomas Richeson succeeded him in the office. During his connection of many years with the Collier Works, Colonel Richeson invented and put into use many improvements which lowered the cost of manufacturing.

The annual production of the Collier Works about 1883 was 4,000 tons of white-lead-in-oil, 100 tons of red lead, 100 tons of litharge, 100,000 gallons of linseed oil and 100,000 gallons of castor oil.

In 1881 fire again brought serious damage to the Collier Works, causing a loss of $167,250 on May 28 and $85,825 on September 21. However, the destroyed buildings were rebuilt and the business was flourishing when the Collier White Lead and Oil Company was incorporated in the National Lead Company in 1891.

St. Louis Lead and Oil Launched

The next member of the St. Louis group of National Lead founding Companies to organize was the St. Louis Lead and Oil Company, which took over the business in the State of Missouri, with a capital stock of $300,000. The charter contained this interesting clause:

> "This corporation shall pay into the State Treasury one per cent per annum on all net earnings for use of Soldiers' Orphans Home Fund."

In an advertisement in the 1865 edition of the St. Louis Directory, the newly organized company announced the purchase of the O'Fallon business, listed the products they had for sale and stated that "having facilities unsurpassed by any company in the United States, we solicit the patronage of wholesale cash buyers."

In the Spring of 1865 a plant was erected at a cost of about $200,000 on the site of the O'Fallon Plant. The plant produced white lead, litharge, linseed oil, castor oil and cotton-seed oil. Its annual consumption of raw materials in 1880 was 1,000 tons of pig lead, 50,000 bushels of castor beans, 100,000 bushels of flaxseed and 40,000 bushels of cotton-seed.

In 1892 a new plant was erected at the site of our present factory, 5548 Manchester Avenue, and the property at Second Street and Cass Avenue was sold in 1893 to the Pennsylvania Railroad for $200,000. In 1911 manufacturing was concentrated in the then greatly enlarged and modernized Manchester Avenue plant and later discontinued in both the Southern and Collier Works.

The St. Louis Lead and Oil Company supplied one of the first elected directors of National Lead Company—George O. Carpenter, who later became Vice President of our Company.

Southern in St. Louis and Chicago

In 1862 Henry Platt and Robert Thornburgh formed a partnership to engage in the retail drug business, abandoning the line shortly afterwards to merchandise paint, oil and glass.

In 1865 the firm built a white lead factory at Main and Lombard Streets under the name of Platt, Thornburgh and Company. Two years later it was incorporated as the Southern White Lead and Color Company with a capital stock of $120,000 for the purpose of manufacturing white lead, red lead, litharge, castor oil, linseed oil and acids, and the grinding and mixing of oils, paints and colors.

Among the executive officers of the newly incorporated company were names destined to become well known in the paint industry. William H. Gregg was elected President; Henry S. Platt, Vice President; F. W. Rockwell, Secretary; James Johnston, Superintendent. Mr. Rockwell was elected Second Vice President of National Lead Company on the day of its incorporation and years later Mr. Gregg's son, Norris B. Gregg, held a Vice Presidency until his death. Fletcher W. Rockwell was born in St. Louis when his father was Secretary of the Southern Company and was elected President of National Lead Company on January 12, 1938.

On February 9, 1876, the State Legislature granted a change in the name to the "Southern White Lead Company."

About 1880 the consumption of lead was 1,200 tons annually.

In 1887 the McBirney and Johnston White Lead Company of Chicago was absorbed by the Southern White Lead Company and from that time on the Company sold lead from both factories under the Southern Company brands.

Manufacturing in the company's factory was discontinued in 1912 when the city of St. Louis took the Southern corroding yards for a bridge site.

Missouri Lead Company Organized

The Missouri Lead and Oil Company was incorporated on March 2, 1872 with William H. Thompson as President and who was destined to become another St. Louis man to be elected to membership on the first Board of Directors of National Lead Company.

All records examined failed to give any information as to the location and capacity of their manufacturing plant. Their business address was 421-425 Main Street.

William H. Thompson resigned the Presidency in 1884 and the Missouri Lead and Oil Company was absorbed by National Lead Company in 1891. The Missouri Company brand was used for many years.

CHICAGO

Branch Included Two Founders

When National Lead Company was incorporated in 1891, there were two Chicago concerns listed as founding companies; namely, the D. B. Shipman White Lead Company and the Southern White Lead Company.

Mention of Mr. Shipman's election to National Lead Company's first Board of Directors is the only historical item that could be dug up about these two founding companies. However, we do know that the Chicago Branch from its inception has supplied able executives and strong members of the Board of Directors and has contributed substantially to the continued success of National Lead Company.

PITTSBURGH

Forming National Lead & Oil Co. of Penna.

According to available records, Pittsburgh had a white lead factory as early as 1813, operated by Anthony Beelen with J. J. Boudier, a Frenchman and owner of a laboratory, as his superintendent.

Through the years many white lead manufacturing ventures were launched, but it was not until 1849 that there was established the forerunner of one of the successful companies which became the founders of the National Lead & Oil Company of Pennsylvania, our Pittsburgh Branch. This was B. A. Fahnestock & Company, a wholesale drug house that also manufactured and sold white lead and which eventually became the Fahnestock White Lead Company. It is recorded that in the year 1849 this firm's white lead sales amounted to $65,000 and that 500 tons of lead, 1,820 barrels of vinegar and 15,000 gallons of linseed oil were consumed.

Became Industry Leader

Simon Beymer, destined to be one of the outstanding figures in the early days of the Pittsburgh white lead industry, came to that city in 1852 and took employment with B. A. Fahnestock & Company. Five years later he became a partner of B. L. Fahnestock and in 1867 he organized the white lead manufacturing firm of Beymer, Bauman & Company. Upon the death of Reuben F. Bauman in 1885, Mr. Beymer bought the estate's interest and organized the Beymer-Bauman Lead Company, of which he was President and his son, Hervey W. Beymer, Manager.

The Fahnestock White Lead Company, which, as has been mentioned, had its roots in B. A. Fahnestock & Company, was organized and incorporated in 1872 by B. L. Fahnestock, Benj. F. Vandecort and Benj. S. Fahnestock. It was operated successfully until its sale to National Lead & Oil Company of Pennsylvania in 1891.

It was in 1884 that the Davis-Chambers Lead Company purchased the white lead factories and properties of Barclay Preston, but nothing else historically is known about this founding company.

Supplied First President

While we lack historical data on the Armstrong-McKelvy Lead & Oil Company other than that it was organized by John H. McKelvy and Thomas M. Armstrong we do know that this founding company had the distinction of supplying the first President of the National Lead & Oil Company of Pennsylvania (our Pittsburgh Branch). This was Mr. McKelvy and he also was elected as one of the first directors of National Lead Company. He was succeeded by Charles F. Wells, Sr.

Another strong Pittsburgh man who came to National Lead Company in its early days was W. N. Taylor. He had been Vice President of the Scottdale Iron & Steel Company until elected President of the Davis Lead Company in 1904, which office he held until the concern was purchased by National Lead Company in 1907. It was then that Mr. Taylor headed the Pittsburgh Branch and became a Director of National Lead Company.

Pittsburgh supplied another member of the first Board of Directors of National Lead Company—Simon Beymer.

CLEVELAND

J. H. Morley Heads Business

The J. H. Morley Lead Company of Cleveland was incorporated May 20, 1887, purchasing the white lead manufacturing business, including buildings and real estate, of J. H. Morley & Company for $200,000, which represented the entire capital stock of the new corporation.

The J. H. Morley & Company were the successors of Morley & Cary, a firm organized in 1862. Mr. Morley and his associates obviously had had considerable experience in the white lead business, if we are to judge from the success with which the concern was operated before and after it was absorbed by National Lead Company. The Minutes of a Directors' meeting in 1890, for instance, disclose a dividend of 10% which, while not of "melon cutting" size common to the times, was an indication of substantial business.

J. R. Morley was elected the first President of the newly incorporated business, but resigned in six months and was succeeded by J. H. Morley. The latter continued to head the concern for several years after it became the Cleveland Branch of National Lead Company.

A Family Project

J. R. Morley Lead Company was a family project, J. H. Morley owning 875 shares and F. H. Morley, C. H. Morley and J. R. Morley owning 200 shares between them, or a total of 1,075 of a total capitalization of 2,000 shares. The officers until C. H. Morley died in 1889 were: J. H. Morley, President; C. H. Morley, Vice President; and F. H. Morley, Secretary and Treasurer.

There are interesting salary items in the Minutes of the Corporation. In 1887 the President received $5,000 and the same salary was accorded to F. H. Morley, Secretary and Treasurer. Two years later the President's salary remained the same, but the Directors voted $2,100 to the Vice President and Treasurer and $2,200 to the Secretary.

OUR FIRST BOARD OF DIRECTORS

In the preceding historical sketches of our founding companies mention was made of practically all the white lead pioneers who as officers and directors of the newly incorporated National Lead Company faced the numerous problems of this enormous combination. As a further tribute to these rugged individualists who so ably launched our Company on its road to success and as an added note of interest, our first officers and directors and their respective home cities are listed below:

OFFICERS

W. P. Thompson, President, New York
A. T. Goshorn, First Vice President, Cincinnati
F. W. Rockwell, Second Vice President, St. Louis
Chas. Davison, Secretary, New York

DIRECTORS

E. F. Beale, Philadelphia
Simon Beymer, Pittsburgh
George O. Carpenter, St. Louis
R. R. Colgate, New York
J. H. McKelvy, Pittsburgh
R. P. Rowe, New York
D. B. Shipman, Chicago
A. P. Thompson, Buffalo
W. H. Thompson, St. Louis

SUPPLEMENT TWO

PRODUCT LIST

PRODUCTS

SOLD AND MANUFACTURED BY NATIONAL LEAD COMPANY AND ITS BRANCHES, DIVISIONS AND AFFILIATED COMPANIES

Occasionally our salesmen are asked whether National Lead Company manufactures certain products, other than paint and, if so, where can information and prices be gotten.

Such inquiries can be answered easily by reference to the product list on the following pages.

The inquiry should be passed along to the nearest office selling the product, either by the salesman or the prospect, whichever the latter prefers.

Such service has its good-will value, as well as serving the best interests of the Company.

HOW TO USE

It will be observed that the products are classified into the following five groups and in each case are arranged alphabetically:

METAL PRODUCTS
PAINT PRODUCTS
DRY PIGMENT PRODUCTS
OIL PRODUCTS
MISCELLANEOUS PRODUCTS

When a product is located, the next step is to note the numeral or numerals adjacent to it in the column headed "By Whom Sold." Then turn to the "Key" for the name and address of the office or offices handling the product under consideration. The same procedure, of course, applies in the case of the "By Whom Made" column.

KEY FOR CHECKING WHO MAKES AND SELLS PRODUCTS LISTED

A. National Lead Company (Headquarters) 111 Broadway, New York, N. Y.

NATIONAL LEAD COMPANY BRANCHES

1.	**Atlantic** National Lead Company	111 Broadway, New York, N. Y.
2.	**Baltimore** National Lead Company	214 Henrietta Street, Baltimore, Md.
3.	**Boston** National Lead Co. of Mass.	800 Albany Street, Boston, Mass.
4.	**Buffalo** National Lead Company	116 Oak Street, Buffalo, N. Y.
5.	**Chicago** National Lead Company	900 West 18th Street, Chicago, Ill.
	Detroit	1627 West Fort Street, Detroit, Mich.
	Milwaukee	744 North Fourth Street, Milwaukee, Wis.
6.	**Cincinnati** National Lead Company	659 Freeman Avenue, Cincinnati, Ohio
	Atlanta	Bishop Street, Atlanta, Ga.
	Louisville	1320 Heyburn Building, Louisville, Ky.
7.	**Cleveland** National Lead Company	1213 West Third Street, Cleveland, Ohio
8.	**Pacific Coast** National Lead Company	2240—24th Street, San Francisco, Calif.
	Los Angeles	932 Wilson Street, Los Angeles, Calif.
	Portland	1211 N.W. Glisan Street, Portland, Ore.
	Seattle	973 John Street, Seattle, Wash.
	Spokane	N. 908 Howard Street, Spokane, Wash.
	Tacoma	1013 A Street, Tacoma, Wash.
9.	**Philadelphia** John T. Lewis & Bros. Co.	Widener Building, Philadelphia, Pa.
10.	**Pittsburgh** National Lead Co. of Pa.	1376 River Avenue, Pittsburgh, Pa.
11.	**St. Louis** National Lead Company	722 Chestnut Street, St. Louis, Mo.
	Dallas	959 Terminal Street, Dallas, Texas
	Kansas City	1406 West 13th Street, Kansas City, Mo.
	New Orleans	516 Tchoupitoulas Street, New Orleans, La.
	Omaha	2810 A Street, Omaha, Neb.
	St. Paul	102 West Fairfield Avenue, St. Paul, Minn.

AFFILIATED COMPANIES AND DIVISIONS

12.	American Bearing Corporation	429 So. Harding Street, Indianapolis, Ind.
13.	American Lead Corporation	1600 East 21st Street, Indianapolis, Ind.
14.	Blatchford Co., E. W. (Branch)	63 Park Row, New York, N. Y.
15.	Canada Metal Company, Ltd.	721 Eastern Avenue, Toronto, Canada
16.	Combined Metals Reduction Co. (No N. L. ownership)	Stockton, Utah
17.	Evans Lead Corporation	Charleston, West Virginia
18.	Kirk & Son, Inc., Morris P.	2717 South Indiana Street, Los Angeles, Calif.
19.	Magnus Metal Corporation	721 Railway Exchange Building, Chicago, Ill.
	New York	111 Broadway, New York, N. Y.
20.	Master Metals, Inc.	2850 West Third Street, Cleveland, Ohio
21.	National Lead Company, S/A	Avenida Presidente Roque Saenz Pena 567, Buenos Aires, Arg., S.A.
22.	Titanium Pigment Corporation	111 Broadway, New York, N. Y.
	Boston	34 Midway Street, Boston, Mass.
	Chicago	104 S. Michigan Avenue, Chicago, Ill.
	Cleveland	Room 617, Penton Building, 1213 West 3rd Street, Cleveland, Ohio
	Los Angeles	2475 Enterprise Street, Los Angeles, Calif.
	Philadelphia	Widener Building, Philadelphia, Pa.
	San Francisco	350 Townsend Street, San Francisco, Calif.
	St. Louis	Carondelet Station, St. Louis, Mo.
23.	Titanium Division, National Lead Company	111 Broadway, New York, N. Y.

For information about the Baker Castor Oil Company, the Baroid Sales Division and the DeLore Division, see Page 10. Products identifying the lines handled by these organizations are also included under the product group headings.

METAL PRODUCTS

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Acid Concentrating Plants (Simonson-Mantius Vacuum Process)		
Chamber Acid	1	1
Sludge Acid	1	1
Spent Acid	1	1
Acid Separating Plants (Simonson-Mantius Vacuum Process)		
Sludge Acid	1	1
Alloys, Die Casting		
Lead	1-2-4-5-6-7-9-10-11-13-15-18-20	1-2-4-5-6-7-9-10-11-13-15-18-20
Tin	1-2-4-5-6-7-9-10-11-13-15-18	1-2-4-5-6-7-9-10-11-13-15-18
Zinc	1-4-5-6-7-10-11-15-18	1-5-7-11-15-18
Alloys, Slush Mold Casting	1-5-7-9-10-13-15-18-21	1-5-7-13-15-18-21
Alloys, For Aircraft Industry (See Kirksite)		
Aluminum Alloy Ingot	18	18
Aluminum Ingot	18	18
Antimonial Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-5-6-7-9-10-11-13-18-20-21
Babbitt Metals		
Dutch Boy Trademarked	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-21
Others—any formula	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-13-18-20-21
Satco Ingot	19	
Bar Tin	1-2-3-4-5-6-7-9-10-11-14-15-18-21	1-2-3-4-5-6-7-9-10-11-18-21
Bars, Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-15-18-20-21
Battery Grid Metal	1-2-3-5-6-11-12-15-18-20-21	1-2-3-4-5-6-11-12-18-20-21
Battery Straps	1-2-6-9-11-21	1-6-11-21
Bearings		
Armature	11	11
Bronze		
Finished	19	19
Rough	15-19	15-19
Bronze Backed, Babbitt Lined	12-19	12-19
Die-Cast	11-15-19	11-19
Journal	19	19
Satco Lined	12-19	12
Bends		
Flanged	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-10-11-15-21
Hardlead	1-2-3-4-5-6-7-9-10-11-15-21	10-11-15-21
Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-10-11-15-21
Reducing	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-10-11-15-21
Blatchford Base (Printers)	5-14	
Block Tin Pipe	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-7-9-10-11-15-21
Britannia Metal	1-2-4-5-6-7-9-10-11-15-21	1-9-11-21
Bullet Core Bar Lead	1-2-3-4-5-6-7-9-10-11-15-18-20-21	1-2-3-5-6-7-9-10-11-15-18-21
Burning Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-15-21
Bushings, Rough and Finished	19	19
Caulking Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21
Cames, Lead		
Antique	1-2-4-5-7-10-11-15	1-11-15
Plain	1-2-4-5-6-7-9-10-11-15	1-2-4-5-6-7-9-10-11-15
Reinforced	1-2-4-6-7-9-10-11-15	1-7-11-15
Rustic	1-4-6-7-10-11	1-11
Smooth Faced	1-2-4-6-7-10-11	1-2-7-10-11
Casket Trimming Metal	1-2-5-6-7-9-10-11-13-15-18-20-21	1-2-5-6-7-11-13-15-18-20-21
Castings, Non-Ferrous, Rough and Finished	19	19
Chemical Apparatus, Special Lead Lined	1-5-15-21	1-5-15-21

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Cinch Anchors (See Expansion Bolts)		
Clock Weights	1-3-6	1-3-6
Cocks		
Bibb	1-21	1-21
Hardlead	1-15-21	1-15-21
Plug	1-15-21	1-15-21
Coils		
Lead Covered Copper	1-21	1-21
Lead Lined	15-21	15-21
Special Built-Up, Lead	1	1
Copper Aluminum Hardener	18	18
Counterweights	1-2-3-5-6-7-9-10-11-20-21	1-2-3-6-7-9-10-11-20-21
Discs for Collapsible Tubes		
Antimonial Lead	1	1
Tin Coated	1	1
Electro Cases	1-11-18	1-11
Expansion Bolts		
Cinch Anchors	1	1
Cinch Cylinders	1	1
Cinch Lead Screw Anchors	1	1
Ferrules, Combination	1-2-4-5-6-7-9-10-11-15-21	2-5-6-10-11-15-21
Fittings		
Flanged or Screwed	1-9-15-21	1-15-21
Hardlead Flanged	1-9-15-21	1-15-21
Lead Lined	9-15	15
Lead Lined Soil Pipe	1-9	1
Tin Lined	1-9	1
Flux	5-7-14-21	5-14-21
Fuse Wire	2-3-4-5-7-10-11-15-21	2-3-5-7-10-15-21
Gaskets		
Composition	1-2-3-7-10-11-15	1-2-10-11-15
Lead	1-2-4-5-6-7-9-10-11-15-21	1-2-5-7-9-10-11-15-21
Tin	1-2-5-7-9-15	1-2-5-7-15
Guards, Metal (Bearers)	1-5-10	1-5
Hammer Metal	1-2-3-4-5-6-7-9-10-11-13-15-18	1-2-3-5-7-9-10-11-13-15-18
Hammers		
Babbitt	1-2-4-6-7-10-11-15-18	1-2-4-7-10-11-15-18
Lead	1-2-4-6-7-10-11-15-18	1-2-4-7-10-11-15-18
Hardening Lead	1-2-3-4-5-6-7-10-11-15-21	1-2-3-4-5-10-11-15-21
Homogeneous Bonded Lead Lined Equipment		
Agitators	1-15-21	1-15
Digestors	1-15	1-15
Drums	1-15	1-15
Mixing Equipment	1-15-21	1-15-21
Plating Equipment	15	15
Tank Cars	1-15	1-15
Tanks—Others to Specification	1-15-21	1-15-21
Hoyt's No. 11 Babbitt Metal	1-2-4-5-7-10-11-15-18-21	1-7-10-11-15-21
Impellers	1	1
Impression Lead, Hoyt's		
Plain	1-2-5-6-7-10-11-18-21	1-11-21
Ready to Mould	1-2-5-6-7-10-11-18	1-11
Tin Coated	1-2-5-6-7-8-10-11-15-18	1-11
Ingot Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-11-13-15-18-20-21
Key Leads	1-2-3-5-6-7-9-10-15	1-2-3-5-9-10-15
Kirksite "A" Alloy		
"A" Wire	1-2-3-4-5-6-7-9-10-11-15-18	1-5-11-15-18
Kettle-Koater	1-2-3-4-5-6-7-9-10-11-15-18	
Pig	1-2-3-4-5-6-7-9-10-11-15-18	1-5-7-11-15-18
Rolled	1-2-3-4-5-6-7-9-10-11-15-18	

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Lead Angles	1-2-3-6-7-10-11	1-2-3-10-11
Lead Anodes	1-2-4-5-6-7-9-10-11-15-21	1-2-5-7-9-10-11-15-21
Lead Balls	1-2-4-6-7-10-11-15-21	1-11-15-21
Lead Construction	1-21	1-21
Lead Counterweights	1-2-3-4-6-7-9-10-11-20-21	1-2-3-6-7-9-10-11-19-21
Lead Covered Equipment		
Copper	1-5-21	1-5-21
Non-Ferrous Alloy Pipes	5-6	5-6
Steel	1-5	1-5
Lead Discs	1-2-3-4-5-6-7-9-10-11-21	1-2-3-5-6-7-9-10-11-21
Lead Headed Nails	4-6-9-10	
Lead Lined Chemical Equipment		
Autoclaves	1-5-9-15-21	1-5-9-15-21
Stills	1-5-9-15-21	1-5-9-15-21
Sulphonators	1-5-9-15	1-5-9-15
Lead Plates	1-2-4-6-7-9-10-11-15-21	1-2-6-7-9-10-11-15-21
Lead, Pulverized	1-2-3-4-5-6-7-9-10-11-18-21	1-2-5-18-21
Lead Sinkers	1-2-3-5-6-7-10-11	2-3-5-11
Lead Sleeving	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-9-10-11-15-21
Lead Spacers	1-2-4-5-6-7-9-10-11	1-2-3-5-9-10-11
Lead Wire	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-9-10-11-15-18-21
Lead Wool	1-2-3-4-5-6-7-9-10-11-15-18-21	1-5-15-21
Mold Metal, Rubber	1-9	1-9
Music Plates	1-2-5-6-7-10-11-18	1-11
Needle Metal	1-2-9-11-15-21	1-9-11-15-21
Net Leads	1-3-5-6-9-11-15	1-3-5-9-15
Nickel-Bronze	11-15	11-15
Organ Pipe Metal	1-3-5-6-7-10-11-15-21	1-3-5-11-15-21
Ornaments, Lead	1-3-15	1-15
Pewter	1-2-4-5-6-7-10-11-18	1-11
Phosphor Bronze Castings	15	15
Phosphor Tin	1-4-5-6-7-11-15-21	1-11-15-21
Pig Lead	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-3-13-15-18-20-21
Pig Tin	1-2-3-4-5-6-7-9-10-13-15-18-21	1-3-13-15-18
Pinking Blocks	11	11
Pipe		
Block Tin	1-2-3-4-5-6-7-9-10-11-15-18-21	1-5-7-9-10-11-15-21
Brass, Lead Lined	1	1
Brass-Lined Steel	1	1
Brass, Tin Lined	1	1
Copper Lined Steel	1	1
Lead		
Antimonial	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-10-11-15-21
Chemical	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-10-11-15-21
Common	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-10-11-15-21
Composition	1-2-3-5-7-9-10-11-15-21	1-2-3-5-7-10-11-15-21
Tellurium	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-10-11-15-21
Lead, Tin Lined	1-3-15	1-3-15
Soil, Lead Lined	1	1
Steel	1	1
Steel, Lead Lined	1-15-21	1-15-21
Steel, Tin Lined	1	1
Printers Metals (See Type Metals)		
Pulverized Tin	1-2-3-4-5-6-7-9-10-11-18-21	1-2-5-21
Pumps		
Hardlead Centrifugal Acid	1	1
Lead Vertical Acid	1	1
Tin Lined Hardlead Centrifugal Acid	1	1
Reducers (Lead)	1-2-3-4-5-6-7-9-10-11-15-21	10

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Ribbon		
Composition	1-2-3-7-9-10-11	1-2-3-7-9-10-11
Lead	1-2-3-4-6-7-9-10-11-15-18-21	1-2-3-4-6-7-9-10-11-15-21
Tin	1-2-4-6-7-9-10-11-15-18	1-2-7-9-10-11-15
Roof Flanges	1-2-3-4-5-6-7-9-10-11-15-18	3-5-11-15
Roofing Sheets, Hardlead	1-2-3-4-5-6-7-9-10-11-15	1-3-11-15
Sash Weights, Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-15-21
Screens, Perforated Lead Plates	1-3-6-7-9-10-11	1-9-11
Screws, Brass Trap	1-5-6-7-10-11-15-21	15-21
Sheet Lead		
Antimonial	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-11-15-21
Chemical	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-7-10-11-15-21
Common	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-10-11-15-21
Composition	1-3-5-7-9-10-11-21	1-3-5-11-21
Crawlproof	1-4-6-7-9-10-11-15	1-10-11-15
Tellurium	1-2-3-4-5-6-7-9-10-11-21	1-2-3-5-6-7-11-21
Sheet Roofing Metal, Hardlead	1-2-3-4-6-7-9-10-11-15	1-3-11-15
Sheet Tin	1-2-3-4-5-6-7-9-10-11-15-18	1-5-11-15
Shot, Lead (All Sizes)	1-2-3-4-6-7-9-10-11-18-21	1-11
Shrapnel Balls	1-5-6-7-10-11-15	1-11-15
Simonson-Mantius Acid Recovery Plants	1	1
Sink Drains	1-3-7-10-11-15	1-3-11-15
Soil Pipe—Lead	1-3-6-7-9-10-11	1-3-6-7-9-10-11
Solder		
Acid Core	1-2-3-4-5-6-7-9-10-11-18	1-9
Bar (All Sizes)	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-3-4-5-6-7-9-10-11-13-15-18-21
Cake	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-9-10-11-15-21
Capping Bar	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Drop	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-5-6-9-11-15-21
Fusible Bar	1-2-3-4-5-6-7-9-10-11-15-18	1-2-3-5-6-7-9-10-11-15
Fusible Wire	1-2-3-4-6-7-9-10-11-15-18	1-2-3-7-9-10-15
Hard	1-3-4-7-10-11-18-21	1-3-7-10-11-20
Ingot	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-3-4-5-6-7-9-10-11-13-15-18-21
Meter Bar	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-3-5-6-7-9-10-11-13-15-18-21
Paste	21	21
Pig	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21	1-2-3-4-5-6-7-9-10-11-13-15-18-20-21
Pulverized	1-2-3-4-5-6-7-9-10-11-15-18-21	1-5-15-18-21
Radiator Bar	1-2-3-4-5-6-7-9-10-11-13-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Ribbon or Tape	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-5-7-9-10-11-15-18-21
Rosin Core	1-2-3-4-5-6-7-9-10-11-18-21	1-9-21
Segment (Cut Wire)	1-3-4-5-6-7-9-10-11-18-21	1-5-6-9-11-21
Sheets	1-3-4-5-6-7-10-11-15-21	1-5-11-15-21
Slabs	1-2-3-5-6-7-9-10-11-15-18-21	1-2-4-5-6-7-9-10-11-15-21
Tinners' Bar	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-6-7-9-10-11-15-18-21
Triangular Bar	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-4-5-6-7-9-10-11-15-18-21
Wire	1-2-3-4-6-7-9-10-11-15-18-21	1-2-3-4-6-7-9-10-11-15-18-21
Sounding Weights, Lead	1-2-3-4-6-7-9-11-15-18	3-9-11-15
Special Aeroplane Body Pattern Alloys (See Kirksite)		
Special Apparatus	1	1
Spelter	1-2-4-6-7-10-11-15-18-21	1-18
Stamping Metal	1-3-5-6-7-9-11-18	1-3-7-11
Strip Tin	1-2-3-5-6-7-9-10-11-18	1-2-5-7-9-10-11
Tank Connections		
Lead Covered	1-15-21	1-15-21
Lead Lined	1-15-21	1-15-21
Tanks		
Homogeneous Lead	1-15-21	1-15-21
Tin Covered	1-21	1-21
Tin Lined	1-5-15-21	1-5-15-21
Tape, Lead	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-5-6-7-9-10-11-15-21

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Tellurium Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-6-9-10-15-21
Tempering Lead	1-2-3-4-5-6-7-9-10-11-21	1-2-4-5-9-10-11-21
Tin Anodes	1-2-4-5-6-7-9-11	1-2-5-7-9-11
Tin Bars	1-2-3-4-6-7-9-10-11-13-15-18-21	1-2-3-4-6-7-9-10-11-13-15-18-21
Tin Pipe	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-7-9-10-11-15-21
Tin Wire	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-9-10-11-15-18-21
Tinning Compound	1-3-4-5-6-7-9-10-11-15-18-21	1-2-5-15-18-21
Tint Plates	1-5-6-7-11	1-2-11
Traps, Lead	1-2-3-4-5-6-7-9-11-15-21	1-2-3-5-6-11-15-21
Tubes		
Lead	1-2-3-4-6-7-9-10-18-21	1-2-3-4-6-7-9-10-21
Lead Covered	1	1
Lead Lined	1-3	1-3
Tin	1-2-3-6-7-9-18	1-2-3-7-9
Tin Covered Brass	1-4	1
Tin Covered Copper	1	1
Tin Covered Steel	1	1
Tin Lined Brass	1	1
Tin Lined Copper	1	1
Tin Lined Steel	1	1
Tubing		
Antimonial	1-2-3-4-5-6-7-9-10-11-15	1-2-3-5-6-7-9-10-11-15
Block Tin	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-7-9-10-11-15-21
Composition	1-2-3-5-6-7-9-10-11-21	1-2-3-5-7-9-10-11-21
Hardlead	1-2-3-4-6-7-9-10-11-21	1-2-3-6-7-9-10-11-21
Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-9-10-11-15-21
Tellurium	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-5-6-7-9-10-11-15-21
Type Metals		
Autoplate	1-2-5-6-7-14-18-21	1-2-5-7-11-13-18-21
Electrotype	1-2-5-6-7-11-13-14-15-18-21	1-2-5-6-7-11-13-15-18-21
Intertype	1-2-6-7-9-10-11-13-14-15-18-21	1-2-7-9-10-11-13-15-18-21
Linotype	1-2-5-6-7-9-10-11-13-14-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Monotype	1-2-5-6-7-9-10-11-13-14-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Stereotype	1-2-5-6-7-9-10-11-13-14-15-18-21	1-2-5-6-7-9-10-11-13-15-18-21
Typograph	1-2-7-10-11-13-14-18	1-2-7-10-11-13-18
Valves		
Lead Lined Acid	1-21	1-21
Tin Lined Acid	1	1
United Hardlead	1-15-21	1-15-21
Washers, Lead	1-2-3-4-5-6-7-9-10-11-18-21	1-2-5-9-10-21
Wedge Lead	1-2-3-4-5-6-7-9-10-11-15-21	1-2-3-4-5-6-7-9-10-11-15-21
Wire		
"A" Wire (See Kirksite)		
Iron, Lead Coated	1-9	1-9
Lead	1-2-3-4-5-6-7-9-10-11-18-21	1-2-3-4-5-6-7-9-10-11-18-21
Solder	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-4-5-6-7-9-10-11-15-18-21
Tin	1-2-3-4-5-6-7-9-10-11-15-18-21	1-2-3-5-6-7-9-10-11-15-18-21
Zinc		
Special High Grade	1-3-4-5-7-10-11-15-16-18	1-16
High Grade	4-5-7-10-11-15-16-18	16
Prime Western	1-2-4-5-6-7-10-11-15-18-21	1-18
Zinc Base Alloys		
Die Casting	1-5-7-10-11-15-18	1-5-7-11-15-18
Gravity Casting	7-10-11-15-18	7-11-15-18
Kirksite	1-2-4-5-6-7-9-10-11-15-18	1-5-7-11-15-18
Slush Casting	1-5-7-9-10-11-15-18-21	1-5-7-11-15-18-21

PRODUCTS	BY WHOM SOLD	BY WHOM MADE

PAINT PRODUCTS

Colors-in-Oil (Full Line)	1-3-4-5-6-7-8-9-10-11-21	8-9
Painting Equipment		
Brushes, Ladders, etc.	8 (Sold only by Pacific Coast Branch)	
Putty	8-9	9
Ready Mixed Paints		
Enamels	8-21	8
House Paints (Exterior and Interior)	1-3-4-5-6-7-8-9-10-11	1-5-8
Industrial Paints	8-21	8
Lacquers	8-21	8
Sundries	8-21	8
Varnishes	8-21	8
Red Lead—Paints		
Liquid Red Lead No. 1—No. 5		1-8-9-11
(Black Finish Coat)—Marine		1-8-9-11
Metal Primer No. 050		8-9-11
Quick Drying	1-3-4-5-6-7-8-9-10-11	9-11
Semi Quick-Drying		1-8-9-11
No. 25		1-8-9-11
Paste in Oil		1-8
Wall Primer	1-3-4-5-6-7-8-9-10-11	
White Lead		
Paints—Pure White Lead		
Exterior Primer	1-3-4-5-6-7-8-9-10-11	8-9-11
Outside White	1-3-4-5-6-7-8-9-10-11	1-5-8
White Lead in Oil		
Heavy Paste	1-3-4-5-6-7-8-9-10-11-21	1-5-8-9-11
Soft Paste	1-3-4-5-6-7-8-9-10-11-21	1-5-8-9-11
Pulp	1-5	1-5

DRY PIGMENT PRODUCTS

Barium Sulphate	See Baroid Sales Division & DeLore Division	Page 10
Barytes	See Baroid Sales Division & DeLore Division	Page 10
Blanc Fixe	See DeLore Division	Page 10
Calcium Carbonate	See DeLore Division	Page 10
Extender Pigments	See DeLore Division	Page 10
Fillers	See DeLore Division	Page 10
Lead Silicates		
Bisilicate	1-6-7-10-17	17
Monosilicate		
Litharge		
Color Makers		1-5-8-9-11-17-18
Fumed		11-17
Glass Makers		1-8-9-11-17-18
Insecticide	1-3-4-5-6-7-8-9-10-11-17-18	1-8-9-11-17-18
Oil Refiners		1-8-9-11-17-18
Regular		1-8-9-11-17-18
Storage Battery Oxides	1-3-4-5-6-7-8-9-10-11-17-18-21	1-8-9-11-17-18
Varnish Makers	1-3-4-5-6-7-8-9-10-11-17-18-21	1-8-9-11-17-18
Mineral Primers	See DeLore Division	Page 10
Orange Mineral	1-3-4-5-6-7-8-9-10-11-17	1-9-11-17
Red Lead		
Barton		1-9-11-18
Fumed		11-17
Furnace		1-8-9-11-17-18
Glass Makers	1-3-4-5-6-7-8-9-10-11-21	1-8-9-11-17-18
Regular		1-8-9-11-17-18
Storage Battery		1-8-9-11-17-18

PRODUCTS	BY WHOM SOLD	BY WHOM MADE
Titanium Pigments		
"Titanox"—A (Anatase)	22	23
"Titanox"—RA (Rutile)	22	23
"Titanox"—B 30 (Barium Pigment)	22	23
"Titanox"—C (Anatase—Calcium Pigment)	22	23
"Titanox"—RC (Rutile—Calcium Pigment)	22	23
"Titanox"—L (Lead Titanate)	22	23
Titanium Sulphate Cake	22	23
White Lead		
Basic Lead Carbonates		
Carter and HTS	1-3-4-5-6-7-8-9-10-11-21	1-5-8
No. 111	1-3-4-5-6-7-8-9-10-11-21	8-9-11
No. 333	1-3-4-5-6-7-8-9-10-11-21	8-9-11
Basic Lead Silicate		
45X	1-3-4-5-6-7-9-10-11	9
Basic Lead Sulphates		
Blue	1-3-4-5-6-7-9-10-11	
Dutch Boy (White)	1-3-4-5-6-7-9-10-11	11
Whiting	8-21 See DeLore Division	Page 10

OIL PRODUCTS

Castor Oil, its derivatives and specialties	See Baker Castor Oil Co.	Page 10
Flatting Oil	1-3-4-5-6-7-8-9-10-11-21	1-8
Lead Mixing Oil	1-3-4-5-6-7-8-9-10-11	1-8
Linseed Oils		
Blown	1-5-6-9	1-5-9
Boiled	1-3-4-5-6-7-8-9-10-11	1-5-9
Dutch	1-4-5-6-9	1-9
Heat Bodied	1-5-6-9	1-9
Raw	1-3-4-5-6-7-8-9-10-11	1-9
Refined	1-5-6-9	1-9
Refrigerated	1-5-6-9	1-9
Special Processed	1-5-6-9	1-9
Liquid Drier	1-4-5-6-7-8-9-10-11	1

MISCELLANEOUS PRODUCTS

Copperas (Iron Sulphate)	23	23
Copper Sulphate	18	18
Hyposulphite of Lead (black and white)	1-9	9
Lead Acetate	1-6	
Lead Formate	A	9
Linseed Meal	1-9	1-9
MacIntyre Magnetite (Iron Ore)	23	23
Molspray	1-6	1
Oil Well Drilling Muds and Materials	See Baroid Sales Division	Page 10
Plumb-O-Sil (Precipitated Lead Silicate)	A	9
Pyrites Cinders	23	23
Sodium Sulphide—60% Flaked and Solid	23	23
Sulphuric Acid	23	23
Tribase (Tribasic Lead Silicate)	A	9
Zinc Chloride Solution (Chromated Solution)	18	18
Zinc Sulphate		
Solution	18	18
Flake	18	18

BAKER CASTOR OIL COMPANY

120 Broadway, New York, N. Y.

Products: The following list does not include all the castor oils, their derivatives and specialties, manufactured and sold by The Baker Castor Oil Company, but does cover their main lines:

Baker's Castor Oil
- Baker's AA Cold Pressed
- Baker's Crystal "O" Cold Pressed
- Baker's No. 3 Castor Oil

Baker's Castung Oils (Dehydrated Castor Oils for Varnishes and Lacquers)
- No. 103
- No. 403-101—G to H Body
- No. 403-101—Z and Z3 Body
- No. 504—U to V Body
- No. 504—Z3 Body

Baker's Processed Oils (Solvents and Plasticizers for Nitro Cellulose Esters and Ethers)
Baker's P Line Alkyl Ricinoleates (To impart flexibility to pyroxolin compounds)
Baker's AN Series (For plasticizing water finishes—glue, casein, shellac)
Baker's Ricinoleic Acids (Raw Materials for Alkyd Resins)

BAROID SALES DIVISION

NATIONAL LEAD COMPANY

830 Ducommun Street, Los Angeles, Calif.
1113 Second National Bank Building, Houston, Texas
502 Tulsa Building, Tulsa, Okla.

Products: The following list is representative of the products handled by this Division:

- Anhydrox
- Aquagel
- Baroid
- Baroco
- Barium Sulphate
- Barytes
- Bentonite
- Fibertex
- Glass Makers Barite
- Impermex
- Micatex
- Smentox
- Stabilite
- Zeogel

DE LORE DIVISION

NATIONAL LEAD COMPANY

Carondelet, St. Louis, Missouri

Products: The following list is representative of the products handled by this Division:

- Barium Sulphate
- Barytes (Refined Water Ground)
  - Foam-A
  - Baryta-White
- Blanc Fixe
- Calcium Carbonate
- Extender Pigments
- Fillers
- Mineral Primers
- Whiting
  - Verablanc
  - C-C-O-White

Physical Properties

Certain physical properties of white lead are shown in the following table:

Bulking Values	
Pounds per solid gallon	56 to 57
% Light Reflection	92
Oil Absorption	8 to 15
*Tinting Strength	100 to 220
Hiding Power	
Sq. Ft. per lb. over black	15 to 23

WHITE LEAD IN PAINT

As is well known white lead is used extensively in paint, particularly in exterior house paint. Usually this type of paint is a mixture of pigment which is solid and of linseed oil which, of course, is liquid. The drying of a paint takes place when the liquid portion solidifies. This is caused by chemical changes, mostly oxidation, which are induced by the atmosphere. However, this oxidation reaction does not just stop when the paint is dry but keeps on going. Continued oxidation of any organic material such as linseed oil eventually causes it to break down.

Films consisting of linseed oil alone fail quite rapidly. In fact, it is not possible to make a linseed oil paint of reasonable durability if nothing is done to reduce the rate of destruction to which the oil is subject.

In order to retard the failure of the oil, white lead is used. White lead is reactive, that is to say, it combines with linseed oil forming more stable compounds, thus delaying the destruction of the oil.

Some of these compounds are lead soaps which, in addition, serve other purposes. They possess a unique particle structure and consist of a series of radiating rods growing from a central core. They are flexible and interlaced in a paint film, they provide strength and flexibility as well as adhesion.

Another result of white lead's affinity for linseed oil is that they mix very readily. This is important in the paint factory where it contributes to the ease of making paint.

White Lead's Contributions to Paint

White lead also possesses substantial hiding power and excellent whiteness. The fact of the matter is that white lead adds more desirable qualities required in a good paint than any other white pigment can provide. The properties which white lead contributes to a paint may be summed up as follows:

1. Mixing and grinding ease
2. Package stability
3. Hiding
4. Brushability
5. Leveling
6. Drying action
7. Whiteness
8. Film strength
9. Flexibility
10. Tint retention
11. Adhesion
12. Gloss
13. Weather resistance
14. Fool-proofness

All these qualities add up to what may be termed "fool-proofness," a contribution of major importance to paint. Moreover, it explains why white lead is the only white pigment which by itself, with a suitable vehicle, will produce a paint of outstanding quality.

Other Uses

White lead is used for other purposes. They include the manufacture of pottery, colors, caulking compounds, putty, heavy duty greases and special adhesives and cements.

*Based on standard sample Dutch White Lead 100

COLORED PIGMENTS

The colored pigments used in paints may be divided into two classes, natural pigments and chemical pigments. The natural pigments are produced by processing colored crude ores and this consists of grinding to reduce particle size, drying to remove moisture and in some cases calcining to dehydrate and oxidize the ores. The chemical pigments are made by combining chemicals to form the desired pigments.

The following table lists the more common colored pigments, shows whether they are natural or chemical and indicates the manufacturing process used to produce them.

ORANGE		
Chrome Orange C	Chemical	Precipitation of basic lead chromate.
Orange Mineral	Chemical	Roasting white lead or litharge.
RED		
Indian Red	Chemical	Calcining ferrous sulfate.
Red Iron Oxide	Chemical	Precipitation of iron hydroxide and calcining.
Toluidine	Chemical	Precipitation of organic coal-tar compounds.
Venetian Red	Chemical	Co-precipitation of hydrated iron oxide and calcium sulfate, followed by calcining.
BLACK		
Bone Black or Drop Black	Chemical	Burning bones.
Carbon Black	Chemical	Burning gas.
Iron Ixoide Black	Natural	Grinding magnetite.
Graphite	Chemical	Heating coke to high temperature.
Lampblack	Chemical	Burning oil.
Precipitated Black Oxide	Chemical	Precipitation of iron oxide followed by oxidation.
BLUE		
Phthalocynine	Chemical	Roasting copper and phthalonitrile.
Prussian	Chemical	Precipitation of ferric ferrocyanide.
Ultramarine	Chemical	Calcining siliceous materials.
GREEN		
Chrome Green	Chemical	Precipitation of chrome yellow with prussian blue.
Chromium Oxide	Chemical	Roasting potassium dichromate.
Phthalocyanine	Chemical	Chlorination of phthalocyanine blue.
YELLOW AND BROWN		
Burnt Sienna	Natural	Calcination of raw sienna.
Burnt Umber	Natural	Calcination of raw umber.
Chrome Yellow	Chemical	Precipitation of lead chromate.
Hydrated Iron Oxide	Chemical	Precipitation of iron hydroxide, followed by oxidation.
Ocher	Natural	Grinding ore lower in iron content.
Raw Sienna	Natural	Grinding ore higher in iron content.
Raw Umber	Natural	Grinding ore containing iron and manganese.
Van Dyke Brown	Chemical	Precipitation of iron hydroxide followed by oxidation.

Colored pigments are sold as dry powders or are ground into paste with linseed oil or some other vehicle. The linseed oil pastes are called "colors in oil." If the color is ground in a Japan varnish, the paste is called "Japan color" or "superfine color."

Colors in oil are used principally by painters for tinting or for making colored paints. Dry colors are used by manufacturers of paints, inks, linoleums, calcimines and other water paints. Japan colors are used by sign painters, and, to a limited extent, by painters for tinting enamels.

Dutch Boy Wonsover

This line of one-coat wall finishes is outstanding in its field:

1. Dutch Boy Wonsover not only gives one-coat coverage but it is a real oil flat paint that can be washed like new.
2. It requires no priming coat. It goes on right over wall board, brick, aged unsized plaster, previously painted wall and woodwork surfaces and even wall-paper and water-mixed paints.
3. Dirt, fingermarks, smudges and even grease can be removed easily. They do not sink into the surface because Dutch Boy Wonsover is a real oil flat paint. Therefore it can be washed again and again with soap or a reliable wall cleaner.
4. Easily applied with either brush, roller or sprayer—flows and levels out to an even, rich-looking flat finish.
5. Sets dust free in a few hours—dries hard overnight.
6. Leaves no unpleasant after-odor.
7. The line includes the more popular present-day tints for interior walls, plus white.

PAINTING TIPS

1. Before painting with Wonsover, loose or scaling particles of the old finish coat should be removed.
2. Cracks should be filled with patching plaster and spot-coated with Wonsover.
3. Finer cracks or bad stains should receive a first coat of Wonsover a day before putting on the final coat.
4. The paint should be stirred thoroughly.
5. For spray application it may be necessary to add a small amount of mineral spirits or turpentine.
6. No glue size should be used on unpainted plaster or wallboard.
7. Freshly plastered surfaces should be allowed to age for a reasonable time in order to avoid "hot spots."
8. Allow about one gallon for each 500 square feet.

WARNING

Dutch Boy Wonsover should not be used on furniture. Neither is it designed as an under-coater for enamel although it is a perfect primer for interior gloss wall paint.

BLACK AND YELLOW LINE

The important items in this line are, of course, Dutch Boy Soft Paste White Lead and Dutch Boy Pure White Lead Paints, the latter including a ready-to-spread Exterior Primer and an Outside White. These are the greater volume and profit producers in the black and yellow line.

The supplementary Dutch Boy products in the line were designed especially to assure the best possible painting jobs with Dutch Boy Soft Paste White Lead. Moreover, these companion products make it possible for the painter who "mixes his own" to handle *any* painting job, exterior or interior, on *any* building material with the few items in the line. To the painter the black and yellow line in his shop means the economy of low inventories and practically no wastage of materials.

To the dealer the stocking of the black and yellow line means that with a small investment he can satisfy *any* painting need of his customers. Moreover, its high rate of turnover and satisfactory markup make the line attractive to the dealer from a profit angle.

In the following pages we will discuss the end-use advantages of each item in the black and yellow line of Dutch Boy products, many of which will be of sales value to the dealer in contacting his customers.

Dutch Boy Soft Paste White Lead

Constant experimental work by our Laboratories and resulting improved manufacturing methods and equipment make it possible for the salesman or dealer to include current improvements among the many end-use advantages of Dutch Boy Soft Paste White Lead:

1. Stepped Up in Whiteness
   a. Whiter white jobs.
   b. Cleaner, truer, tinted jobs.
2. Heavier and Better Body Than Ever
   a. Increased hiding.
   b. Smoother brushing.
   c. Solid, evenly hidden jobs.
3. Convenience
   a. Pours from the keg.
   b. Mixes readily with paint oils and varnishes.
   c. Easily made into paint.
4. All-Purpose
   a. Makes paint for *all* coats on *all* surfaces.
   b. White or easily tinted to exact color wanted.
5. Economy

   Figured by the gallon, by the yard, by the job or in years of service, paint made from Dutch Boy Soft Paste White Lead is high in quality and low in cost.

Dutch Boy Exterior Paint Oil

(LINSEED REPLACEMENT OIL)

Dutch Boy Exterior Paint Oil was developed during the last war to conserve linseed oil needed by the armed forces and for food purposes, but it proved to be so satisfactory when used with white lead for gloss finishes that it was decided to continue marketing it in peace times. The oil is a careful blend of pure linseed oil, mineral spirits and drier—nothing else. Part of the oil is heat-treated or polymerized. Important facts about the product are:

1. Added to paste white lead, it produces a typical white lead and linseed oil paint film—durable and economical.
2. It may be used any place where it has been the practice to use raw or boiled linseed oil in paint—to thin white lead, red lead, other pastes, paints, etc.
3. It is designed to give to paints the same general working properties as those formerly made with straight linseed oil.
4. There is ease of brushing and good hiding.
5. Leveling qualities are as good, if not better, than when paint is made with straight linseed oil.
6. Setting up is a little more rapid due to the higher volatile content but this has the advantage of reducing dirt collection during the drying period.
7. Since the product contains drier, none need be added.
8. Standard white lead painting formulas may be followed except for the finish coat. This requires a little less vehicle and should include a small amount of turpentine.

Dutch Boy Liquid Drier

Advantages in using Dutch Boy Liquid Drier in paints containing raw linseed oil:

1. Best insurance against poor drying tackiness, dirt collection and early chalking.
2. Especially made to avoid surface drying and resulting wrinkling of the paint.
3. Does not curdle or discolor white paint.
4. Economical because one pint to six gallons of white lead and raw linseed oil paint gives the best results.

NOTES

1. No drier needed in white lead mixed into paint with boiled linseed oil or Exterior Paint Oil (Linseed Replacement Oil).
2. No drier needed in Dutch Boy multiple pigment paints.

Dutch Boy Lead Mixing Oil

When used with white lead, Dutch Boy Lead Mixing Oil produces a glossless paint that has a number of advantages that appeal to the applicator and property owner:

1. Produces smooth, velvety, durable flat finish for interior surfaces—plaster, wallboard or woodwork.
2. Produces weatherproof, solid-looking flat finish for exterior surfaces—wood shingles, brick, stucco, concrete or stone.
3. A complete vehicle—nothing need be added.
4. Mixes, tints and applies easily.
5. Can be used for all coats on new plaster or wallboard—it seals as well as decorates.
6. Makes ideal enamel undercoater because of excellent sealing and flowing qualities.
7. Can be stippled to an attractive orange-peel effect.
8. Retains good appearance under repeated washings.
9. When tinted with Dutch Boy Colors-in-Oil, does not wash out or streak under repeated washings.
10. With white lead on exteriors it wears down slowly and evenly by gradual chalking.
11. With its superior spreading rate and durability, Dutch Boy White Lead and Lead Mixing Oil paint is low in cost when figured by the yard, by the job or in years of service.

Dutch Boy Flatting Oil

Among the important uses of Dutch Boy Flatting Oil are:

1. With Dutch Boy White Lead to make a sharp, well-defined, stippling flat paint.
2. This stipple has exceptional beauty of finish and because of its texture and hard matte surface is preferred by craftsman as a ground for decorative painting.
3. Dutch Boy Flatting Oil is used extensively for mixing decorative glazes with Dutch Boy Colors-in-Oil because it requires no varnish protective coat.
4. It mixes readily with oil colors to produce superior wood stains.
5. Dutch Boy Flatting Oil is widely used by painters for thinning interior paints.

Dutch Boy Colors-in-Oil

Here is what consumers get in Dutch Boy Colors-in-Oil:

1. High tinting strength—a little color tints a lot of paint.
2. True tone—they make clean, sharp tints true to shade or tone.
3. Quick-mixing—so soft and finely ground they disperse in paint easily and quickly without streaking.

And here is what they save:

1. Trouble—clear, clean tints.
2. Time—quick-mixing.
3. Money—less color needed.

TIPS FOR USERS

Here are some very practical hints you can pass along to customers who buy Dutch Boy Colors-in-Oil:

FRENCH OCHRE: A permanent, clear, brownish yellow. Produces attractive red brown or tan tints of good durability.

RAW SIENNA: A permanent brownish yellow. Widely used to produce light cream tints and tan shades with a soft green undertone. Used with Chrome Yellows in making distinctive creams. With Raw Umber it produces warm grays. Very effective as a glazing color.

BURNT SIENNA: This very permanent red brown color is used principally in glazes and oil stains, such as cherry and mahogany. In tinting, it is used to advantage to impart the warmth lacking in other coloring materials.

RAW UMBER: A permanent brownish gray. Used extensively for graying bright tints. Excellent as a glaze for antique finishes. Many users prefer it to lampblack for producing gray tints. It is often used alone or in combination with Raw Sienna to make oyster whites.

BURNT UMBER: A permanent reddish brown of gray cast. The permanency of the color makes it ideal for use in exterior stains such as those for shingles. Also used extensively in making pleasing shades of warm browns and grays. A most dependable color for glazing or graining purposes.

LAMPBLACK: The most permanent of all colors. An essential color for making gray shades. Also used in combination with other colors to impart gray effects.

C. P. CHROMIUM OXIDE: A grayed yellow green. The most permanent of the green colors. Thinned with the proper vehicle, it is often used alone as a sash and trim color. It is of course used in lighter shades when let down with white for the same general purposes.

C. P. CHROME GREENS: Bright, permanent, chemically-pure colors of very high tinting strength. Available in three shades—Light, Medium and Dark. Frequently used alone with a

suitable vehicle to produce sash and trim colors. A wide range of sharp, clear tints are obtainable with these colors.

CHROME GREENS: Reasonably permanent, bright, green colors available in three shades—Light, Medium and Dark. They are used for the same general purpose as the C. P. Chrome Green Colors, although a greater quantity is required to get a given tint.

C. P. CHROME YELLOWS: Bright, permanent, chemically-pure colors of very high tinting strength in three shades—Lemon, Medium and Orange. Most extensively used for tinting purposes. Produce a range of very clean yellow and orange tints of good permanence. The orange shade is often used as a straight decorative color.

PRUSSIAN BLUE: A strong blue most widely used for tinting and glazing. Its permanence is good on interior exposures.

DUTCH BOY BLUE: A clean, bright blue of good permanence. Especially designed to withstand exterior exposure. Used as a tinting color the tints obtained are pleasing blues of greenish cast. So formulated that when reduced with an equal volume of raw linseed oil, finished paint is obtained which is highly desirable for trim and shutters.

BULLETIN RED: A permanent red used extensively for store front signs, either by itself or intermixed with Indian Red or Black. Fairly permanent when used for tinting.

ROSE RED: A rich red intended for producing rose tints with white. Also a warm toner in combination with other colors in making tints.

VENETIAN RED: Very permanent. Used widely as the pigment part of finish coat paints for brick surfaces. An excellent tinting material in combination with other color materials for either interior or exterior paints.

TUSCAN RED: Fairly permanent. Produces soft grayed rose tints with white. Can also be used as a straight color with flat or gloss vehicles.

INDIAN RED: A permanent color. Makes a desirable maroon trim color for exterior use. Develops soft blue red tints when used with white. Used with Bulletin Red to make "India Red."

PART IV

PRACTICAL AND TECHNICAL INFORMATION

EXTERIOR HOUSE PAINT

Adapting Dutch Boy Products to PAINTABLE SURFACES

WHITE LEAD

OTHER WHITE HIDING PIGMENTS

COLORED PIGMENTS

WHITE BASIC LEAD SULFATE

RED LEAD

ORANGE MINERAL

ZINC CHROMATE (*Zinc Yellow*)

BLUE BASIC LEAD SULFATE

DRYING OILS

PAINT THINNERS

RESINS

EXTERIOR HOUSE PAINT

When the word "paint" is mentioned to a layman the chances are that in his mind a picture arises of a tin can containing a semi-viscous material or he thinks of a white or colored shiny surface. This is not a paint man's conception of paint or at least it should not be.

The fact that paint is fluid and put up in cans is incidental and temporary and paint does not perform its function in that form. Although paint is produced as a liquid, this only serves to allow application. It is as a film formed on the surface of an object that paint performs its services as a protective and beautifying agent.

Chemical Changes

Exterior house paint consists of a mixture of pigment which is solid and of drying oil which is liquid. After such a paint has been applied the conversion of the liquid coat into what is known as a dry film is due to chemical changes taking place within the oil and causing its solidification to the extent that a film is obtained. These chemical reactions do not stop after the paint has dried but continue until the film's final destruction. This, as well as the fact that a paint film may be subjected to other influences which may act chemically on the individual constituents of the film, explains the importance of a paint's composition.

Physical Structure

However, a paint film's behavior is not dependent alone on its chemical composition. Its physical structure is of equal importance. It must be borne in mind that a paint film is a three dimensional entity. It has length, width and depth, and occupies a volume. The manner in which the various ingredients are distributed physically and build up a film (in other words, its structure) may have important bearing on its performance. This may be illustrated by drawing comparisons with other more obvious structures. For instance a steel bridge may be weak because of faulty construction. On the other hand a wooden bridge may be strong because of sturdy construction. By the same token a paint film may be resistant notwithstanding the presence of a binder which by itself is easily destroyed, while it is possible to obtain weak films with practically indestructable pigments.

To sum up: a paint film's performance depends on its structure as well as on its composition. These factors are inter-related and therefore cannot be separated in explaining the performance of a film or in predicting its possible behavior.

PAINT FILM REQUIREMENTS

The requirements which a paint film on the exterior of wooden houses has to meet are many and varied. Such a film has to be opaque and smooth. It has to adhere to the surface on which it has been formed. It has to have sufficient thickness to provide adequate protection. In addition it has to have durability and maintain good appearance during its period of service.

In the past, films have been built up with three coats of paint. In the order of their application they provided:

1. Adhesion.
2. Hiding and film thickness.
3. Appearance and film protection.

In recent years paint systems have been developed in which two coats of paint produce a satisfactory film. The first coat of this type of system combines the properties of the first two coats mentioned under the older method of film construction.

TWO-COAT SYSTEM ADVANTAGES

Compared to the older three-coat system the two-coat system offers many advantages, one of the most important of which is its economy, due to the fact that the main cost of a paint job is labor for application. The following discussion will deal exclusively with the two-coat method of film construction.

It is obvious that since the two paint coats serve a different purpose their composition and structure must vary. However, they should be so constituted that they are mutually compatible. In order to formulate paint intelligently it is necessary to consider all factors involved in such a manner that a picture may be developed of the paint film's ultimate physical appearance. Without this it will not be possible to predict its probable behavior and determine its suitability for the purpose for which it is intended. Consideration should be given first to the structure of the film which a paint is required to produce. Then the individual ingredients may be introduced.

STRUCTURE

Since a paint film consists of solid materials (pigments) suspended in the solidified vehicle, the quantities of each of these major constituents to be used in a paint should be determined first. Variations in the proportions of these elements may produce marked differences in the physical appearance of a paint film and also differences in behavior and performance.

To illustrate some of the possibilities which may result, a comparison may be made between paint films containing higher or lower pigment content. In the former, enough pigment may be present so that some of the particles protrude through the surface and produce a flat finish. When the pigment concentration is low the pigment particles may all be covered by the oil content and form a continuous smooth surface producing a glossy finish. Naturally the behavior of films of different pigment concentration may differ substantially on outside exposure and in their resistance to the elements.

The following drawings give some idea of what such films might look like in cross section:

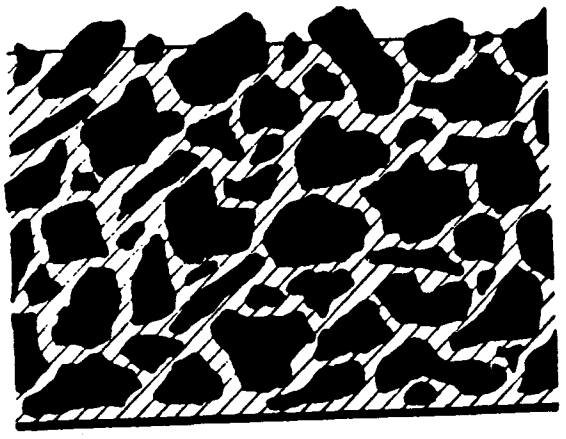


*Figure 1

Cross Section of Flat Paint Film

Note that pigment content is sufficiently high to permit particles to protrude through the surface of the film and produce a flat finish.

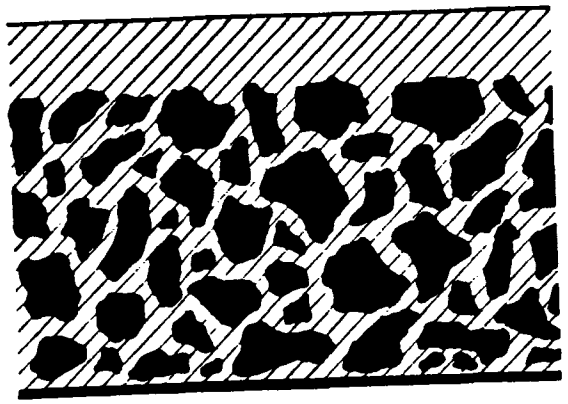


*Figure 2

Cross Section of Exterior House Paint Film

Note that the lower pigment content allows the oil to cover the particles and form a glossy finish.

*Slanted lines represent oil content and irregular black spots the pigment particles.

In order to be able to draw the foregoing pictures the volume proportions occupied by pigment and vehicle have to be known. Since materials of such great difference in specific gravity are involved, weight figures would not supply the necessary information. For instance, a mixture of half pigment and half vehicle by weight would not give a paint film in which half the volume would be occupied by each. The average specific gravity of pigment is somewhere in the neighborhood of 4.50 and of vehicle *.900. This means that under those conditions 50% pigment by weight would equal only 16⅔% pigment by volume.

PV EXPLAINED

Naturally with each variation in specific gravity of one or more of the ingredients this volume figure would change, notwithstanding the maintenance of equal weight proportions. In order to avoid confusion and to obtain a mental picture of the film which a paint might produce, the proportion of pigment is often expressed in a percentage by volume calculated on the total non-volatile ingredients in a paint. The latter comprise all those materials which remain in the film after the paint has dried. They include the pigment and the non-volatile portion of the vehicle. This figure is designated as PV, indicating a pigment—non-volatile vehicle ratio. For instance, a paint having a PV of 30 means that 30% by volume of its film forming constituents is represented by pigment.

Since the primer of a two coat paint system is to provide among other things film thickness it should form a dense coat and a high pigment volume is required. Moreover, a large volume of pigment in such a paint can be used to obtain a flat or semi-flat finish which produces compatibility with the next coat and provides a good bond so that the two coats of the system may act as one film.

Successful PV's for Primers

The most successful pigment concentration for first coats seems to lie between PV's of 35 and 40. However, it is obvious that such pigment-non-volatile oil mixtures are of rather thick consistency and in order to be able to apply such paints, fairly large proportions of volatile are required to thin the paint to brushing consistency.

For the finish coat the requirements are different. This is the coat which provides the outer surface to a paint film, requiring resistance to the weather or other outside influences. In addition it contributes the beautifying qualities which demand sufficient hiding and most often a pleasing glossy finish.

Successful PV's for Finish Coats

The pigment is responsible for a major portion of these qualities. It provides protection but cannot continue to do so unless it is held in place by the binder, the non-volatile vehicle. A finish coat has to be so constructed that the binder will enable the pigment to perform its function. A larger proportion of vehicle is required, which at the same time produces the glossy finish. However, too large a proportion of oil introduces conditions which are detrimental.

Although the oil keeps the pigment in place the pigment protects the oil. In films with high oil content the pigment has a tendency to recede into the depth of the film and in so doing cannot be in close enough proximity to the surface layer of oil to protect it. A most effective balance in pigment and non-volatile vehicle for finish coats is between the general limits of PV 28 to 31.

*Specific gravity of water is 1.000.

Application of a priming coat followed by a finish coat of the structure described in the foregoing paragraphs will provide a continuous paint film with a solid base, sufficient thickness and a good smooth outer surface.

COMPOSITION

Within the limits set by the structural requirements, specific raw materials are introduced to obtain the desired physical structure and chemical composition of the paint film. These include pigments and vehicles which will be discussed in subsequent paragraphs.

PIGMENT

As hitherto stated a pigment can increase the durability of a vehicle. This increased strength may be due to either physical or chemical action or both.

Physical protection includes the ability of some pigments to shield a vehicle from the intense action of the destructive rays of the sun. This type of protective process is generally associated with colored pigments.

Chemical protection can be provided by those pigments which will react in specific ways with the vehicle and form more resistant compounds.

In white exterior house paint, the action of the pigment which contributes most substantially to the extension of the life of the vehicle is generally of a chemical nature. White pigments may be divided into two groups—reactive and non-reactive. The reactive pigments, by chemical combination, increase considerably the durability of the vehicle, which in outside house paint consists mostly of linseed oil. The reactive pigments include white lead and zinc oxide.

White Lead

In another chapter white lead's chemical reactivity and function in a linseed oil paint have been described. As it reacts with the oil it delays its ultimate destruction and also forms lead soaps which provide adhesion and flexibility to a paint film.

Zinc Oxide

This pigment also reacts with linseed oil forming soaps. These soaps have their own typical characteristics. In particular they are hard and for that reason zinc oxide forms hard and brittle films. Moreover, zinc oxide in a paint film will eventually form water-soluble derivatives which cause so-called "washing."

The non-reactive pigments have other functions to perform.

Titanium Dioxide

Titanium dioxide's most valuable asset is extremely high hiding power. In fact, in a multi-pigment paint, it is used mainly to build up the hiding to the required degree.

As titanium dioxide in its simplest form is entirely non-reactive it is easily subject to chalking. In the presence of zinc oxide which forms water soluble compounds, titanium dioxide provides a paint with so-called self-cleaning properties.

Extender Pigments

This generic name is applied to non-hiding pigments, such as barytes, magnesium silicate (asbestine) and whiting. Most of these are inert although a few are reactive. The reactivity of the latter, however, is very mild and hardly ever is it a consideration for their use.

The function of the extender is principally in filling up available space in the pigment phase to reach the required volume not occupied by the other pigments used. Extender pigments make it possible to do this economically, because their cost is very low. Moreover, extenders may act as plasticizers in the paint film. They usually produce soft films and their presence helps avoid excessive hardness.

The white pigments just mentioned are those generally used in formulating an exterior house paint. It must be added, however, that many modifications in each of these groups are available and that their correct choice may have important bearing on the performance of a paint as well as on that of the paint film.

VEHICLE

A vehicle can be divided into two parts: non-volatile and volatile. The first remains in the paint coat after it has reached the so-called "dry" stage and consequently must possess film-forming properties. The volatile leaves the drying paint by evaporation and is used to impart sufficient fluidity so that the paint may be applied.

Linseed Oil

Linseed oil is the most widely used material as the film-forming ingredient in exterior house paint. It is available in many modifications, each one being chosen for use in paint to meet particular circumstances and requirements.

The different grades of normal viscosity may vary in acid number. Oils of different acid number are selected in order to meet production requirements as well as to control soap formation.

Differences in viscosity are taken advantage of to give a paint body and gloss whenever necessary. Moreover, oils of heavy viscosity do not readily penetrate porous surfaces and can contribute to the sealing qualities of a paint.

Volatile

The most widely known volatile in paint undoubtedly is turpentine. However, it is not the most generally used by the paint manufacturer. Most paints contain so-called mineral spirits as volatile thinners. They are petroleum derivatives which are produced in many grades varying in specific gravity and the speed with which they evaporate. These qualities may influence substantially the application properties of a paint and consequently the fact that so many types are available provides the paint manufacturer with another means of adjusting his products.

FORMULATING PAINT

Formulating a paint consists of the selection of the proper type of raw materials and the proportions in which they shall be used. Naturally many factors have to be considered. In addition to the purpose for which the point is designed, the conditions of application, etc., personal preference enters into the situation most prominently. Moreover, it should be understood that in general all ingredients contribute specific characteristics and the desire to accentuate one particular property in a paint of necessity results in a reduced opportunity to impart other qualities.

For that reason a paint formula of a high grade paint usually represents a compromise in ideas, the purpose being to design a paint which most completely suits the expected requirements. It is understandable that there are so many different paints of varying compositions on the market, since so many factors have to be considered and since opinions on their importance and the manner in which the many requirements may be met vary so widely.

It is always tempting to judge paints from the formulas given on the labels on the cans. However, as hitherto explained, it is impossible to obtain a picture of the structure and composition of the film from the weight figures usually given. Although translation into volume proportions would help, even that does not disclose full information.

The fact of the matter is that no one should ever venture to express an opinion of the quality of a paint while only the general formula is known. Only experts familiar with all details could take a chance at predicting a paint's behavior.

In selling paint, therefore, stress should not be laid so much on its composition as on its known performance, obtained from observation of its behavior under practical conditions.

WHITE LEAD

White lead, or basic lead carbonate, is a white opaque pigment consisting essentially of a double compound of lead carbonate and lead hydroxide. It is made by a number of different processes, in all of which metallic lead is combined with oxygen, carbon dioxide and water to form basic lead carbonate.

The commercial white leads made by the various processes show variations in chemical composition and, consequently, in physical characteristics.

Exposure of metallic lead to the influence of the atmosphere will form some white lead. This may be observed when a lead pipe or a sheet of lead has been out in the weather for some time. A very thin coat of a white substance will have appeared, and this is basic lead carbonate. Since this process of nature is corrosion and not erosion, there is no wearing away of the lead pipe or sheet lead and the action of the oxygen, carbon dioxide and water in the atmosphere on the lead stops as soon as the thin coat of basic lead carbonate is formed. Such coatings have been known to shield lead objects from further changes for centuries, demonstrating the unusual protective qualities of white lead.

Depending on nature to produce white lead, however, would take much too long and prove very costly. The formulation of white lead is speeded up by using acetic acid. In the presence of acetic acid, metallic lead, oxygen and water will form a compound called basic lead acetate which readily reacts with carbon dioxide to produce basic lead carbonate or white lead. Only a small amount of acetic acid is needed as it is not consumed and is not part of the final product. It is released when the basic lead carbonate is formed and thus can take part repeatedly in the reaction.

ALL PROCESSES BASICALLY THE SAME

All processes used for the manufacture of white lead are based on the foregoing principles. The various methods of production show differences in the form of the raw materials, the method of introduction into the process and the equipment employed.

The raw materials required are lead, acetic acid, carbon dioxide and water. The lead used is generally of a highly refined grade known as corroding lead.

The acetic acid used has varied through the ages. Many centuries ago sour wine was employed; later, vinegar was used. Nowadays, refined acetic acid of varying concentrations is used.

Carbon dioxide is formed as a gas when carbon compounds oxidize or burn which may take place under many varying conditions, from rapid combustion to slow fermentation processes. When sour wine or vinegar was used as a source of acetic acid, tan bark supplied the carbon dioxide. At present, carbon dioxide from burning coke is utilized in several manufacturing processes.

Water is present in all of the processes. The acetic acid solution contains water. Where carbon dioxide gas is used which has been generated in a coke fire, the water is added as such or as steam. Finally, in some processes the reaction actually takes place in water.

In the different processes for manufacturing white lead the equipment is adjusted to the form in which the raw materials are introduced and the way the chemical reactions are produced.

Dutch Process

The Dutch Process is one of slow corrosion generally requiring 100 to 120 days. Lead buckles or perforated discs of lead are placed in corroding pots, resting on a narrow ledge or shoulder part way up the inside wall of the pot. In the bottom, a small amount of dilute acetic acid is placed. These pots are placed in rows on a floor covered with spent tanbark which has been wet down thoroughly. Planks are laid on top of the pots and another layer of pots containing buckles

and acetic acid is placed on top of these planks and the procedure is containued until a stack of 10 or more layers has been built up. In these stacks, the fermentation process of the tan-bark supplies the heat and the carbon dioxide. The heat is sufficient to volatize the acetic acid which in conjunction with air and water forms basic lead acetate, which is in turn converted to basic lead carbonate by the action of the carbon dioxide from the tan-bark.

This method of manufacture, as well as the product it produces, was considered standard for many years. However, new processes have been developed, short descriptions of which follow.

Carter Process

In the Carter Process the white lead is formed in large, slowly rotating cylinders. The lead is introduced in the form of fine powder. Carbon dioxide is admitted through the head of the cylinder in the form of gas and a weak solution of acetic acid is sprayed into the cylinder at intervals. As the cylinder revolves, finely divided lead is carried up on the inside wall and rolls to the bottom so that new particles are continually exposed to the action of the corroding agents. Thus, the entire batch reaches a completely corroded state in from 12 to 14 days. In addition to the saving in time the process lends itself better to the exercise of closer control.

Thompson-Stewart Process

Metallic lead is subjected first to an oxidation process. The resulting product, made into a water slurry, is placed in a tank. After treatment with air and carbon dioxide in the presence of small quantities of acetic acid, white lead is precipitated.

This process is National Lead Company's most recent development. It is very fast and permits strict control. The operation is flexible and different types of white lead, each of particular uniformity, can be manufactured in this way.

Euston Process

Metallic lead is melted and run into water where it forms a mossy, spongy mass of "feathered" lead. This spongy lead quickly oxidizes and when lead acetate solution is added, the oxide is dissolved and the basic lead acetate is formed. This lead acetate solution is clarified and treated with carbon dioxide to form basic lead carbonate.

Sperry Process

This is an electrolytic process which is carried out in a concrete cell having a lead anode and iron cathode separated by a porous diaphragm. The lead anode is immersed in sodium acetate solution and the iron cathode in sodium carbonate solution. Under the influence of the current, basic lead carbonate forms near the surface of the lead anode. The solution flows continuously from the anode removing the white lead as it is produced and depositing it in regular settling tanks.

Finishing Processes

After the white lead has been formed by any one of these processes, it must be carefully washed, screened and in some instances, ground. It is then in the form known as white lead water pulp.

The white lead water pulp may be either dried and ground for delivery to the paint maker, ceramic manufacturer or other user as dry white lead, or it may be mixed with linseed oil and made into white lead paste. When linseed oil is added directly to the white lead water pulp, the white lead has such great affinity for the oil that the latter displaces the water. It is not necessary to first dry the white lead to make white lead and oil.

COMPOSITION OF WHITE LEAD

The manufacturing processes in use today for the production of white lead make it possible to produce a number of types varying in physical properties as well as composition. Most commercial white leads have a lead carbonate content within the range of 62 to 70 per cent, well within the limits allowed in Federal and A. S. T. M. specifications.

Boston Lead Company Has Ups and Downs

There is an interesting bit of industrial history back of the name under which our Boston Branch conducted its business from 1928 to December 20, 1945; namely, the National-Boston Lead Company. It is the story of a company that tenaciously retained its corporate name—Boston Lead Company—despite a failure, a reorganization, an amalgamation and the final consolidation with the National Lead Company of Massachusetts.

It was in 1829 that the Boston Lead Company was incorporated, the first white lead business in New England and the second in the United States to adopt that form of organization. There were 25 stockholders subscribing to 52 shares at $1,000 each. From the start the company manufactured lead pipe, sheet lead, red lead, litharge and white lead.

It was in 1863 that the company suffered a disastrous fire, but the directors voted to rebuild.

By 1872 the capital stock had been increased to $500,000 and the company prospered until reverses came in 1878 when it failed. The following July it was reorganized as the Boston Lead Mfg. Company and that same year, J. H. Chadwick, one of its executives, left the Company to organize the Chadwick Lead Works.

National-Boston Organized

Both companies prospered, but in 1901 they consolidated under the name of the Chadwick-Boston Lead Company. The Company was purchased by the United Lead Company, which in 1926 became a subsidiary of National Lead Company. It was not until 1928 that the Chadwick-Boston Lead Company was consolidated with the National Lead Company of Massachusetts under the name of The National-Boston Lead Company. On December 20, 1945 the name of our Boston Branch became officially The National Lead Company of Massachusetts.

From the Boston Lead Company came one of the Directors of National Lead Company—A. H. Broderick, who started with that company in 1876, was President of the Chadwick-Boston Lead Company and upon the latter's consolidation with the National Lead Company of Massachusetts was made Manager, which position he held until his death.

CINCINNATI

Oldest Founders in Midwest

Turning to the white lead manufacturing history of the Middle West, we find that the first of our founding companies to be organized in that section of the country were located in Cincinnati, Ohio. These were the Anchor White Lead Works and the Eckstein White Lead Company, which also have the distinction of being the first *successful* white lead concerns to be established in Cincinnati.

While not one of Cincinnati's pioneer manufacturers, the first successful white lead concern was established in 1828 by Roy MacChandless, a Scotsman who had been connected with the manufacture of white lead in Scotland and Richard Conkling, a Cincinnati painting contractor. Later this concern became the Anchor White Lead Company.

Anchor as a Trademark

The two men formed a co-partnership under the firm name of MacChandless & Conkling. They erected a small factory and lead bins on a site later used for the United States Post Office. They adopted an anchor as their brand and stenciled this trademark on their kegs.

Since there was no tanbark available at that time, the German process of manufacture was employed, corroding in spent manure. The vinegar used in corroding was made by the founders in their own plant from apples and beech shavings. The pig lead was cast into thin sheets in a pan, then rolled in spirals and placed in pots similar to those used in the Dutch process. The sheets were about eighteen inches long and six inches wide. The minimum time of corrosion was about forty days; the maximum sixty days.

Rival Enters Field

MacChandless and Conkling enjoyed their monopoly in the Cincinnati market for about eight years. Then, in 1836, a rival plant was erected by Townsend Hills. This concern later became the Eckstein Company.

During the next thirty years the Hills concern underwent a few changes while its rival underwent many. MacChandless had died in 1838 and the firm carried on under the name of Richard Conkling & Bros. It continued as such until 1842 when a new factory was erected and a new name adopted, Richard Conkling & Company.

In 1856 Conkling sold the business to a Robert Hogue who operated it under his name for about a decade.

Anchor Company Incorporated

In Cincinnati in 1866 the Hogue concern was purchased by A. T. and A. O. Goshorn and became known as Goshorn Bros. Eight years later, the firm was incorporated. Another member of the family, E. C. Goshorn, was taken into the firm and the name Anchor White Lead Company was adopted. In the following year a new factory, larger and with more up-to-date equipment, was erected.

Eckstein Company Incorporated

In 1865 Frederick Eckstein secured an interest in the plant founded in 1836 by Townsend Hills. This firm operated for several years under the name Eckstein, Hills & Company, and was finally incorporated in 1880 as the Eckstein White Lead Company. Three years later a modern plant was erected on the west side of Freeman Avenue between Seventh Street and the C. H. & D. Railroad, now a division of the Baltimore & Ohio Railroad.

When in 1891 the Eckstein White Lead Company became a part of National Lead Company A. T. Goshorn was elected First Vice President of our Company. The Deer Creek plant of the Anchor White Lead Company was purchased at this time, but it was operated for only a year and then closed down, all subsequent manufacturing being concentrated at the Eckstein Freeman Avenue factory.

Goshorn Made Director and Manager

In 1895 E. C. Goshorn was elected a director of National Lead Company in succession to his brother, A. T. Goshorn, and served in that capacity and as manager of the Cincinnati Branch until his death in 1924.

The business of the Cincinnati Branch of National Lead Company increased to the point where expansion was necessary so the erection of larger buildings was begun in 1907 and completed in 1914.

ST. LOUIS

Had Four Strong Founders

Lead and pelts were the two most important articles of barter and commerce for several years after St. Louis was founded in 1764, money not being in common use.

In the 1800's the manufacture of white lead, red lead and other lead products, together with lead mining, became an important industry in the St. Louis area. It was quite natural, therefore, that St. Louis should have produced four of the ten or twelve stronger companies which organized the National Lead Company. They were the Collier, Missouri, Southern and St. Louis Lead and Oil Companies.

The pioneer of our St. Louis founding companies began operations in 1837 on Clark Street, between Ninth and Eleventh, which was later to become the Collier Works. This plant was sold to Joseph Charless and Henry T. Blow in 1842.

Color Matching Lamps

Sash and trim colors and tinted paints are also finished on the second floor. The tinting materials are carefully measured and introduced. Since the exactness of shade of these paints is so very important, the Control Laboratory is equipped with the latest in color matching lamps in order to assure the desired results independent of the amount of daylight available at any time of the day or year.

Incidentally, but importantly, all manufacturing areas in the plants are equipped with the latest in fluorescent lighting.

Filling, Labeling and Packing Streamlined

After a paint batch has been checked and passed by the Control Laboratory, it is allowed to flow down to the first floor for filling, labeling and packing. After the containers are filled, they are transported on a conveyor belt on their sides to the labeling machine. When labeled, the containers are set up on end automatically and continue on the conveyor belt to the packer. The cases are sealed automatically and stacked on pallets for transportation to the warehouse on an electric fork truck.

"Palletizing" Saves Labor

The use of pallets on an electric fork truck is called "palletizing" and is a labor saving device in loading and unloading operations. The pallets look like two platforms, sturdily joined together, with sufficient space between them to permit the entrance of the fork on the electric truck. The truck is counterbalanced to permit carrying three pallets with a load weighing as much as two tons. A powerful elevator arrangement makes possible comparatively high stacking in the warehouse.

Paints the Same From Separate Plants

Paints manufactured in the East are formulated by our Research Laboratories in Brooklyn and then it is up to the Production Department to meet the specifications. A Control Laboratory is located in each factory and testing by the chemists starts with the raw materials before they are unloaded.

No finished batch of paint is released for packaging until it is approved by the Control Laboratory. Raw materials must meet four to six tests and each paint batch is subjected to seven to ten tests. In addition, our paints are under constant observation and testing by operators during each operation in the paint-making process. Moreover, due to central control in New York of both raw materials and finished products, paints from either Chicago or Perth Amboy factories will produce the same results, whether they are in white or color. The same careful control set-up is in force in the Pacific Coast paint factories.

All of which means that our salesmen can be confident that any product turned out under the Dutch Boy trademark is tops in quality.

OUR PAST PRESIDENTS

WILLIAM P. THOMPSON

President—December 8, 1891 to February 3, 1896

Upon the incorporation of National Lead Company on December 8, 1891, William P. Thompson was elected our first President.

Mr. Thompson had previously been an executive of the Standard Oil Company, which concern had helped finance the consolidation—an interest that later was absorbed by National Lead Company.

It was during Mr. Thompson's administration that the management devoted its efforts principally to the maintenance and improvement of the properties and business already acquired; to the increase of manufacturing capacity at plants best adapted to the most economical production and distribution; to the sale or other disposition of plants not so adapted; and to the standardization of methods and processes—all with a view to the reduction of operating costs and all financed out of earnings or out of proceeds of property sold.

Mr. Thompson was President until his death on February 3, 1896.

LUCIUS A. COLE

President—February 20, 1896 to August 25, 1910

Lucius A. Cole was elected the Company's first Treasurer upon its incorporation, which position he held until June 30, 1892, when he was promoted to a Vice-Presidency.

On February 20, 1896 Mr. Cole was elected President and served in that capacity until his death on August 25, 1910.

In addition to carrying on the reorganization policies of the preceding administration, the Company under Mr. Cole took its first important step in expanding its interests in the metal field by purchasing the United Lead Company and the Magnus Metal Company outright and 50 per cent of the capital stock of the United States Cartridge Company.

Other major accomplishments of Mr. Cole's administration were the purchase of the Carter White Lead Company, which added important patented and secret processes to the white lead manufacturing technique of the Company and which increased the business and profits in that product materially; the erection of a plant to manufacture steel kegs to replace the old-fashioned wooden kegs for white lead, red lead and oxides; the organization of National Lead Company of California (now our Pacific Coast Branch) to handle the Company's business West of the Rocky Mountains.

Incidentally but importantly, it was Mr. Cole who suggested that the Dutch Boy, which was created originally for use only as a character to advertise white lead, would make a good Company trademark.

WILLIAM W. LAWRENCE

President—September 15, 1910 to August 29, 1916

When the Sterling White Lead Company of Pittsburgh, Pa., was purchased in 1903, William W. Lawrence, its President, was elected Treasurer of National Lead Company on May 1 of that year. On May 2, 1907, he was made a Vice-President and on September 15, 1910, was elected President.

One of the early acts of Mr. Lawrence's tenure of office was the further expansion of the Company's white lead business by the purchase of the Matheson Lead Company, which concern since then has been dissolved.

However, probably the most notable decisions of his administration were those that interested the Company for the first time in foreign holdings and put us into the mixed paint business in a comparatively small way. These moves were accomplished by the purchase of 50 per cent of the capital stock of Williams Harvey & Co., Ltd. of England, the largest tin smelters in the world, and the acquiring of all the capital stock of the Bass-Hueter Paint Co., Pacific Coast manufacturers of varnishes and mixed paints.

Mr. Lawrence served as President until his death on August 29, 1916.

EDWARD J. CORNISH

President—September 21, 1916 to February 23, 1933
Chairman of the Board—February 23, 1933 to May 3, 1938

Edward J. Cornish entered the white lead business as the attorney for the Carter White Lead Company and on November 10, 1903 became its President. Three years later he negotiated the sale of the Carter Company to National Lead Company and on December 17, 1908 was made Manager of our Chicago Branch and a member of the Company's Board of Directors.

Mr. Cornish was elected President on September 21, 1916 and it was during his term of office that the Company made substantial progress in product diversification and in achieving sound financial standing.

The policy of product diversification has served to cushion loss of business in some fields with improved business in other fields. For example, during the 1930 Depression, the fact that we did not have all our "eggs in one basket" helped the Company materially in weathering the storm.

During Mr. Cornish's administration the Company also expanded its foreign holdings. The National Lead Company of Argentine was organized to develop our business in that important section of South America and to look after the Company's tin and tin smelting interests there. Important investments in foreign enterprises were made in England, France, Norway and Germany.

An example of astuteness just prior to the 1930 Depression was the refusal of the management to meet the demands of some stockholders for increased dividends during years when the Company earned several times the regular dividend on the common stock.

Mr. Cornish explained that the dividend rate should not be increased until the management was convinced that it could be maintained. Moreover, taking his stand practically alone among the business leaders of the day, Mr. Cornish prophesied the 1930 Depression and argued that the reserves being built up from surplus profits would be needed to continue dividends on stocks during the business slump. This promise to the stockholders was kept.

On February 23, 1933, Mr. Cornish resigned the Presidency and was elected Chairman of the Board of Directors, a position that was created for the first time in the history of the Company and which he held until his death on May 3, 1938.

FRED M. CARTER

President—February 23, 1933 to January 12, 1938

When Fred M. Carter was elected President on February 23, 1933, he brought to the position the most varied and broadest experience in the white lead business of any of his predecessors in the office.

On April 1, 1898, Mr. Carter took charge of the advertising and promotion of the Carter White Lead Company, having been induced by his uncle, Levi Carter, Founder and President, to make the change in employment from a middle-western agricultural machinery company.

In 1903 Mr. Carter was made General Manager of the Carter White Lead Company, in 1906 its Vice President and in 1910 its President. In addition to fulfilling his executive responsibilities, Mr. Carter from the first was keenly interested and unusually well-informed on manufacturing, painting and merchandising problems.

On December 21, 1911, Mr. Carter was started on his way to the Presidency of National Lead Company with his election to the Board of Directors. Then came a Vice Presidency on September 15, 1927 and six years later he succeeded E. J. Cornish, when the latter resigned as President to become Chairman of the Board.

As Director, Vice President and President, Mr. Carter was one of the staunchest supporters of research in the Company. It was due largely to his influence that our Laboratories are as well-equipped and ably-manned as they are today. The result has been the improvement of several of our old products and the addition of many new products that have contributed materially to the profits and stability of our Company.

Among several contributions that Mr. Carter's administration made to the welfare and security of the Company's employees was the establishment of an adequate pension system. Under this plan employees contribute a percentage of their salary toward the purchase of an annuity payable at the age of 65. The Company, however, contributes two-thirds of the cost, thus giving the employees the annuity at a very low rate and an adequate income at retirement.

Mr. Carter resigned the Presidency and went into retirement on January 12, 1938.

OUR CHAIRMAN OF THE BOARD

FLETCHER W. ROCKWELL

President—January 12, 1938 to April 17, 1947
Elected Chairman of Board of Directors April 17, 1947

It might be said of Fletcher W. Rockwell, Chairman of the Board of Directors, that he was born and raised in the lead industry, since his father of the same name was one of the founders, original incorporators and a Vice-President of National Lead Company, and also because he has devoted his entire business life to our Company.

Mr. Rockwell's first position of responsibility was assumed in 1896 when he was appointed Superintendent of the Southern White Lead Works in Chicago. Upon the consolidation of the Southern Company with the Shipman White Lead Works of Chicago in 1906 he became General Superintendent of the combined plants.

It was on May 20, 1920 that Mr. Rockwell was brought to New York to serve as Production Manager of the entire Company.

When he was elected to the Board of Directors on March 21, 1926, Mr. Rockwell had devoted 30 years to manufacturing problems, and it was this directorship, augmented by his appointment to the Executive Committee in 1927, that gave him the opportunity to become so well informed as he is today with *all* the activities and problems of the Company

Mr. Rockwell was elected a Vice-President on March 23, 1937 and upon the resignation of Fred M. Carter as President on January 12, 1938, he was chosen to fill the position. He was elevated to the chairmanship of the Board of Directors on April 17, 1947.

Almost from the start of Mr. Rockwell's administration as President the Company was faced with serious wartime problems, all of which were met successfully and patriotically. We can all be proud of the Company's wartime record.

OUR PRESIDENT

JOSEPH A. MARTINO

Elected President April 17, 1947

Probably the most outstanding example in our Company of what an American boy can accomplish through sheer ability alone is exemplified in the business career of our President, Joseph A. Martino.

Starting as an office boy with the United Lead Company, a subsidiary of National Lead Company, on February 24, 1916, when he was a few days short of sixteen years of age, Mr. Martino has since then held positions in our Company of a type and responsibility that have familiarized him with every phase of our business. His starting salary was $5 per week.

It was on January 1, 1927, that Mr. Martino was given his first title, that of Assistant Auditor of the United Lead Company, and about two years later was transferred to National Lead Company as Office Manager of the General Office Accounting Department.

Mr. Martino was made Assistant Comptroller in 1934 and it was while holding this position that in 1944 he was elected a Director and appointed to the Executive Committee. But it was after April 1945, when he was promoted to the Comptrollership, that he made his most rapid advance in positions of responsibility. He was honored with a Vice-Presidency in April 1946, made Executive Vice-President seven months later and elected President on April 17, 1947.

During the years following his transfer to National Lead Company, Mr. Martino served as Secretary of the Metal Sales Committee, Chairman of the Mining Committee, a member of the Manufacturing Committee, Vice-President and Director of the American Bearing Corporation, Director of the Magnus Metal Corporation and Assistant General Manager of the Magnus Bearing Division.

Mr. Martino also worked closely with Executives on various pigment and paint problems. His most important contribution in this phase of our business was Management's acceptance of his recommendation that the Company enter the mixed paint field.

It was due to Mr. Martino's advocacy that we have the profit-sharing plan, which is an important addition to the Company's policy of continually giving consideration to the welfare of its employees.

This background of wide experience and known ability, coupled with the obvious confidence in which he is held by our Board of Directors, make it certain that National Lead Company will continue to prosper under the leadership of Mr. Martino.

HEADQUARTERS EXECUTIVES YOU SHOULD KNOW

(Those Who Influence Paint Sales and Product Policies)

DAVID A. MERSON

Director

Manager of Paints, Oils and Pigment Sales

Sales Manager of Sales Development Department

Shortly after graduating from the Virginia Military Institute with a Bachelor of Science degree in chemical engineering, David A. Merson was employed on February 6, 1923 as a Chemist in our Laboratories.

Prior to his appointment in 1938 as Manager of Oxide Sales, Mr. Merson had had a thorough grounding in the Company's storage battery business, both in the Laboratories and in the field contacting battery manufacturers. The following year he was made Chairman of the Oxide Sales Committee and in 1946 was given the added responsibility of managing the Sales Development Department. This department has put on the market profitably a number of new products developed by our Laboratories.

During World War II Mr. Merson was General Manager of the Magnesium Reduction Company, the plant of which was designed, erected and operated by our Company at Luckey, Ohio, at the request of the Government. The plant was operated without profit as a contribution to the war effort and on February 6, 1944, the Magnesium Reduction Company and its employees were awarded the Army-Navy "E".

It was in 1947 that Mr. Merson was elected a Director of the Company and was appointed Manager of Paints, Oils and Pigment Sales, retaining also the position of Manager of the Sales Development Department. On January 27, 1948 he was elected a member of the Executive Committee.

HARRY C. WILDNER

Comptroller

When Harry C. Wildner was employed by National Lead Company as a traveling auditor on June 8, 1921, he had had several years of experience as a Certified Public Accountant with a number of different firms. His World War I service was with the Coast Artillery.

In 1929 Mr. Wildner was made Manager and Treasurer of the Newton Die Casting Corp., New Haven, Connecticut, a subsidiary of National Lead Company. When that Corporation was sold in 1932 to the Doehler Die Casting Co., he resumed his position as traveling auditor. Six years later he was appointed Assistant Comptroller of National Lead Company.

The years 1938 to 1941 were passed in visiting practically all of the Company's branches in the United States and Canada for the purpose of studying factory operations as well as sales and distribution methods. This background of experience has been applied constructively and helpfully to certain problems of the White Lead Sales Committee, to which Mr. Wildner was appointed in 1944.

It was on April 19, 1946, that Mr. Wildner was promoted to the position of Comptroller of National Lead Company and on January 27, 1947 he was elected a Director of the Company and a member of the Executive Committee.

FRED McCARTHY

Manager of Trade Sales

When Fred McCarthy came to New York from Cincinnati in 1943 to become Manager of Trade Sales and Chairman of the White Lead Sales Committee, he had been thoroughly trained for his new responsibilities by years of experience as a salesman and executive, both during and prior to his employment by National Lead Company.

Mr. McCarthy started his business career with Scripps Howard newspapers and after six years was National Advertising Manager of the Indianapolis Times. Then followed a number of years of employment with Proctor & Gamble's Bulk Products Division during which he was a salesman in several Middle-Western territories and for some time before leaving that Company was in charge of the Division's salestraining and sales promotion in the East.

Mr. McCarthy entered the service of National Lead Company on November 1, 1935, as a salesman for the Cincinnati Branch. After an intensive training course in paint technology in New York and a season of helping conduct painters' meetings, he was appointed Sales Promotion Manager. From then on his abilities were recognized with frequent and important promotions.

On January 1, 1937, Mr. McCarthy was appointed Sales Manager of the Cincinnati Branch. Two years later he was made Assistant Manager and then succeeded William A. Dail as Manager shortly after the latter's death on November 5, 1939.

WILLIAM KNUST

Advertising Manager

The story of William Knust's rise to the position of Advertising Manager of National Lead Company is one of which any American would be proud.

Employed as a stenographer and bookkeeper on October 25, 1909, Mr. Knust diligently and intelligently worked his way through every division of the Advertisement Department, under the competent tutelage of O. C. Harn, Manager. At one time or another he handled the Company's direct-by-mail literature, dealer helps, painter helps, etc., as well as general and trade paper advertising.

For several years prior to its disposal, Mr. Knust was in charge of the advertising campaigns of the United States Cartridge Company.

Upon the resignation of O. C. Harn, Mr. Knust was appointed Advertising Manager of National Lead Company on March 1, 1927. Mr. Knust has devoted a share of his time to advertising and paint association activities. For two years—1932 and 1933,—he was President of Controlled Circulation Audit, Inc., an organization that verifies magazine circulations. He is a member of the Public Relations Committee of the Paint, Varnish and Lacquer Association.

ALEX STEWART

Director of Research

During the years, starting in 1908, when Alex Stewart was working in our Brooklyn Laboratories as a boy, he was so ambitious to become a chemist that he devoted all his Summer vacations to studying his chosen subject. When he left the Laboratories it was to go to college and, after graduation in 1916, to accept his first position as a Chemist with the Wringwalt Linoleum Company, now the Nairn Congoleum Company.

Then followed years of broadening experience, during which Mr. Stewart was in charge of the technical department of the C. L. Constant Company, mining engineers, and was associated with several leading chemists of the country on special research projects.

In 1930 Mr. Stewart returned to the National Lead Laboratories as a research chemist and three years later was put in charge of the new products research and development department. In 1938 he was appointed Director of Research of the parent Company, which position was broadened in 1947 to include responsibility for research for the entire National Lead organization.

Among a number of developments of importance to National Lead Company that are credited to Mr. Stewart are lignin colloids, commonly called expanders and which are used in lead-acid storage batteries; 111 White Lead, an entirely new composition of matter; and acicular basic lead sulfate, the only acicular product of lead.

E. R. ROWLEY

Production Manager

It was September 29, 1933, that E. R. Rowley was employed by National Lead Company, joining the Mechanical Engineering Department of the Chicago Branch. Prior to then and after graduating from the Illinois Institute of Technology with a Bachelor of Science degree in mechanical engineering, he had had three years of experience in his profession, principally with Proctor & Gamble.

On June 1, 1939, Mr. Rowley became Assistant Production Manager of the Company and served in that capacity until he was appointed Plant Manager of the Magnesium Reduction Company, Luckey, Ohio, during its wartime operation by National Lead Company.

In September, 1945, he was made Production Manager of the Chicago Branch and on March 15, 1948, Mr. Rowley was promoted to Production Manager of the Company.

★ EXECUTIVES WITH WHOM YOU WORK ★

PRENTISS S. ORR

JAMES L. CARUTH

W. C. MINSINGER

H. E. MacCLEARY

W. P. PEDIGO

ERIC G. ORLING

RAY C. KRUEGER

DAN B. ROBERTS

HARRY S. IRWIN

K. C. SPECHT

ABOUT EXECUTIVES WITH WHOM YOU WORK

JAMES L. CARUTH

Manager

Years of experience as a paint salesman and executive was the training James L. Caruth brought to the Managership of the Pacific Coast Branch on January 1, 1943. Even his first job after leaving school was valuable experience, since it gave him a first-hand understanding of the problems of a paint store. He was employed by a wholesale and retail paint and wallpaper distributor in San Antonio, Texas for several years and served successively as bookkeeper, office manager, clerk and territory salesman.

Upon receiving his discharge in France after two years overseas service in the Army during World War I, Mr. Caruth had the unusual and valuable experience of serving under Herbert Hoover as Manager of Transportation in the American Relief Administration, covering the Balkan States with headquarters at Bucharest, Rumania.

It was on October 15, 1923 that Mr. Caruth was employed by the Carter White Lead Company as salesman covering Texas. Later his territory was extended to include Oklahoma, Kansas, Alabama, Georgia and Florida.

When National Lead Company absorbed the Carter Sales Force in 1929, Mr. Caruth was transferred to the Chicago Branch with headquarters in Detroit, Michigan. Mr. Caruth's first executive job with the Company was as Assistant Manager of the Cleveland Branch. This promotion came on January 1, 1936, and a year later he was made Branch Manager.

On March 1, 1942, Mr. Caruth was transferred to the Pacific Coast Branch as Assistant Manager and nine months later became Manager.

Mr. Caruth served as President of the Cleveland Paint, Varnish and Lacquer Association during the fiscal year of 1939-1940.

PRENTISS S. ORR

Manager, White Lead and Oxide Department

Starting as an office boy on November 28, 1916, Prentiss S. Orr, Sales Manager of the White Lead and Oxide Department of the Pacific Coast Branch, has devoted practically his entire business career in the service of National Lead Company.

During his first five years with the Company, excepting a year's service in the Navy during the first World War, Mr. Orr held various positions in the San Francisco office. In 1921 he was transferred to the Sales Department, handling white lead and oxide sales in the City and County of San Francisco.

When the Bass-Hueter Paint Company was merged with National Lead Company on April 26, 1930, Mr. Orr was given the additional duties of handling industrial and jobbing paint accounts and battery oxide sales.

Mr. Orr was promoted to the Managership of the White Lead and Oxide Department on September 1, 1945.

Among the honors that have come to Mr. Orr during his connection with our Company are the Presidency of the San Francisco Paint Salesmen's Club during the 1928-1929 fiscal year and election to the Executive Committee of the Golden Gate Paint, Varnish and Lacquer Association in 1945.

W. C. MINSINGER

Manager, Industrial Sales Department

Prior to his employment by National Lead Company as an industrial salesman on January 1, 1943, W. C. Minsinger had had several years of experience in the Portland, Oregon, territory which fitted him eminently for the position of Manager of Industrial Sales, to which he was promoted on July 1, 1947.

The Portland companies which Mr. Minsinger served approximately three years each and in what capacities follows: Union Oil Company, service station salesman and manager; Cress & Co., building material and paint salesman; C. D. M. Paint Company, a partner and salesman of paint for the industrial and painter trade; Rodda Paint Company, in charge of all industrial, Federal and State business.

H. E. MacCLEARY

Manager, Wallpaper and Sundries Department

Prior to his employment by the Pacific Coast Branch of National Lead Company on February 25, 1946, H. E. MacCleary had served for 18 years in various capacities in the Paint Department of E. I. DuPont de Nemours & Co. Probably his most valuable experience with that company was his Managership of Stores, to which position he was appointed in 1940. He was responsible until his resignation on December 31, 1945, for all store expansion programs and operations, including their locations in all sections of the country and seeing to it that they made money during the first year of operation.

It was on May 15, 1946, that Mr. MacCleary was appointed Manager of the Wallpaper and Sundries Department of the Pacific Coast Branch.

W. P. PEDIGO

Supervisor of Dutch Boy Paint Stores

Learning retail store merchandising and salesmanship the hard way for 10 years, had been the experience of W. P. Pedigo, when on February 18, 1929, he was employed as a salesman by the Bass-Hueter Paint Company, then a subsidiary of National Lead Company.

At the age of 17 Mr. Pedigo started his business career with a large general merchandise store in Fresno, California, in the humble capacity of keeping the basement clean, running errands and doing most of the store's odd jobs. In due course he became shipping clerk in the hardware department, floor salesman and buyer of builders' hardware, and in turn head of the crockery, sporting goods and paint departments. It was while he was serving in the latter capacity that Mr. Pedigo accepted a job as salesman with the Bass-Hueter Paint Company.

Mr. Pedigo's first promotion with National Lead Company came December 1, 1933, when he was made Manager of the Fresno Branch. On November 28, 1935, he was transferred to Sacramento as Branch Manager and on August 15, 1938, to Oakland where he was Manager of the Oakland, Berkley, Alameda and Fruitvale Branches. It was on January 1, 1945, that Mr. Pedigo was brought to the main office of the Pacific Coast Branch in San Francisco as Sales Manager of the Central Division. From this position he was promoted on June 1, 1946 to the Supervisorship of the Branch's Dutch Boy Paint Stores.

During his connection with National Lead Company, Mr. Pedigo has served as a member of the Executive Boards of the Builders Exchange and the Master Painters' Association in Fresno and as President and member of the Executive Board of the Oakland Paint, Varnish & Lacquer Association.

ERIC G. ORLING

Sales Manager, Central Division

Following his graduation from Ohio University with a Bachelor of Science degree in Chemistry in 1935, Eric G. Orling launched his career in the paint industry in the Sales Department of Eagle Picher Lead Company. Subsequently he was transferred to the Joplin, Missouri, research laboratories of that company for training in paint, storage battery, oil refining and rubber technology, preparing him as a salesman of lead and zinc pigments in the Southwest territory, with headquarters at Dallas, Texas.

Upon resigning his position with Eagle Picher, Mr. Orling started employment with National Lead Company on June 15, 1938 as a salesman in our Cleveland Branch. Four years later he was appointed Assistant Manager and on October 1, of that year was transferred to the Sales Department of the Pacific Coast Branch.

Receiving a leave of absence on February 22, 1943, Mr. Orling served the U. S. Maritime Commission for about 2½ years as an inspector of paint manufacturing methods in the Los Angeles and San Francisco areas, devoting time also to analyzing and testing paints, oils, chemicals and drugs.

It was on June 1, 1946, shortly after returning from Government service, that Mr. Orling was appointed Sales Manager of the Central Division of the Pacific Coast Branch. He is also Manager of Export Sales for the Branch.

Mr. Orling is a member of the American Chemical Society and is active in the National and Golden Gate Paint, Varnish and Lacquer Associations.

RAY C. KRUEGER

Manager, Seattle Division

Ten years in the sales departments and factories of manufacturers of paint and allied products was the background of experience that Ray C. Krueger, Manager of the Northern Division, brought to his first job as salesman with National Lead Company of California on July 1, 1918. This valuable experience was gained with the Standard Wallpaper Company, American Paint & Dry Color Company and the Pacific Coast Paint Corporation.

Mr. Krueger's first promotion with National Lead Company came on August 1, 1926, when he was put in charge of a warehouse that had been opened in Portland, Oregon. On January 1, 1932, about two years after the Bass-Hueter Paint Company was merged with National Lead Company, he was made Manager of the Portland Branch.

It was on April 15, 1935, that Mr. Krueger was promoted to the Managership of the Northern Division with headquarters at Seattle, Washington.

Mr. Krueger served as President of the Portland Paint, Oil and Varnish Club during the fiscal year of 1931-1932 and as President of the Puget Sound Paint, Varnish and Lacquer Association during the 1937-1938 fiscal year.

DAN D. ROBERTS

Manager, Portland Division

After a short business experience with the Matson Navigation Company, Dan D. Roberts was employed on September 1, 1921, in The San Francisco Order and Pricing Department of the then National Lead Company of California. During the next three years he also handled the duties of their Traffic Department. On April 1, 1925, he was transferred to Portland, Oregon as a salesman.

It was on March 1, 1943 that Mr. Roberts was promoted to Manager of the Portland Division of National Lead Company.

Mr. Roberts served as president of the Portland Paint, Varnish and Lacquer Association in 1940.

HARRY S. IRWIN

Manager, Southern Division

When the Bass-Hueter Paint Company was purchased by National Lead Company in 1916, Harry S. Irwin had been Manager of that subsidiary's Branch in Portland, Oregon, since 1909. Prior to his employment by Bass-Hueter as a salesman in the San Francisco territory during 1908, Mr. Irwin had worked seven years for the Otis Elevator Company, the last two years of which he had served as Manager of their Portland Branch.

On July 25, 1922, Mr. Irwin was appointed the Los Angeles Division Manager of the Bass-Hueter Paint Company, which was still operating as a separate organization. After consolidation with the Pacific Coast Branch he was made Sales Manager of the Company's Southern Division, Los Angeles, in July, 1930. Two years later Mr. Irwin became Manager.

Mr. Irwin was President of the Los Angeles Paint, Varnish and Lacquer Association during the 1933-34 fiscal year and for several years was Chairman of the Membership Committee of the National Association.

K. C. SPECHT

Assistant Manager, Southern Division

When K. C. Specht graduated from the University of California in 1931, having met his expenses by working for the Safeway Stores and the Electrical Products Corporation, he was unable to obtain employment in industry because of the depression. Nothing daunted, he met the situation by opening a gasoline service station, which he operated until he landed employment with National Lead Company as bookkeeper in the Los Angeles Branch.

On March 9, 1936, Mr. Specht was appointed Assistant Purchasing Agent and inside salesman. Three years later he was made an industrial territory salesman.

Mr. Specht was promoted to the Managership of the Industrial Sales Department of the Pacific Coast Branch on July 1, 1944 and three years later was transferred to the Southern Division as Assistant Manager.

SELLING DUTCH BOY PRODUCTS

The Dutch Boy's prestige has sales value that our salesmen should take advantage of at every opportunity.

National advertising for many years has made Dutch Boy known to millions of home owners, painters and other users and specifiers.

Dutch Boy's reputation for high quality has been carefully built up and even more carefully guarded during generations of use.

Thousands upon thousands of long-lasting, good-looking paint jobs testify to why users prefer Dutch Boy.

Such wide consumer acceptance is the basis of convincing sales points that salesmen can use in selling Dutch Boy.

SELLING DUTCH BOY TO DEALERS

Here are a few that are effective in contacting dealers:

1. The Dutch Boy cuts selling time. This is true of any product that has as wide consumer acceptance as Dutch Boy. Time thus saved can be devoted to customer service or sales of other items in the store.
2. The Dutch Boy helps build reputation for quality. Every successful dealer knows that quality merchandise, such as Dutch Boy, is the only sure foundation for a substantial and profitable business.
3. The Dutch Boy assures repeat business. Users of Dutch Boy are satisfied customers and, it naturally follows, are repeat customers. Most dealers consider satisfied customers as their stores' best advertisements, helping immeasurably to increase their business.
4. Dutch Boy attracts trade. It naturally follows that customers drawn to a store by Dutch Boy's popularity are also prospects for other profitable items.
5. The Dutch Boy draws volume business. Most painting contractors favor Dutch Boy and this is volume business—the mainstay of every successful paint store.

SELLING DUTCH BOY TO PAINTERS

Some of the foregoing sales points will also interest painters:

1. The Dutch Boy helps sell paint jobs. When the painter mentions he will use Dutch Boy, it is an important point in his selling effort that gets an immediate favorable response, so wide is Dutch Boy's consumer acceptance.
2. The Dutch Boy helps build reputation for quality. The slogan, "Dutch Boy is good paint's other name" is in the minds of thousands of property owners, so when the painter promises to use Dutch Boy, the prospect is more than half sold on the idea that the job will be a quality job.

The fact is, the Dutch Boy's reputation for quality products is a valuable sales asset in contacting *any* type of prospect.

TWO LINES OF DUTCH BOY PRODUCTS

Dutch Boy paint products are marketed in two separate lines—differing in package design, distribution policy and basic composition.

One line, since its package design is in black and yellow colors and since it includes only white lead, oxides and companion products, is commonly called "the black and yellow line" or "the white lead and oxide line."

The other line, since its package design is in blue and white colors and since it includes only multiple pigment paints, is commonly called "the blue and white line" or "the mixed paint line."

The black and yellow line is permitted a wider distribution than is accorded the blue and white line. However, in each case the selection of outlets must be made with great care to serve the best interests of both dealers and the Company, and in strict conformity with the national distribution policy which is entrusted to your Branch Management to enforce.

SALES POLICIES

In carrying out the national distribution policy, these points should be kept in mind in selling our two paint lines:

1. Dealers selected to handle the blue and white line should also be sold the black and yellow line or at least those items that will put them in a position to meet customer demand.
2. Dealers selected to handle the black and yellow line *only* should not, of course, be sold any items in the blue and white line.
3. Push the sale of our blue and white line of paints at every opportunity. Promote and demonstrate their advantages even to the prospect who continues to prefer white lead, being very careful, however, not to question his judgment in choice of products. If nothing else, this will familiarize the confirmed "white-leader" with the merits of the new line against the time when he may decide to change his type of paint. The same policy applies, of course, to our interior products, both in the black and yellow line and in the Wonsover line of flat wall paints.

In establishing the foregoing sales policy, there is naturally no intention of disparaging white lead in the slightest degree. White lead makes as satisfactory a paint today as it ever did. As always, it can be depended upon for unexcelled working qualities, adhesion, film integrity, and extreme durability. Where it suffers in comparison with modern-day mixed pigment paints is in appearance. These provide vastly greater hiding and also maintain a cleaner, brighter look over the years, which of course accounts for their wide acceptance and large sale.

The fact must not be overlooked that paint technology has advanced by leaps and bounds in the last couple of decades. New materials, new equipment, new processes have been developed. Old materials, old methods have been improved. Specifically, mention might be made of "titanium" (pioneered, incidentally, by National Lead Company). With the advent of titanium di-oxide pigments have come house paints possessing better coverage, whiteness, tint retention and self-cleaning ability. Then there are the newer vehicles, assuring improved sealing, leveling and wearing qualities.

Somewhere along the line, every salesman is bound to run into the question: "Which is better —the Dutch Boy Blended House Paint or white lead and oil?" Considering that we have been advocates of straight white-lead paint for so long, this question is inevitable. There is only one answer, if the question is met fairly and honestly. That answer, emphatically, is, *"the Blended Paint."* And the reason why is that our multiple pigment paint, in addition to matching white lead's durability and other desirable qualities, outmatches it in the thing property-owners want most—maintenance of fine appearance.

Here are a few of the advantages that may be claimed for *our* multiple pigment exterior paints over single pigment, white lead paint:

1. Produce whiter white jobs, thus meeting the demands of the consumer.
2. Give tinted jobs that hold their color longer.
3. Provide greater hiding power, thus making possible one-coat repaint jobs in some cases. Also give more solid-looking jobs.
4. Produce harder films, thus minimizing dirt collection.
5. Each product in the line is especially designed for a particular purpose; thus is better suited for the job than any all-purpose paint.
6. More "fool-proof"; thus the inexperienced user is less likely to obtain an unsatisfactory job.

In conclusion, it might be pointed out that our new multiple pigment paints serve the best interest of all concerned—the property owner, the painter, the dealer, the salesman, and the Company. The property-owner gets more value for his paint dollar, particularly in appearance. The painter, in giving this greater value, builds his business on a sounder long-term basis. The dealer secures a larger and more profitable volume. Sales, likewise, are larger for the salesman and for the Company. Having a product perfectly in key with the trend of the times, both can look forward to an expanding instead of a shrinking market.

BLUE AND WHITE LINE

The blue and white line is composed of multiple pigment paints in white, tints, and sash and trim colors, for exterior use only; and one-coat flat wall finishes in white and tints.

To the dealer this means that with a comparatively small investment he has a line of the highest quality ready-to-use paints on the market to meet any exterior painting need of his customers, as well as the demand for one-coat interior wall jobs. Moreover, the profit margin is most attractive, turnover is rapid and the products are easy to sell because of the wide consumer acceptance of Dutch Boy.

To the painter who prefers ready-to-use mixed paints, the blue and white line not only meets his exterior paint and one-coat flat wall needs at a reasonable cost, but its use assures him the best possible results and, consequently, satisfied customers. Moreover, the Dutch Boy gets him customer approval when the question comes up as to what brand of products he will use.

When the blue and white line was launched we had and will continue to have certain general advantages, among which are:

1. The prestige of the Dutch Boy with painters, property owners, architects and other users and specifiers of paint products.
2. The outstanding reputation of our Company for integrity and as producers of time-tested, high-quality products.
3. The widely known fact that the Company has had long experience as a manufacturer of paint materials and products.
4. There is never any compromise with quality in the formulation of these paints. As producers of practically all the pigments they contain, we are thoroughly familiar with their characteristics and relative advantages. The blue and white line is therefore engineered without bias to meet the needs of the consumer.
5. The best equipped paint laboratories in the country, staffed by experts with years of experience and the reputation for leadership in advancing paint technology.
6. The latest and most efficient manufacturing equipment, operating on a scale not generally possible in the paint industry.
7. The most modern of control systems, taking full advantage of the type of manufacturing operation and using the latest methods and equipment.

The foregoing not only include some sales points but also assurances that Dutch Boy paints will continue to lead competitive products in quality and results.

Dutch Boy Primer-Undercoater

This product has exceptional merits:

1. Provides dense hiding and an even-sealing first coat on either new exterior wood or old painted surfaces.
2. Dries to a low sheen.
3. Drying time: overnight—can be recoated safely in 48 hours.
4. Ideal primer in two-coat system, using Dutch Boy Bright White or one of our tinted paints as a finish coat.
5. Dutch Boy Primer-Undercoater should always be used as received in the package.
6. Normal spreading rates—500 square feet per gallon on smooth unpainted wood; 600 square feet per gallon over old painted surfaces.

Dutch Boy Bright White

This is a non-tintable outside white paint and possesses outstanding qualities:

1. Gives exceptional hiding.
2. Produces a dazzling white exterior finish that *stays* white.
3. Presents a surface that continually renews itself, permitting rain to wash away dirt, thus keeping its fine appearance.
4. Has great durability, wearing down slowly and evenly to a satisfactory surface for repainting.
5. Especially designed as a white finish coat paint for use over Dutch Boy Primer-Undercoater, either on new unpainted wood or on old painted surfaces.
6. Will produce a satisfactory one-coat job over a previously painted surface that is in good condition.
7. A finish coat paint that should be applied in *white only* and as received in the package.
8. Spreading rate—600 square feet per gallon.

Dutch Boy House Paint in Color

Our line of colored house paints has a number of superior qualities:

1. Formulated to meet the demand for clean, sharp tints of excellent color retention under weather exposure.
2. Produce surfaces that not only look their best when freshly painted but that retain their brightness and cleanliness as time goes on.
3. Especially formulated to assure stability in color and uniformity in appearance.
4. Can be intermixed to produce intermediate tints.
5. Should be used just as mixed in the can over Dutch Boy Primer-Undercoater, which may be tinted to the approximate shade of the respective House Paint with colors-in-oil.
6. The number of tints available cover the range of light shades most commonly used on exterior surfaces.
7. Spreading rate—600 square feet per gallon.

Dutch Boy Sash and Trim Colors

This is not only a high quality line but it has a number of special uses:

1. Colors are true and retain their gloss and brilliancy for a satisfactory time, due to the high quality of the color pigments and paint oils used in their manufacture.
2. Remarkably durable, smooth as enamel and easy to apply.
3. Dry to hard, high-gloss finishes.
4. Can be intermixed to produce any number of intermediate colors, but should not be used as tinting materials in exterior paints.
5. Ideal for exterior use on parts of the home calling for strong colors, such as sash, shutters and doors, as well as for store fronts, fire escapes, fences, railings, signs, decorative metal work, lawn furniture and play equipment.
6. When used on new wood surfaces, the first coat should be Dutch Boy Primer-Undercoater, which may be tinted to a shade of the trim color selected.
7. Before applying to new or old weathered metal surfaces, all rust and scale should be removed and a coat of Dutch Boy Semi Quick-Drying Red Lead paint applied.
8. Should not be thinned, but used just as they come in the can.
9. The line includes the most commonly used colors, plus black and white.
10. Spreading rate—600 square feet per gallon.

Produced Magnesium

In addition to mining and metal-processing activities, National Lead Company contributed to the success of the nation's metal program by constructing and operating a plant for the production of magnesium and its alloys which were needed in the manufacture of aircraft parts, incendiary bombs, tracer bullets and flares. In response to the request of the Defense Plant Corporation of the Government, the plant was built in northern Ohio where there are extensive deposits of dolomite, a magnesium-bearing limestone. Ground was broken in July, 1942, and within four months a pilot plant was in operation. Within less than eight months, the main plant was brought into production.

A Record of Achievement

The genius of our management and the devotion to duty of our employees in meeting the extreme demands of war-time America have been responsible for a record of achievement of which we all may be proud.

THE DUTCH BOY—A BIOGRAPHY

No history of the early days of National Lead Company would be complete without the story of the development of the Dutch Boy Painter trademark.

This famous little fellow was created in 1907 for a definite purpose—to solve a specific merchandising problem. National Lead Company was at that time marketing twenty-one different brands of white lead—Anchor, Armstrong and McKelvy, Collier, Atlantic, Beymer-Bauman, Cornell, Brooklyn, Davis-Chambers, Shipman, Fahnestock, Lewis, Salem, Jewett, Morley, Phoenix (Eckstein), Red Seal Southern, Sterling, Union, Missouri and Bradley. Each of these brands was popular in some section of the country but none was sold nationally.

How best to advertise these brands was the problem. To continue advertising each separately in the locality where it was marketed would have been costly and inefficient. To have advertised them all together nationally would have been impractical because it would have been an unwieldly arrangement and also would have led to a conflict of brands in the minds of the consumers. Nor was it sound procedure to drop the local brands and substitute only one national brand. It would have meant sacrificing the prestige enjoyed by each local brand—a most valuable asset.

Local Brands Tied Together

The solution was the Dutch Boy trademark, which was placed on each package without interfering with the local brand it carried. Thus all the brands were tied together, the prestige of the local brands was retained and the power of national advertising supported all of them by the simple means of featuring the Dutch Boy.

The quality of the product and the power of National Advertising soon put the prestige of the Dutch Boy trademark in the ascendency over the various local trademarks. As soon as this was obvious, steps were taken to subordinate the local brands to the Dutch Boy. Local trademarks were relegated to the lids of white lead kegs and the Dutch Boy name and illustration was used prominently on the sides of the kegs. Today the Dutch Boy has replaced all local brands on the lids as well as on the sides of our white lead kegs.

What is more, the Dutch Boy became so well and favorably known to so many types of trade that he was put to work as a trademark on other National Lead products, both paint and metal.

Development of a Personality

Several factors contributed to the prestige of the Dutch Boy, such as advertising and the quality of the products which he represents, but his own gay, pleasing personality was also responsible for his quick rise to nation-wide popularity and his sustained hold on the buying public. The development of that lovable personality was no accident but was planned carefully and executed by one of the best portrait painters of the day. The story of the creation of the Dutch Boy

and his varied functions is one of the most unique and interesting in the history of American business.

The "daddy" of the Dutch Boy was O. C. Harn, then Advertising Manager of the National Lead Company, who gave specifications of his idea to a Dutch artist named Yook for the first preliminary sketches. The boy was intended at first only as an advertising character but later, when search began for a suitable national trademark, L. A. Cole, then President, suggested that the Dutch Boy Painter be adopted. This was done and one of Yook's pencil sketches was turned over to Lawrence Carmichael Earle, noted portrait painter, with a commission for an oil painting which would give the boy the breath of life. That was in 1907.

"Mike" Brady the Original

An interesting sidelight was that the boy who posed for the portrait was an Irish lad by the name of Michael Brady, a "regular feller" called "Mike" by his playmates and who, incidentally, became a well-known cartoonist.

The original oil painting of the Dutch Boy trademark is kept at Headquarters and is considered so valuable that it has never been loaned to lithographer or printer for reproduction purposes. They must do their work where it is hung.

Animated Trademark

So vivid a personality did the artist create that it was soon discovered the Dutch Boy could be recognized easily in postures other than the familiar trademark position. No matter whether he is depicted painting a house, taking part in various sports or even standing on his head, the Dutch Boy never loses his identity as the trademark of National Lead Company. This is unique in trademark history, the Dutch Boy being one of very few today that is shown in other than trademark position.

The Dutch Boy—Salesman

What is more important to the Company's interests is the fact that the Dutch Boy's warm, honest personality inspires confidence in his wares, which, once justified, increases many fold. He is welcome wherever he has served and there is no need to introduce himself where he hasn't been on the job. He's a great little salesman, as those who have used him to help make sales have discovered.

OUR FUTURE

The future of our Company looks bright. Its finances are on the soundest possible basis. Its reputation for quality products and fair dealing is of the highest. Its Management includes men of great ability, who are alive to competitive conditions and the need for continued progress in merchandising and product development. Its rank and file of employees are loyal, conscientious and have a feeling of security engendered by the Company's efforts in behalf of their welfare and best interests. All of which makes for continued success in our industry.

OUR COMPANY . . .

ITS FAR-FLUNG INTERESTS

The following paragraphs about corporations in which National Lead Company is interested through ownership of all or part of the capital stock make it clear how they help diversify our products and extend our markets, thus adding to our Company's financial stability.

American Bearing Corporation, Indianapolis
Manufacturers of precision bearings for diesel engines.

American Lead Corporation, Indianapolis
Smelters of secondary metals containing lead, tin and antimony.

Baker Castor Oil Company, New York
Manufacturers of castor oil, several types of which are used in paint making.

Canadian Titanium Pigments Limited, Montreal
Distributors in Canada of titanium pigments.

Evans Lead Corporation, Charleston, W. Va.
Distributors of lead oxides. When acquired in 1930 as the Evans-Wallower Lead Company, it added the fumed process to our method of manufacturing lead oxides.

Hoyt Metal Company of Great Britain, London
Manufacturers of anti-friction metals.

Morris P. Kirk & Sons, Inc., Los Angeles
Manufacturers of metallic lead products, lead and zinc alloys and lead oxides.

Magnus Brass Mfg. Co., Cincinnati
Manufacturers of locomotive specialities.

Magnus Metal Corporation, Chicago
Brass founders and manufacturers of railroad journal bearings and castings.

Master Metals, Inc., Cleveland
Smelters of secondary metals containing lead, tin and antimony.

National Lead Co. S.A. (Argentina), Buenos Aires
Manufacturers and distributors of paint and metal products in South America.

St. Louis Smelting & Refining Company, St. Louis
Miners, smelters and refiners of lead.

The Canada Metal Company, Ltd., Toronto, Montreal, Winnipeg, VanCouver
Manufacturers of lead products, brass and bronze, dross smelters.

Titanium Pigment Corporation, New York
Manufacturers and distributors of titanium pigments.

ABOUT RESEARCH and PRODUCTION

There is a close relationship between the Sales, Research and Production Departments. Certainly, therefore, every salesman would want to be well-informed about these departments upon which he depends for maintaining the superior quality of Dutch Boy products and for whose existence he is responsible to an important degree.

Quality products help assure successful selling, and successful selling and advertising help assure the continued employment of factory and laboratory workers. The social-minded salesman should therefore, get an added satisfaction out of his efforts in knowing that he is importantly responsible for the livelihood of so many of his fellow employees.

It is our belief that the salesman will find in the succeeding pages the information he wants to know about our Laboratories and Production Department. It should add greatly to his feeling of confidence in the Company and its products. It should increase his self-confidence materially.

OUR RESEARCH LABORATORIES

The Research Laboratories of National Lead Company were started in 1892, and since then have presented an interesting story of continued progress and development exemplifying the benefits that accrue from the cooperative efforts of management and research.

The first Laboratory was located in Adams Street, Brooklyn, and was under the direction of Dr. G. W. Thompson who, with only one assistant, undertook to handle all of the chemical problems arising in the various plants of the newly formed National Lead Company. At that time the principal functions of the Laboratory were to maintain the high quality of the Company's products through regular analyses of samples of the plants' output, and develop new products. Improvements in various manufacturing processes naturally resulted.

The original Laboratory was soon found to be inadequate and in 1899 a four story building at 129 York Street was purchased and converted to accommodate the growing staff. Within a very few years an addition was erected where metallurgical investigations were conducted. Practical tests were made on pigments, drying oils and paints in this same building.

LABORATORY BUILT

By 1925 the Laboratory staff numbered about fifty and the scope of investigations had increased to such extent that it was necessary to build another, even larger Laboratory. The present five story building at the corner of York and Jay Streets, Brooklyn, was erected at that time.

In all its history there have been only a few changes in the directorship of the Research Laboratories. Dr. Thompson, after his retirement in 1938, was succeeded by R. L. Hallett and a few years later when Mr. Hallett was appointed Chief Chemist of National Lead Company, Alex Stewart became Director of Research.

LABORATORIES DEPARTMENTALIZED

The organization of the Laboratories has been changed from time to time to meet changing demands. Special departments have been established to handle the various phases of the work. Each is under the guidance of a well-trained, experienced individual who is responsible for all of the activities of his department and who reports directly to the Director of Research.

ANALYTICAL: The General Analytical Department conducts periodical examinations of National Lead Company's various products, analyzes materials submitted by other departments in connection with research and service work and handles all analysis work submitted by our various branches.

RESEARCH AND SERVICE: The Paint and Pigment Research and Service Department comprises four divisions—Sales Service, General Paint Research and Service, Sayville Experimental and Test Division (atmospheric and marine exposures) and Metal Paint Research and Service.

METALLURGICAL: Metal problems including metal refining, improvement of metal products and processes, and general physical metallurgy are handled by the Metallurgical Department. This department is located in the new laboratory building and also operates a pilot plant at 129 York Street.

STORAGE BATTERY: The Storage Battery Department has been constantly increasing the scope of its activities. The lead acid storage battery is highly important in these days of automotive transportation and the number of problems handled by this group is increasing constantly.

ORGANIC VEHICLE: Problems concerning organic products are handled by the Organic Vehicle

Dutch Boy Wall Primer

This sealer and paint coat combined was designed to assure satisfactory white lead jobs on interior plaster surfaces. Some of its outstanding qualities:

1. Seals all porous surfaces.
2. Hides well over patched or discolored plaster.
3. Brushes easily.
4. Spreads far (average 800 square feet per gallon on smooth plaster).
5. Adheres firmly.
6. Forms the tenacious foundation required for long-time service under succeeding repaint coats.
7. Low in cost applied, because of its spread, hiding and ease of application.

TIPS ON USE

New Plaster

1. If finished job is to be colored, tint Wall Primer to the shade of the finishing coat paint.
2. Apply two coats of White Lead and Lead Mixing Oil paint over Dutch Boy Wall Primer on new plaster.
3. To overcome excessive porosity, use one part Wall Primer to three parts White Lead and Lead Mixing Oil flat in second coat.

Repainting Plaster

1. One part Primer and three parts white lead flat paint also makes a superior first coat for two-coat work on old painted plaster.
2. On patched wall surfaces, spot paint new patches with Wall Primer before applying first paint coat.

Research Department. It is the duty of this group to develop new vehicles, improve present vehicles and the processes for making them and, in general, to investigate all problems involving organic chemistry. The rubber laboratory, for example, is part of this department. Investigation of organic by-products is an important part of the work.

MICROSCOPIC AND PHOTOGRAPHIC: Physical testing, microscopy, spectroscopy and photography are all handled under the direction of the Microscopic and Photographic Department. Problems concerning physical examination of paint materials and metal products are handled by this group.

NEW PRODUCT: In every research laboratory, there is one department which devotes its attention to pure scientific research. All departments are naturally on the alert for possible new products and processes but the actual research work involved is handled under the direction of the New Product Research and Development Department.

CORROSION: The function of the Corrosion Department is to study the various theories of corrosion, investigate corrosion testing methods, develop and investigate corrosion inhibitive systems. In general, it is the duty of this department to study corrosion from the broadest possible viewpoint.

ADMINISTRATIVE: The Administrative Department comprises the executive, purchasing, accounting and library divisions. The functions of the first two are self-evident. The library division in addition to its obvious activities, such as preparation of literature surveys, compilation of market data and reviewing of current technical publications, also assists in the preparation of patent applications.

MAINTENANCE: The Maintenance Department is responsible for the upkeep of the buildings and the general equipment. This is important, because the best efforts of the staff can be exerted only under proper working conditions.

All departments cooperate so that every detail of each problem is given adequate attention by competent individuals. Regular meetings of the department heads, with special meetings of certain groups as the need arises, are of considerable assistance in maintaining the necessary cooperation.

Other Laboratory Activities

The Laboratory activities are not confined to the Brooklyn building. Members of the staff regularly visit our various manufacturing branches in connection with their investigations. They also cooperate with various institutions where investigations are being conducted under industrial fellowships.

The Sayville Experimental Station, which was started in 1916, and our Fresh Water Test Basin at New Kensington, Pa., started in 1941, are really parts of the Laboratories. Our regular paint products and also new pigments and vehicles are subjected to exterior tests at these stations. Products are not released for the general market until they have been given suitable tests and have demonstrated their value fully in practical exterior exposure programs.

Achievements

The achievements of the Research Laboratories are reflected by the many diversified products which the company manufactures for home and industry. The Research Laboratories have contributed greatly to the development, manufacture and sales of these products and have been an important factor in establishing the Dutch Boy as the symbol of quality.

OUR PRODUCTION DEPARTMENT

It has always been Company policy to spare no expense or effort in producing products of the highest quality on the market. The constant research and study of our Laboratories and Production Department, backed by a progressive Management, have been responsible for many improvements in manufacturing processes and the development of new products. The salesmen, too, have had an important share in this record of progress, reporting, as they have done throughout the years, the demand for new and improved paint products.

The paints and paint products marketed by National Lead Company are manufactured in factories that are located strategically from a distribution standpoint in or near the cities of Chicago, New York, Philadelphia, St. Louis, San Francisco and Los Angeles. The product list in supplement No. 2 of this Manual will inform the salesman where each item is manufactured.

Improving Processes

Improved manufacturing processes and the production of new products have usually called for new and, oftentimes, especially designed equipment and machinery. Their purchase has been approved by the Management as the need has arisen, as have the expenditures for guarding the health and safety of our 3,500 or more factory employees. In the latter field the Company has always been in the forefront.

In addition to constantly improving our manufacturing processes and equipment, an equally important factor in assuring the high quality of our paint products is the careful and frequent testing by chemists during the various operations of production. In most cases the number of tests made to maintain quality exceeds materially the number of operations required in manufacture. This is true of our white lead and titanium pigments, as well as in the manufacture of white lead in oil, straight lead paints and multiple pigment paints.

Cutting Costs

While considerable time of our chemists, engineers and manufacturing experts has been concentrated on producing quality products, the cutting of costs to a minimum has by no means been neglected. So successful has been this effort that we have always been able to keep our price schedules in line with those of our competitors, despite the fact that in the case of most of our products the quality is superior.

Making Paints

One of our most interesting operations in manufacturing is that of our paint plants in or near Chicago, New York City and Los Angeles. These plants were erected in 1946 and 1947 in accordance with the most modern designs that could be devised to assure the greatest efficiency in manufacture. They were equipped with machinery of the latest design and some of them are amazing in performance. The manufacturing process was planned to achieve the maximum in mass production. In the description that follows we are confining ourselves to one plant, inasmuch as the three are fairly comparable in equipment and operation.

Gravity Flow Type

The plant is a gravity flow type, the raw materials being transported to the top floor of the four-floor building and then, by their own weight, flowing down floor by floor as soon as they are released after the different processing operations.

The fourth floor is devoted to paste mixing; the third to grinding; the second to paint finishing; and the first floor to filling, labeling and packing.

Pastes Mixed in Heavy-Duty Equipment

The different dry pigments used in our paints are transported to the fourth floor on a ten-ton elevator and the liquids necessary to paste mixing are pumped up through pipes from storage tanks. These raw materials are of course transported to the different mixing units where the first step is taken in processing the respective paints.

The paste mixing equipment is of an extremely heavy-duty type to assure thorough mixing. This is a very critical step in the manufacturing process, since proper mixing assures easier grinding and best ultimate pigment dispersion.

Machines Influence Gloss

When thoroughly mixed, the pastes flow down to the different types of grinding machinery on the third floor, which, in fact, is a mezzanine floor. If a high gloss paint is to be produced such as sash and trim colors, the proper paste mixture is ground in a machine especially designed for that purpose. If a moderate gloss is wanted, such as in a primer, another type of grinder produces the desired results with the proper paste mixture.

Pebble Mills Operate Economically

Suspended on a level with the mezzanine floor are pebble mills which can be operated at night without supervision, except a check-up by the night watchman on his rounds to preclude damage by over-heating or some other mechanical failure. Should such occur, the night watchman simply turns off the power and the necessary repairs to the pebble mills are made the following day.

When the pastes are ground to the satisfaction of the operator, they are released to flow down to their respective tanks on the second floor. Here is where the final steps in manufacture are taken and where there are some unusually interesting processes and equipment features.

Liquids Incorporated First

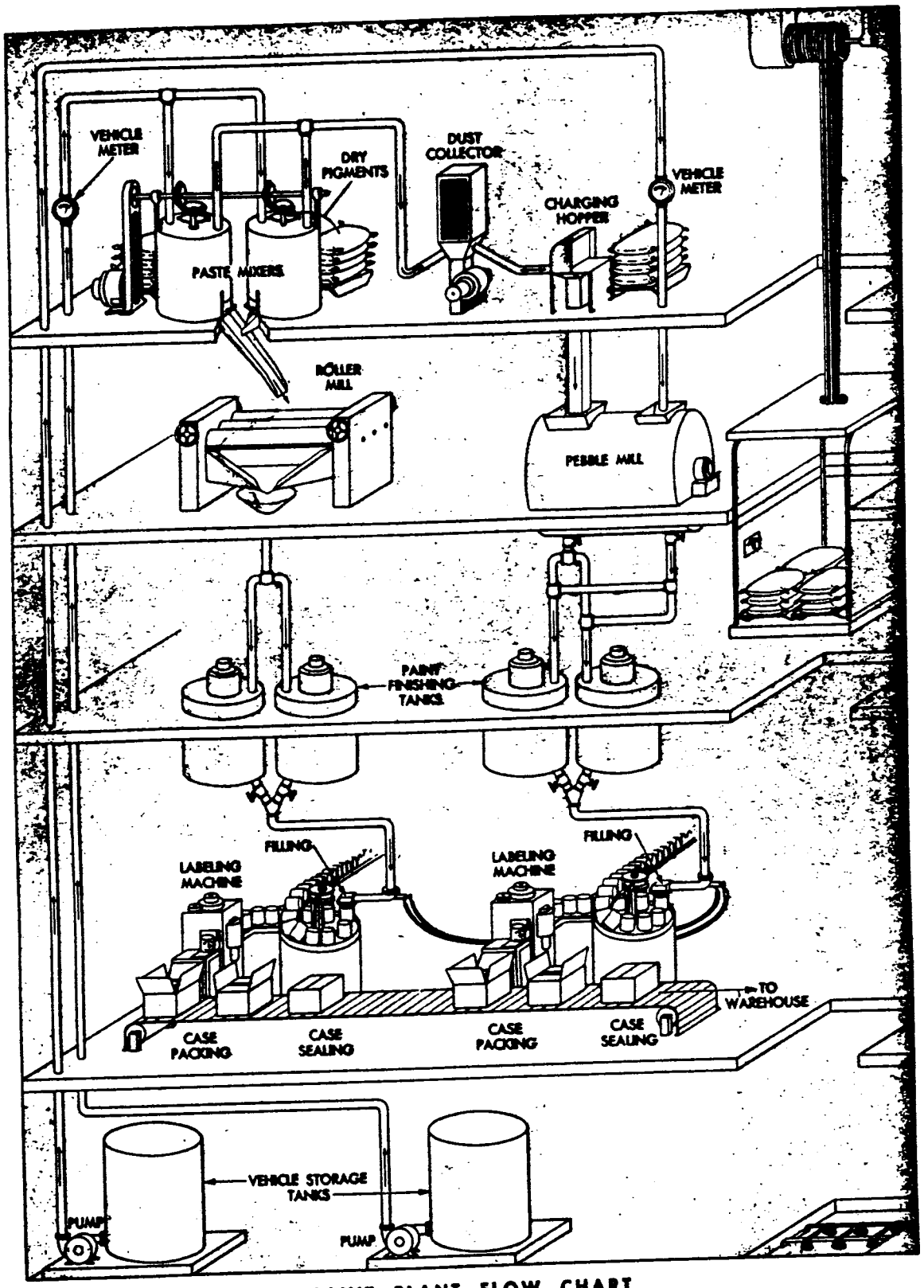
Contrary to the usual procedure in most paint factories, all the liquid ingredients used in our paints are introduced into the paint-finishing tanks before the paste mixtures are incorporated. By this procedure the agitator, which is started as soon as the paste mixture begins to flow in, is not required to stir heavy materials at any time during the process. This effects a saving in power, since a lower horse power motor can be used to operate the agitator than if it were required to mix pastes that are heavy until thinned with liquids.

The agitator is a turbine propeller type, which incorporates the liquid into the paste mixture much more thoroughly and quickly than does the more commonly used circulating type.

Liquids by Remote Control

Liquids are introduced into the paint-finishing tanks through an ingenious piece of equipment known as a remote-control switch system. The amount of each liquid needed in any particular batch is set on the respective meters in the same manner as one might punch an adding machine. Then switches are thrown and the vehicle pumps deliver the indicated amounts of liquids from their respective storage tanks through the meters to the paint-finishing tank. In many instances the particular oil or liquid is delivered at the rate of 50 to 75 gallons per minute.

A feature of this equipment is that the *same oil or liquid* can be delivered *at the same time* through a meter on the second floor to a paint-finishing tank and through a meter on the fourth floor to a paste-mixing tank.



PAINT PLANT FLOW CHART

the age of nineteen, obtaining employment with a Frederick, Md., merchant by the name of August King. The friendship between the two men became so deeply affectionate and mutually trustful that at the suggestion of Augustus they assumed the role of brothers, under the name of Graham, united their capital and launched a business and personal relationship that lasted until death separated them.

When the Brooklyn White Lead Company was incorporated in 1825, John Graham accepted stock of none too promising value at that time in payment of a substantial loan he had made previously to Augustus without security. Further evidence of their mutual faith was the fact that they never kept separate accounts, took funds each needed from a common purse and when final settlement was made, divided their joint holdings without the slightest disagreements.

Leavitt Met Financial Crisis

David Leavitt, the first President of the Brooklyn White Lead Company, was probably the greatest financial genius in the early history of the white lead industry.

In addition to maintaining a sound financial policy for the Brooklyn White Lead Company, Mr. Leavitt served as President of the Fulton Bank from 1826 to 1837 when he was elected to the Presidency of the American Exchange Bank of New York, which became one of the most powerful banks in the city.

It was in 1843 that he faced a severe test of his ability as a financial organizer. He and his bank were heavily invested in State of Illinois Canal bonds and a large additional amount of money was needed to complete the project and protect the investment. After a long bitter fight the Illinois legislature finally voted to pledge the credit of the State and Mr. Leavitt made two trips to London to supplement local assistance with loans from two of the great banking houses of that city. At that time Thomas Ford was Governor of Illinois and later in his "History of Illinois" he gave Mr. Leavitt credit for the success of the negotiations.

The Brooklyn White Lead Company became largely a family organization and when their father died, first Edward Leavitt and then at his death Sheldon Leavitt took the Presidency, but Reginald P. Rowe was the real manager from about 1885 until it was merged into the National Lead Company.

Atlantic Branch Formed

On April 3, 1890 the Jewett White Lead Company, the Bradley White Lead Company and others were consolidated with the Brooklyn White Lead Company under the name of the National Lead and Oil Company of New York. On December 8, 1891, all of these properties were acquired by the National Lead Company and were operated as the National Lead and Oil Works Branch with R. P. Rowe as Manager. On that date Mr. Rowe was also elected a member of the first Board of Directors of National Lead Company.

Meanwhile the Atlantic White Lead and Linseed Oil Works had also been made a branch of the National Lead Company and on July 1, 1893, the business of the two branches was consolidated into the Atlantic Branch with Romulus R. Colgate as Manager. He also had been elected in 1891 to National Lead Company's first Board of Directors. Mr. Rowe was made Manager of the Atlantic Branch in 1901 and was elected Vice-President of National Lead Company in 1904, holding both positions until his death.

Jewett Uses Whale Oil Factory

Next to the Brooklyn White Lead Company, the oldest manufacturer of white lead among our founding companies in the New York area was The Jewett White Lead Company, first organized as John Jewett & Sons. In the Atlantic Branch office is a large bottle filled with white lead and labeled, "Sample of the First White Lead Made at the Jewett Works, June 1830."

The Jewett family established their first white lead mills in an old whale oil factory, which had its origin in Revolutionary days. During the Civil War the main building of the Jewett Works was used as a barracks to train Federal soldiers.

The organizers of the white lead concern were John Jewett, John Jewett Jr., James R. Jewett and George W. Jewett. The business was managed successfully for about 50 years when all the members of the original family having died, it was reorganized in 1882 with only the treasurer, Charles H. Jewett, bearing the family name.

When the company was absorbed by National Lead Company ,its plant had a capacity of 3500 tons of high quality white lead annually.

Atlantic Most Successful

The "Atlantic White Lead and Linseed Oil Company," incorporated in 1866, was probably the most successful financially and manufactured products most widely accepted by the trade of any of our founding companies in the New York area.

Almost from its incorporation, the company paid substantial dividends to its stockholders, often over 20% on its capital stock.

Robert Colgate was the first President of the Atlantic White Lead and Linseed Oil Company and its principal stockholder, owning 330 of the 500 shares issued of $1,000 each. Edward Austin owned 140 shares, A. W. Colgate 25 shares and S. J. Colgate 5 shares.

Almost immediately after incorporation, the Robert Colgate & Company, founded in 1845, was appointed general sales agents of the Atlantic White Lead and Linseed Company with an annual commission of 2½ per cent on all sales and 1½ per cent on "all receipts and disbursements made for account of the Company." This arrangement was cancelled effective January 1, 1886, due to the death of Robert Colgate during the preceding year. The business was conducted thereafter in the name of the Company instead of through the agents, Robert Colgate & Company.

Paid Secretary $6,000 in 1885

When Samuel J. Colgate was elected President on October 30, 1885 all the capital stock was owned by the Colgate family, but at the subsequent annual meeting George W. Fortmeyer, a long-time employee and who many years later was to become Manager of the Atlantic Branch and a Director of National Lead Company, was elected Secretary of the Company at an annual salary of $6,000.

In the early days of his employment, Mr. Fortmeyer was practically a one-man business. In the morning he would hitch up his horse and buggy and call on the trade. In the afternoon, he would pack, bill and deliver the products for which he had orders.

With the exception of the Cornell Lead Company of Buffalo, little of historical interest is known of the other New York State founding companies, which included the Bradley White Lead Company, the Ulster Lead Company and the Union White Lead Manufacturing Company.

BUFFALO

First Buffalo White Lead Manufacturer

It was early in the year 1840 that a young chemist by the name of Henry Roop left his home in Buffalo for a visit with friends in New York City and vicinity. While making a few business calls in Brooklyn, he took advantage of an opportunity to inspect a white lead factory, asking a number of questions to satisfy the natural curiosity of a budding young scientist.

Returning to Buffalo he immediately began an intensive study of the practical and scientific phases of white lead manufacture with the idea in mind of entering the business.

When he considered himself sufficiently informed to take the risk and with borrowed capital of $3,000 he built a small wooden shop and started the manufacture of white lead. This was in 1841 and Henry Roop became the first manufacturer of white lead in Buffalo.

The product was fair in quality, considering the rather primitive method of manufacture. For instance, he had two sets of stones which were driven by horses.

Buffalo Mayor Invests

The infant business survived the first year and at that time attracted additional capital amounting to $9,000. The business began to make money and shortly afterwards got the attention of Sheldon Thompson, who was the first mayor of Buffalo to be elected by popular vote. He added $20,000 to the capital and in 1844 the plant was expanded and equipped with the latest machinery of the day.

Shortly after getting into operation, all the new buildings were completely destroyed by the historic gale of 1844. With no break walls to protect it, the entire lower city was submerged by the huge waves whipped up from Lake Erie by the high winds.

Undaunted by the catastrophe, the company moved all the machinery that could be salvaged to a new location, where an even larger and better equipped factory was built. Prosperity followed, according to an old account, which stated that "the concern made money as fast as any factory ought to."

During this period in white lead history, the principal source of supply of pig lead was the "Galena District" in northern Illinois and Southern Wisconsin. An interesting custom of the times was the auction of pig lead held daily by the smelters. Sheldon Thompson's son, A. P. Thompson, was his father's buyer for many years, often riding to and from the mines on horseback. The lead was carted by oxen to Milwaukee and brought down the lakes in sailing vessels.

When Mr. Roop retired from active business because of ill health, the firm's name was changed to Thompson & Company and was taken over by Sheldon Thompson and his son, A. P. Thompson, and his son-in-law, Edward Warren. Sheldon Thompson died in 1851 and Mr. Warren in 1863, the business being carried on by A. P. Thompson.

Katherine Cornell's Ancestor Enters Business

It was in 1852 that Mr. Roop, his health recovered, again entered the white lead business. With Gibson T. Williams and Samuel G. Cornell he formed the Niagara White Lead Company. Mr. Cornell, it is interesting to know, was the great-grandfather of the famous American actress, Katherine Cornell.

In the early 1860's Mr. Roop again retired because of ill health and the Niagara White Lead Company passed into the hands of Samuel G. Cornell and his son, S. Douglas Cornell. At the same time they purchased Thompson & Company, abandoned the latter's plant and consolidated the two companies under the name of S. G. Cornell & Son.

About two years later A. P. Thompson bought back a half interest from the Cornells and in 1867 the Cornell Lead Company was incorporated. Samuel G. Cornell died in 1879 and his son in 1910.

When the company was sold to National Lead Company, it became known as our Buffalo Branch, and A. P. Thompson served as Manager and as one of the first elected Directors until his death in 1911.

BOSTON

Historical Salem Contributes

Perhaps when you think of Salem, Mass., you recall the infamous witch trials there in the early days of our Country, but the Old Town made other more civilized contributions to history. One that is of special interest to us of National Lead Company was the incorporation in 1868 of The Salem Lead Company, one of our founders and destined to be the cornerstone of our Boston Branch.

Almost from its incorporation, the Salem Lead Company had offices in the "Hub City" so in effect it was a Boston concern practically throughout its existence.

When the company was absorbed by National Lead Company, it was operated as a subsidiary of the latter under the name of National Lead Company of Massachusetts. Walter Tufts was Treasurer and General Manager and later became one of the Directors of National Lead Company.

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INDUSTRIES

INTRODUCTION

N L Industries, Inc. came into being over 80 years ago. We began as a one product company and until 1971 were known as National Lead Company.

We changed our name because we had grown and diversified to the point where our old name no longer represented the true nature and scope of our operations.

Today, our more than 50 divisions, subsidiaries and affiliates are responsible for annual sales in excess of a billion dollars. Our more than 27,000 employees work in plants and laboratories, mines, mills and offices that are located in every state of the Union and in a score of other countries.

Our operations can be classified into the following primary categories:

Metals Group **Page-17**

N L Industries works with an alphabet of metals—from aluminum, bronze and cadmium, to titanium, uranium and zinc.

Pigments Group **Page-20**

N L Industries has been a leading producer of titanium dioxide since we pioneered the commercial development of this essential pigment almost two generations ago.

Fabricated Products Group **Page-20**

In addition to mining, smelting and refining a wide range of metals, N L Industries also fabricates these and other materials into an equally wide range of finished and semi-finished products for use in nearly every industry.

Chemicals Group **Page-21**

N L Industries is active in nearly every area of the chemical industry... from injection molding of thermoplastics to the production of a wide variety of chemicals for use in ceramics, paint, petroleum, plastics, paper, cosmetics, textiles and automotive production.

Industrial Specialties Group **Page-23**

The broad scope of N L Industries today is best indicated by the diversity of products and services represented in this classification. They range from specialized products for the ceramic industry to highly sophisticated nuclear products and services for both industry and medicine.

Other Products **Page-24**

N L Industries' major consumer product, the universally-recognized Dutch Boy® brand of paints, is included in this group.

International Operations **Inside Back Cover**

INDEX OF PRODUCTS AND SERVICES

This directory of N L Industries' products and services is divided into two sections:

Section 1 (Pages 1-16)—An alphabetical listing of products and services. The numbers opposite each listed product or service correspond with the numbers assigned to the operating units where the product or service may be obtained.

Section 2 (Pages 17-24)—A numbered listing of N L Industries' divisions, subsidiaries and affiliates, describing products and services, with sales office information.

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Metals Group

1. AMERICAN BEARING DIVISION

N L Industries, Inc.
429 South Harding Street
Indianapolis, Indiana 46221 317/632-5588

American Bearing manufactures a broad line of precision sleeve bearings, bushings and machined parts. Principal products include thick wall heavy duty sleeve bearings for medium and large diesel and gas engines, aircraft engines, gas and steam turbines, pumps, compressors, hydraulic transmissions and similar types of equipment.

SALES OFFICE & PLANT:

Ind.	Indianapolis 46221	429 So. Harding St.	317/632-5588

2. BUNTING BRASS AND BRONZE COMPANY

A subsidiary of N L Industries, Inc.
715 Spencer Street
Toledo, Ohio 43609 419/382-3451

Bunting is a major producer of cast bronze and powder metal (P/M) parts. Principal cast bronze products include commercial and precision sleeve bearings and bars in standard sizes ranging from ⅛" to 27" diameter, and mechanical components for industry and defense.

Products include standard and custom designs of cast bronze, sintered oil-filled (P/M) bearings, continuous cast or centrifugally cast bars and structural parts of bronze alloys and ferrous alloys. Bunting produces the only standard line of oil-filled (P/M) bronze bearings to ASTM size standards.

SALES OFFICES:

Calif.	Los Angeles 90007	2614 S. Main St.	213/747-5566
Calif.	San Francisco 94107	1551 Minnesota St.	415/647-1385
Ga.	Atlanta 30318	1216 Fowler St. N.W.	404/876-6316
Ill.	Elk Grove Vlge. 60007	1830 Lunt Ave.	312/593-2750
Mass.	Cambridge 02142	152 6th St.	617/547-5170
Mich.	Kalamazoo 49002	4252 E. Kilgore Rd.	616/345-8691
N.Y.	Woodside 11377	5905 39th Ave.	212/899-3100
Ohio	Toledo 43609	715 Spencer St.	419/382-3451
Tex.	Dallas 75207	2286 Vantage St.	214/631-8672

PLANTS: Toledo, Ohio; Kalamazoo, Mich.

3. GOLDSMITH DIVISION

N L Industries, Inc.
1300 West 59th Street
Chicago, Illinois 60636 312/925-3800

Goldsmith has been a leading refiner and processer of precious metals and chemicals for over 100 years. Today, it is one of the world's largest producers of silver nitrate for the photographic industry. Other Goldsmith products include silver chloride, oxide and powder; precious metals for the plating and electronics industries; and a complete line of silver brazing products: powder, paste, strip, wire, and preformed rings.

SALES OFFICES:

Ill.	Chicago 60636	1300 W. 59th St.	312/925-3800
N.Y.	New York 10036	20 W. 47th St.	212/582-0630

PLANT: Chicago Ill.

4. JONATHAN MANUFACTURING COMPANY

A subsidiary of N L Industries, Inc.
1101 South Acacia Avenue
Fullerton, California 92631 714/526-4651

Precision steel slides, cable retracting devices and related packaging components are principal products of Jonathan Manufacturing Co. Jonathan ball bearing chassis slides have been utilized on virtually every major military electronics program in the past decade.

The "Tru Glide" line of precision steel slides have found wide application in the commercial market, including use on copying machines, computer equipment, furniture, vending machines and lateral files.

SALES OFFICES:

Calif.	Fullerton 92631	1101 S. Acacia Ave.	714/526-4651
N.J.	Teaneck 07666	1258 Teaneck Rd.	201/833-0061

PLANT: Fullerton, Calif.

5. JONATHAN SYSTEMS DIVISION

N L Industries, Inc.
3405 Avenue D
Arlington, Texas 76011 817/265-2283

Jonathan Systems Division designs, develops and fabricates a wide range of special systems and equipment for both government and commercial enterprises. These products include integrated production lines, automatic gages, control devices and control systems, free-floating non-synchronous transfer-assembly systems and machinery systems. The majority of these products are being applied to plant modernization/automation projects.

SALES OFFICE & PLANT:

Texas	Arlington 76011	3405 Avenue D	817/265-2283

6. LEE METAL PRODUCTS COMPANY

An affiliate of N L Industries, Inc.
West Pine Street
Philipsburg, Pennsylvania 16866 814/342-0460

Manufacturers and designers of specialized corrosion resistant processing equipment for the chemical, pharmaceutical, cosmetic and food industries. Standard products include kettles (jacketed and unjacketed), agitation systems, mixers and blenders for wet and dry products, reactors, vacuum processing vessels, tanks, and accessory equipment.

Lee has developed the "Uniflow" pressure jacket with a working pressure of 250 P.S.I. The "Uniflow" jacket can be used for both heating and cooling and has proven to be highly efficient. Plant capability ranges from the smallest research vessel to the largest factory fabricated storage tank.

SALES OFFICES:

Calif.	Fullerton 92631	1101 S. Acacia Ave.	714/871-9033
Ill.	Chicago 60611	260 E. Chestnut St.	312/366-2455
N.Y.	Rockville Center 11571	P.O. Box 4	516/536-0517
Pa.	Philipsburg 16866	West Pine St.	814/342-0460

PLANT: Philipsburg, Pa.

7. MAGNESIUM DIVISION

N L Industries, Inc.
238 North 2200 West
Salt Lake City, Utah 84116 801/328-3761

The world's most advanced magnesium production facility with a capacity of 45,000 tons of magnesium metal per year. This new source of primary magnesium metal and magnesium alloys will increase U.S. production by one-third. The facility will also produce 80,000 tons of liquid chlorine per year. Ferric Chloride is also produced for use in water and sewage treatment applications.

SALES OFFICES:

Metal Sales:

Utah	Salt Lake City 84116	238 North 2200 West	801/328-3761

Chlorine & Ferric Chloride Sales:

Calif.	Newport Beach 92660	University Plaza, Suite 536 4500 Campus Dr.	714/546-6622

PLANTS: Fontana, Calif.; Rowley, Utah.

8. MAGNUS METAL DIVISION

N L Industries, Inc.
2234 West 43rd Street
Chicago, Illinois, 60609 312/376-8434

Since 1875, Magnus Metal Division has been a leading producer of solid journal bearings for railway rolling stock. It is also a major producer of motor support bearings for diesel-electric locomotives.

Magnus also supplies the railroad industry with a wide range of bronze replacement items for diesel engine repair, including connecting rod and main bearings.

Magnus is also the selling agent for freight car roller bearings produced by the Roller Bearing Division.

SALES OFFICES:

Calif.	French Camp 95231	P.O. Box 400	209/982-0961
Ga.	Atlanta 30349	6405 Kimberly Rd. S.W., College Pk.	404/964-6767
Ill.	Chicago 60609	2234 W. 43rd St.	312/376-8434
Kan.	Kansas City 66103	P.O. Box 3103 Rosedale Station	913/236-4640
Md.	Baltimore 21146	P.O. Box 346 Severna Park	301/647-3008
Mo.	St. Louis 63110	4153 Clayton Ave.	314/371-4030
N.J.	Somerville 08876	696 Talamini Rd.	201/526-1636
Texas	Houston 77001	P.O. Box 2663	713/227-5552

PLANTS: French Camp, Calif.; St. Louis, Mo.; Fremont, Neb.; Cincinnati, Ohio; Houston, Texas.

9. MAGNUS ROLLER BEARING DIVISION

N L Industries, Inc.
3670 Werk Road
Cincinnati, Ohio 45211 513/922-0439

Magnus Roller Bearing Division is a principal producer of tapered roller bearings for use on American railroad freight cars.

SALES OFFICES:

Calif.	French Camp 95231	P.O. Box 400	209/982-0961
Ga.	Atlanta 30349	6405 Kimberly Mill Rd. S.W.	404/964-6767
Ill.	Chicago 60609	2234 W. 43rd St.	312/376-8434
Kan.	Kansas City 66103	P.O. Box 3103 Rosedale Sta.	913/236-4640
Md.	Severna Park 21146	P.O. Box 346	301/647-3008
Mo.	St. Louis 63110	4153 Clayton Ave.	314/371-4030
N.J.	Somerville 08876	696 Talamini Rd.	201/526-1636

PLANT: Cincinnati, Ohio

10. METAL DIVISION

N L Industries, Inc.
111 Broadway
New York, N.Y. 10006 212/732-9400

Grid metal for the battery industry is a major product of the Metal Division. Also, it is a leading manufacturer of a wide range of non-ferrous metal products, including lead shot and solders and fluxing materials for the electronic and electric industries.

In addition to its broad line of products, the Metal Division offers its customers access to its research facilities and its highly competent technical service organization.

SALES OFFICES:

Calif.	Emeryville 94068	4050 Horton St.	415/653-7533
	Los Angeles 90023	2700 S. Indiana St.	213/262-1101
Colo.	Denver 80316	699 Denargo Market	303/222-4450
Ga.	Atlanta 30318	451 Bishop St. N.W.	404/876-7361
Ill.	Chicago 60680	900 W. 18th St.	312/226-3700
	Granite City 62040	16th & Cleveland Sts.	618/452-3000
Mich.	Detroit 48234	4700 E. Nevada Ave.	313/893-0100
Minn.	St. Louis Park 55426	Hampshire St. & Highway 7	612/929-2675
Neb.	Omaha 68114	7601 Dodge St.	402/393-3024
N.J.	Perth Amboy 08862	1050 State St.	201/826-6000
N.Y.	Depew 14043	3241 Walden Ave.	716/683-6840
Ohio	Cincinnati 45211	3670 Werk Rd.	513/922-4100
	Cleveland 44113	2850 W. 3rd St.	216/621-2361
Ore.	Portland 97210	5909 N.W. 61st Ave.	503/224-3370
Pa.	Pittsburgh 15212	1376 River Ave.	412/321-2335
Texas	Dallas 75222	1000 Sargent Rd.	214/948-3521

PLANTS: Los Angeles, Calif.; Atlanta, Ga.; Chicago, Ill.; Granite City, Ill.; Beech Grove, Ind.; Detroit, Mich.; St. Louis Park, Minn.; Pedricktown, N. J.; Perth Amboy, N. J.; Cincinnati, Ohio; Cleveland, Ohio; Portland, Ore.; Altoona, Pa.; Dallas, Texas.

11. MORRIS P. KIRK & SON, INC.

A subsidiary of N L Industries, Inc.
2700 South Indiana Street
Los Angeles, California 90023 213/262-1101

Morris P. Kirk & Son operates as the Western Region of the N L Metal Division. As such, it produces and markets a broad line of non-ferrous materials and fabrications in a territory comprised of California, Oregon, Washington, Idaho, Utah, Montana, Nevada, Arizona, Alaska and Hawaii.

Kirk products include lead, zinc and aluminum alloys for the automotive, aircraft and die casting industries; antimonial lead (grid metal) and lead oxides for storage batteries; fabricated lead products for the chemical and plumbing industries; solders for the electronics and can industries; lead radiation shielding in all forms.

SALES OFFICES:

Calif.	Emeryville 94608	4050 Horton St.	415/653-7533
	Los Angeles 90023	2700 S. Indiana St.	213/262-1101
Ore.	Portland 97210	5909 N.W. 61st Ave.	503/224-3370
Wash.	Spokane 99202	East 41 Gray Ave.	509/624-3583

PLANTS: Los Angeles, Calif.; Portland, Ore.

12. PIONEER METALS, INC.

A subsidiary of N L Industries, Inc.
3800 East 26th Street
Los Angeles, California 90023 213/263-7211

Pioneer Metals is the world's leading distributor of aluminum extrusions. An inventory of over 100,000 items in over 30,000 different shapes is strategically located in six locations in the United States.

Cast aluminum plate manufactured by Pioneer Metals is finished to extremely close dimensional, flatness and surface tolerances. It is used for a myriad of purposes including tooling jigs and fixtures, electronic equipment panels, hydraulic freezer units and vacuum chucks.

Pioneer also carries large inventories of aluminum sheet, plate and coil; aluminum and brass rod and bar and aluminum alloyed ingot.

SALES OFFICES:

Calif.	Los Angeles 90023	3800 E. 26th St.	213/263-7211
	South Gate 90280	10035 Burtis St.	213/263-7211
Ga.	Marietta 30060	484 Glover St. S.E.	404/422-2110
Kan.	Wichita 67207	4611 E. 31st St. So.	316/682-1521
N.J.	Teaneck 07666	1258 Teaneck Rd.	201/833-0061
Pa.	Altoona 16602	Sixth Ave. & 41st St.	
Wash.	Kent 98031	7820 196th St.	206/854-1500

PLANTS: Los Angeles, Calif.; South Gate, Calif.; Marietta, Ga.; Wichita, Kan.; Altoona, Pa.; Kent, Wash.

13. REGAL MOLDS, INC.

A subsidiary of N L Industries, Inc.
5515 Enterprise Boulevard
Toledo, Ohio 43612 419/729-3795

Regal produces small to medium size plastic molds for a wide range of industries, including manufacturers of appliances, automobiles, toys and household products. Regal also makes die casting and auto forge molds, and specializes in precision molds for such products as blower wheels and terminal strips.

SALES OFFICE & PLANT

Ohio	Toledo 43612	5515 Enterprise Blvd.	419/729-3795

14. SCREW MACHINE DIVISION

N L Industries, Inc.
900 West 18th Street
Chicago, Illinois 60608 312/226-3700

Screw Machine Division specializes in high volume production of completely finished precision parts, such as aluminum alloy hydraulic brake cylinder pistons for the automotive industry. The Division is expanding and diversifying its operations, as indicated by the recent installation of an automatic anodizing system for better serving customer requirements.

SALES OFFICE & PLANT:

Ill.	Chicago 60608	900 W. 18th St.	312/226-3700

15. STANDARD STEEL DIVISION TITANIUM METAL CORPORATION OF AMERICA

An affiliate of N L Industries, Inc.
Burnham, Pennsylvania 17009 717/248-4911

Standard Steel is one of the largest, and most versatile specialty steel plants in the world. Manufacturing processes are fully integrated from melting, through forging, rolling, heat treatment to finish machining. The variety of steels melted and processed run from the more common grades of carbon steel to stainless and the superalloys for critical high-temperature, high-stress applications in the missile, jet engine, and nuclear reactor component markets.

Standard Steel is a principal supplier of wheels and axles for the railroad and car building industries. Additionally, open die forgings (100 lbs to 52,000 lbs), weldless rings and flanges (15 in. to 240 in.—100 lbs to 30,000 lbs), and closed die forgings (12 in. to 50 in.—150 lbs to 2,000 lbs), are manufactured for the following industries: aircraft, shipbuilding, power generating, sugar refining, metal, mining, cement, material handling, petroleum, pipeline, printing and engraving, electrical, earth moving equipment and ordnance.

Facilities include electric melting furnaces, argon-oxygen vessels, vacuum arc remelting and vacuum degassing equipment, ring rolling mills, automatic forging machine, tape controlled and manually controlled machine tools, forging presses and hammers, treating furnaces and modern quality control equipment and laboratory.

SALES OFFICES:

Calif.	San Mateo 94402	1777 Borel Pl.	415/574-7000
Conn.	Hartford 06103	119 Ann St.	203/549-4160
Ga.	Atlanta 30341	5260 Peachtree Industrial Blvd. N.E.	404/451-9217
Ill.	Chicago 60601	111 E. Wacker Dr.	312/751-4300
Mo.	St. Louis 63102	410 Mansion House Ctr.	314/241-6315
N.Y.	Schenectady 12301	P.O. Box 779	518/393-1375
Ohio	Akron 44313	1795 W. Market St.	216/867-3056
Pa.	Philadelphia 19113	Scott Plaza 2	215/521-1550

PLANT: Burnham, Pa.

16. STEEL PACKAGE DIVISION

N L Industries, Inc.
15th & State Streets
Granite City, Illinois 62040 618/452-3000

Steel Package Division is a major producer of small steel shipping containers (2½-gal. to 6½-gal.) for such markets as the petroleum and chemical industries.

Types of containers produced are the Kerosene Type Utility Container (2½-gal. and 5-gal.); Lug Cover Steel Pail, both straight sided and tapered; Tight Head Steel Drums; Dome Stacker Utility Container. All of the above containers are manufactured to customer's individual specifications, which include metal decorating various fittings and handles, internal linings, etc.

SALES OFFICE & PLANT:

Ill.	Granite City 62040	15th & State Sts.	618/452-3000

17. TEXAS MINING AND SMELTING DIVISION

N L Industries, Inc.
Highway 81
Laredo, Texas 78040 512/722-2486

Texas Mining & Smelting is a major smelter and refiner of antimony ore to produce antimony metal and antimony oxide.

SALES OFFICES:

Antimony Metal: See Sales Offices of Metal Division (No. 10)
Antimony Oxide: See Sales Offices of Pigments & Chemicals Division (No. 28)

PLANTS: Laredo, Texas.

18. TIMET DIVISION TITANIUM METALS CORPORATION OF AMERICA

An affiliate of N L Industries, Inc.
1140 Bloomfield Avenue
West Caldwell, New Jersey 07006 201/575-9500

TIMET is the world's leading producer of titanium sponge, ingot and mill products for aerospace and industrial applications. Titanium product forms include powder, sponge, ingot, forging billet, bar, tube, plate, sheet and strip. Other products include magnesium chloride, titanium tetrachloride and nitinol.

SALES OFFICES:

Calif.	Irvine 92707	17802 Sky Park Blvd.	714/979-2800
Ill.	Skokie 60076	Westmoreland Bldg.	312/583-3777
N.J.	W. Caldwell 07006	1140 Bloomfield Ave.	201/575-9500
Ohio	Cleveland 44122	24300 Chagrin Blvd.	216/831-4400

PLANTS: Henderson, Nev.; Toronto, Ohio.

Pigments Group

19. TITANIUM PIGMENT DIVISION

N L Industries, Inc.
100 Chevalier Avenue
South Amboy, New Jersey 08879 201/721-8400

Titanium Pigment Division is the world's largest producer of titanium dioxide. TITANOX®-brand titanium dioxide is produced by both sulfate and chloride processes. Titanium dioxide is used to pigment paint, paper, plastic, rubber, ceramics, ink, flooring, roofing granules, synthetic fibers and miscellaneous products. Titanium dioxide imparts whiteness, brightness and opacity to the products in which it is incorporated, enchancing appearance and durability. Manufacturing TITANOX is a complex process requiring close quality control of the many specialized grades to insure the most economical and useful pigment for the users' application.

SALES OFFICES:

Calif.	Los Angeles 90040	6449 Corvette St.	213/723-6501
	Oakland 94601	4825 San Leandro St.	415/535-1770
Ga.	Atlanta 30322	6065 Roswell Rd.	404/256-1666
Ill.	Oak Brook 60521	1301 W. Cermak Rd.	312/654-0760
Md.	Timonium 21093	10 Gerard Ave.	301/252-8070
Mass.	Dedham 02026	886 Washington St.	617/326-8413
Minn.	Bloomington 55437	5001 W. 78th St.	612/920-0850
Mo.	St. Louis 63111	Carondelet Station	314/638-3200
N.J.	East Orange 07017	725 Park Ave.	201/676-0363
Ohio	Cincinnati 45243	7809 Laurel Ave.	513/561-7098
	Cleveland 44113	2208 Terminal Tower	216/241-7195
Ore.	Portland 97214	49 S.E. Clay St.	503/235-6689
Pa.	Newtown Sq.19073	13A St. Albans Ave.	215/353-3351
Texas	Dallas 75206	5646 Milton	214/363-7628

PLANTS: St. Louis, Mo.; Sayreville, N.J.

Fabricated Products Group

20. COCHRANE FOUNDRY, INC.

A subsidiary of N L Industries, Inc.
465 Ogontz Street
York, Pennsylvania 17405 717/848-2990

Cochrane is a leading producer of high-quality aluminum and copper sand castings from 1 ounce to 700 pounds with additional capabilities in pattern-making, core-making (shell, Co_2, oil sand), machining, heat treating, and match plate molding.

SALES OFFICES:

For sales information on Cochrane Foundry products, contact Doehler-Jarvis Division Sales Offices (No. 21).

PLANT: York, Pa.

21. DOEHLER JARVIS DIVISION

N L Industries, Inc.
1945 Smead Avenue
Toledo, Ohio 43601 419/244-9521

Doehler-Jarvis is an experienced, engineering-oriented maker of components, with the resources to meet the needs of major industrial customers for individual die castings, injection molded plastics, or machined, finished and assembled singular or multi-material components.

SALES OFFICES:

Calif.	Pomona 91767	947 Murray Ave.	213/749-5120
Ga.	Marietta 30060	3928 Sentry Walk	404/427-0638
Ill.	Chicago 60680	6027 Northwest Hwy.	312/763-2375
Mass.	Needham 02194	18 Longfellow Rd.	617/444-4819
Mich.	Dearborn 48124	19855 W. Outer Dr.	313/565-1462
	Grand Rapids 49502	525 Cottage Grove St.NE	616/245-1191
Minn.	Navarre 55392	Box104, Shadywood Rd.	612/471-8538
N.J.	Livingston 07039	299 Hillside Ave.	201/992-2661
N.Y.	Batavia 14021	Robertson St.	716/343-3000

N.Y.	New York 10006	111 Broadway	212/732-9400
N.C.	Greensboro 27406	3415 Winchester Dr.	919/299-8192
Ohio	Toledo 43601	1945 Smead Ave.	419/244-9521
	Toledo 43612	5400 N. Detroit Ave.	419/476-0721
Pa.	Pottstown 19464	Old Reading Pike	215/323-1100
Wisc.	Mequon 53092	103 Mequon Rd. East N112	414/241-5748
Texas	Dallas 75238	7758 Eagle Trail	214/321-9243

PLANTS: Grand Rapids, Mich.; Batavia, N.Y.; Toledo, Ohio; Pottstown, Pa.

22. FLOATING FLOORS, INC.

A subsidiary of N L Industries, Inc.
5400 North Detroit Ave.
Toledo, Ohio 43621 419/476-0721

Floating Floors manufactures and assembles die cast and steel panels for elevated floor systems consisting of strong, removable panels supported by pedestals, providing infinite access to cable installations and also a completely flexible air distribution system. Floating Floor Systems are principally used in computer rooms, office and medical installations and in communication centers.

Floating Floors also produces Site Environmental Systems which provide constant, precise control of temperature, humidity and air filtration within extremely close tolerances for computer room installations.

SALES OFFICE AND PLANT:

Ohio	Toledo 43612	5400 N. Detroit Ave.	419/476-0721

Note—Floating Floor Systems and Site Environmental Systems are available from 84 distribution centers located in 33 States. Contact Toledo Sales Office for nearest location.

23. SOUTHERN SCREW DIVISION

N L Industries, Inc.
P.O. Box 1360
Statesville, North Carolina 28677 704/873-7211

Southern Screw is a major manufacturer of small threaded fasteners for the appliance, automotive, furniture, marine and other industries. Over 2 billion standard and special items are kept in stock for immediate delivery. This stock includes the new ROLOK™ thread-rolling screw which eliminates tapping and resists vibration in metals, die castings and ductile plastics.

SALES OFFICES:

Calif.	Los Angeles 90040	6465 Corvette St.	213/723-4881
Ill.	Chicago 60639	1800 N. Pulaski Rd.	312/227-4200
N.J.	North Bergen 07047	4100 Dell Ave.	201/864-4330
Texas	Dallas 75207	2119 Farrington St.	214/748-8241

PLANT: Statesville, N.C.

24. TOOL AND ENGINEERING DIVISION

N L Industries, Inc.
735 South Washtenaw Avenue
Chicago, Illinois 60612 312/826-6335

The Tool and Engineering Division of N L Industries is a leading supplier of prototype body parts and assemblies for the automotive industry. The Division also produces dies, tooling and short to medium runs of sheet metal parts for use in aircraft, specialty vehicles and other segments of the metalworking industry.

The Division specializes in the development of large and medium size draw dies for prototype purposes, as well as production of deep drawn parts and assemblies from sheet steel, aluminum and the exotic alloys.

SALES OFFICES:

Ill.	Chicago 60612	735 S. Washtenaw Ave.	312/826-6335
Mich.	Detroit 48211	3501 Griffin Street	313/871-4640

PLANTS: Chicago, Ill.; Detroit, Mich.

Chemicals Group

25. AMOS-THOMPSON CORPORATION

A subsidiary of N L Industries, Inc.
600 South Kyle Street
Edinburg, Indiana 46124 812/526-5551

The Plastics Division of Amos-Thompson is a major custom injection molder and finisher of thermoplastics for such applications as grilles and other decorative parts for the automotive industry, TV cabinets and fronts, business machine and computer housings, and heavy appliance components. The Division also utilizes rotational casting to produce tanks and vessels for agricultural chemicals, wine making, milking machinery and other applications.

The Wood Division of Amos-Thompson is the world's largest producer of American walnut lumber. It also produces walnut veneers, as well as cherry, oak, pecan, bartiki, and poplar face veneers.

Excel Mold, Inc., a subsidiary of Amos-Thompson, designs and fabricates molds for the plastics and die casting industries. Multiple and single cavity molds from small to medium size range up to ten tons. Duplicating and contour work is a specialty for such applications as the automotive, electrical and communication industries.

SALES OFFICES:

Plastics Division:

Ill.	Des Plaines 60018	1001 E. Touhy Ave.	312/297-4570
Ind.	Edinburg 46124	600 S. Kyle St.	812/526-5551
Mich.	Dearborn 48124	19855 W. Outer Dr.	313/563-7715

Wood Division—Lumber:

Ala.	Birmingham 35213	101 Lake Dr.	205/871-0538
Ill.	St. Charles 60174	P.O. Box 125	312/584-0659
N.Y.	Brooklyn 11209	158 79th St.	212/836-3217
S.C.	Greenville 29606	P.O. Box 5621	803/233-3961
Texas	Dallas 75205	4712 Abbott St.	214/526-4173
Wash.	Gig Harbor 98335	R.R. 4, Box 4412	206/857-4101

Wood Division—Veneer:

Ala.	Birmingham 35213	101 Lake Dr.	205/871-0538
Calif.	S. Pasadena 91030	P.O. Box 578	213/254-9209
Ill.	St. Charles 60174	R.R. 3, Box 477	312/584-2352
Ind.	Edinburg 46124	P.O. Box 127	812/526-5551
Pa.	Wyncote 19095	P.O. Box 59	215/887-3163
Wash.	Gig Harbor 98335	R.R. 4, Box 4412	206/857-4101

Excel Mold, Inc.:

Ind.	Indianapolis 46203	939 E. Troy Ave.	317/787-3428

PLANTS: Edinburg, Ind.; Indianapolis, Ind.; Kansas City, Kan.

26. THE BAKER CASTOR OIL COMPANY

A subsidiary of N L Industries, Inc.
40 Avenue A — 201/436-8800
Bayonne, New Jersey 07002 — 212/349-0500

Baker Castor Oil is a major supplier of castor oil and its derivatives. Baker supplies all fundamental organic reaction forms of castor oil for which there is a market. Products include various castor oils and polymers; dehydrated castor oil (drying oil); esters; waxes; urethane prepolymers and polyols for casting systems, coatings and adhesives; rheological agents; resin intermediates. Major markets include coatings; lubricants; greases; inks; plastics; textiles; waxes; automotive chemicals; cosmetics; pharmaceuticals; toilet goods; functional fluids; hot melts; adhesives; paper coatings; leather; rubber; dielectrics; sealants; agricultural chemicals; flavors; perfumes; surfactants; electronics and communications.

SALES OFFICES:

Calif.	Burlingame 94010	340 Lorton Ave.	415/343-7818
	Los Angeles 90040	5585 E. 61 St.	213/723-1318
Ga.	Atlanta 30325	1303 Boyd Ave. N.W.	404/351-3501
Ill.	Arlington Hts. 60005	605 E. Algonquin Rd.	312/439-7350
Kan.	Kansas City 66110	5200 Speaker Rd.	913/321-3131
Ky.	Louisville 40202	446 Commonwealth Bldg.	502/584-6181
Md.	Baltimore 21202	1602 Mercantile Trust Bldg.	301/685-4365
Mich.	Southfield 48075	18777 W. Ten Mile Rd.	313/444-1636
Minn.	Minneapolis 55415	909 Second St., So.	612/332-5394
Mo.	St. Louis 63111	7710 Polk St.	314/638-7400
N.J.	Bayonne 07002	40 Avenue A	201/436-8800
Ohio	Cincinnati 45203	N-203 Union Terminal Bldg.	513/721-7518
	Cleveland 44115	1505 Broadway	216/241-2777
Okla.	Oklahoma City 73112	3909 S. Meridian Ave.	405/685-7741
	Tulsa 74017	801 W. 21 St.	918/584-6169
Ore.	Portland 97210	2728 N.W. Nela St.	503/222-1301
Pa.	Flourtown 19031	P.O. Box 27	215/887-6161
	Pittsburgh 15222	2010 Clark Bldg.	412/281-9373
Texas	Dallas 75222	2627 Weir St.	214/638-8034
	Houston 77001	1701 Oliver St.	713/869-5801
Wash.	Seattle 98134	2450 Eighth Ave. So.	206/682-4425

PLANTS: Los Angeles, Calif.; Bayonne, N.J.

27. BAROID DIVISION

N L Industries, Inc.
2404 Southwest Freeway
Houston, Texas 77001 — 713/524-6381

Baroid is a leading supplier of oil and gas well drilling fluids, chemicals, equipment, and engineering services. It pioneered the application of on-site computer technology to the drilling industry. Baroid also provides products and services to the oil and gas production, mining, water treatment, brewing, foundry, grease, ink, construction, livestock feed, steel and other industries.

SALES OFFICES:

Domestic Drilling Services:

Col.	Denver 80202	912 Security Life Bldg.	303/266-1953
La.	Lafayette 70501	Box 51287	318/234-5258
La.	New Orleans 70112	1512 Pere Marquette Bldg.	504/524-5165
Okla.	Oklahoma City 73106	2000 Classen Center Suite 312 East	405/521-1636
	Tulsa 74103	1302 Philtower Bldg.	918/587-3611
Texas	Amarillo 79109	514 Petroleum Bldg.	806/374-0282
	Corpus Christi 78401	600 Guaranty Bank Plaza	512/882-7487
	Dallas 75201	626 Fidelity Union Tower	214/747-5115
	Houston 77002	300 Southwest Tower	713/225-0391
	Midland 79701	Box 311	915/682-4381

McCullough Services Dept.:

Calif.	Downey 90241	Box 670	213/869-2517
Colo.	Denver 80202	912 Security Life Bldg.	303/255-3407
La.	Lafayette 70501	Box 51287 O.C.S.	318/233-5450
	New Orleans 70112	1509 Pere Marquette Bldg.	504/522-9067
Okla.	Oklahoma City 73119	Box 19036	405/685-5573
Texas	Corpus Christi 78401	602 Guaranty Bank Plaza	512/884-7262
	Dallas 75201	626 Fidelity Union Tower	214/747-5115
	Houston 77001	Box 2575	713/672-2461
	Midland 79701	Box 5	915/684-8085

PLANTS: Malvern, Ark.; Newberry Springs, Calif.; New Orleans, La.; Potosi, St. Louis, Mo.; Battle Mountain, Nev.; Belle Fourche, S.D.; Sweetwater, Tenn.; Channelview, Corpus Christi, Houston, Texarkana, Texas; Osage, Wyo.

28. PIGMENTS AND CHEMICALS DIVISION

N L Industries, Inc.
P.O. Box 420
Hightstown, New Jersey 08520 — 609/448-3200

The Pigments & Chemicals Division is the leading producer of lead oxides for use in the glass, ceramic and other industries. The Division also is a major manufacturer of stabilizers for vinyl plastics used in wire insulation, automotive interiors, upholstery, floor coverings, shoe soles and other products. The Division produces flame retardant chemicals for treating plastics, fibers, paper, adhesives, rubber, paint, and other products.

The P&C Division has been a major contributor to the technology of the coatings field, supplying specialty pigments for use in anticorrosive paints and Bentone® gellants as bodying and suspending agents. This latter group of products finds growing use in the areas of cosmetics, pharmaceuticals, pesticides and paper, as well as in paints and coatings of all kinds.

P&C Division's DeLore Products manufacturers and markets extender pigments. Its principal products are Barytes, Whiting, and a diatomaceous calcite trade named Lorite®. These products are used by the automotive market in brake linings, paints and urethane foams. Other major markets are the rubber and vinyl industries for closures and mechanical goods, the housing industry for paint and seamless flooring, and the refining of petroleum.

SALES OFFICES:

Pigments & Chemicals Division

Calif.	Los Angeles 90023	3800 E. 26th St.	213/266-1720
	Oakland 94601	4701 San Leandro St.	415/261-0180
Ga.	Atlanta 30309	P.O. Box 7008, Sta. C	404/876-7361

Ill.	Chicago 60680	P.O. Box 7000 A	312/226-3700
Mass.	Westwood 02090	425 University Ave.	617/762-7400
Mich.	Detroit 48211	3501 Griffin St.	313/874-0488
Minn.	St. Louis Park 55426	3645 Hampshire Ave. So.	612/929-2675
Mo.	St. Louis 63101	P.O. Box 7109	314/241-8782
N.Y.	New York 10006	111 Broadway	212/732-9400
Ohio	Cincinnati 45211	3670 Werk Rd.	512/922-4100
	Cleveland 44113	1776 Columbus Rd.	216/696-3800
Pa.	Philadelphia 19125	2607 E. Cumberland St.	215/426-0600
Texas	Dallas 75222	1000 Sargent Rd.	214/948-3521
W. Va.	Charleston 25325	P.O. Box 1467	304/342-8103

DeLore Products

DeLore Products are available through Pigments & Chemicals Division Sales Offices and through 18 sales agents in 17 locations. Contact nearest P&C Division Sales Office for sales agent information.

PLANTS:

Pigments & Chemicals Division

Los Angeles, Calif.; Atlanta, Ga.; Chicago, Ill.; St. Louis, Mo.; Brooklyn, N.Y.; Philadelphia, Pa.; Dallas, Texas; Charleston, W. Va.

DeLore Products

St. Louis, Mo.

Industrial Specialties Group

29. BELL CLAY COMPANY

A subsidiary of N L Industries, Inc.
Bell Street
Gleason, Tennessee 38229 — 901/648-5511

Bell Clay mines and produces ball clays, brick clays and lignite. These products are chiefly used by the ceramic industry in producing floor and wall tile, sanitaryware, dinnerware, hotel china, artware, refractories and structural clay products.

SALES OFFICES:

N.Y.	Niagara Falls 14305	Hyde Park Blvd.	716/285-3333
Tenn.	Gleason 38229	Bell Street	901/648-5511

PLANT: Gleason, Tenn.

30. CAMBRIDGE NUCLEAR RADIOPHARMACEUTICAL CORPORATION

A subsidiary of N L Industries, Inc.
575 Middlesex Turnpike
Billerica, Massachusetts 01821 — 617/935-4050

Cambridge Nuclear, and its affiliate, Industrial Reactor Laboratories, Inc., are major producers of radioisotopes, radiopharmaceuticals and radioimmunoassay reagents for diagnostic nuclear medicine.

Facilities include a five megawatt swimming-pool-type nuclear reactor and related facilities at Plainsboro, N. J. and 14,000 square feet of laboratory space at Billerica, Mass.

SALES OFFICES:

Mass.	Billerica 01821	575 Middlesex Tpk.	617/935-4050
N.J.	Princeton 08540	P.O. Box 528	609/799-1133

LABORATORIES: Billerica, Mass.; Plainsboro, N.J.

31. CHAS. TAYLOR SONS COMPANY

A subsidiary of N L Industries, Inc.
8361 Broadwell Rd.
Cincinnati, Ohio 45244 — 513/561-2100

Chas. Taylor Sons Company is the largest producer of mullite and zircon refractories in the United States, and a major producer of bonded alumina-zirconia-silica, magnesia-alumina spinels, zirconia, and alumina refractories. It produces these products in a variety of standard brick, special shapes, cements, castables, ramming mixes and patches. Taylor special refractories are supplied to the glass, ceramic, chemical, steel, aluminum, and other metallurgical industries.

SALES OFFICES:

Ga.	Atlanta 30342	174 W. Wieuca Rd., N.E.	404/255-6672
Ind.	Hammond 46320	6 Russell St.	219/932-1000
Mich.	Southfield 48076	29200 Southfield Rd.	313/557-6473
Mo.	Webster Groves 63119	325 Simmons Ave.	314/961-4317
Ohio	Cincinnati 45244	8361 Broadwell Rd.	513/561-2100
	Cleveland 44122	3431 W. Brainard Rd.	216/831-1125
Pa.	Pittsburgh 15222	706 Investment Bldg.	412/281-6362
	Valley Forge 19481	Box 314	215/783-7080

PLANTS: South Shore, Ky.; Cincinnati, Ohio.

32. EDGAR PLASTIC KAOLIN COMPANY

A subsidiary of N L Industries, Inc.
P.O. Box 8
Edgar, Florida 32049 — 904/481-2421

Edgar Plastic Kaolin is the only active producer of Florida kaolin—a high strength, high quality kaolin which has long been a standard of the ceramic industry. Users include manufacturers of dinnerware, sanitary ware, tile and electrical porcelain. Non-ceramic uses include filler and coatings applications.

In addition to clay, Edgar Plastic Kaolin supplies specialty sands to the construction, fertilizer, and glass manufacturing industries in the Southeast.

SALES OFFICES:

Fla.	Edgar 32049	Box 8	904/481-2421
N.Y.	Niagara Falls 14305	Box C, Bridge Sta.	716/285-3333

PLANTS: Edgar, Plant City, Fla.

33. ELECTRONICS DEPARTMENT

N L Industries, Inc.
P.O. Box 420
Hightstown, New Jersey 08520 — 609/448-3200

N L Industries Electronics Department is a major producer of thermistors (temperature sensitive resistors) and varistors (voltage sensitive resistors). These products are available as simple components or incorporated in complex assemblies. Major areas of application include air conditioning, automotive, CATV, computer and electrical generating. Also, home appliances, home entertainment, industrial control, medical electronics, mobile communications, photocopy, photographic, process control and telephone.

SALES OFFICES:

N.J.	Hightstown 08520	P.O. Box 420	609/448-3200

PLANT: Muskegon, Mich.

34. NATIONAL LEAD COMPANY OF OHIO

A subsidiary of N L Industries, Inc.
P.O. Box 39158
Cincinnati, Ohio 45239 513/738-1151

National Lead Company of Ohio is the contract operator for U.S. Atomic Energy Commission's uranium ore concentration plant.

PLANT: Fernald, Ohio.

35. NUCLEAR DIVISION

N L Industries, Inc.
111 Broadway
New York, New York 10006 212/732-9400

Nuclear Division is the major U.S. producer of depleted uranium products for radiation, shielding, counterweight and ballast applications in aircraft, industry and other applications, including ordnance. Manufacturing capabilities include large and small specialized shipping containers for containment of irradiated or corrosive materials, utilizing depleted uranium, lead, concrete or any conventional material.

Other facilities include designing or building-to-print a wide range of transfer and handling mechanisms for use in and around nuclear reactors. Also, total service in the transport of spent nuclear fuel to reprocessing sites.

SALES OFFICES:

Del.	Wilmington 19801	919 Market St.	302/656-1601
	Wilmington 19801	Foot of West St.	302/656-1661
N.Y.	Albany 12205	1130 Central Ave.	518/459-2700

PLANTS: Wilmington, Del.; Albany, N.Y.

36. TAM DIVISION

N L Industries, Inc.
Box C, Bridge Station
Niagara Falls, New York 14305 716/285-3333

TAM Division produces zirconium compounds, primarily silicates and oxides, from zircon mined in N L-owned facilities in Australia. Principal applications include ceramic glaze opacifiers and refractory constituents, as well as non-ceramic use in filler and coating applications.

TAM is also a major producer of dielectric titanates, zirconates and stannates used in the manufacture of ceramic capacitors.

SALES OFFICE AND PLANT:

N.Y.	Niagara Falls 14305	Box C, Bridge Sta.	716/285-3333

Other Products

37. ANAHEIM CITRUS PRODUCTS COMPANY

A subsidiary of N L Industries, Inc.
421 East Commercial Street
Anaheim, California 92803 714/533-4558

Anaheim Citrus Products is one of the leading manufacturers of dry citrus peel products in the western United States. During an average season Anaheim Citrus processes some 2-million pounds of waste material per day into salable products for industrial and livestock uses.

The major product is dry citrus peel for pectic manufacturers. Other products include dried citrus pulp meal for the cattlefeed industry and wet brewers grains for the dairy industry.

SALES OFFICE:

Calif.	Anaheim 92803	421 E. Commercial St.	714/533-4558

PLANTS: Yuma, Ariz.; Anaheim, Calif.

38. PAINT DIVISION

N L Industries, Inc.
195 Clinton Rd.
West Caldwell, New Jersey 07006 201/575-0970

The Dutch Boy® trademark identifies the line of interior and exterior paints that are produced and marketed by the Paint Division of N L Industries. Dutch Boy latex and alkyd finishes are sold to consumers and painting contractors by a network of independent dealers throughout the United States, the Caribbean area and the Philippine Islands.

SALES OFFICES:

Calif.	Burlingame 94010	1818 Gilbreth Rd.	415/692-4111
	Los Angeles 90023	3113 E. 26th St.	213/263-7121
	San Diego 92115	6415 University Ave.	714/582-3282
	Stockton 95204	204 E. Alpine St.	209/466-5025
Fla.	Ft. Lauderdale 33308	2801 E. Oakland Park Blvd.	305/564-7531
Ill.	Chicago 60680	900 W. 18th St.	312/226-3700
Mass.	Westwood 02090	425 University Ave.	617/762-7400
Mo.	St. Louis 63177	1015 Locust St.	314/241-8782
N.Y.	Woodbury 11797	211 Crossways Park Dr.	516/921-7380
Ohio	Cincinnati 45211	3670 Werk Rd.	513/922-4100
	Cleveland 44113	1776 Columbus Rd.	216/696-3800
Ore.	Portland 97214	810 S. E. Belmont St.	505/235-2191
Pa.	Philadelphia 19125	2607 E.Cumberland St.	215/426-0600
	Pittsburgh 15201	Arsenal Terminal Whse., Bldg. 43, 39th & Butler Sts.	412/687-3910
Texas	Dallas 75222	1000 Sargent Rd.	214/948-3521
Wash.	Seattle 98134	1128 S.W.Spokane St.	206/622-1950

PLANTS: Los Angeles, Calif.; Chicago, Ill.; Perth Amboy, N.J.; Philadelphia, Penna.; Seattle, Wash.

39. R-N CORPORATION

An affiliate of N L Industries, Inc.
111 Broadway
New York, New York 10006 212/732-9400

R-N Corporation is the developer and licensor of processes for the production of metallic iron by the direct reduction of iron ores and other iron-bearing materials.

SALES OFFICE:

N.Y.	New York 10006	111 Broadway	212/732-9400

International Operations of N L Industries

Metals Group

Cia Minera y Refinadora, S.A. (49%), Mexico City, Mexico
Antimony mining.

The Canada Metal Company, Limited (50%), Toronto, Canada
Lead oxides, lead and zinc alloys, brass and bronze products, fabricated lead products.

Pigments Group

Canadian Titanium Pigments, Limited, Montreal, Canada
Titanium pigments; gellants; lead pigments; stabilizers; zirconium and titanium compounds.

Kronos SA/NV, Brussels, Belgium
Titanium pigments; gellants; lead pigments.

Kronos Titan A/S, Fredrikstad, Norway
Titanium pigments; gellants; lead pigments; stabilizers.

Kronos Titan—GmbH, Leverkusen, West Germany
Titanium pigments; gellants; lead pigments.

Kronos Titanium Pigments, Limited, London, England
Titanium pigments.

Societe Industrielle du Titane S.A. (93%), Paris, France
Titanium and lead pigments.

Titania A/S, Hauge i Dalane, Norway
Ilmenite ore mining.

Fabricated Products Group

Doehler-Australia Pty. Ltd. (70%), Auburn, Australia
Die castings.

Doehler Canada Limited, Hamilton, Canada
Aluminum, brass, magnesium, zinc die castings.

Industrias Doehler do Brasil, S.A., Sao Paulo, Brazil
Die castings.

Metal Castings Doehler, Ltd., Worcester, England
Die castings.

Schraubenfabrik Neustadt Goetz & Cie GmbH (99%), Neustadt/Schwartzwald, West Germany
Screws and metal fasteners.

Chemicals Group

Abbey Chemicals Limited (70%), London, England
Gellants and stabilizers.

Baroid Australia Pty., Limited (99%), Sydney, Australia
Oil well drilling materials.

Baroid de Venezuela, S.A. (92%), Maracaibo, Venezuela
Oil well drilling materials.

Baroid do Brasil, Ltda., Salvador, Brazil
Oil well drilling materials.

Baroid International, S.p.A., Rome, Italy
Oil well drilling materials.

Baroid of Canada, Ltd., Calgary, Canada
Oil well drilling materials, services.

Baroid of Libya, Ltd. (49%), Benghazi, Libya
Oil well drilling materials.

Baroid of Nigeria, Limited, Lagos, Nigeria
Oil well drilling materials.

Baroid Trinidad Services, Ltd. (50%), Trinidad, West Indies
Oil well drilling services.

Baroid (U.K.) Limited, London, England
Oil well drilling materials.

Bentone-Chemie GmbH (70%), Nordenham, West Germany
Gellants.

Oncor SA/NV, Langerbrugge, Belgium
Anti-corrosive pigments.

Perubar, S.A., Lima, Peru
Barite mining.

Pigmentos Minerais Industrial e Commercial Pigmina, S.A., Salvador, Brazil
Barite mining.

The Carter White Lead Company of Canada, Limited (50%), Montreal, Canada
Lead pigments; oxides; stabilizers.

Industrial Specialties Group

Chas. Taylor Sons, S.A., Brussels, Belgium
High temperature refractories.

Mineral Deposits, Limited (85%), Southport, Queensland, Australia
Mining of rutile, zircon ores.

Queensland Titanium Mines Pty., Ltd. (75%), Southport, Queensland, Australia.
Mining of rutile, zircon ores.

The Titanium Alloy Manufacturing Co. Pty., Limited, Southport, Queensland, Australia.

Other Products

Industrias Deriplom, S.A., Buenos Aires, Argentina
Lead oxides.

National Lead Company (Philippines), Inc. (51%), Manila, Philippines
Paints and related products.

National Lead Company, S.A., Buenos Aires, Argentina
Lead products.

Figures in parentheses represent percentage of voting securities owned.

NATIONAL LEAD COMPANY
SUBSIDIARY AND AFFILIATED COMPANIES
DECEMBER 31, 1969

NAME OF CORPORATION	ADDRESS	TYPE OF BUSINESS	PERCENTAGE OF VOTING SECURITIES OWNED DIRECTLY OR INDIRECTLY BY NATIONAL LEAD CO.
National Lead Company	111 Broadway, New York, N. Y.	Manufacturing paints; pigments; fabricated lead and allied products; die castings; zinc alloys and metal forming dies; bearings; oil well drilling materials and miscellaneous products	Parent Company
Aluminum Match Plate Corp.	1500 Military Road, Kenmore, N. Y.	Manufacturing aluminum castings	100
American Bearing Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Amos-Thompson Corporation	600 S. Kyle St., Edinburg, Indiana	Manufacturing hardwood lumber, face veneers, molded plastics and plastic products	100
Amos Molded Plastics of Illinois, Inc.	290 E. Fullerton St., Carol Stream, Illinois	Manufacturing plastic products	100
Frank Purcell Walnut Lumber Co., Inc.	13th & Kaw River, Kansas City, Kansas	Production of lumber and purchase of logs	100
Excel-Mold, Inc.	939 E. Troy Ave., Indianapolis, Indiana	Manufacturing injection molds	100
Amos-Thompson of North Carolina, Inc.	600 S. Kyle St., Edinburg, Indiana	Sale of face veneer	100
Anchor Screw Products Co.	6465 Corvette St., Los Angeles, California	Distributing screws and metal fasteners	100
The Baker Castor Oil Co.	40 Ave. A, Bayonne, N. J.	Manufacturing castor oil and derivatives	71
The Baker Castor Oil Co. of Calif.	"	Real estate holding company	71
The Baker Castor Oil Co. of Texas	"	Purchasing castor beans	71
Cia Mamona Brasileira, S. A.	"	Inactive	71
Baroid Chemicals, Inc.	2404 Southwest Freeway, Houston, Texas	Selling oil well drilling materials	100
Baroid Sales Export Corp.	2404 Southwest Freeway, Houston, Texas	Selling oil well drilling materials	100
The Bunting Brass and Bronze Co.	715 Spencer St., Toledo, Ohio	Manufacturing bronze bushings, bars; special sintered bronze and iron parts	100
Cobalt Nickel Reduction Co.	111 Broadway, New York, N. Y.	Inactive	100
Cochrane Foundry, Inc.	465 Ogontz St., York, Pa.	Manufacturing aluminum, bronze, and brass sand castings	100
Doehler-Jarvis Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Edgar Plastic Kaolin Co., Inc.	Edgar, Florida	Mining kaolin clay and glass sand	100
Edgar Brick Co., Inc.	Edgar, Florida	Inactive	100
Evans Lead Corp.	111 Broadway, New York, N.Y.	Inactive	100
Floating Floors, Inc.	1945 Smead Ave., Toledo, Ohio	Selling elevated floors and site environmental systems	100
Goldsmith Bros. Dental Co.	900 West 18th St., Chicago, Ill.	Selling dental supplies	100
H-K, Inc.	238 North 2200 West, Salt Lake City, Utah	Inactive	100
Hoyt Metal Co.	111 Broadway, New York, N. Y.	Inactive	100
Jonathan Manufacturing Co.	1101 South Acacia Ave., Fullerton, Calif.	Manufacturing chassis slide rails and metal processing	100
Anaheim Citrus Products Co.	421 East Commerical, Anaheim, Calif.	Dehydrating citrus peel, pectin and cow feed	100
C. A. W. Metal Fabricators	1601 E. Orangethorpe Ave., Fullerton, Calif.	Fabricating metals	100
Entin Metals, Inc.	1621 E. Orangethorpe Ave., Fullerton, Calif.	Sale of metal products	100
Morris P. Kirk & Son, Inc.	2700 So. Indiana St., Los Angeles, Calif.	Manufacturing lead oxides, fabricated lead, aluminum zinc and allied products	76
Pioneer Aluminum, Inc.	3800 East 26th St., Los Angeles, Calif.	Manufacturing aluminum aircraft extrusions and tooling plate	76
Magnus Metal Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Master Metals, Inc.	2850 West 3rd St., Cleveland, Ohio	Manufacturing fabricated lead products	100
Metallurgical & Chemical Corp.	111 Broadway, New York, N. Y.	Inactive	100
National Lead Co., Inc.	"	Inactive	100
Lake View Trust and Savings Bank	3201 North Ashland Ave., Chicago, Ill.	Banking	99
National Lead Co. of Hawaii, Ltd.	1603 Dillingham Blvd., Honolulu, Hawaii	Liquidated December 1969	100
National Lead Co. of Ohio	111 Broadway, New York, N. Y.	Contract operator, atomic energy commission	100
National Lead Overseas Capital Corp.	"	Financing capital requirements of National Lead Co.'s foreign subsidiaries	100
Nickel Processing Corp. of New York	"	Inactive	100
Radio Baroid, Inc.	2404 Southwest Freeway, Houston, Texas	Radio station	100
The Ridge Machine Co.	5325 West 130th St., Cleveland, Ohio	Manufacturing of machines for die casting	100
Sayre & Fisher Land Co.	111 Broadway, New York, N. Y.	Real estate holding company	100
Southern Screw Co. of P. R., Inc.	Industrial Park, Arecibo, Puerto Rico	Manufacturing screws	100
Southern Screw Co.	111 Broadway, New York, N. Y.	Sales Agent	100
Synrox, Inc.	Cincinnati, Ohio	Manufacturing ceramic molds	100
The Chas. Taylor's Sons Co.	8361 Broadwell Rd., Cincinnati, Ohio	Manufacturing refractories	100
Titanium Pigment Corp.	111 Broadway, New York, N. Y.	Sales agent	100
Titanium Pigment Export Corp.	"	Selling titanium pigments	100
United Lead Co.	"	Inactive	100
Zirconium Metals Corp. of America	Hillyard St., Hamilton, Canada	Sales agent	100
Barber Die Casting Co., Ltd.	608 - 7th St. S. W. Calgary, Canada	Manufacturing die castings	100
Baroid of Canada, Ltd.	721 Eastern Ave., Toronto, Canada	Mining and manufacturing oil well drilling materials	100
The Canada Metal Co., Ltd.		Manufacturing lead oxides; fabricated lead and allied products; lead and zinc alloys	50

NATIONAL LEAD COMPANY
SUBSIDIARY AND AFFILIATED COMPANIES
DECEMBER 31, 1969

NAME OF CORPORATION	ADDRESS	TYPE OF BUSINESS	PERCENTAGE OF VOTING SECURITIES OWNED DIRECTLY OR INDIRECTLY BY NATIONAL LEAD CO.
ATLAS SMELTING & REFINING CO., LTD.	721 EASTERN AVE., TORONTO, CANADA	INACTIVE	50
GREAT WESTERN SMELTING CO., LTD.	"	INACTIVE	50
HEWITT METALS CORP., LTD.	1554 MCDOUGALL AVE., WINDSOR, CANADA	MANUFACTURING FABRICATED LEAD AND ALLIED PRODUCTS	50
THE HOYT METAL CO. OF CANADA, LTD.	721 EASTERN AVE., TORONTO, CANADA	INACTIVE	50
CANADIAN BAROID SALES, LTD.	608 -7TH ST. S. W. CALGARY, CANADA	SELLING OIL WELL DRILLING MATERIALS	100
CANADIAN TITANIUM PIGMENTS, LTD.	2140 SUN LIFE BUILDING, MONTREAL, CANADA	MANUFACTURING TITANIUM PIGMENTS	100
THE CARTER WHITE LEAD CO. OF CANADA,LTD.	1295 DELORIMIER AVE., MONTREAL, CANADA	MANUFACTURING LEAD PIGMENTS, LEAD OXIDES & STABILIZERS	50
LAKESHORE DIE CASTING, LTD.	39 ROYAL RD., GUELPH, CANADA	MANUFACTURING DIE CASTINGS	100
BAROID DO BRASIL, LTDA	RUA MIGUEL CALMON 19, SALVADOR BAHIA, BRAZIL	SELLING OIL WELL DRILLING MATERIALS	100
INDUSTRIAS DOEHLER DO BRASIL, S. A.	102 AV. ALBERT SCHWEITZER, SAO BERNARDO DO CAMPO, BRAZIL	MANUFACTURING DIE CASTINGS	95
PIGMENTOS MINERAIS INDUSTRIAL E COMERCIAL PIGMINA, S. A.	RUA MIGUEL CALMON 19, SALVADOR, BAHIA, BRAZIL	MINING BARYTES	100
IMPORTACAO E EXPORTACAO DEOR LTDA.	PRACA DOM JOSE GASPAR 134, SAO PAULO, BRAZIL	HOLDING COMPANY	100
BAROID DE VENEZUELA, S. A.	APARTADO 42, MARACAIBO, VENEZUELA	MANUFACTURING OIL WELL DRILLING MATERIALS	89
BARYTES & MINERALS, LTD.	59 SACKVILLE ST., PORT OF SPAIN, TRINIDAD, W. I.	MANUFACTURING OIL WELL DRILLING MATERIALS	50
CIA. MINERA Y REFINADORA MEXICANA, S. A.	AV. VENUSTIANO CARRANZA NO. 980, S.L.P., MEXICO	MINING ANTIMONY ORE	49
CIA. MINERA DE OAXACA, S. A.	"	" " "	74
CIA. MINERA DEL FUTURO, S. A.	"	" " "	73
CIA. MINERA DEL CERRO NEGRO, S. A.	"	INACTIVE	100
PERUBAR, S. A.	TEODOSIO PARRENO 342-344, BARRANCO, LIMA, PERU	BARYTES EXPLORATION	100
BAROID AUSTRALIA PTY., LTD.	16-20 BRIDGE ST., SYDNEY, N.S.W., AUSTRALIA	SELLING OIL WELL DRILLING MATERIALS	99
THE TITANIUM ALLOY MFG. CO. PTY., LTD.	EMPEROR ST., TIN CAN BAY, QUEENSLAND, AUSTRALIA	HOLDING COMPANY	100
MINERAL DEPOSITS, LTD.	81 ASHMORE ROAD, SOUTHPORT, QUEENSLAND, AUSTRALIA	MINING AND CONCENTRATING RUTILE AND ZIRCON	85
QUEENSLAND TITANIUM MINES PTY., LTD.	EMPEROR ST., TIN CAN BAY, QUEENSLAND, AUSTRALIA	MINING RUTILE AND ZIRCON ORES	75
BAROID (U.K.) LTD.	19 GRAFTON ST., LONDON, W. 1., ENGLAND	SELLING OIL WELL DRILLING MATERIALS	100
THE HOYT METAL CO. OG GREAT BRITAIN, LTD.	105 DEODAR RD., PUTNEY, LONDON, ENGLAND	MANUFACTURING BEARINGS AND ANTIFRICTION METALS	100
ABBEY CHEMICALS, LTD.	8 BAKER ST., PORTMAN SQUARE, LONDON, ENGLAND	MANUFACTURING GELLANTS AND STABILIZERS	52
HEAVY DUTY BEARINGS, LTD.	105 DEODAR RD., PUTNEY, LONDON, ENGLAND	INACTIVE	100
THE HOYT METAL CO. OF AUSTRALIA PTY., LTD.	68-80 HUGHES AVE., ERMINGTON, N.S.W., AUSTRALIA	MANUFACTURING BEARINGS AND ANTIFRICTION METALS	100
STE. FRANCAISE DU METAL ANTIFRICTION HOYT	55 QUAI DE VALMY, PARIS, FRANCE	" " " "	100
KRONOS TITANIUM PIGMENTS, LTD.	ST. ANN'S HOUSE, PARSONAGE GREEN, WILMSLOW,ENGLAND	SELLING TITANIUM PIGMENTS	100
METAL CASTINGS DOEHLER, LTD.	DROITWICH RD., WORCESTER, ENGLAND	MANUFACTURING DIE CASTINGS	100
NATIONAL LEAD CO. (PHILIPPINES), INC.	MAKATI COMMERCIAL CENTER, MAKATI, RIZAL, P. I.	MANUFACTURING PAINTS	51
NATIONAL LEAD CO. (THAILAND), LTD.	10 BUSH LANE, BANGKOK, THAILAND	" "	51
INDUSTRIAS DERIPLOM, S. A.	AV. R. SAENZ PENA 567, BUENOS AIRES, ARGENTINA	HOLDING COMPANY	100
NATIONAL LEAD CO., S. A.	"	LEAD SMELTING AND MANUFACTURING FABRICATED LEAD PRODUCTS	100
CIA MINERA CASTANO VIEJO, S. A.	"	MINING LEAD AND ZINC AND MFG. LEAD AND ZINC CONCENTRATES	50
MERETA, S. A.	AVDA. MARQUEZ E ITALIA, BUENOS AIRES, ARGENTINA	HOLDING COMPANY	100
DOEHLER ARGENTINA, S.A.I.C.I.F.	VIA G.A. GUATTANI 14, ROME, ITALY	MANUFACTURING DIE CASTINGS	100
BAROID INTERNATIONAL, S.P.A.	RUE LEOPOLD 11, BRUSSELS, BELGIUM	MINING AND MANUFACTURING OIL WELL DRILLING MATERIALS	100
CHAS. TAYLOR SONS, S. A.	BRUGHERIO, (MILANO), ITALY	MANUFACTURING REFRACTORIES	100
COLVER, S.P.A.	RUE LEOPOLD 11, BRUSSELS, BELGIUM	MANUFACTURING PAINTS	70
STE. BELGE DU TITANE, S. A.	"	SELLING TITANIUM PIGMENTS	100
DERIVES DU TITANE, S. A.	45 RUE DE COURCELLES, PARIS, FRANCE	MANUFACTURING TITANIUM PIGMENTS	100
STE. INDUSTRIELLE DU TITANE	GROOTHANDELSGEBOUW, STATIONSPLEIN 45, ROTTERDAM, HOLLAND	SELLING TITANIUM PIGMENTS	91
KRONOS TITAAN N. V.	FREDRIKSTAD, NORWAY	SELLING PAINTS AND TITANIUM PIGMENTS	100
TITAN CO. A/S	HAUGE - DALANE, NORWAY	MANUFACTURING PAINTS AND TITANIUM PIGMENTS	100
TITANIA A/S	"	MINING AND MILLING ILMENITE	100
THE JOSSINGFJORD MFG. CO. A/S	RUE LEOPOLD 11, BRUSSELS, BELGIUM	PRODUCING ELECTRICITY	100
TIFERRO, S. A.	NYBROGATAN 44, STOCKHOLM, SWEDEN	HOLDING COMPANY	100
KRONOS TITANPIGMENT A. B.	7828 NEUSTADT/SCHWARZWALD, WEST GERMANY	SELLING TITANIUM PIGMENTS	76
SCHRAUBENFABRIK NEUSTADT GOETZ & CIE, GMBH	PESCHSTRASSE 5, LEVERKUSEN, GERMANY	MANUFACTURING SCREWS AND METAL FASTERNERS	99
TITANGESELLSCHAFT MBH	"	MANUFACTURING TITANIUM PIGMENTS	100
UNTERSTUTZUNGSKASSE TITAN GMBH	134/136 BROAD ST., LAGOS, NIGERIA	HOLDING COMPANY	100
BAROID OF NIGERIA, LTD	5050 POPLAR ST., MEMPHIS, TENN.	SELLING OIL WELL DRILLING MATERIALS	100
ENENCO INC.	250 PARK AVE., NEW YORK, N. Y.	PRODUCTING FATTY AMINES	50
MINE LA MOTTE CORP.	111 BROADWAY, NEW YORK, N. Y.	INACTIVE	50
R-N CORPORATION		SELLING R-N PROCESS FOR DIRECT REDUCTION AND BENEFICIATION OF IRON ORES	50
TITANIUM METALS CORP. OF AMERICA	195 CLINTON ROAD, WEST CALDWELL, N. J.	MANUFACTURING TITANIUM METAL SPONGE, INGOTS, SHEET AND FORGINGS	50
WILSON-SNEAD MINING CO., INC.	EUFAULA, ALABAMA	MINING VAUXITE	50

NATIONAL LEAD CO./NL INDUSTRIES, INC.

HISTORY OF GROWTH (U.S. ONLY)

1891 - 1981

1891 - National Lead Company was incorporated by consolidation of the following companies:

Original Name	Location	Products	New Name
John T. Lewis & Company	Phila., Pa.	white,red lead	John T. Lewis & Bros. Branch
Western White Lead Company	"	white lead	
Brooklyn White Lead Company	New York, N.Y.	"	National Lead and Oil Works Branch
Jewett White Lead Company	"	"	
Bradley White Lead Company	"	"	
Atlantic White Lead & Linseed Oil Company	"	"	Atlantic White Lead and Linseed Oil Branch
Cornell Lead Company	Buffalo, N.Y.	*	Buffalo Branch
Salem Lead Company	Boston, Mass.	*	Nat'l Lead Co. of Mass.
Anchor White Lead Company	Cincinnati, Ohio	white lead	Cincinnati Branch
Eckstein Company	"	"	
Collier White Lead & Oil Co.	St. Louis, Mo.	"	St. Louis Branch(?)
St. Louis Lead & Oil Co.	"	"	
Southern White Lead & Color Co.	"	*	
Missouri Lead & Oil Co.	"	white lead	
D. B. Shipman White Lead Co.	Chicago, Ill.	"	Chicago Branch (?)
Southern White Lead Co.	"	"	
Fahnestock White Lead Co.	Pittsburgh, Pa.	"	Pittsburgh, Pa.
Beymer-Bauman Lead Co.	"	*	
Davis-Chambers Lead Co.	"	*	
Armstrong-McKelvey Lead & Oil Co.	"	white lead	
J. H. Morley & Company	Cleveland, Ohio	*	Cleveland Branch

* Presumed to be white lead

1890 - Bought Lennox Smelting, Front & Jay St., Brooklyn, N.Y.

1891 - Bought Kentucky Lead & Oil Co., 9th St. between Main & River Sts., Louisville, Ky. Sold it in 1906.
- Bought American White Lead, 8th St. & Cawthorne, Louisville, Ky. Sold it in 1896.
- Bought Red Seal Castor Oil Co., St. Louis, Mo.

1893 - Acquired Ulster Lead Company, New York, N.Y.
- Acquired Union White Lead Mfg., Company, New York, N.Y.
- Combined these with the previously formed Atlantic White Lead and Linseed Oil Branch and the National Lead and Oil Works Branch into the Atlantic Branch.

1897 - Acquired the St. Louis Smelting and Refining Co., St. Louis, Mo.

1899 - Established Baltimore Branch
- Began production at mine in St. Francois County, Missouri.

1905 - Tells of mining property acquired in 1897, which became productive in 1899. Property was in St. Francois County, Missouri.

1906 - Acquired United Lead Co., with its companies as listed below:
American Shot & Lead Co., Fayette, Pitt & Front St., Baltimore, Md
American Shot & Lead Co., Dickson & Lewis St., St. Louis, Mo.
American Shot & Lead Co., St. Joseph & Constance St., New Orleans,
Sportsman's Shot Works, Cincinnati, Oh.
Collier Shot Tower Works, St. Louis, Mo.
Omaha Shot & Lead Works, 2810 "A" St., Omaha, Nebraska
Northwestern Shot & Lead, 118 Fairfield Ave., St. Paul, Mn.
Chicago Shot Tower Works, Chicago, Ill.
Bailey Farrell Shot Works, Pittsburg, Pa.
LeRoy Shot & Lead Works, N.Y.
Lousten Lead Works, Chicago, Ill.
Merchants Shot Works, Baltimore, Md.
(Hoyt) Markle Lead Works, St. Louis, Mo., plant in Granite City, Ill.
Union Lead & Oil, Front St., Brooklyn, N.Y.
W. L. McDougall Co., Elk & Prenitt St., Buffalo, N.Y.
Tatham Bros., 82-84 Beekman St., N.Y.
Tatham Bros., 82 Morgan St., Jersey City, N.J.
Tatham Bros., 226 S. 5th St., Philadelphia, Pa.

1907 - (reported in 1911) - Acquired Heath & Millgan Co., paint manfacturer, Chicago, Ill.

1908 - "Your mining and smelting interest have a plant in process of erection for the manufacture of sublimed lead (basic lead sulfate made directly from ore), product which now enters into a variety of uses including ready mixed paints."

1909 - Acquired an interest in U.S. Cartridge Co. of Lowell, Mass. (ammunition maker).
- (reported in 1912) Built a steel package plant.

1910 - Built a new plant in Pittsburgh, Pa. (Sterling Works?)
- Purchased a metal plant in Baltimore, Md.
- New plant of Southern Works, Chicago, Ill. (white lead).
- New St. Louis works nearing completion.

1911 - Sold Shipman Works, Chicago, Ill.
- New plant, Pittsburgh, Pa., Sterling Works (white lead).
- "A modern smelter has been constructed at Collinsville, Ill. . . . In addition to and in connection with the smelter, has been erected and is now in successful operation, a plant for the manufacture of Basic Sulfate of Lead." (This is all the St. Louis Smelting and Refining Co.)

- Baltimore Branch apparently absorbed into John T. Lewis & Co. Branch of Philadelphia, Pa.
- United Lead Co. bought Consolidated Lead Co.

1912 - Acquired Matheson Lead Co., Long Island City, N.Y.

1915 - Announced that the River Smelting and Refining Co. is a new corporation organized jointly by Messrs. Stone and Webster of Boston and the National Lead Co. for the purpose of manufacturing spelter by electrolytic process from zinc ores. "The plants of this company are completed and . . . they are about to be put in operation."
- (reported in 1916) Large plant in Brooklyn for aluminum die-castings.

1916 - Purchased Bass-Hueter Paint Co., San Francisco, Calif.
- Announce plans to build a tin smelter in the U.S. "The Co. has for many years smelted scrap tin and tin drosses."
- Acquired majority interest in Cinch Expansion Bolt and Engineering Co.
- Hoyt Metal Co. building die-casting facilities at its St. Louis plant.
- New plant of Carter White Lead nearly completed at West Pullman, Chicago.

1917 - Tin Smelting works being constructed in Brooklyn. (Williams Harvey Corp. of New York),

1918 - New construction took place in Phila., New York City, Cincinnati, San Francisco, Detroit, Denver, and New Haven.
- A United Lead Co. plant in Keokuk, Iowa made a tin substitute alloy, Ulco Hard Metal, during the war.
- Williams Harvey Corp. (American) new plant began operations (tin smelter).

1919 - Sold Heath & Milligan Co., Chicago (paints).
- Acquired all of Hirst and Begley Co., Chicago, Ill. (linseed oil production).
- Purchased all remaining stock of U.S. Cartridge Co.

1921 - Acquired one-half of the Titanium Pigment Co., Inc. plant in Niagara Falls, N.Y. (including Florida ilmenite properties, later known as Ponte Vedra Co.)

1923 - Acquired National Pigments and Chemical Co., St. Louis, Mo. (barytes plant).
- Titanium Pigment Co. is building a large plant in St. Louis, Mo. using equipment bought from a plant of the Mineral Refining and Chemical Corp. of St. Louis, Mo.
- Closed Williams Harvey Corp. tin - smelting plant on Long Island, N.Y.
- Acquired all interest in the Mueller Brass Foundry Co. of St. Louis.
-Acquired an interest in Combined Metals Reduction Co.

1926 - Sold United States Cartridge Co., Lowell, Mass.
- Acquired Chicago Bearing Metal Co.

1927 - Sold the Die-Casting Department, accepting stock in the Newton Die-Casting Corp., New Haven, Conn.

1928 - United Lead Co. plants consolidated with those of the National Lead Co.
- Acquired Georgia Lead Co.

1929 - Formed the Midwest Carbide Corp. to take over the business formerly operated by the National Lead Co. at Keokuk, Iowa. The Shawinigan Products Corp. became (50%) associates.

1930 - Acquired majority interest in Morris P. Kirk & Sons, Inc., Los Angeles, Calif. (purchase, treatment, and sale of secondary metals).
- Bought Evans Lead Co. plant at Charleston, W. Va. (lead oxides).
- Dissolved Cinch Expansion Bolt and Engineering Co.
- Dissolved Williams - Harvey Corp.

1932 - Acquired all outstanding stock of the Titanium Pigment Co. (including lands owned by Buckman & Pritchard, Inc. a subsidiary wholly owned by the Titanium Pigment Co. consisting of 17 miles of beach and abutting lands between Jacksonville and St. Augustine, Florida).

1933 - Acquired controlling interest in Master Metals, Inc., Cleveland, Ohio (smelting and refining drosses and secondary metals).
- Calif. Branch renamed the Pacific Coast Branch.

1935 - New TiO_2 plant built at Sayreville, N.J.
- Acquired majority interest in the American Bearing Corp., Indianapolis, Ind. (bearings).
- Acquired the California Talc Co.
- Acquired the Silica Products Co.
- Acquired the unowned balance of the Baroid Sales Co.
- Closed plant and liquidated the Virginia Lead Smelting Corp.

1936 - Sold mining properties the St. Francois, Missouri district (mines).
- Abandoned the Matawan, N.J. plant, transferring its operations to Perth Amboy, N.J.
- Simplified the corporate organization by dissolving the following subsidiary companies (acquiring all of the assets of the companies:)

Titanium Pigment Company.....
National Pigments and Chemical Co...
California Talc Co. .....
Silica Products Company .....
National Pigments Co. .....
National Barytes Co. .....
Baroid Sales Company .....
Magnus Co. Inc. New York .....
Magnus Co. Inc. California .....
The Magnus Co. Colorado.....
Magnus Co. Inc. Connecticut .....
Magnus Co. Inc. Georgia .....
Magnus Metal Co. Illinois .....
The Magnus Metal Co. Kansas.....
Magnus Metal Co. Inc. Kentucky .....
Magnus Co. Inc. Michigan .....
Magnus Metal Co. Missouri .....
Magnus Co. Inc. Oregon .....
Magnus Co. Inc. Texas .....
Magnus Co. Inc. Wisconsin .....
Evans Lead Company .....
U. S. Cartridge Company.....
Carter White Lead Company.....

1938 - Development of the Buckman & Pritchard, Inc. real estate (Florida) is being continued under the corporate name of Ponte Vedra Co.

1941 - Acquired MacIntyre ilmenite deposits (in Town of Newcomb, Essex County, N.Y.)

1942 - Built and began operations at Magnesium Reduction Co., Luckey (Toledo), Ohio (production of magnesium). All funds for construction and operation were provided by Federal government.
- Sold Ponte Vedra Co. (Florida).
- Continued exploration and development (mining properties) in Missouri, Kansas, and Oklahoma; and at mines operated by our subsidiary, Combined Metals Reduction Co., in Utah and Nevada.
- Mining properties in Rico, Col. abandoned.
- Non-operating properties in Bonanza, Col. were sold.

1943 - Acquired Edna Brass Manufacturing Co. (locomotive specialities).
- Relinquished interest in Combined Metals Reduction Co.

1944 - Acquired William A. Hardy & Sons Company, Fitchburg, Mass. (railroad bearings and paper mill screen plates).
- The newly developed Madison County, Missouri, area, which yields lead, copper, nickel, and cobalt concentrates, was brought into production.

1945 - Magnesium plant operated by the Magnesium Reduction Co. was closed.
- Missouri mining operations in the Madison County area substantially curtailed.

1946 - Acquired the outstanding minority shares of American Lead Corp., Indianapolis, Ind. (secondary metals smelters).
- Acquired the Texas Mining and Smelting Co., Laredo, Texas (metallic antimony and antimony oxides).

1947 - Began production of mixed paints at Perth Amboy, N.J. and Chicago, Ill.
- Constructed a plant to produce ground bentonite at Aladdin, Wyo., replacing unit at Belle Fourche, So. Dak. which was destroyed by fire.

1948 - New paint factory built in Los Angeles, Calif.
- Acquired majority interest in the Minnesota Linseed Oil Co., Minneapolis, Minn.
- Ceased linseed oil crushing operations at plants in Philadelphia, Pa. and Brooklyn, N.Y.
- Purchased certain assets of Titanium Alloy Manufacturing Co., Niagara Falls, N.Y.

1949 - New non-ferrous metal plants were constructed and are being operated by Morris P. Kirk & Son, Inc. in Salt Lake City, Utah and Portland, Ore.

- Acquired majority stock of Baker Castor Oil, with plants in Bayonne and Jersey City, N.J., Los Angeles, Calif., and Rochester, N.Y.

1950 - Acquired the plant of the Schorn Paint Co., Seattle, Wash.
- Formed Titanium Metals Corp. of America, owned jointly with Allegheny Ludlum Steel Corp.
- New bentone plant built in St. Louis, Mo.

1951 - Operations ceased at the Atlantic plant (linseed oil, white lead, paint products) in Brooklyn, N.Y., and the property was sold.
- Began production of titanium metal at Henderson, Nevada.
- Acquired all of the stock of Chas. Taylor's Sons Co. (plants in Cincinnati, Ohio and Taylor, Ken.).

1952 - Began operating AEC Feed Materials Plant at Fernald, Ohio.
- Operating small plant for AEC in Middlesex, N.J. (uranium ore sampling).
- Formed the Pioneer Alloy Products Division (valves, castings), with a plant in Ellwood City, Pa.

1953 - Acquired the Doehler-Jarvis Corp.
- Built new Doehler-Jarvis plant in Pottstown, Pa.
- Completed new DeLore (pigment extender) plant in Edson, Kansas.
- Completed new Baroid barytes plant in Corpus Christi, Texas.
- With Goodyear Tire & Rubber Co. and Bird & Son, Inc., formed Ruberite, Inc. (rubberized barytes for paving material). Plant in Malvern, Arkansas.

1954 - Completed nickel-copper-cobalt refinery at Fredericktown, Mo. (on the site of the lead and zinc mine of the St. Louis Smelting and Refining Division).
- Became contract operator of AEC Raw Materials Development Laboratory in Winchester, Mass. (including a pilot plant in Grand Junction, Col.).

1955 - Acquired Southern Screw Co., Statesville, No. Carolina.

1957 - Disposed of a D-J plant unit in Chicago which had not been in operation for several years.
- Formed new Nuclear Metals Division (supervises Fernald, Winchester, Grand Junction, Monticello operations).
- Nickel oxide smelted to produce metallic nickel at Crum Lynn, Pa.

1958 - Completed facilities at Albany, N.Y. for fabrication of nuclear fuel elements.
- Apparently ceased operations at Grand Junction, Colorado.
- Completed, with nine other companies, a nuclear research reactor at Plainsboro, N.J.

1959 - Acquired Goldsmith Bros. Smelting and Refining Co.
- Closed lead and zinc mine at Baxter Springs, Kansas.
- Monticello, Colorado facility closed.

1960 - Magnus Metal Division completed new facility in Fremont, Neb.
- Operating contract of Nickel Processing Corp. terminated.
- Started operation of new facility in Middlesex County, N.J. to produce materials encapsulated in polyethylene.

1961 - Disposed of majority stock interest in Minnesota Linseed Oil.
- Fredericktown, Mo. mine closed, operation liquidated.
- Hightstown laboratories completed.

1962 - Treating chemicals added to Baroid product line.
- Acquired Floating Floors Inc. (markets products made in D-J plants).

1963 - Production facilities for die-casting aluminum flooring and site-environmental systems transferred from Newark, N.J. to Toledo, Ohio.
- Metal fabricating plant and warehouse in Cincinnati, Ohio relocated to new facility in same area.
- New, partly owned, subsidiary, Enenco, Inc. built new plant in Memphis, Tenn.
- Paint test station transferred from Sayville, N.Y. (since 1917) to Hightstown, N.J.

1964 - Acquired all the stock of American Tansul Co. (specialized clay products).
- Two Doehler plants in Pottstown, Pa. consolidated into one location.
- Agreement signed with Bunker Hill Co. for development and mining of the Company's Higdon lead-zinc property near Fredericktown, Mo.
- TMCA opened applications development center at West Caldwell, N.J. to conduct special metallurgical investigations and to build and test prototype parts for the chemical industry.
- Construction began of new lead oxide facilities in Portland, Ore.
- Set up large experimental facility at Lakepoint, Utah to study magnesium salts extraction.

1965 - Acquired a plant at Landover, Maryland (cast acrylic sheets).
- Started manufacturing aluminum castings in a plant at Kenmore, N.Y.

1966 - New plant built by Magnus Metal Division at French Camp, Calif.
- Albany operations expanded through purchase of the equipment of the Sylcor Division of Sylvania Electric Products.
- New plant completed by Baroid at Channelview, Texas to produce oil field chemicals.
- New secondary lead refinery built at Beech Grove, Ind.

1967 - Acquired Amos Thompson Corp.
- Acquired Cochrane Foundry Inc.
- Purchased a plant in Wilmington, Del. to augment and broaden capability to fabricate radiation shielding material and mechanisms from depleted uranium.

1968 - Acquired Lake View Trust and Savings Bank, Chicago, Ill.
- Acquired Bunting Brass and Bronze Co.

1969 - Acquired McCullough Tool Co.
- Acquired Jonathan Manufacturing Co.
- Began Magnesium Division.
- Acquired Anaheim Citrus Products.

1970 - Closed paint and varnish manufacturing operations in San Francisco (in operation since 1891).
- Fasteners plant in Puerto Rico began operations.
- Baroid Treating Chemicals plant into full operation, including mineral synthesis plant.
- Discontinued manufacture of acrylic plastic sheet, and of encapsulated cellulose.
- Opened an antimony-ore concentrating mill in Nevada.

1971 - "In the past 18 months, we have closed down seven unprofitable plants and have sold three marginal operations."
- Acquired General Electric Company's speciality resistor business in Muskegon, Mich.
- Sold Blatchford Base and Aluminum Match Plate Corporation.
- Discontinued production of ferro titanium alloys.
- Chloride plants in U.S. and Canada shut down. Ceased production calcium-based titanium pigments.
- Name changed to NL Industries, Inc.

1972 - Pedricktown started up.
- Acquired Cambridge Nuclear Radiopharmaceutical Corp. (Billerica, Mass.) and Industrial Reactor Laboratories Inc. (Plainsboro, N.J.).
- Purchased (TIMET) Standard Steel Division.
- Acquired outstanding stock of Bell Clay Co.
- Started magnesium plant.

1973 - Greenville, Tenn. plant (Southern Screw) began operations.
- New plant opened in Altoona, Pa.
- Acquired outstanding stock of Triangle Service Inc.

1974 - Four operations - American Bearing, Bunting Brass, Magnus Metal, Regal Molds - combined into Bearings Division.
- Acquired remaining outstanding stock of Wilson-Snead Mining Co.

1975 - Sold five operations: Amos-Thompson Wood Div., Electronics Dep't., Floating Floors Inc., Lee Metal Products Co., Regal Molds Inc.
- Closed Doehler-Jarvis plant in Grand Rapids, Mich.

1976 - Sold Dutch Boy Paints Division.
- Sold Lake View Trust and Savings Bank.
- Sold Bell Clay Co.
- Sold Anaheim Citrus Products Co.
- Sold "....the Company's interest in lead mining properties."

1977 - Acquired the Rucker Co.
- Sold Jonathan Slide Div.
- Acquired Jett Engineering, Charlotte, N.C.

- Operations terminated at Antimony Division, Laredo, Texas. Subsequently sold.
- Southern Screw plants in Greenville, Tenn. and Puerto Rico closed.
- Sold Plastic Products Division.
- Sold Cochrane Foundry
- Sold Metallurgical Products operation.
- Acquired outstanding stock of Ashton Supply Co., Inc.

1978
- Began operations of D-J plant in Greenville, Tenn.
- Acquired Well Services Division workover, maintenance, and completion. (Formerly Texas International).
- Acquired Control Systems Division (formerly Stewart and Stevenson).
- Shut down St. Louis TiO_2 plant.
- Sold Taylor Refractories Division.
- Sold NL Clays Corp.
- Sold Pioneer Aluminum, Inc.
- Sold lead-plants in Portland, Ore. and Los Angeles, Calif.
- Closed lead plant in Dallas, Texas; subsequently sold.

1979
- Opened North Belt Complex.
- Completed new Hycalog plant in Oklahoma.
- Acquired Basin Surveys.
- Acquired Petrolog.
- New plant, Atlas-Bradford, Bryan, Texas.
- Sold Philadelphia plant (lead chemicals).
- Sold Niagara Falls plant (ceramics, Zr chemicals).
- Sold Bearings plant in Indianapolis, Ind.
- Sold Secondary lead plants: Altoona, Pa.,; Cleveland, Ohio; Granite City, Ill.; Beech Grove, Ind.; St. Louis Park, Minn.; Brooklyn (Bradley plant), N.Y.

1980
- Sold Bearings plants: Toledo, Ohio; Kalamazoo, Mich.
- Closed Bearings plant in Houston, Texas.
- Sold Magnesium Division.

1981
- Acquired Sperry-Sun, Sugarland, Texas.

* * *

HGR/aab
Revised 6/18/81

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF ORGANIZATION

OF

NATIONAL LEAD COMPANY

To: The Secretary of State
State of New Jersey

Pursuant to the provisions of Section 14A:9-2(4) and Section 14A:9-4(3) of the New Jersey Business Corporation Act, the undersigned executes the following Certificate of Amendment of the Certificate of Organization of National Lead Company:

1. The name of the corporation is NATIONAL LEAD COMPANY.

2. The following amendment of the Certificate of Organization of National Lead Company having been approved by its Board of Directors was adopted upon receiving the affirmative vote of two-thirds of the votes cast by the holders of shares entitled to vote thereon at a meeting of its shareholders held on the 15th day of April A.D., 1971:

The Certificate of Organization of National Lead Company, as amended, is amended so that Article I will read as follows:

"I. That the name assumed to designate such company and to be used in its business dealings is N L INDUSTRIES, INC."

3. The number of shares outstanding at the time said amendment was adopted and the number of shares entitled to vote thereon was 23,816,042.

4. The number of shares voted for and against such amendment, respectively, was 17,412,572 votes for and 350,822 votes against such amendment.

IN WITNESS WHEREOF, this Certificate has been executed on behalf of National Lead Company by its Chairman of the Board thereunto duly authorized this 16th day of April A.D., 1971.

NATIONAL LEAD COMPANY

[CORPORATE SEAL]

By EDWARD R. ROWLEY
Edward R. Rowley
Chairman of the Board

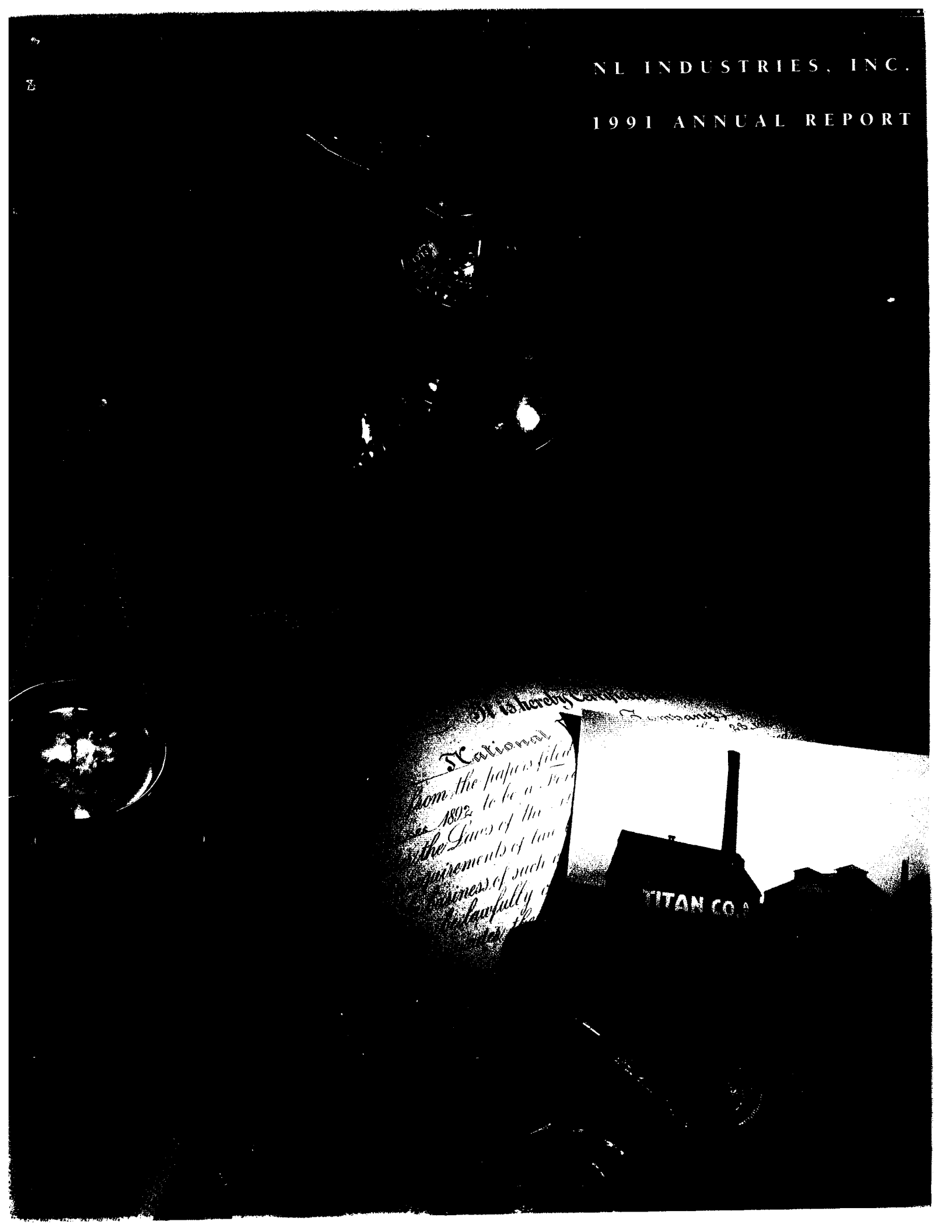
Attest:

THOMAS P. MESICK
Thomas P. Mesick, Secretary

Exhibit 4

NL INDUSTRIES, INC.

1991 ANNUAL REPORT



COMPANY PROFILE

NL Industries, Inc. is a multinational company that manufactures and markets titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two principal operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paint, plastics, paper, fiber and ceramics. Rheox, Inc., NL's other principal operating subsidiary, is a major supplier of water-based and solvent-based rheological additives. These products are used to control the flow and levelling characteristics of paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,500 people worldwide. The Company is committed to being a leading corporate citizen and fair employer in the countries where it operates. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

ABOUT THE COVER

To commemorate the centennial anniversary of the founding of NL Industries, this image visually presents a "historical perspective" of the Company. The Dutch Boy, well-recognized for many years as the logo which represented NL's line of high-quality paints, is now a worldwide trademark of the Sherwin-Williams Company and its affiliates. The leather-bound ledger contains the minutes from NL's first Board of Directors meeting held in 1891. Also shown is the charter document from 1892 when the Company was registered in the state of New York. The photo with the smokestack shows the first titanium dioxide pigments plant built in Norway in the 1920s.

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FINANCIAL HIGHLIGHTS

(In millions, except per share data)	**1991**	1990	1989
Net sales	**$ 840.3**	$ 906.6	$ 1,000.9
Operating income	**139.0**	251.1	308.6
Income (loss) before income taxes	**(19.0)**	154.8	278.1
Income (loss) before extraordinary items	**(24.0)**	93.5	170.3
Net income (loss)	**(16.5)**	92.4	172.9
Capital expenditures	**195.1**	195.3	83.4
Cash and cash equivalents	**125.3**	435.3	165.6
Marketable securities:			
Current	**228.0**	7.8	129.9
Noncurrent	**220.3**	429.7	449.0
Total assets	**1,831.0**	1,966.7	1,512.3
Notes payable and current maturities of long-term debt	**139.0**	180.0	465.9
Long-term debt	**1,150.3**	1,130.4	383.9
Common shareholders' equity (deficit)	**(58.3)**	38.6	132.3
Income (loss) per common share:			
Income (loss) before extraordinary items	**$ (.40)**	$ 1.42	$ 2.57
Extraordinary items	**.13**	(.02)	.04
Net income (loss)	**$ (.27)**	$ 1.40	$ 2.61

ABOUT THIS REPORT

This annual report gives a concise overview of NL's products, financial condition and financial results for 1991. Additional detailed information is provided annually to shareholders in accordance with the regulations of the Securities and Exchange Commission. This detailed information is in the Company's Annual Report on Form 10-K, which includes complete audited financial statements and information pertaining to litigation and other contingencies to which the Company is subject. Certain portions of this information are also included in the appendix to the Company's annual meeting proxy statement, which accompanied the initial mailing of this annual report to shareholders.

NL's products are used worldwide to make inks brighter and paper whiter, and this annual report represents just one of thousands of products containing titanium dioxide pigments.

TO OUR SHAREHOLDERS:

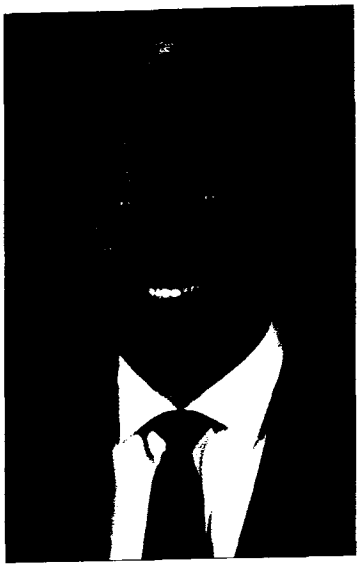
The year 1991 marked the centennial anniversary of the founding of NL Industries, Inc. The titanium dioxide pigments business of our wholly-owned subsidiary, Kronos, Inc., traces its origins to companies which became part of NL during the early years of its growth. These companies played an important role in the development of today's pigment industry by establishing the titanium dioxide pigments market and improving product performance. This was accomplished by building an international organization that continues to meet the needs of this important market.

Harold Simmons
Chairman of the Board

The recession in the United States and other parts of the world, combined with excess industry capacity, posed difficult challenges for our Company in 1991 and as we begin 1992. Net sales were $840 million, down 7% from the previous year. Operating income was $139 million, a 45% reduction from 1990. As a result of investment losses, interest and other expenses, the Company incurred a net loss of $16 million compared to net income of $92 million in 1990. Operations in 1991 were adversely affected by a continued worldwide decline in titanium dioxide pigment prices, which began to fall early in 1990. Substantial cost reductions, record production from our chloride process technology plants, and sales volume 10% above 1990 mitigated the decline in operating income due to price erosion.

This year will mark the completion of construction at Kronos' 80,000 metric ton capacity titanium dioxide pigments plant in Lake Charles, Louisiana. This facility, which is in the early start-up stages, marks Kronos' return to manufacturing titanium dioxide pigments in the United States for the first time since 1982. We believe that sales in the United States have been constrained by customer preferences for a domestic supplier, and that operation of the Lake Charles plant will facilitate future growth of Kronos' U.S. sales.

In September 1991, the Company purchased 11.3 million shares of its common stock for an aggregate cost of $181 million in a self-tender offer. As of February 14, 1992, the Company had also purchased 4.0 million shares of its common stock pursuant to a 5 million share repurchase program authorized in 1990, including 1.6 million shares repurchased during 1991 for an aggregate cost of $21 million.



J. Landis Martin
President and Chief Executive Officer

Recovery from the effects of a worldwide decline in economic conditions has been disappointingly slow. The tight titanium dioxide pigments supply/demand relationship that existed in the late 1980s eased significantly during the past two years. Worldwide pigment supply increased from production expansion projects begun in the late 1980s, while 1991 demand growth did not fully recover from reductions sustained in 1990. According to industry estimates, capacity utilization was below 90% in both 1990 and 1991. As a result, pigment prices weakened and the impact of these reduced prices will continue to be felt in 1992. Without significant price improvements over current levels, Kronos' operating income in 1992 is expected to be substantially lower than in 1991, and the Company currently expects to report a net loss for 1992. However, when an economic recovery begins, operating rates should improve and result in higher prices in the longer term.

Our Rheox subsidiary made considerable progress in its second year of operating as a separate subsidiary by bringing 20 new products to global markets, and by organizing its product lines into three distinct groups. Most of the new products were introduced late in the year and did not substantially affect 1991 net sales.

All operations of the Company have ongoing stringent cost control programs to enhance future profitability, and we are confident that these efforts will have a positive impact in 1992. Throughout our 100 year history, NL has endured cyclical swings in the economy, and we believe that the titanium dioxide pigments industry has significant long-term potential.

Harold Simmons

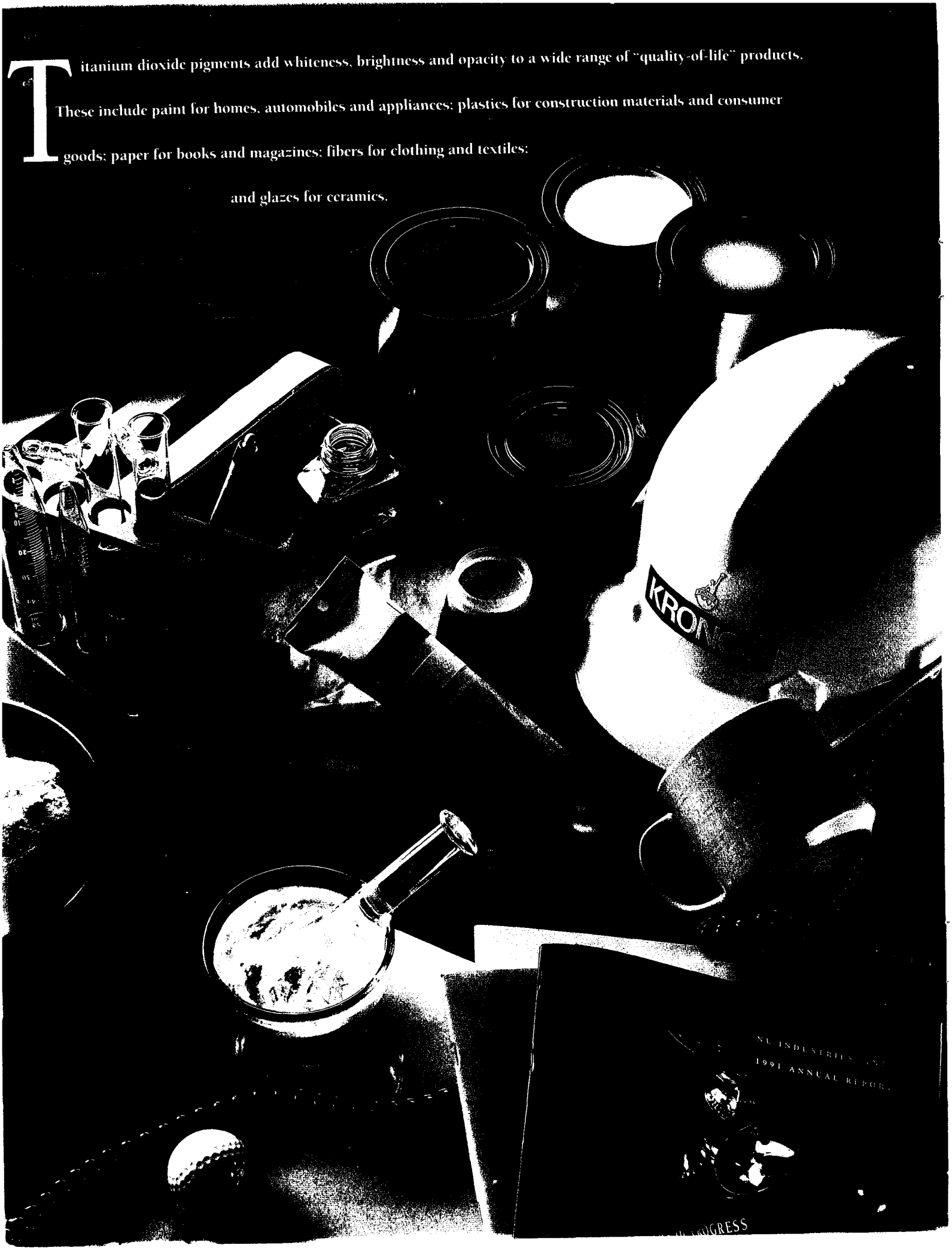
Harold Simmons
Chairman of the Board

J. Landis Martin

J. Landis Martin
President and Chief Executive Officer

February 14, 1992

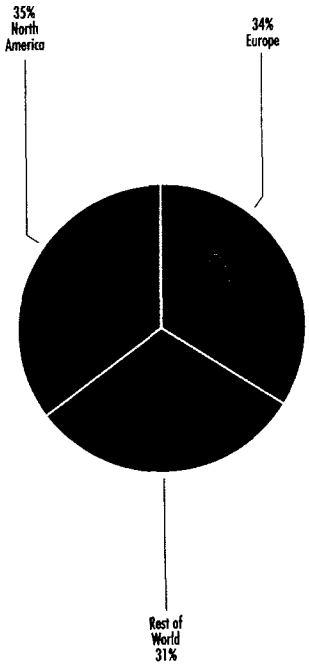
Titanium dioxide pigments add whiteness, brightness and opacity to a wide range of "quality-of-life" products. These include paint for homes, automobiles and appliances; plastics for construction materials and consumer goods; paper for books and magazines; fibers for clothing and textiles; and glazes for ceramics.



TITANIUM DIOXIDE PIGMENTS

Demand for titanium dioxide pigments increases with the growth of end-use products related to an improved standard of living. The titanium dioxide pigments industry has

An employee at Kronos' new Lake Charles facility removes titanium dioxide pigments from the slurry collection filters prior to the drying phase of the manufacturing process.



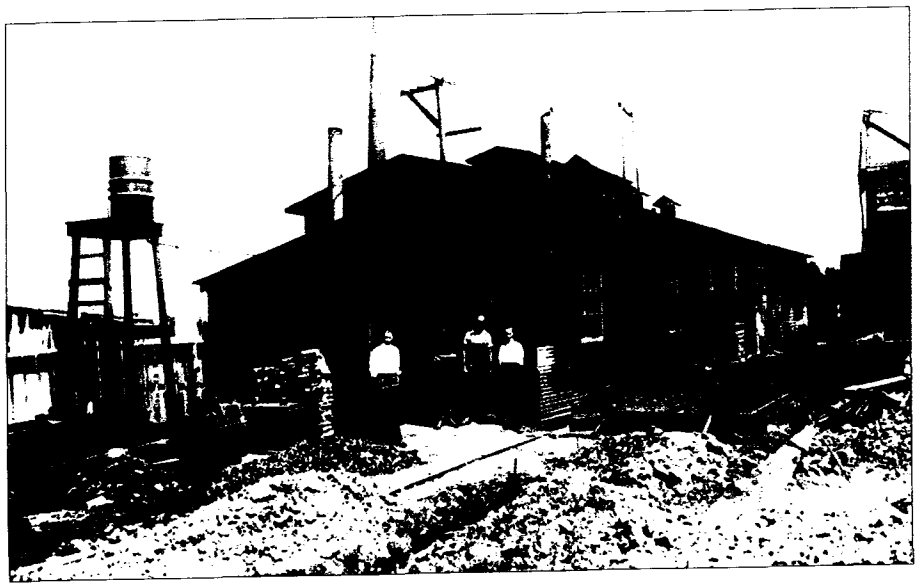
Worldwide Pigment Consumption by Geographic Region

grown 50% during the last two decades to an annual production capacity of almost three million metric tons. This growth was achieved despite temporary setbacks resulting from the cyclical nature of worldwide economic conditions.

The potential for long-term growth of the industry can be seen by examining per capita consumption of titanium dioxide pigments in various geographical regions. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world. Kronos believes that economic development in Eastern Europe, the Far East and China should eventually produce consumption patterns approaching those of more industrialized nations. This will result in increased demand for titanium dioxide pigments – a product for which there presently is no direct substitute. As the world's fourth largest producer of these pigments, Kronos is well positioned to participate in this future growth.

TITANIUM DIOXIDE PIGMENTS– A HISTORY OF PROGRESS

Kronos played a leading role in development of the worldwide titanium dioxide pigments market and in the growth of NL Industries. Predecessor companies first commercialized production of titanium dioxide pigments in the United States and Norway in the 1920s. The sulfate manufacturing process pioneered by these operations remains a basic technology for plants that today account for over half of the world's titanium dioxide pigments supply. The company also provided ilmenite ore, a key raw material for the growing industry, from two mines, one of which is still in operation in Norway.



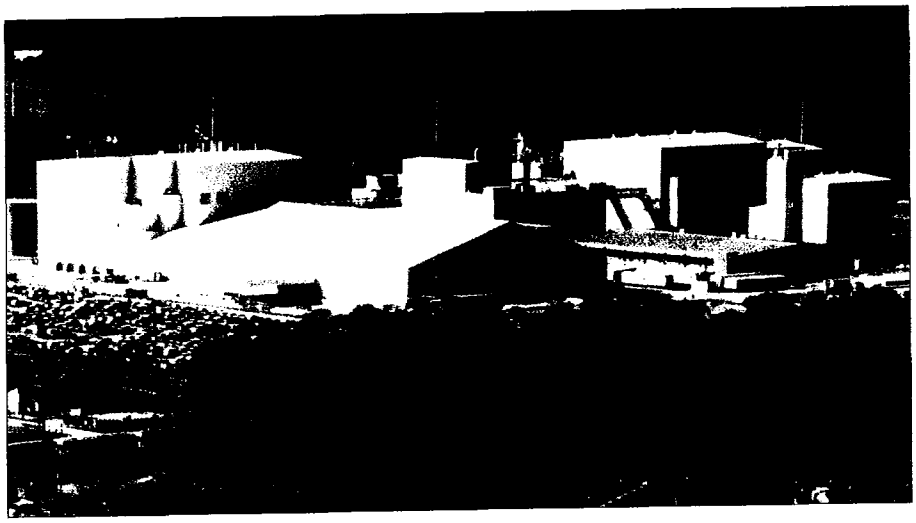
The first plant to produce commercial quantities of titanium dioxide pigments in the United States began operations in Niagara Falls, New York in 1916. This plant became part of the Company's operations in 1920.

As demand for titanium dioxide pigments spread throughout Europe, the company established manufacturing facilities in Germany and sales organizations in France and Belgium. Further growth in worldwide pigment demand led to construction of additional production facilities in Belgium and Canada during the late 1950s.

Kronos research and development scientists continued to improve the sulfate process and also developed a proprietary chloride process technology. In 1978, Kronos completed construction of the first commercial titanium dioxide pigments plant in Continental Europe to utilize the chloride process technology. This technology is a

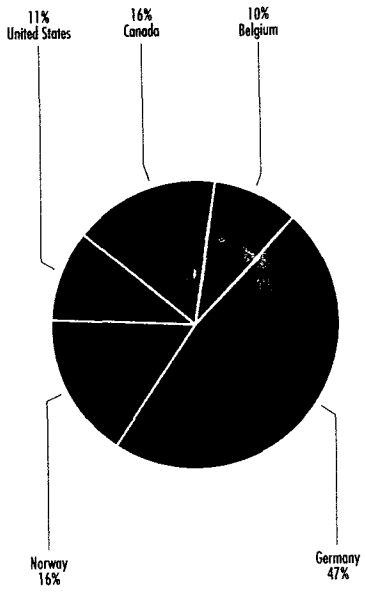
keystone for Kronos' continued growth as it provides significant economic and environmental advantages from reduced effluent waste treatment requirements and improved energy and manpower utilization compared to the sulfate process.

Over the past decade, Kronos developed and implemented an environmental initiative which included building three environmentally-preferred chloride process plants and discontinuing waste acid discharge from all European sulfate process plants. Kronos has undertaken these measures well ahead of other titanium dioxide pigment companies in the European Community.



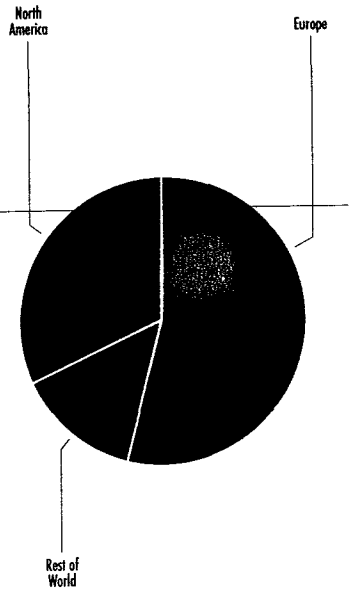
Kronos has completed construction of its U.S. titanium dioxide pigments plant in Lake Charles, Louisiana. Start-up of production began in early 1992 utilizing the environmentally-preferred chloride process.

Kronos currently operates six pigment production plants and one mine at locations in five countries. Successful operation of these facilities has been achieved by employing strong managerial and technical personnel recruited from local areas. The multinational nature of Kronos is evident from both a historical perspective and the 1991 geographical distribution of its employees. This worldwide presence provides the manufacturing, sales and distribution systems to service more than 5,000 customers in over 100 countries.



Kronos Employee Distribution

Operating income in 1991 was $110.8 million, compared to $230.3 million in 1990. This decline resulted from a 15% decrease in average selling prices, partially offset by a 10% growth in sales volume which improved Kronos' worldwide market share. The continued decline in prices was due primarily to easing of the supply/demand balance resulting from the combined effects of increased worldwide production capacity and reduced demand.



Kronos 1991 Unit Sales Volume

Although selling prices declined, lower demand did not uniformly impact all pigment products. Sales of pigments produced by the chloride process remained relatively strong compared to sales of sulfate process pigments. Having approximately equal capacities of both processes, Kronos responded by reducing production at the sulfate facilities, while maintaining full chloride production.

Kronos also took advantage of its strong chloride production base to increase sales volume, especially in the United States. Seven new pigment products were introduced in the U.S. during 1991. Four of these have been specifically designed for plastics applications, which are the fastest growing market segment. The major coatings market was bolstered by the introduction of two new products, one of which is supplied to customers in slurry form. Shipment of pigment as a slurry reduces wastes from discarded packaging materials, and eliminates an initial customer operation required for paint manufacturing. Another new pigment product was also introduced in the important paper laminate market.

Start-up is currently underway at Kronos' new titanium dioxide pigments plant located in Lake Charles, Louisiana. This is the first new titanium dioxide pigments plant built in the United States since 1979. The facility incorporates the latest in Kronos' proprietary chloride process technology, including capability to utilize a wide range of

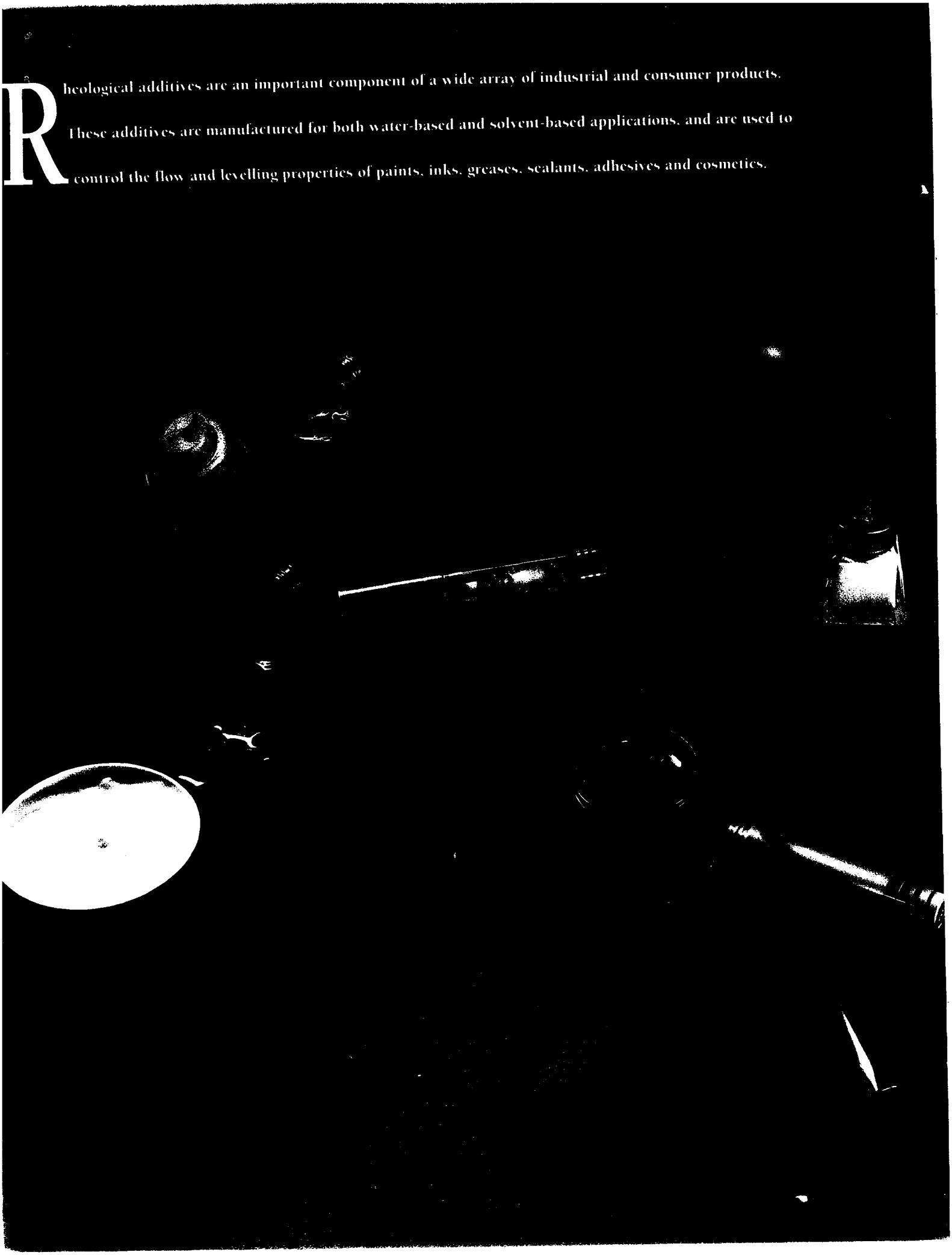
feedstock materials. This flexibility, which is not available to all manufacturers, allows consumption of relatively low-cost raw materials. The plant also incorporates the latest environmental and safety technology.

A research scientist uses a high resolution X-ray diffractometer to certify the purity of titanium dioxide pigments and determine parameters for product processing.

The U.S. and Canadian pigment markets continue to move closer together with pending full implementation of the Free Trade Agreement in 1993. The Lake Charles facility, in conjunction with the existing Canadian plant, is expected to enhance Kronos' position in this strategically important North American market. The additional production capacity of the Lake Charles plant is expected to allow the company to take full advantage of anticipated increased demand resulting from a worldwide economic recovery.

The strong manufacturing and marketing base established by Kronos assures our customers a secure supply of quality pigments manufactured in cost-effective plants. Our employees are secure in the knowledge that they work in safe facilities, and the neighboring communities know that these facilities are operated with a high regard for protection of the environment. We believe these factors provide a strong business foundation for future success.

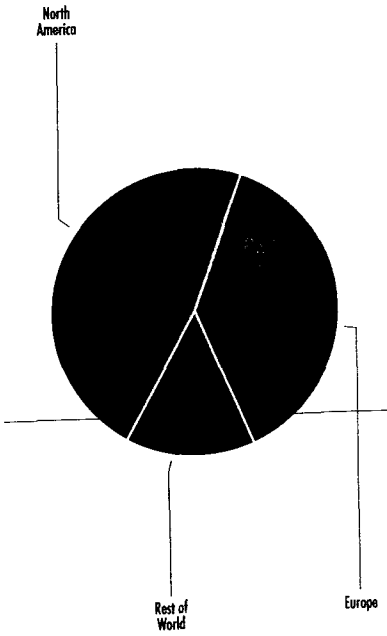
Rheological additives are an important component of a wide array of industrial and consumer products. These additives are manufactured for both water-based and solvent-based applications, and are used to control the flow and levelling properties of paints, inks, greases, sealants, adhesives and cosmetics.



Operating income in 1991 was $28.2 million, compared to $23.6 million in 1990. The 1990 earnings included a nonrecurring charge related to settlement of certain patent infringement litigation. Excluding the effect of this charge, 1991 earnings were essentially unchanged from 1990, with a slight reduction in sales volume being offset by production efficiencies and cost reduction programs. Average prices in 1991 were above 1990 levels as Rheox continued to focus on higher-margin products and expansion of its product lines.

Rheox also focused on global growth by organizing into three business groups: Solvent Base Coatings, Water Base Coatings and Specialties. This will facilitate responsiveness to customer needs in each business segment. International expansion resulted in a 16% growth in net sales in the Far East and Pacific Rim markets compared to 1990.

Rheox 1991 Unit Sales Volume



The Solvent Base Coatings group represents Rheox's largest business segment. This group benefits from a worldwide customer base and production of its own key raw materials. Hectorite clays are obtained from a company-owned mine in California which contains what is believed to be the largest known commercial deposit in the world. Quaternary amines, another important raw material, are purchased primarily from a 50%-owned joint venture company.

New solvent base products were patented and introduced during 1991. These include THIXATROL® TSR which prevents seeding in aliphatic coatings, and M-P-A® 3000 MS, a liquid anti-settling additive. In response to global distribution demands, Rheox developed a dry powder version of some of its newer liquid products. Dry products are easier to ship and are environmentally preferable to solvent-containing liquid forms.

The Water Base Coatings group introduced a wide array of products that are being sold in construction, paint and automotive end-user markets. Construction products BENAQUA™ 4000 and 8000 are additives for indoor and outdoor textured wall

coatings and elastomeric roof coatings. Other products include RHEOLATE® 300 which is a non-urethane associative thickener useful in high-value interior paints. RHEOLATE 2000, a water-dispersible additive, is being utilized successfully in the development of new water base automotive paints.

The Specialties group began marketing several new products during 1991. These include new ink additives such as BENTONE® 760 and several developmental products which enable customers to formulate inks based on environmentally preferred vegetable

Rheox utilizes an advanced infrared microscope which allows examination and analysis of microsamples to determine chemical composition and identify contaminants.

oils. A new acrylic polymer, RHEOLATE 5000, is currently being evaluated by customers as a thickener in water base cosmetics and industrial applications. Another polymer was market tested in an adhesive/sealant application, and commercial introduction of a broad family of adhesive products is expected in 1992. New oil well drilling products broadened the Rheox line of low-temperature drilling fluid additives. These complement the family of more technically demanding high-temperature products. The grease and plastics additives businesses were also expanded globally, and several new gels for cosmetics were introduced.

During 1992, Rheox will continue to develop its traditional products and markets while intensifying efforts to expand into other specialty chemicals areas.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)	Years ended December 31 1991	1990	1989
Net sales:			
Kronos	$ 732,108	$ 792,390	$ 822,324
Rheox	108,187	114,199	108,635
Specialty chemicals unit sold	–	–	69,924
	$ 840,295	$ 906,589	$ 1,000,883
Operating income:			
Kronos	$ 110,767	$ 230,250	$ 280,944
Rheox	28,194	23,598	25,733
Specialty chemicals unit sold	–	–	6,004
Group expense, excluding general corporate items	–	(2,772)	(4,131)
	138,961	251,076	308,550
Disposition of business units	–	–	33,523
General corporate income (expense):			
Interest and dividend income	40,502	40,556	21,967
Securities transactions, net	(53,092)	8,745	5,126
Expenses, net	(44,921)	(44,290)	(44,644)
Interest expense	(100,412)	(101,240)	(46,433)
	(18,962)	154,847	278,089
Provision for income taxes	(3,910)	(60,078)	(106,439)
Minority interest	(1,113)	(1,263)	(1,376)
Income (loss) before extraordinary items	(23,985)	93,506	170,274
Extraordinary items	7,523	(1,083)	2,620
Net income (loss)	$ (16,462)	$ 92,423	$ 172,894
Per common share:			
Income (loss) before extraordinary items	$ (.40)	$ 1.42	$ 2.57
Extraordinary items	.13	(.02)	.04
Net income (loss)	$ (.27)	$ 1.40	$ 2.61
Dividends	$ .60	$ .60	$ .45
Weighted average common shares outstanding	60,233	65,666	66,017

CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands)	December 31 1991	1990
Current assets:		
Cash and cash equivalents	$ 125,270	$ 435,256
Marketable securities	227,996	7,809
Accounts and notes receivable	239,338	222,888
Inventories	196,911	207,895
Prepaid expenses	6,001	10,577
Total current assets	795,516	884,425
Other assets:		
Marketable securities	220,345	429,749
Prepaid pension cost	17,511	16,713
Other	59,077	58,694
Total other assets	296,933	505,156
Property and equipment, net	738,584	577,114
	$1,831,033	$1,966,695
Current liabilities:		
Notes payable	$ 429	$ 40,746
Current maturities of long-term debt	138,605	139,285
Accounts payable and accrued liabilities	216,194	184,561
Income taxes	4,941	35,811
Total current liabilities	360,169	400,403
Noncurrent liabilities:		
Long-term debt	1,150,251	1,130,444
Deferred income taxes	232,336	257,148
Accrued pension cost	78,218	82,326
Other	66,495	56,276
Total noncurrent liabilities	1,527,300	1,526,194
Minority interest	1,839	1,530
Shareholders' equity (deficit)	(58,275)	38,568
	$1,831,033	$1,966,695
Common shares outstanding	51,201	64,135

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Years ended December 31 1991	1990	1989
Cash flows from operating activities:			
Net income (loss)	**$ (16,462)**	$ 92,423	$ 172,894
Depreciation, depletion and amortization	**32,581**	35,525	26,458
Deferred income taxes	**(14,665)**	75,387	(9,764)
Securities transactions, net	**53,092**	(8,745)	(5,126)
Changes in assets and liabilities	**2,513**	(108,370)	(35,917)
Other, net	**(7,127)**	(5,121)	(20,941)
Net cash provided by operating activities	**49,932**	81,099	127,604
Cash flows from investing activities:			
Capital expenditures	**(195,146)**	(195,304)	(83,386)
Sales (purchases) of securities, net	**87,502**	73,529	(646,381)
Other, net	**(1,786)**	45,073	102,423
Net cash used by investing activities	**(109,430)**	(76,702)	(627,344)
Cash flows from financing activities:			
Net borrowings	**2,504**	327,697	576,307
Dividends	**(34,724)**	(40,056)	(39,770)
Purchases of treasury stock	**(202,519)**	(22,129)	–
Other, net	**(842)**	(6,143)	(5,850)
Net cash provided (used) by financing activities	**(235,581)**	259,369	530,687
Cash and cash equivalents:			
Net change during the year	**(295,079)**	263,766	30,947
Net change due to currency translation	**(14,907)**	5,852	(3,676)
Balance at beginning of year	**435,256**	165,638	138,367
Balance at end of year	**$ 125,270**	$ 435,256	$ 165,638
Supplemental disclosures - cash paid for:			
Interest, net of amount capitalized	**$ 107,638**	$ 83,214	$ 34,620
Income taxes	**54,628**	62,547	113,602

CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)	Years ended December 31, 1991, 1990 and 1989
Balance at December 31, 1988	$ 145,365
Net income	172,894
Dividends	(30,599)
Adjustments:	
Currency translation	(86,980)
Marketable equity securities	(68,482)
Other	112
Balance at December 31, 1989	132,310
Net income	92,423
Dividends	(39,772)
Adjustments:	
Currency translation	(49,985)
Marketable equity securities	(74,641)
Purchases of treasury stock	(22,129)
Other	362
Balance at December 31, 1990	38,568
Net loss	(16,462)
Dividends	(34,724)
Adjustments:	
Currency translation	19,637
Marketable equity securities	137,198
Purchases of treasury stock	(202,519)
Other	27
Balance at December 31, 1991	**$ (58,275)**

REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders of NL Industries, Inc.:

We have audited, in accordance with generally accepted auditing standards, the consolidated balance sheets of NL Industries, Inc. as of December 31, 1991 and 1990, and the related consolidated statements of operations, cash flows and shareholders' equity for each of the three years in the period ended December 31, 1991 appearing in an appendix to the proxy statement for the 1992 Annual Meeting of Shareholders of NL Industries, Inc. (not presented herein). In our report dated February 14, 1992 also appearing in that proxy statement, we expressed an unqualified opinion on those consolidated financial statements.

In our opinion, the information set forth in the accompanying condensed consolidated financial statements is fairly presented, in all material respects, in relation to the consolidated financial statements from which it has been derived.

COOPERS & LYBRAND

Houston, Texas
February 14, 1992

DIRECTORS, OFFICERS AND EXECUTIVES

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer - NL Industries, Inc.

Kenneth R. Peak
President - Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman - Valhi, Inc. (diversified holding company)

Harold Simmons
Chairman of the Board - NL Industries, Inc.
Chairman and Chief Executive Officer - Valhi, Inc.

John R. Sloan
President and Chief Executive Officer - The Thompson Group (private investment company)

Michael A. Snetzer
President - Valhi, Inc.

Admiral Elmo R. Zumwalt, Jr. (Retired)
President - Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee
John R. Sloan, Chairman
Kenneth R. Peak

Management Development and Compensation Committee
Kenneth R. Peak, Chairman
John R. Sloan
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee
Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS AND EXECUTIVES

NL Industries, Inc.

Harold Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel, and Secretary

Dennis G. Newkirk
Vice President and Controller

Kronos, Inc.

J. Landis Martin
Chairman of the Board

Dr. Lawrence A. Wigdor
President and Chief Executive Officer

Susan E. Alderton
Vice President and Treasurer

William R. Bronner
Vice President and Secretary

Dennis G. Newkirk
Vice President and Controller

Anthony L. DeGisi
Vice President, North America

Fred DeJong
Vice President

Dr. Siegfried Hartmann
Vice President, Manufacturing

Edward J. Zadzora
Vice President, Human Resources

Dr. Christopher E. Jones
President, Kronos Louisiana, Inc.

Rheox, Inc.

Dr. Lawrence A. Wigdor
Chairman of the Board and Chief Executive Officer

Susan E. Alderton
Treasurer

Wilbert E. Blair
Vice President, Manufacturing

William R. Bronner
Vice President and Secretary

Dr. Michael A. DeSesa
Vice President, Technology

Paul A. Kopasko
Vice President, Finance

Larry Weissman
Vice President, Marketing

David Wood
Vice President, Europe

SHAREHOLDER INFORMATION

Annual Meeting

The annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

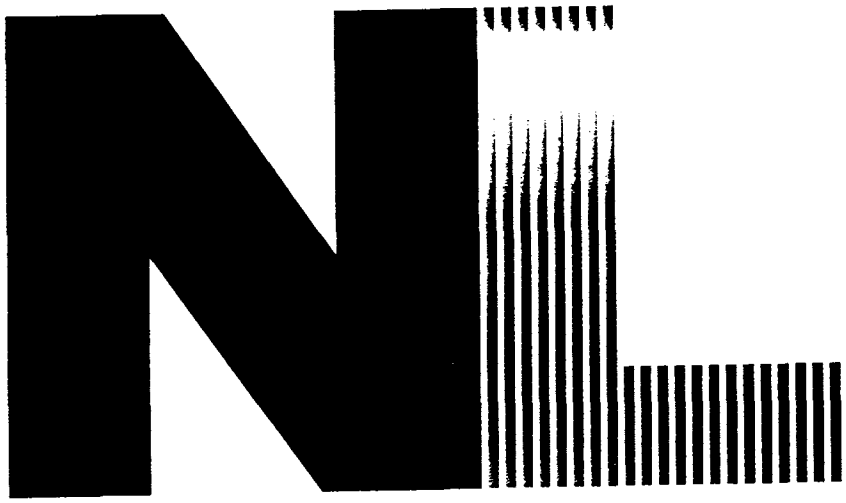
Registrar and Transfer Agency

First Chicago Trust Company of New York, P.O. Box 3981, Church Street Station, New York, New York 10008-3981. Telephone (212)791-6422

Form 10-K Report

Shareholders may obtain a free copy of the Annual Report on Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ended December 31, 1991. Requests should be addressed to NL Industries, Inc., Investor Relations Department, P.O. Box 60087, Houston, Texas 77205, or by calling (713)987-5186.

NL INDUSTRIES, INC.



1992

Annual

Report

COMPANY PROFILE

NL Industries, Inc. is a multinational company that manufactures and markets titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, the larger of NL's two principal operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments.

These pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paint, plastics, paper, fiber and ceramics. Rheox, NL's other principal operating subsidiary, is a worldwide supplier of solvent-based and water-based rheological additives. These products are used to control the flow and levelling characteristics of paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,600 people worldwide. The Company is committed to being a leading corporate citizen and fair employer in the countries where it operates. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL."

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Shareholder Information	IBC

TO OUR SHAREHOLDERS

The financial performance of NL Industries, Inc. in 1992 was adversely affected by the depressed worldwide economic climate and continued deterioration of pricing for titanium dioxide pigments. Although the year's financial results were disappointing, important strides were taken which should help enhance our business in future years.

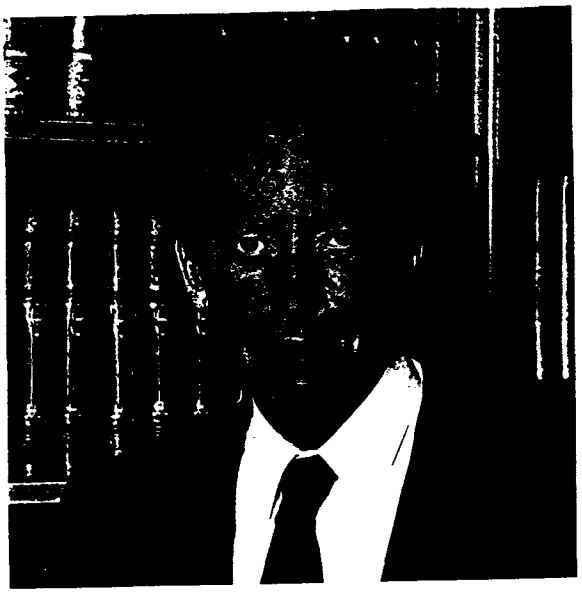
Kronos, our titanium dioxide pigments subsidiary, improved operating efficiencies and achieved production records at our chloride process titanium dioxide pigments plants in Canada and Europe. Kronos also implemented a new marketing and pricing program for its water treatment chemicals, which resulted in a more significant contribution to operating income from this co-product. We also successfully commissioned our chloride process titanium dioxide pigments plant in Lake Charles, Louisiana. Since its start-up, the plant has demonstrated continuing improvement in operating performance and has the potential of producing over 100,000 metric tons per year.

Rheox, our specialty chemicals subsidiary, continued to broaden its product lines in 1992. Rheox introduced 21 new products, many of which are aimed at the faster growing water-based applications. Rheox also focused on product development for environmental applications, with new products introduced for de-inking and soil remediation. An expansion of our specialty chemicals plant at St. Louis was completed, which met our operating objectives of lowering costs, improving quality and reducing Rheox's use of toll producers. In late 1992, a direct marketing and technical service organization was established in Europe which is expected to help increase Rheox's market share in 1993 and beyond.

NL's net sales increased 6% to $893 million in 1992, as increased sales volumes offset lower average selling prices. Kronos achieved record sales volumes in 1992 and improved its share of titanium dioxide pigments sales in the United States and Europe. Kronos' sales volume increase of 11% was well above the industry's 1992 average growth rate.

Despite Kronos' record sales and production volumes and the continuation of stringent cost controls, the further erosion of selling prices resulted in NL's operating income declining by 20% to $111 million compared to 1991. Operating income for Kronos fell 26% to $82 million in 1992. Operating income for Rheox approximated the previous year at $29 million.

General corporate expense was $2 million lower in 1992 than in 1991 due to reductions in certain proxy solicitation expenses and litigation settlements and expenses partially offset by an increased provision for environmental costs. In March 1992, the Company ceased capitalizing interest upon completion of the new Lake Charles plant. As a result, 1992 interest expense was $118 million, an $18 million increase over 1991. Interest and corporate expense were greater than operating income, which resulted in a 1992 loss of $44 million before the effects of changes in accounting principles and extraordinary items compared to a loss of $24 million in 1991. The loss before changes in accounting principles and extraordinary items includes aggregate losses on securities transactions of $6 million and $53 million in 1992 and 1991, respectively.



Harold Simmons

The Company's net loss for 1992 was $76 million compared to $16 million for 1991. The 1992 net loss includes the impact of adopting two accounting changes relating to postretirement benefits other than pensions and deferred income taxes. The net impact of these changes was a one-time non-cash charge of $32 million.

In June 1992, Kronos International, Inc. amended its Deutsche Mark-denominated term loan resulting in a prepayment of the June 1993 DM 200 million ($132 million) principal installment and modification of certain financial covenants alleviating potential loan covenant compliance concerns in the short term.

In February 1993, Kronos announced it had entered into a Letter of Intent to establish a 50/50 manufacturing joint venture with Tioxide Group, a wholly-owned subsidiary of Imperial Chemical Industries PLC, for operation of the Lake Charles titanium dioxide pigments plant. The Letter of Intent provides for Kronos to receive a cash payment of approximately $200 million from Tioxide along with an exchange of technology. A portion of the proceeds will be used to pay down existing debt related to

the plant. The transaction is subject to, among other things, obtaining acceptable financing, preparation of definitive documents, and review by U.S. antitrust authorities. Kronos' share of output from the joint venture, combined with increased capacities at Kronos' other chloride process plants, will provide Kronos the opportunity to meet current market requirements and strengthen its worldwide presence in future years.

J. Landis Martin

Additional steps taken to conserve cash included the suspension of the Company's quarterly cash dividend. We will continue to implement measures to reduce the Company's debt and improve cash flows from operations and explore other means to improve liquidity.

While recovery from the effects of the decline in the worldwide economy continues to be disappointingly slow, we believe that the titanium dioxide pigments industry has significant long-term potential. Cost controls and reduced capital spending now in place, along with the benefits expected to be realized through the proposed joint venture, will help NL emerge from the recession as a stronger company.

Harold Simmons

Harold Simmons
Chairman of the Board

J. Landis Martin

J. Landis Martin
President and Chief Executive Officer

March 5, 1993

FINANCIAL HIGHLIGHTS

(In millions, except per share data)	1990	1991	1992
Net sales	$ 906.6	$ 840.3	$ 893.5
Operating income	251.1	139.0	110.7
Income (loss) before income taxes	154.8	(19.0)	(43.0)
Income (loss) before extraordinary items and cumulative effect of changes in accounting principles	93.5	(24.0)	(44.6)
Cumulative effect of changes in accounting principles	–	–	(31.8)
Net income (loss)	92.4	(16.5)	(76.4)
Capital expenditures	195.3	195.1	85.2
Cash and cash equivalents	435.3	125.3	87.3
Marketable and other securities:			
Current	7.8	228.0	100.6
Noncurrent	429.7	220.3	23.6
Total assets	1,966.7	1,831.0	1,472.1
Notes payable and current maturities of long-term debt	180.0	139.0	43.6
Long-term debt	1,130.4	1,150.3	992.0
Shareholders' equity (deficit)	38.6	(58.3)	(146.3)
Income (loss) per common share:			
Income (loss) before extraordinary items	$ 1.42	$ (.40)	$ (.88)
Extraordinary items	(.02)	.13	–
Cumulative effect of changes in accounting principles	–	–	(.62)
Net income (loss)	$ 1.40	$ (.27)	$ (1.50)

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required]**
— For the fiscal year ended December 31, 1992

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 1-640

NL Industries, Inc.

(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	**13-5267260** (IRS Employer Identification No.)
3000 North Sam Houston Parkway East, Houston, Texas (Address of principal executive offices)	**77032** (Zip Code)

Registrant's telephone number, including area code: **(713) 987-5000**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	**New York Stock Exchange** **Pacific Stock Exchange**
7½% Debentures, due December 15, 1995	**New York Bond Exchange**

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes ✓

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months and (2) has been subject to such filing requirements for the past 90 days. Yes ✓ No __

As of March 16, 1993, 50,889,943 shares of common stock were outstanding. The aggregate market value of the 17,037,953 shares of voting stock held by nonaffiliates as of such date approximated $85 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the Registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a corporation under the laws of the State of New Jersey in 1891, is primarily a holding company with its operations conducted principally through two wholly-owned subsidiaries, Kronos and Rheox. During 1989 and 1990, NL implemented an organizational restructuring of its worldwide operations whereby, among other things, its titanium dioxide pigments ("TiO_2") operations were grouped under Kronos, and its specialty chemicals operations were grouped under Rheox. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company."

At December 31, 1992, Valhi, Inc. held approximately 49% of NL's outstanding common stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies.

Legal proceedings, environmental matters and other contingencies are described in Item 3 — "Legal proceedings," and Notes 13, 17 and 20 to the Consolidated Financial Statements, which information is incorporated herein by reference, and under the caption "Regulatory and environmental matters" below. Business and geographic segment financial information is included in Note 3 to the Consolidated Financial Statements, which information is incorporated herein by reference.

Chemicals Operations

Products and operations

The Company is an international producer and marketer of TiO_2 and specialty chemicals, primarily rheological additives. The Company and its distributors and agents sell and provide technical services for its products to over 5,000 customers in over 100 countries, with the largest portion of sales in Europe, the United States and Canada. Kronos accounted for 88% of the Company's net sales in 1992, and Rheox accounted for the remainder.

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide variety of products, including paint, paper, plastics, fibers and ceramics. Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos is the world's fourth largest TiO_2 producer, with an estimated 11% share of the worldwide market. Kronos' major customers include international paint, paper and plastics manufacturers.

TiO_2 demand is driven by the growth in the end-use markets — paint, paper and plastics — which are generally considered "quality-of-life" markets. As such, demand for TiO_2 is influenced by the relative economic well-being of various geographical regions. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. Economic development in Eastern Europe, the Far East and China may eventually produce consumption patterns approaching those of the more industrialized nations and these regions are expected to provide the largest percentage growth rates in future TiO_2 demand.

Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in international markets. By volume, over one-half of Kronos' 1992 TiO_2 sales were to Europe, with approximately one-third to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ores (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived co-products of the pigment production processes). These co-product chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Rheological additives produced by Rheox control the flow and levelling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays that have been chemically reacted with organic chemicals and compounds. The Company believes that it is the world's largest producer of rheological additives for solvent-based systems, supplying approximately one-half of the worldwide market, and is also a supplier for rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for slightly over 90% of Rheox's sales in 1992. Rheox introduced 21 new products in 1992, many of which are aimed at the faster growing water-based applications. Rheox also focused on product development for environmental applications with new products introduced for de-inking and soil remediation.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using the chloride and sulfate pigment production processes. While most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred by certain segments of the coatings and plastics markets, and sulfate process pigments are generally preferred by the paper, fibers and ceramics markets. Due to, among other things, relative capacity and operating costs of chloride process and environmentally-corrected sulfate process plants, the market share of chloride process pigments has increased in recent years, which trend is expected to continue. Kronos believes that its proprietary chloride process technology makes it one of the lower cost producers in the world. Almost two-thirds of Kronos' production capacity is based on chloride process technology.

Kronos produced 358,000 tons of TiO_2 in 1992, up from 293,000 metric tons in 1991. The increase in production during 1992 was primarily at Kronos' chloride process plants, including its new plant in Lake Charles, Louisiana which commenced production in 1992. As a result of improved operating efficiencies, Kronos achieved record production levels of chloride process pigments in 1992. Kronos believes its annual attainable production capacity has been increased to approximately 430,000 metric tons, including the new Louisiana plant.

The primary raw materials used in the chloride pigment production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and rutile. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process are available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Ltd. (South Africa), approximately 60% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp, in South Africa. Natural rutile ore is purchased from a number of sources. Synthetic rutile, another beneficiated ilmenite, is purchased from Renison Goldfields Consolidated, Ltd., formerly Associated Minerals Consolidated, Ltd., in Western Australia.

The primary raw materials used in the sulfate pigment production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided substantially all of Kronos' feedstock for its European sulfate process pigment plants in 1992. Kronos' mine is also a major commercial source of rock ilmenite for other sulfate process producers in Europe. Kronos also has ilmenite reserves in the state of New York, but production from these reserves is not economical under present market conditions. Kronos purchases sulfate grade ilmenite slag under contracts negotiated annually with QIT and Tinfos Titan and Iron K/S in Norway.

While Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate in the near term, tightening supplies for the chloride process may be encountered in the late 1990s. To meet this challenge, Kronos is attempting to identify alternate sources of titanium-containing feedstock and does not anticipate experiencing any interruptions of its raw material supplies, as new mining ventures for beach sand ilmenite and rutile are being evaluated by suppliers in various parts of the world.

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with Bentonite Corporation, a wholly-owned subsidiary of Tremont, which has significant bentonite reserves in Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future and Bentonite's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of hectorite clays in the world. Quaternary amines are purchased primarily from a joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Proposed Joint Venture

In January 1993, Kronos entered into a letter of intent to establish a manufacturing joint venture with Tioxide Group, a wholly-owned subsidiary of Imperial Chemicals Industries PLC. The joint venture, which would be equally owned by Kronos and Tioxide, would operate the Lake Charles chloride process TiO_2 plant currently owned by Kronos. Under separate offtake agreements, Kronos and Tioxide would be required to purchase their equal share of TiO_2 produced at the plant. Under the terms of the letter of intent, Kronos would contribute the Lake Charles plant to the joint venture and receive approximately $200 million in cash from Tioxide. The letter of intent also provides for the companies to exchange certain technological information. The transaction is subject to, among other things, obtaining acceptable joint venture financing, preparation of definitive documents and review by U.S. antitrust authorities.

Upon completion of the Kronos/Tioxide joint venture transaction, Kronos' annual TiO_2 production capacity, including its one-half share of output from the joint venture, would aggregate approximately 380,000 metric tons, of which two-thirds would be based on chloride process technology. Such capacity is slightly higher than actual 1992 production and is believed to be sufficient to provide Kronos the opportunity to strengthen its North American and worldwide presence in future years.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity and customers generally were accumulating pigments. In the past few years, supply has exceeded demand, in part due to new chloride process capacity coming on-stream, and customers have generally reduced inventories accumulated in prior years to more normal levels. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980's, have had a negative impact since prices peaked in early 1990.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and a significant amount of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada. Kronos' principal competitors are E.I. du Pont de Nemours & Co.; Hanson PLC (SCM Chemicals); Tioxide Group; Kemira Oy; Ishihara Sangyo Kaisha, Ltd.; and Bayer AG. These six competitors have estimated individual worldwide market shares ranging from 5% to 21%, and an aggregate 65% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is the principal North American competitor.

Worldwide capacity additions in the TiO_2 market have been limited because of the significant capital expenditures and lead time (typically four or five years) required to obtain environmental approval and build new facilities. Kronos has substantially completed a major environmental protection and improvement program commenced in the early 1980s to replace, expand or modify its European TiO_2 production facilities for compliance with various environmental laws by the respective effective dates. All of Kronos' European plants now use either the low-waste yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Kronos has announced its intentions to construct a $30 million waste acid neutralization/synthetic gypsum manufacturing facility for its Canadian sulfate process TiO_2 plant, which is expected to be completed in mid-1994. The Company believes that its environmental protection and improvement program places it in an advantageous position relative to many of its competitors in the TiO_2 industry. See "Regulatory and environmental matters."

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors are Laporte PLC, Sud-Chemie AG and Akzo NV.

Research and development

The Company's annual expenditures for research and development and technical support programs have averaged over $10 million during the past three years with Kronos accounting for about 70% of the annual total. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are primarily directed towards improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to specialty chemicals are conducted primarily in the United States and are primarily directed towards the development of new products for water-based systems and environmental applications and new applications for existing product lines.

Patents and trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the proposed joint venture with Tioxide, the parties would exchange certain technological information, with such exchange resulting in cross-licensing of certain patents currently held by each party.

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada and approximately one-third of Rheox's sales in the past few years have been attributable to European production. An aggregate of 77% of the Company's 1992 consolidated sales were attributable to non-U.S. customers, including 11% attributable to customers in areas other than Europe and Canada.

The Company's foreign businesses are subject to the risks customarily attendant to foreign operations and investments in foreign countries, including nationalization, restrictive action by local governments, limitations on repatriation of earnings and changes in currency exchange rates. The Company's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and environmental matters."

Customer base and seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1992, the Company employed approximately 3,600 persons, with approximately 800 employees in the United States and approximately 2,800 at sites outside the United States. About 90% of worldwide production facility hourly employees are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and environmental matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company has and continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants are in substantial compliance with applicable requirements of these laws. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the Company's plants to operate. The Company believes all of its European plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of TiO_2 plants in Europe vary from country to country, a common regulatory denominator is provided by the European Community (the "EC"). Germany and Belgium, members of the EC, follow the initiatives of the EC. Norway, although not a member, generally patterns its environmental regulatory actions after the EC. Kronos is in compliance with agreements reached with the environmental authorities of Germany and Belgium and is also in compliance with an EC directive to control the effluents produced by TiO_2 production facilities.

Germany and Belgium have ratified the Oslo Convention of February 1972 which restricts marine pollution caused by the offshore disposal of wastes. Kronos' German and Belgian chloride process plants do not dispose of effluents offshore. Waste sulfuric acid from the Nordenham sulfate process plant is concentrated and recycled using a waste acid concentration plant developed by Kronos in conjunction with the German government to replace offshore disposal of effluents. Waste acid from the Leverkusen sulfate process plant is concentrated and recycled under a long-term service contract.

The Norwegian Pollution Control Act of 1981, as amended, is the principal environmental statute regulating the Fredrikstad plant. Kronos has a ten-year operating permit which expires in May 1999. In accordance with the terms of an agreement with environmental regulatory authorities which expires in 2004, Kronos disposes its waste acid effluents at a neutralization facility in Norway.

Kronos' ilmenite mine near Hauge i Dalane has a permit for the offshore disposal of tailings until February 1994. In 1990, the Norwegian government issued a decree mandating that Kronos convert to onshore disposal of tailings by January 1994. Kronos is constructing a $17 million onshore disposal system, including $7 million incurred through 1992, which is on schedule for timely completion. Onshore disposal will result in a modest increase in the mine's operating costs.

In Varennes, Quebec, the Quebec provincial government is the principal environmental body with regulatory authority over Kronos' Canadian TiO_2 production facilities, which currently consist of plants utilizing both the chloride and sulfate process technologies. The provincial government has jurisdiction, delegated by the Canadian government, over discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos' right to discharge effluents from its Canadian sulfate process Ti02 plant into the St. Lawrence River until June 1994, at which time Kronos' new waste acid neutralization facility is expected to be completed. In January 1993, the Quebec provincial government granted Kronos a permit to construct the facility and established the future permit parameters which Kronos will be required to meet upon completion of the facility in June 1994.

In March 1993, Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate TiO_2 production facility. The penalty for these violations could be up to Canadian $15 million, if proven. Additional charges, if brought, could involve additional penalties. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above, and will contest the matter vigorously.

Future capital expenditures related to the Company's ongoing environmental protection and improvement program, including those described above, are currently expected to be approximately $82 million, including $40 million in 1993.

In connection with past operations and waste disposal practices, the Company has been named a potentially responsible party ("PRP") pursuant to CERCLA, in governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priority List. See Item 3 — "Legal Proceedings".

ITEM 2. PROPERTIES

The principal executive offices of the Company are located at 3000 North Sam Houston Parkway East, Houston, Texas 77032. These offices are made available to the Company through an intercorporate services agreement with Baroid Corporation.

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway), a facility in Varennes, Quebec, Canada and a new facility in Lake Charles, Louisiana which started production in 1992.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately 30% of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired on December 31, 1991 and to which an extension through 2011 has been agreed to in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreements contain restrictions on the Company's ability to transfer ownership or use of the Leverkusen facility.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany.

All of the Company's principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed at the state, local and federal levels that seek to impose various obligations on present and former manufacturers of lead pigment and lead paint with respect to asserted health concerns associated with the use of such products. No legislation or regulations have been adopted to date which are expected to have a material adverse effect on the Company.

In 1987 and 1988, actions were filed against the Company and other defendants for injuries allegedly caused by lead pigment purportedly supplied by the defendants (*Spriggs v. Sherwin-Williams, et al.*, No. LE3121-5-87 Housing Court of Massachusetts, Hampden County; *LeBlanc v. Marderosian, et al.*, No. 87-CV-0036, Superior Court of Massachusetts, Worcester County; *Santiago v. Sherwin-Williams, et al.*, No. 87-2799T, United States District Court for the District of Massachusetts). The complaints seek compensatory and punitive damages for allegedly negligent product design, failure to warn, breach of warranty, and concert of action from the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA").

In January 1992, the court in *Santiago* granted the defendants' summary judgment motion barring the plaintiff from relying on a market-share liability theory and denied the plaintiff's cross-motion. In July 1992, the court granted summary judgment to the defendants, including the Company, on the plaintiff's two remaining claims: concert of action, because the plaintiff was unable to identify whose products caused her alleged injuries; and enterprise liability, because that theory of liability is not recognized by the courts in Massachusetts. The dismissal of the complaint is on appeal.

In August 1992, the court in *LeBlanc, et al. v. Marderosian, et al.* granted the plaintiffs' motion to dismiss the Company and the other pigment manufacturing defendants with prejudice.

In January 1993, the parties in *Spriggs v. Sherwin-Williams, et al.* agreed to seek a stay of the action pending the outcome of the appeal in *Santiago*.

In July 1992, the Company was served with a complaint entitled *Boston Housing Authority v. Sherwin-Williams Company*, C.A. No. 92-10624-Y, United States District Court for the District of Massachusetts. The complaint asserts a claim for contribution from the Company, other pigment manufacturers and the LIA based on their alleged negligence in product design, manufacture and distribution; negligent failure to warn; breach of warranty; aiding and abetting; and conspiracy. The plaintiff seeks contribution to its $1.45 million cost of settling a claim by an individual who was allegedly injured by exposure to lead pigment in the period from 1973 to 1977. In September 1992, on joint motion of the parties, the court entered a stay of all proceedings pending the outcome of the appeal in Santiago. The parties stated in the motion that if the *Santiago* decisions are affirmed, this case would be dismissed with prejudice.

In November and December 1990, the Company and others were served with third-party complaints in actions entitled *Coren, et al. v. Cardozo v. Sherwin-Williams, et al.* (No. 29101) and *Pacheco, et al. v. Ortiz v. The Sherwin-Williams Company, et al.* (No. 90-3067-B) in the Housing Court of Massachusetts, Suffolk County. The third-party complaints against the pigment manufacturers and the LIA contain allegations similar to those in the *Santiago* action and also seek contribution and indemnification for any relief awarded to plaintiffs.

In *Coren,* the third-party defendants removed the case to federal court. In 1992, the federal court dismissed the direct claims and remanded the indemnification and contribution claims to the housing court. Thereafter, the housing court granted the third-party defendants' motion to stay discovery, pending trial on the main action. The Company has answered the third-party complaint, denying all allegations of wrongdoing.

In *Pacheco,* plaintiffs settled with the defendant landlords for less than $100,000. The third-party claims are in discovery. Third-party plaintiffs have proposed a stay of this matter pending the outcome of the appeal in *Santiago.*

In October 1991, the Company and others were served with a third-party complaint by the owner of the plaintiff's apartment in an action entitled *Barros v. Pires v. Sherwin-Williams Co., et al.,* (Civ. No. 01011), in the Housing Court of Massachusetts, Suffolk County. The third party complaint against the pigment manufacturers and the LIA alleges negligent product design, negligent failure to warn, breach of warranty, aiding and abetting, and concert of action, and also seeks contribution and indemnification for any relief awarded to plaintiff for damages allegedly suffered due to exposure to lead-based paint. In May 1992, the court granted the third-party defendants' motion to dismiss. In June 1992, the third-party plaintiffs moved for reconsideration or for reversal of the dismissal.

Pending in the Civil District Court for the Parish of Orleans, State of Louisiana, are numerous actions against the Housing Authority of New Orleans ("HANO") wherein residents of HANO housing seek compensatory and punitive damages for injuries allegedly caused by lead pigment. In 1989 and 1990, HANO filed third-party complaints in 14 of these actions for indemnity and/or contribution against the pigment manufacturers and the LIA. Subsequently, HANO agreed to dismiss all such complaints and to consolidate them for purposes of appeal. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other eight cases also included in the appeal, the court of appeals reversed the lower court decision dismissing the cases on various grounds. These eight cases have been remanded to the district court for further proceedings.

In January 1990, HANO filed a third-party complaint against the pigment manufacturers, the LIA and certain paint companies in a class action filed on behalf of all present and future residents of approximately 16,000 HANO apartments (*Spells v. HANO, et al.,* CDC 89-25170) seeking indemnity and/or contribution for abatement of lead paint allegedly found in the HANO apartments. The court dismissed the third-party complaint in December 1991. Thereafter, plaintiffs filed an appeal.

In April 1990, an action was filed in a Civil District Court for the Parish of Orleans, State of Louisiana, against the pigment manufacturers and the LIA seeking indemnity and/or contribution for the abatement of lead paint in approximately 14,750 HANO apartments (*HANO v. NL Industries, Inc., et al.,* CDC 90-6091). The court dismissed this case in August 1991. Plaintiff appealed the decision, and the appeal was consolidated with the appeal in *Spells.* In January 1993, the Court of Appeals affirmed the lower court judgments dismissing the complaints in *HANO v. NL Industries, Inc., et al.* and *Spells v. HANO, et al.* on the grounds that the statute of limitations barred the actions. Hano has applied to the Supreme Court of Louisiana for writs of certiorari in both cases.

In August 1991, the Company was served with a complaint in an action entitled *Orleans Parish School Board v. Apex Sales Company, et al.,* (No. 91-6014) filed in Louisiana State Court against numerous lead pigment and paint manufacturers, including the Company, for lead paint abatement in approximately 160 schools and surrounding grounds. Plaintiff alleged, among other things, that the defendants conspired to mislead and failed to warn the public regarding the hazards associated with lead paint use. In July 1992, the court dismissed the complaint in its entirety and, in August 1992, plaintiffs appealed the dismissal of the complaint.

In December 1991, the Company received a copy of a complaint filed in the Civil District Court for the Parish of Orleans seeking indemnification and/or contribution against the Company and eight other defendants for approximately $4.5 million in settlements paid to Housing Authority residents (*Housing Authority of New Orleans v. Hoechst Celanese Corp., et al.*, No. 91-28067). These claims appear to be the same theories which HANO had previously filed. The Company has not been served.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability. In January 1992, plaintiffs appealed the dismissal, and the defendants cross-appealed. Plaintiffs' appeal was voluntarily dismissed. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In December 1992, plaintiffs filed a motion to stay the claims of the City of New York and the New York City Health and Hospitals Corporation pending resolution of the Housing Authority's claim.

In November 1990, a purported class action was filed in the United States District Court for the Eastern District of Pennsylvania against the pigment manufacturers and the LIA on behalf of the City of Philadelphia, the Philadelphia Housing Authority ("PHA") and all other municipalities in the United States with a population over 100,000 carrying out lead abatement programs (*City of Philadelphia and Philadelphia Housing Authority v. Lead Industries Association, Inc., et al.*, No. 90-7064JG). The action alleges liability on a variety of theories, including negligent product design, negligent failure to warn, strict liability, breach of warranty, restitution, indemnity, concert of action, conspiracy and market share liability and seeks compensatory and punitive damages and injunctive relief. The alleged damages are similar to those claimed in the *City of New York* case. In February 1992, the court ruled that the claims of the City of Philadelphia, but not the PHA, were barred by the statute of limitations, and clarified the dates upon which the period of limitations commenced to run.

In April 1992, the court in the *City of Philadelphia* matter granted defendants' motions to dismiss the amended complaint in its entirety with prejudice, ruling that the negligent product design, civil conspiracy, concert of action, enterprise liability, market share liability, alternative liability, and indemnification counts should be dismissed because they failed to state a claim under Pennsylvania law, and that the negligent failure to warn and restitution counts should be dismissed because the defendants' alleged conduct was not the proximate cause of plaintiffs' injuries. The court dismissed the breach of warranty count on the ground that plaintiffs did not purchase any lead pigment from defendants. Finally, the court dismissed the fraud and misrepresentation counts because plaintiffs did not allege with required specificity that the defendants had unique knowledge concerning the alleged hazards of lead paint that was not also available to plaintiffs. In July 1992, plaintiffs filed an appeal, in the United States Court of Appeals for the Third Circuit, of the court's grant of defendants' motion to dismiss the amended complaint in its entirety. The defendants filed a cross-appeal of the court's previous decision holding that the statute of limitations did not bar the claims of the PHA.

In June 1991, a purported class action was filed in the United States District Court for the Eastern District of Pennsylvania against the LIA and 18 alleged former lead pigment and/or lead paint manufacturers, including the Company, by the named plaintiffs and on behalf of all current and retired residential, commercial and industrial painters (and their spouses) residing in Pennsylvania and New Jersey who have been occupationally exposed to lead paint and lead pigment products *Swartzbauer, et al. v. Lead Industries Association, Inc. et. al.*, No. 91-CV-3948. Plaintiffs allege that the defendants are liable on a variety of theories including negligent product design, failure to warn, breach of warranty, strict liability, fraud and misrepresentation, intentional tort, market share, joint and several liability, civil conspiracy, and concert of action. Plaintiffs seek damages in excess of $100,000 for each affected class member (alleged to be over 21,000

individuals exclusive of spouses), punitive damages, the establishment of a fund to cover the costs of periodic diagnostic medical examinations and tests for affected individuals, and a fund to develop alleged alternative safety equipment procedures and paint products. In July 1992, the court granted defendants' motion to dismiss the enterprise liability and alternative liability claims because they failed to state a claim under Pennsylvania law. The court denied the defendants' motion to dismiss the remainder of the complaint. The case is in discovery.

In July 1991, a purported class action was filed in the United States District Court for the Eastern District of Pennsylvania against a variety of defendants including the PHA, the City of Philadelphia, the United States Department of Housing and Urban Development, the LIA and 19 alleged former lead pigment and/or paint manufacturers, including the Company, on behalf of current residents in approximately 5,000 dwelling units overseen by the PHA which were painted prior to 1978, *Hurt, et al. v. Philadelphia Housing Authority, et al.*, No. 91-CV-4746. Plaintiffs alleged that the defendants are liable on a variety of theories, including negligent product design, failure to warn, breach of warranty, strict liability, fraud and misrepresentation, intentional tort, market share, joint and several liability, civil conspiracy and concert of action. The action seeks injunctive relief for the abatement of lead-based paint alleged to exist in the PHA units in which members of the class reside, medical monitoring and treatment, education as to the alleged hazards of lead-based paint and the reimbursement for past and future abatement and medical expenses. In August 1992, the court granted motions to dismiss all claims against the Company, the pigment manufacturing defendants, and the LIA. The court's dismissal of the Company, the other pigment manufacturing defendants and the LIA is not yet appealable pending entry of final judgement as to all parties.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the PHA and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. Defendants moved to dismiss various claims, but the court dismissed only the claim for loss of consortium. Defendants answered the complaint denying allegations of wrongdoing. The case is in discovery.

In August 1992, the Company was named as a defendant and served with an amended complaint in *Renita Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative liability. In October 1992, the Company and the other defendants moved to dismiss the complaint. Discovery has been stayed pending the outcome of the motion.

In December 1992, the Company was served with the complaint in *Shelton v. Sherwin-Williams, et al.* in District Court, County of Hennepin, Minnesota. The complaint alleges personal injury caused by exposure to lead paint during the early 1970s. The legal theories pled are negligent failure to warn, negligent product design, conspiracy and concert of action, breach of warranty and market share liability. Counsel for plaintiff served but did not file the complaint. Thereafter, the parties entered into a stipulated dismissal without prejudice. Plaintiff has until July 1, 1993 to recommence the action.

The Company believes that the foregoing lead pigment actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that described above will not be filed.

Environmental matters and litigation

Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities. Additionally, in connection with past disposal practices, the Company has been named a PRP pursuant to CERCLA in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. EPA's Superfund National Priority List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims.

Typically, CERCLA liability cannot be estimated until the Remedial Investigation and Feasability Study ("RIFS") is complete, the U.S. EPA issues a final record of decision and costs are allocated. Such proceedings may involve numerous waste generators and transporters and seek to allocate or recover costs associated with such investigation and cleanup which costs could be substantial. The Company currently believes it has adequately provided accruals for CERCLA and hazardous waste matters. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites, could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

In Pedricktown, the U.S. EPA divided the site into two operable units, and a RIFS relating to the first operable unit is being performed. The U.S. EPA performed a focused feasibility study for the other operable unit which consists of a partial surface cleanup. The U.S. EPA selected a remedy for the surface cleanup estimated to cost approximately $5 million. In April 1992, the Company and 30 other PRPs were served with a Unilateral Administrative Order issued by the EPA, Index No. II-CERCLA 20105 (the "Order"), directing immediate removal activities, including the cleanup of waste, surface water, and building surfaces, at the Company's former Pedricktown, New Jersey secondary lead smelter. The Company and other PRPs are performing the work in accordance with the Order.

In Granite City, the RIFS is complete, and the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others, *(United States of America v. NL Industries, Inc., et al., Civ. No. 91-CV 00578)*, with respect to the Granite City smelter. The action seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was arbitrary, capricious and not in accordance with law. The action also seeks to recover past costs of $300,000 and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. Currently discovery is delayed pending the outcome of a motion for a protective order filed by the government. At a status conference in January 1993, the court ordered the parties to consider the submittal of proposals for a Technical Advisory Committee, whose role would be to advise the court as to the technical issues in the case.

Having completed the RIFS in Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc., Civ. No. 89-408,* United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notice of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, estimated to cost approximately $16 million. In January 1992, the U.S. EPA issued unilateral administrative orders Docket No. 1091-01-10-106 to the Company and six other PRPs directing the performance of the remedy. The Company and others have commenced performance of the remedy. In November 1991, Gould Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.,* No. 91-1091, U.S.D.C.D. Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and $5 million in punitive damages. In January 1993, Gould filed a motion to amend the complaint to add additional defendants and third party defendants. The amended complaint deletes the fraud and punitive damages claims asserted against the Company. The court granted the motion. The Company denied liability in the Gould action and intends to defend it vigorously.

In November 1992, the Company entered into negotiations with the U.S. EPA regarding an administrative consent order requiring a removal action at the Company's former plant in Perth Amboy, New Jersey. Negotiations are still in progress in this matter.

Pursuant to an administrative consent order entered into with the U.S. EPA, the Company is also conducting a RIFS at a municipal and industrial waste disposal site in Batavia, New York. With respect to the Batavia site, six other PRPs have been notified. The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois *(People of the State of Illinois v. NL Industries, et al.,* No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.27 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. The case is in discovery.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.,* Civ. No. 91-4098. The complaint seeks to recover $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. In compliance with the order, the Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because they were in conflict with California law. The Company believes it had sufficient cause not to comply with the order. The Company answered the complaint denying liability and intends to defend the action vigorously. The government now claims it expended in excess of $2.4 million for this matter. Trial is scheduled to commence in March 1993.

In July 1990, the Company notified the U.S. EPA that it was investigating the possibility that certain chemicals manufactured during the period in which Kronos owned a former subsidiary were not appropriately listed with the U.S. EPA pursuant to the Toxic Substances Control Act. The Company believes that the manufacture of the chemicals in questions was initiated by a prior owner of the subsidiary. The Company intends to cooperate fully with the U.S. EPA in investigating this matter and determining whether any manufacture of non-listed chemicals occurred. If such manufacture is found to have occurred, the U.S. EPA may levy fines against the Company and possibly others. If any fines are levied, the Company will attempt to seek reimbursement from such prior owner of the subsidiary.

Other litigation

In April 1990, the Company filed a complaint in the United States District Court for the Central District of California against Lockheed Corporation and its directors in connection with Lockheed's 1990 annual meeting of stockholders, (*NL Industries, Inc. v. Lockheed Corporation, et al.*, No. CV-90-1950 RMT (Bx)), which complaint was subsequently amended. In December 1992, a unanimous jury verdict was returned in the Company's favor in the amount of $30 million, which award is a gain contingency not recorded as income by the Company and which would result in net proceeds to the Company of approximately $22 million. The jury found that Lockheed violated the federal securities laws by making false and misleading public statements about Lockheed's employee stock ownership plan. Lockheed has filed numerous post-trial motions and an appeal is anticipated. The Company has filed a motion requesting prejudgment interest.

During 1992, the Company settled certain litigation (*NL Industries, Inc. v. UAW*, Civ. Act. No. 87-12992A and *Haggerty v. NL Industries, Inc.*, Civ. Act. No. 87-1549A, W. D. N.Y.) related to the Company's 1987 termination of certain postretirement benefits other than pensions ("OPEB") (collectively, the "*Haggerty* litigation") and a matter (*Farley, Inc. v. UAW*, Civ. Act. No. 90-6195, E.D. Pa.) involving OPEB benefits for retirees of certain plants sold by the Company in 1982 for which the purchaser, Farley, Inc., contractually assumed responsibility for such benefits (the "*Farley* matter"). Pursuant to a court-approved settlement of the *Haggerty* litigation, the Company will provide class members benefits under a modified postretirement health care benefits plan, the cost of which is less than the cost of providing benefits under the arrangement terminated in 1987. In addition, the Company will pay certain previously accrued amounts. Pursuant to the court-approved settlement of the *Farley* matter, Farley has agreed to establish a new medical benefit plan for the benefit of the purported class, and the Company has agreed to fund a portion of the benefits provided under the new plan. The Bankruptcy Court in Farley's bankruptcy proceeding approved the settlement in December 1992. Benefits to be provided by the Company pursuant to the settlement of the *Haggerty* litigation and the *Farley* matter are components of the Company's OPEB liabilities.

In January 1990, an action was filed in the United States District Court for the Southern District of Ohio against NLO, Inc., a subsidiary of the Company, and the Company on behalf of a putative class of former NLO employees and their families and former frequenters and invitees of the Feed Materials Production Center ("FMPC") in Ohio (*Day, et al. v. NLO, Inc., et al*, No. C-1-90-067). The FMPC is owned by the United States Department of Energy (the "DOE") and was formerly managed under contract by NLO. The complaint seeks damages for, among other things, emotional distress and damage to personal property allegedly caused by exposure to radioactive and/or hazardous materials at the FMPC and punitive damages. A trial was held separately on the defendants' defense that the statute of limitations barred the plaintiffs' claims. In November 1991, the jury returned a verdict against six of the ten named plaintiffs, finding that their claims were time barred. The court has denied the plaintiffs' motion to vacate the verdict, and has certified this action as a class action, but has not ruled on various motions by the defendants to dismiss the claims of the remaining plaintiffs. A nonbinding summary jury trial, previously scheduled for February 1993, has been stayed by the Court of Appeals; a trial on the merits is scheduled for September 1993. Although no assurance can be given, the Company believes that, consistent with a July 1987 DOE contracting officer's decision, the DOE will indemnify NLO in the event of an adverse decision just as it did when two previous cases relating to NLO's management of the FMPC were settled; therefore, the resolution of the *Day* matter is not expected to have a material adverse affect on the Company. In the 1987 decision, the contracting officer affirmed NLO's entitlement to indemnification under its contract for the operation of the FMPC for all liability, including the cost of defense, arising out of those two previous cases.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1992.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of March 16, 1993, there were approximately 12,000 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape, and dividends declared during the periods indicated. On March 16, 1993, the closing price of NL common stock according to the NYSE Composite Tape was $5.

	High	Low	Dividends declared
Year ended December 31, 1991:			
First quarter	$13⅞	$ 8½	$.15
Second quarter	16⅛	11½	.15
Third quarter	16¾	13½	.15
Fourth quarter	14⅛	9	.15
Year ended December 31, 1992:			
First quarter	$12⅞	$ 7¼	$.15
Second quarter	8⅞	7⅝	.15
Third quarter	8½	6	.05
Fourth quarter	6¼	4	—

The Company suspended its regular quarterly dividend in October 1992, in view of, among other things, the continuing weakness in TiO_2 prices. The Company will continue its policy of evaluating dividends and the amounts thereof based on the Company's results of operations, financial condition, cash requirements for its businesses, contractual restrictions on payment of dividends, if any, and other factors deemed relevant by the Board of Directors.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 — "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1988	1989	1990	1991	1992
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$1,007.0	$1,000.9	$ 906.6	$ 840.3	**$ 893.5**
Operating income	284.1	308.5	251.1	139.0	**110.7**
Income (loss) from continuing operations	134.2	170.3	93.5	(24.0)	**(44.6)**
Net income (loss)	163.0	172.9	92.4	(16.5)	**(76.4)**
Per common share:					
Income (loss) from continuing operations	$ 2.02	$ 2.57	$ 1.42	$ (.40)	**$ (.88)**
Net income (loss)	2.45	2.61	1.40	(.27)	**(1.50)**
Cash dividends	$ 1.50	$ .45	$ .60	$ .60	**$ .35**
BALANCE SHEET DATA (at year-end):					
Cash and cash equivalents	$ 138.4	$ 165.6	$ 435.3	$ 125.3	**$ 87.3**
Marketable securities:					
Current assets	—	129.9	7.8	228.0	**100.6**
Noncurrent assets	—	449.0	429.7	220.3	**23.6**
Total assets	841.4	1,512.3	1,966.7	1,831.0	**1,472.1**
Notes payable and current maturities of long-term debt	19.5	465.9	180.0	139.0	**43.6**
Long-term debt	183.3	383.9	1,130.4	1,150.3	**992.0**
Series A preferred stock — redeemable	10.0	5.0	—	—	**—**
Common shareholders' equity (deficit)	145.4	132.3	38.6	(58.3)	**(146.3)**

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results of Operations

The Company's operations are conducted in two business segments — titanium dioxide pigments and specialty chemicals. During 1989 and 1990, NL implemented an organizational restructuring of its worldwide operations whereby, among other things, its TiO_2 operations were grouped under Kronos and its specialty chemicals operations were grouped under Rheox.

The Company adopted Statement of Financial Accounting Standards ("SFAS") No. 106, "Employers' Accounting For Postretirement Benefits other than Pensions," and SFAS No. 109, "Accounting For Income Taxes" in 1992. As a result, the Company recorded a $32 million "one-time catch-up" charge to earnings in 1992. See Note 18 to the Consolidated Financial Statements. These new accounting standards relate principally to accrual accounting for postretirement benefits ("OPEB") and to accounting for deferred income taxes and do not impact cash flows from operating activities.

The following table sets forth, for the periods indicated, certain information related to the Company's business segments.

	Years Ended December 31,			% Change	
	1990	1991	1992	1991-90	1992-91
		(In millions)			
Net sales:					
Kronos	$792.4	$732.1	**$784.6**	−8%	+7%
Rheox	114.2	108.2	**108.9**	−5%	+1%
	$906.6	$840.3	**$893.5**	−7%	+6%
Operating income:					
Kronos	$230.3	$110.8	**$ 81.9**	−52%	−26%
Rheox	23.6	28.2	**28.8**	+19%	+2%
Group expenses, net	(2.8)	—	—		
	$251.1	$139.0	**$110.7**	−45%	−20%
Percent change in TiO_2:					
Sales volume				+10%	+11%
Average selling prices (in billing currencies)				−15%	−6%

The worldwide TiO_2 industry continues to be adversely affected by production capacity in excess of current demand. TiO_2 selling prices continued to decline during 1992; however, the rate of decline during most of the year was generally lower than that experienced during much of 1990 and 1991. Average selling prices at the end of 1992 were about 5% below year-earlier prices and about 28% below those at the peak in early 1990. A significant amount of sales are denominated in currencies other than the U.S. dollar. Accordingly, fluctuations in the value of the U.S. dollar relative to other currencies increased 1992 net sales compared to 1991 and slightly decreased 1991 sales compared to 1990.

The increases in TiO_2 sales volumes, in 1992, were primarily in the United States and European markets and, in 1991, were also in export markets. These increases reflect, in Kronos' opinion, increases in both demand and Kronos' worldwide market share. The 1990-91 volume comparison was also aided by reduced volume in 1990 resulting from customers reducing inventories accumulated in prior years. Demand for chloride process pigments has remained relatively strong compared to sulfate process pigments, and Kronos achieved record production levels of chloride process pigments in 1992 while it has been producing sulfate process pigments at less than capacity levels since the second half of 1991.

Approximately one-third of Kronos' 1992 TiO_2 sales, by volume, were attributable to markets in North America with over one-half attributable to Europe and the balance to export markets.

Kronos commenced production at its new chloride process plant in Lake Charles, Louisiana during the first half of 1992 and start-up costs have negatively impacted operating income. Kronos expects that start-up costs will continue to decline as the new plant continues to increase its production rates during 1993.

Kronos' 1992 operating income was also impacted by slightly lower unit production costs which are a result of continued emphasis on cost reduction efforts and increased production volumes. Kronos' water treatment chemicals business, which utilizes TiO_2 co-products, increased its contribution to operating income in both 1991 and 1992. Kronos' operating income in 1991 was impacted by higher raw material and production costs as well as the impact of slightly lower TiO_2 production volumes. Kronos implemented a number of cost reductions during 1991 to mitigate the impact of certain cost increases, and consequently, unit production costs were only slightly higher in 1991 than 1990.

The Company currently believes that Kronos' operating income in 1993 will be lower than 1992 as further selling price declines will likely not be fully offset by the expected reduction in start-up costs of the Louisiana plant and slightly higher sales volumes. Kronos expects the TiO_2 industry to continue to operate at lower levels of capacity over the next few years than the full capacity levels prevalent during the late 1980s. Recovery from the effects of the decline in the worldwide economy continues to be disappointingly slow. The Company believes market conditions have improved in the United States, are generally stable in export markets and are adjusting to currency devaluations in Europe. The Company believes the European market was poised for price improvement prior to currency devaluations in the fall of 1992, which resulted in further TiO_2 price decreases. Kronos currently believes that prices in Europe may stabilize during the second half of 1993. Kronos expects that operating income in 1993 will not be significantly affected by completion of the pending joint venture with Tioxide; however, interest expense would be reduced due to the proposed joint venture financing. Based on, among other things, Kronos' current near-term outlook for its TiO_2 business (particularly pricing in Europe), and expected 1993 debt and interest rate levels, the Company currently expects to report a net loss for 1993.

Rheox's sales and operating income increased in 1992 due principally to the favorable impact of changes in currency exchange rates, partially offset by lower sales volume and slightly higher operating costs. Rheox's sales declined in 1991 due primarily to lower sales volume. Operating income in 1991, excluding the impact of a 1990 charge related to the settlement of certain patent infringement litigation, approximated 1990 as lower operating costs mostly offset the effect of the lower sales volume.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Increase (decrease)	
	1990	1991	1992	1991-90	1992-91
			(In millions)		
Interest and dividends	$ 40.6	$ 40.5	$ 14.2	$ (.1)	$(26.3)
Securities transactions	8.7	(53.1)	(6.0)	(61.8)	47.1
Corporate expenses, net	(44.3)	(44.9)	(43.4)	(.6)	1.5
	$ 5.0	$(57.5)	$(35.2)	$(62.5)	$ 22.3

The Company periodically acquires and disposes of marketable securities, including U.S. Treasury securities, and changes in market values and the timing of sales can cause gains and losses to occur at irregular intervals and to fluctuate significantly from period-to-period. The significant loss in 1991 relates principally to the Company's disposition of its interest in Lockheed Corporation.

Interest and dividend income fluctuates based upon the amount of funds invested and yields thereon. Amounts available for investment in 1992, and yields thereon were lower than in 1991 and 1990.

Corporate expenses, net for 1992 decreased from 1991 due primarily to reductions in certain proxy solicitation expenses and litigation settlements and expenses partially offset by an increased provision for environmental costs. Corporate expenses, net in 1991 approximated those of the prior year as a $9 million decrease in certain Lockheed-related expenses was substantially offset by additional environmental, legal and other expenses.

Interest expense

Average outstanding principal balances of indebtedness amounts increased in 1991, as did effective Deutsche Mark interest rates. Outstanding principal amounts declined in 1992. In addition to the effect of changes in outstanding principal amounts and in interest rates, interest expense fluctuations were impacted by (i) capitalized interest ($8 million in 1990, $26 million in 1991 and $9 million in 1992), principally related to the Louisiana plant which was completed in 1992, (ii) a $9 million reduction in the Company's accrual for income tax related interest in 1991, and (iii) relative currency exchange rates which increased 1991 and 1992 interest expense, in U.S. dollar terms. As discussed above and in "LIQUIDITY AND CAPITAL RESOURCES", the expected pay down of existing indebtedness associated with the Louisiana plant in conjunction with the pending joint venture with Tioxide, would reduce interest expense.

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In 1992, the geographic mix, including losses in certain jurisdictions for which no current refund was available and in which recognition of a deferred tax asset is not currently considered appropriate, contributed significantly to the Company's effective tax rate varying from a normally expected rate. The Company's deferred tax status at December 31, 1992 is explained in "LIQUIDITY AND CAPITAL RESOURCES". In 1991, realization of the available capital loss carryback of the Company's securities transactions at a relatively low rate due to the alternative minimum tax rates in prior years significantly impacted the Company's effective tax rate.

Extraordinary items

See Note 15 to the Consolidated Financial Statements.

Changes in accounting principles

See Notes 2 and 18 to the Consolidated Financial Statements.

Liquidity and Capital Resources

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1990	1991	1992
		(In millions)	
Net cash provided (used) by:			
Operating activities:			
Net income (loss)	$ 92.4	$ (16.5)	$ (76.4)
Depreciation, depletion and amortization	35.5	32.6	47.8
Deferred income taxes	75.4	(14.7)	(18.9)
Minority interest	1.3	1.1	1.1
Net (gains) losses from securities transactions	(8.7)	53.1	6.0
Cumulative effect of changes in accounting principles	—	—	31.8
Change in assets and liabilities, net	(108.4)	2.4	(42.6)
Other, net	(6.4)	(8.1)	4.6
	81.1	49.9	(46.6)
Investing activities:			
Capital expenditures	(195.3)	(195.1)	(85.2)
Sales of securities, net	73.5	87.5	317.4
Other, net	45.1	(1.8)	2.7
	(76.7)	(109.4)	234.9
Financing activities:			
Net borrowings (repayments)	327.7	2.5	(199.5)
Dividends paid	(40.1)	(34.7)	(17.8)
Capital transactions, net	(27.1)	(202.5)	(3.6)
Other, net	(1.1)	(.9)	(.3)
	259.4	(235.6)	(221.2)
Net cash provided (used) by operating, investing and financing activities	$ 263.8	$(295.1)	$ (32.9)

Depreciation, depletion and amortization and capital expenditures for each business segment are presented in Note 3 to the Consolidated Financial Statements. The components of securities transactions are summarized in Note 4 to the Consolidated Financial Statements.

The significant deterioration in cash provided by operating activities in 1991 and 1992 is primarily due to the decline in earnings.

The Company's capital expenditures during the past three years include an aggregate of $349 million ($42 million in 1992) related to completion of the Louisiana chloride process TiO_2 plant and an aggregate of $43 million ($16 million in 1992) for environmental protection and compliance programs related to the Company's ongoing operations. The Company's 1993 estimated capital expenditures are $62 million, which includes $40 million relating to environmental protection and compliance programs including sulfur dioxide removal systems at various operating facilities, the Canadian waste acid neutralization facility and the Norwegian onshore tailings disposal system.

Net sales of securities relate primarily to the net sales of marketable securities in each period and in 1992 relate principally to the disposition of U.S. Treasury securities and DM time deposits to fund repayments of indebtedness, capital expenditures and operations.

Net repayments of indebtedness in 1992 included payments on the DM term loan aggregating DM 350 million ($225 million when paid) and $61 million drawn under Kronos' Louisiana plant credit facilities. Net borrowings in 1991 included a $115 million Rheox term loan, a $52 million increase in the Louisiana plant term construction loan and a DM 150 million ($87 million when paid) reduction in the DM term loan, while net borrowings in 1990 include a DM 463 million ($277 million when drawn) increase in the DM term loan, a $102 million increase in the Louisiana loan and $62 million of sinking fund debentures redeemed. NL has guaranteed $15 million of the remaining $97 million principal balance of Rheox's term loan until the balance is reduced to $85 million. At December 31, 1992, $14 million of the Company's noncurrent marketable securities are restricted under the terms of the Rheox loan agreement. In addition, NL and Kronos have agreed, under certain conditions, to provide Kronos' principal international subsidiary with up to DM 125 million through June 1994.

Capital transactions, net, are primarily treasury stock purchases in each year, including $181 million expended in 1991 in relation to a "Dutch auction" self-tender offer.

At December 31, 1992, the Company had cash, cash equivalents and current marketable securities aggregating $188 million (36% held by non-U.S. subsidiaries). The Company's subsidiaries had $24 million and $52 million available for borrowing at December 31, 1992 under existing U.S. and non-U.S. credit facilities, respectively. At December 31, 1992, the Company had long-term debt aggregating $1.0 billion of which Kronos' DM 1.1 billion ($682 million) term loan represented about two-thirds. For each one percent change in the DM/U.S. dollar exchange rate, the Company's outstanding long-term debt, expressed in U.S. dollars, changes by approximately $7 million. Current maturities of long-term debt at December 31, 1992 were $43 million, including $13 million related to the Louisiana plant borrowings. No principal payments on the DM term loan are scheduled for 1993 as the 1993 installment was prepaid in 1992.

The Company has taken and continues to take measures to manage its near-term and long-term liquidity requirements, including cost reduction efforts, tightening of controls over working capital, deferral and reduction of capital expenditures, suspension of unrelated business acquisition activities, suspension of quarterly dividend payments and also intends to enter into the manufacturing joint venture with Tioxide. The Company currently expects to have sufficient liquidity to meet near-term obligations including operations, capital expenditures and debt service. However, continued use of cash by operations for an extended period of time would have an adverse effect on liquidity and, among other things, would result in requiring the Company to seek modifications of the covenants and/or repayment terms of certain indebtedness. Covenants contained in certain subsidiary loan agreements, including the DM term loan, Rheox term loan and Louisiana plant term loan, currently restrict dividends from substantially all of the Company's operating units.

Kronos expects to use part of the cash payment and financing from the proposed Louisiana joint venture to repay the outstanding principal amount of the existing Louisiana plant term loan and revolving credit facility in 1993. In the event the joint venture transaction is not consummated, the Company believes that modification of the fixed charge coverage ratio in the existing Louisiana plant term loan will be required in the second half of 1993. No discussions with the lenders have taken place with respect to this matter.

The Company expects to report a gain on the joint venture transaction, which gain is expected to be offset in part by a loss related to the settlement of certain interest rate swaps in conjunction with repaying the existing Louisiana plant borrowings. The gain would be reported as a component of pretax income (loss) while the loss related to settlement of indebtedness would be reported as an extraordinary item.

As previously reported, certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position. In 1992, the Company's net cash payments for previously-accrued income taxes and interest related to the settlement of U.S. tax audits for 1979 through 1984 aggregated $15 million. At December 31, 1992, the Company's current assets include $102 million of refundable income taxes, primarily 1989 and 1990 German refund claims, which are currently being contested by German tax authorities.

As a result of adopting SFAS No. 106 (OPEB) in 1992, the Company's balance sheet at December 31, 1992 includes $77 million of accrued postretirement benefit costs, almost all of which relates to current retirees.

Adoption of SFAS No. 109 in 1992 affected the Company's reported results of operations and financial position with respect to deferred income taxes. At December 31, 1992, the Company has recorded net deferred tax liabilities of $150 million. The Company operates in a number of tax jurisdictions, in certain of which it has net deferred tax assets (before valuation allowance). Considering all factors believed to be relevant, the Company has provided a deferred tax valuation allowance of $86 million, principally related to the U.S. and Germany, for deferred tax assets which the Company believes may not currently meet the "more likely than not" realization criteria for asset recognition. The Company will continue to monitor and evaluate the need for, and amount of, a deferred tax valuation allowance and will, in the future, after considering all factors believed to be relevant, make appropriate adjustments of such reserves.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and another Contran subsidiary.

The Company has been named as a defendant or PRP in various legal actions concerning environmental or other matters arising out of operations no longer conducted by the Company. On a regular basis, the Company evaluates the potential range of its liability at CERCLA sites where it is a PRP. The Company believes it has provided adequate accruals for such matters, but the amount the Company could ultimately pay may be affected by a number of factors, including changes in remedial costs and in the allocation of such costs. See Item 3 — "Legal Proceedings" and Note 17 to the Consolidated Financial Statements.

The Company periodically evaluates its liquidity requirements, capital needs and availability of resources in view of, among other things, its debt service requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to raise additional capital, restructure ownership interests, refinance or restructure indebtedness, sell interests in subsidiaries, marketable securities or other assets, or take a combination of such steps or other steps to increase or manage its liquidity and capital resources. Such activities have in the past and may in the future involve related companies.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 16 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1992.

October 23, 1992 — reported items 5 and 7.

October 28, 1992 — reported items 5 and 7.

December 7, 1992 — reported items 5 and 7.

December 31, 1992 — reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
3.1		By-Laws, as amended on June 28, 1990 — incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2		Certificate of Amended and Restated to Certificate of Incorporation dated June 28, 1990 — incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1		Form of 7½% Debenture, due December 15, 1995 — incorporated by reference to Exhibit 2.1 to Amendment No. 1 to the Registrant's Registration Statement on Form S-7 (Registration No. 2-38999).
4.2		Form of Indenture between NL and The Chase Manhattan Bank (N.A.), Trustee, dated December 15, 1970 — incorporated by reference to Exhibit 2.2 to Amendment No. 1 to the Registrant's Registration Statement on Form S-7 (Registration No. 2-38999).
4.3		Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation — incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.1		Credit Agreement dated December 29, 1989 among Kronos Louisiana, Inc. and Citibank, N.A., as Agent — incorporated by reference to Exhibit 10.18 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1989.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
10.2		Loan Agreement dated May 30, 1990 between Kronos International, Inc. and Hypobank International S.A. as Agent and Banque Paribas as Co-agent — incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1990 as amended by the Registrant's Form 8 as of January 29, 1991, to include exhibits and certain schedules to the Loan Agreement. Schedules 10A, 10E, 10F and 10G have been omitted pursuant to a request for confidential treatment in accordance with Rule 24b-2 of the 1934 Act.
10.3		Amendments 1 and 2 dated December 31, 1990 and March 22, 1991, respectively to the Loan Agreement between Kronos International, Inc. and Hypobank International S.A. as Agent and Banque Paribas as Co-agent — incorporated by reference to Exhibit 10.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
10.4		Amendment 3 dated June 15, 1992 to the Loan Agreement between Kronos International, Inc. and Hypobank International S.A. as Agent and Banque Paribas as Co-Agent — incorporated by reference to Exhibit 10.1 the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1992.
10.5		Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents — incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
10.6		Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents — incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1992.
10.7		Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents.
10.8		Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) — incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.
10.9		Contract dated September 9, 1971, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung concerning supplies and services (German language version and English translation thereof) — incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.
10.10		Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) — incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.
10.11		NL Supplementary Life Insurance Plan for Key Executives — incorporated by reference to Exhibit 10.12 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1982.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
10.12		1982 Long Term Performance Incentive Plan of NL Industries, Inc. as restated by the Board of Directors on February 22, 1984 — incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 25, 1984.
10.13		1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 — incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.
10.14		NL Industries, Inc. Modification Agreement supplementing certain Executive Severance Agreements, — incorporated by reference to Exhibit 10.11 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.15		Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL — incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.16		1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 — incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.17		Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 — incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.18		NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 — incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.19		Intercorporate Services Agreement by and between Baroid Corporation and the Registrant effective as of January 1, 1993.
10.20		Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1992.
10.21		Intercorporate Services and Reimbursement Agreement between Tremont Corporation and the Registrant effective as of January 1, 1992 — incorporated by reference to Exhibit 10.19 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.22		First amendment to Intercorporate Services and Reimbursement Agreement between Tremont Corporation and the Registrant effective as of January 1, 1993.
10.23		Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation — incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.24		Employment Agreement dated as of January 1, 1990 among Kronos, Inc., the Registrant and Dr. Lawrence A. Wigdor — incorporated by reference to Exhibit 10.19 to Amendment 2 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1989.

Item No.	Page Number: Manually Signed Copy	Exhibit Index
10.25		Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin — incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.26		Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991.
22.1		Subsidiaries of the Registrant.
24.1		Consent of Independent Accountants.
28.1		Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 8 to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1992.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL INDUSTRIES, INC.
(Registrant)

By /s/ J. LANDIS MARTIN
J. Landis Martin, March 17, 1993
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

Signature	Signature
/s/ J. LANDIS MARTIN J. Landis Martin, March 17, 1993 Director, President and Chief Executive Officer	/s/ HAROLD C. SIMMONS Harold C. Simmons, March 17, 1993 Chairman of the Board
/s/ GLENN R. SIMMONS Glenn R. Simmons, March 17, 1993 Director	/s/ MICHAEL A. SNETZER Michael A. Snetzer, March 17, 1993 Director
/s/ KENNETH R. PEAK Kenneth R. Peak, March 17, 1993 Director	/s/ Dr. LAWRENCE A. WIGDOR Dr. Lawrence A. Wigdor, March 17, 1993 Director, President and Chief Executive Officer of Kronos and Rheox
/s/ ELMO R. ZUMWALT, JR. Elmo R. Zumwalt, Jr., March 17, 1993 Director	/s/ SUSAN E. ALDERTON Susan E. Alderton, March 17, 1993 Vice President and Treasurer (Principal Financial Officer)
/s/ DENNIS G. NEWKIRK Dennis G. Newkirk, March 17, 1993 Vice President and Controller (Principal Accounting Officer)	

NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K
Items 8, 14(a) and 14(d)

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All other schedules are omitted because they are not applicable or not required, or because the required information is included in the consolidated financial statements or notes thereto.

REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1991 and 1992, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 1992. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1991 and 1992, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1992 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 18 to the consolidated financial statements, in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes.

COOPERS & LYBRAND

Houston, Texas
March 5, 1993

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1991 and 1992

(In thousands, except per share data)

ASSETS

	1991	1992
Current assets:		
Cash and cash equivalents	$ 125,270	$ 87,333
Marketable securities	227,996	100,607
Accounts and notes receivable, less allowance of $1,749 and $2,385	133,757	123,020
Refundable income taxes	105,581	101,537
Inventories	196,911	216,232
Prepaid expenses	6,001	5,413
Deferred income taxes	—	1,676
Total current assets	795,516	635,818
Other assets:		
Marketable securities	220,345	23,581
Prepaid pension cost	17,511	16,056
Other	59,077	50,675
Total other assets	296,933	90,312
Property and equipment:		
Land	19,645	29,863
Buildings	150,235	208,056
Machinery and equipment	566,803	811,531
Mining properties	81,959	75,731
Construction in progress	338,685	21,042
	1,157,327	1,146,223
Less accumulated depreciation and depletion	418,743	400,246
Net property and equipment	738,584	745,977
	$1,831,033	$1,472,107

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS — (Continued)
December 31, 1991 and 1992
(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' EQUITY

	1991	1992
Current liabilities:		
Notes payable	$ 429	$ 315
Current maturities of long-term debt	138,605	43,328
Accounts payable and accrued liabilities	208,002	189,638
Payable to affiliates	8,192	4,086
Income taxes	4,941	6,825
Deferred income taxes	—	4,573
Total current liabilities	360,169	248,765
Noncurrent liabilities:		
Long-term debt	1,150,251	991,956
Deferred income taxes	232,336	145,745
Accrued pension cost	78,218	73,956
Accrued postretirement benefits cost	—	71,761
Other	66,495	83,878
Total noncurrent liabilities	1,527,300	1,367,296
Minority interest	1,839	2,339
Shareholders' equity (deficit):		
Preferred stock — 5,000 shares authorized, no shares issued or outstanding	—	—
Common stock — $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,300	759,281
Adjustments:		
Currency translation	(116,640)	(111,820)
Marketable equity securities	(5,925)	(896)
Retained earnings (deficit)	(339,043)	(433,250)
	306,047	221,670
Less treasury stock, at cost (15,638 and 15,949 shares)	364,322	367,963
Total shareholders' equity (deficit)	(58,275)	(146,293)
	$1,831,033	$1,472,107

Commitments and contingencies (Notes 13, 17 and 20)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1990, 1991 and 1992
(In thousands, except per share data)

	1990	1991	1992
Revenues and other income:			
Net sales	$906,589	$840,295	$893,465
Interest and dividend income	49,956	47,293	19,618
Securities transactions	8,745	(53,092)	(6,018)
Other, net	9,914	7,043	1,197
	975,204	841,539	908,262
Costs and expenses:			
Cost of sales	512,633	566,608	629,029
Selling, general and administrative	206,484	193,481	203,736
Interest	101,240	100,412	118,511
	820,357	860,501	951,276
Income (loss) before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles	154,847	(18,962)	(43,014)
Provision for income taxes	60,078	3,910	459
Income (loss) before minority interest, extraordinary items and cumulative effect of changes in accounting principles	94,769	(22,872)	(43,473)
Minority interest	1,263	1,113	1,123
Income (loss) before extraordinary items and cumulative effect of changes in accounting principles	93,506	(23,985)	(44,596)
Extraordinary items	(1,083)	7,523	—
Cumulative effect of changes in accounting principles	—	—	(31,804)
Net income (loss)	$ 92,423	$(16,462)	$(76,400)
Income (loss) per share of common stock:			
Before extraordinary items and cumulative effect of changes in accounting principles	$ 1.42	$ (.40)	$ (.88)
Extraordinary items	(.02)	.13	—
Cumulative effect of changes in accounting principles	—	—	(.62)
Net income (loss)	$ 1.40	$ (.27)	$ (1.50)
Weighted average common shares outstanding	65,666	60,233	50,907

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Years ended December 31, 1990, 1991 and 1992
(In thousands, except per share data)

	Common stock	Additional paid-in capital	Adjustments: Currency translation adjustment	Adjustments: Marketable equity securities	Retained earnings (deficit)	Treasury stock	Total
Balance at December 31, 1989	$8,350	$758,916	$ (86,292)	$ (68,482)	$(340,508)	$(139,674)	$ 132,310
Net income	—	—	—	—	92,423	—	92,423
Dividends declared:							
Series A preferred — $8.625 per share	—	—	—	—	(431)	—	(431)
Common — $.60 per share	—	—	—	—	(39,341)	—	(39,341)
Adjustments	—	—	(49,985)	(74,641)	—	—	(124,626)
Purchases of treasury stock	—	—	—	—	—	(22,129)	(22,129)
Other, net	5	357	—	—	—	—	362
Balance at December 31, 1990	8,355	759,273	(136,277)	(143,123)	(287,857)	(161,803)	38,568
Net loss	—	—	—	—	(16,462)	—	(16,462)
Common dividends declared — $.60 per share	—	—	—	—	(34,724)	—	(34,724)
Adjustments	—	—	19,637	137,198	—	—	156,835
Purchases of treasury stock	—	—	—	—	—	(202,519)	(202,519)
Other, net	—	27	—	—	—	—	27
Balance at December 31, 1991	8,355	759,300	(116,640)	(5,925)	(339,043)	(364,322)	(58,275)
Net loss	—	—	—	—	(76,400)	—	(76,400)
Common dividends declared — $.35 per share	—	—	—	—	(17,807)	—	(17,807)
Adjustments	—	—	4,820	5,029	—	—	9,849
Purchases of treasury stock	—	—	—	—	—	(3,641)	(3,641)
Other, net	—	(19)	—	—	—	—	(19)
Balance at December 31, 1992	$8,355	$759,281	$(111,820)	$ (896)	$(433,250)	$(367,963)	$(146,293)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1990, 1991 and 1992

(In thousands)

	1990	1991	1992
Cash flows from operating activities:			
Net income (loss)	$ 92,423	$ (16,462)	$ (76,400)
Adjustments:			
Depreciation, depletion and amortization	35,525	32,581	47,829
Deferred income taxes	75,387	(14,665)	(18,949)
Cumulative effect of changes in accounting principles	—	—	31,804
Minority interest	1,263	1,113	1,123
Net (gains) losses from:			
Securities transactions	(8,745)	53,092	6,018
Disposition of property and equipment	1,146	1,009	1,419
Pension cost, net	(1,241)	(377)	(2,024)
Other postretirement benefits, net	—	—	1,830
Change in assets and liabilities:			
Accounts and notes receivable	24,554	(6,430)	(1,776)
Inventories	(56,120)	6,582	(33,814)
Prepaid expenses	(4,311)	4,885	207
Accounts payable and accrued liabilities	25,491	30,218	(6,111)
Income taxes	(84,088)	(43,629)	(13,501)
Accounts with affiliates	2,310	5,328	(4,106)
Other noncurrent assets	(15,495)	(3,584)	3,383
Other noncurrent liabilities	(711)	9,143	13,072
Other, net	(6,289)	(8,872)	3,442
Total adjustments	(11,324)	66,394	29,846
Net cash provided (used) by operating activities	81,099	49,932	(46,554)
Cash flows from investing activities:			
Capital expenditures	(195,304)	(195,146)	(85,150)
Marketable securities:			
Purchases	(53,343)	(536,435)	(156,573)
Dispositions	126,872	623,937	473,935
Proceeds from disposition of property and equipment	673	1,033	1,484
Loans to affiliates:			
Loans	—	(150,000)	—
Collections	44,400	150,000	—
Other, net	—	(2,819)	1,168
Net cash provided (used) by investing activities	(76,702)	(109,430)	234,864

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)

Years ended December 31, 1990, 1991 and 1992

(In thousands)

	1990	1991	1992
Cash flows from financing activities:			
Notes payable and long-term debt:			
Additions	$1,139,402	$ 178,195	$ 63,603
Principal payments	(800,705)	(174,565)	(263,093)
Repayments of loans from affiliates	(11,000)	(1,126)	—
Distributions to minority interest	(1,505)	(869)	(277)
Dividends paid:			
Series A preferred stock	(431)	—	—
Common stock	(39,625)	(34,724)	(17,807)
Redemption of Series A preferred stock	(5,000)	—	—
Purchases of treasury stock and other	(21,767)	(202,492)	(3,660)
Net cash provided (used) by financing activities	259,369	(235,581)	(221,234)
Net change during the year from operating, investing and financing activities	$ 263,766	$(295,079)	$ (32,924)
Cash and cash equivalents:			
Net change during the year from operating, investing and financing activities	$ 263,766	$(295,079)	$ (32,924)
Net change due to currency translation	5,852	(14,907)	(5,013)
	269,618	(309,986)	(37,937)
Balance at beginning of year	165,638	435,256	125,270
Balance at end of year	$ 435,256	$ 125,270	$ 87,333
Supplemental disclosures — cash paid for:			
Interest, net of amounts capitalized	$ 83,214	$ 107,638	$ 137,996
Income taxes	62,547	54,628	31,369

See accompanying notes to consolidated financial statements.

Note 1 — Organization and basis of presentation:

NL Industries, Inc., primarily a holding company, completed an organizational restructuring of its worldwide operations in 1990 whereby, among other things, its titanium dioxide pigments ("TiO_2") operations were grouped under Kronos, and its specialty chemicals operations were grouped under Rheox. Kronos and Rheox are wholly-owned by NL.

At December 31, 1992, Valhi, Inc. held approximately 49% of NL's outstanding common stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies.

Note 2 — Summary of significant accounting policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments, gains and losses from hedges of investments in non-U.S. entities and the related income tax effects are accumulated in the currency translation adjustments component of shareholders' equity. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less and are carried at amortized cost, which approximates market value.

Marketable securities and securities transactions

Marketable securities are carried at the lower of aggregate quoted market value or amortized cost.

Unrealized losses on noncurrent marketable equity securities and the related income tax effects are accumulated in the marketable equity securities adjustment component of shareholders' equity. Realized gains or losses are computed based on specific identification of the securities sold.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in affiliates

Investments in 20% to 50%-owned companies are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to 40 years for buildings and three to 20 years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Employee benefit plans

Pension plan accounting and funding policies are described in Note 10.

The Company adopted Statement of Financial Accounting Standards ("SFAS") No. 106, "Employers' Accounting For Postretirement Benefits other than Pensions" in 1992, which changed the Company's method of accounting for the cost of providing postretirement benefits other than pensions ("OPEB") from the expensed when paid ("pay-as-you-go") method to the accrual method which recognizes OPEB cost over the employee service period based upon the estimated amount and timing of future benefit payments. See Notes 10 and 18.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

The Company adopted SFAS No. 109, "Accounting For Income Taxes" in 1992, which changed the Company's method of accounting for deferred income taxes from the deferred method of Accounting Principles Board Opinion ("APBO") No. 11 to the asset and liability method. See Notes 13, 15 and 18.

Income per share of common stock

Income per share of common stock is based upon the weighted average number of common shares outstanding and is computed after giving effect to preferred stock dividend requirements of $431,000 in 1990. Common stock equivalents are excluded from the computation because they are either antidilutive or the dilutive effect is not material.

Note 3 — Business and geographic segments:

The Company's operations are conducted in two business segments — TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and levelling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics.

Sales between geographic areas are principally between the United States, Europe and Canada. No single customer represents a significant portion of the Company's business. Net sales of an unconsolidated affiliate, which are not included in the Company's consolidated net sales, were $15 million in 1990, $16 million in 1991 and $17 million in 1992.

General corporate assets consist principally of cash, cash equivalents and marketable securities.

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Business segments			
Net sales:			
Kronos	$ 792,390	$ 732,108	$ 784,568
Rheox	114,199	108,187	108,897
	$ 906,589	$ 840,295	$ 893,465
Operating income:			
Kronos	$ 230,250	$ 110,767	$ 81,941
Rheox	23,598	28,194	28,792
Group expense, excluding general corporate items	(2,772)	—	—
	251,076	138,961	110,733
General corporate income (expense):			
Interest and dividend income	40,556	40,502	14,234
Securities transactions	8,745	(53,092)	(6,018)
Expenses, net	(44,290)	(44,921)	(43,452)
Interest expense	(101,240)	(100,412)	(118,511)
	$ 154,847	$ (18,962)	$ (43,014)
Capital expenditures:			
Kronos	$ 190,510	$ 189,475	$ 81,872
Rheox	2,478	5,358	3,064
General corporate	2,316	313	214
	$ 195,304	$ 195,146	$ 85,150
Depreciation, depletion and amortization:			
Kronos	$ 32,592	$ 29,324	$ 44,360
Rheox	2,802	2,974	3,184
General corporate	131	283	285
	$ 35,525	$ 32,581	$ 47,829

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Geographic areas			
Net sales — point of origin:			
United States	$ 208,707	$ 207,762	$ 238,170
Europe	665,346	623,036	643,670
Canada	139,372	136,316	138,656
Eliminations	(106,836)	(126,819)	(127,031)
	$ 906,589	$ 840,295	$ 893,465
Net sales — point of destination:			
United States	$ 175,643	$ 180,883	$ 204,270
Europe	553,351	485,784	518,711
Canada	90,861	79,198	72,692
Other	86,734	94,430	97,792
	$ 906,589	$ 840,295	$ 893,465
Operating income:			
United States	$ 25,596	$ 16,578	$ 629
Europe	193,061	99,646	81,805
Canada	32,419	22,737	28,299
	$ 251,076	$ 138,961	$ 110,733

	December 31,	
	1991	1992
	(In thousands)	
Identifiable assets		
Business segments:		
Kronos	$1,246,432	$1,246,186
Rheox	76,669	76,248
General corporate	507,932	149,673
	$1,831,033	$1,472,107
Geographic segments:		
United States	$ 419,971	$ 498,029
Europe	752,626	671,349
Canada	150,504	153,056
General corporate	507,932	149,673
	$1,831,033	$1,472,107

Note 4 — Marketable securities and securities transactions:

	December 31, 1991	December 31, 1992
	(In thousands)	
Current:		
Marketable equity securities	$ 11,870	$ 6,996
U.S. Treasury securities	216,126	93,611
	$227,996	$100,607
Noncurrent:		
Marketable equity securities	$ 10,177	$ 9,192
U.S. Treasury securities	208,168	14,389
Other	2,000	—
	$220,345	$ 23,581
Marketable equity securities:		
Current:		
Unrealized gains	$ —	$ 13
Unrealized losses	(3,761)	(4,233)
Cost	15,631	11,216
Aggregate market	$ 11,870	$ 6,996
Noncurrent:		
Unrealized losses	$ (5,925)	$ (979)
Cost	16,102	10,171
Aggregate market	$ 10,177	$ 9,192
Current U.S. Treasury securities:		
Unrealized gains (losses)	$ 2,544	$ (59)
Cost	213,582	93,670
Aggregate market	$216,126	$ 93,611

At December 31, 1992, noncurrent marketable securities included an aggregate $14 million of U.S. Treasury securities which are restricted under the terms of a loan agreement. Noncurrent U.S. Treasury securities are carried at cost, which approximates market.

Net gains and losses from securities transactions are composed of:

	Years ended December 31, 1990	1991	1992
		(In thousands)	
Realized gains (losses):			
Marketable equity securities	$12,069	$(52,813)	$ (528)
Other securities	—	4,437	1,006
Unrealized gains (losses):			
Marketable equity securities	(3,324)	(517)	(52)
Other securities	—	2,337	(1,570)
Writedown of noncurrent marketable securities	—	(6,536)	(5,931)
Other	—	—	1,057
	$ 8,745	$(53,092)	$(6,018)

Note 5 — Inventories:

	December 31, 1991	December 31, 1992
	(In thousands)	
Raw materials	$ 38,922	$ 43,773
Work in process	10,427	9,201
Finished products	110,887	123,317
Supplies	36,675	39,941
	$196,911	$216,232

Note 6 — Other noncurrent assets:

	December 31, 1991	December 31, 1992
	(In thousands)	
Intangible assets, net of accumulated amortization of $7,270 and $9,792	$23,054	$19,127
Deferred financing costs	24,987	20,533
Investment in affiliates	1,564	2,434
Other	9,472	8,581
	$59,077	$50,675

Note 7 — Accounts payable and accrued liabilities:

	December 31, 1991	December 31, 1992
	(In thousands)	
Accounts payable	$102,205	$ 98,990
Accrued liabilities:		
Employee benefits	39,273	38,506
Environmental costs	5,480	12,080
Interest	24,826	4,376
Miscellaneous taxes	4,709	3,980
Other	31,509	31,706
	105,797	90,648
	$208,002	$189,638

Note 8 — Other noncurrent liabilities:

	December 31, 1991	December 31, 1992
	(In thousands)	
Environmental costs	$43,148	$59,403
Insurance claims and claim expenses	8,559	10,014
Employee benefits	8,146	10,392
Other	6,642	4,069
	$66,495	$83,878

Note 9 — Notes payable and long-term debt:

	December 31, 1991	December 31, 1992
	(In thousands)	
Notes payable — non-U.S. credit agreements	$ 429	$ 315
Long-term debt:		
NL Industries:		
7.5% sinking fund debentures — due through 1995	$ 17,047	$ 14,374
Industrial revenue bonds	12,200	—
	29,247	14,374
Kronos:		
DM bank term loan	955,550	681,560
Kronos Louisiana term loan	154,000	195,000
Kronos Louisiana revolving credit facility	—	20,000
Canadian bank credit agreement	12,977	3,942
5% to 12% bank loans payable through 2000	27,938	19,367
Other	99	2,230
	1,150,564	922,099
Rheox:		
Bank term loan	107,500	97,500
Other	1,545	1,311
	109,045	98,811
	1,288,856	1,035,284
Less current maturities	138,605	43,328
	$1,150,251	$ 991,956

Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, has a Deutsche mark-denominated term loan with an international bank syndicate with DM 1.1 billion ($682 million) principal amount remaining at December 31, 1992. Borrowings bear interest at DM LIBOR (9⅜% at December 31, 1992) plus 1⅝% and are repayable in annual installments in 1994 through 1997. KII has entered into agreements with certain banks in the syndicate which caps DM LIBOR at 10.5% on DM 810 million principal amount of the loan. The principal amount subject to the cap declines as the loan is repaid.

In June 1992, KII amended the term loan to, among other things, modify certain financial covenants and restructure DM 400 million of the loan as a revolving credit facility due no later then June 1997. In connection with the amendment, NL and Kronos agreed, under certain circumstances, to provide KII up to an additional DM 125 million through June 1994.

The DM term loan borrowings are collateralized by pledges of the stock of certain KII subsidiaries. The DM term loan agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, has a long-term loan agreement which provides for (i) a $200 million three-year senior secured construction loan which converts at the end of the construction period into a variable rate seven-year senior secured term loan and (ii) a $30 million senior secured revolving credit facility for working capital purposes (together, the "KLA Loan"). Borrowings under the KLA Loan bear interest, at the Company's option, at rates based upon LIBOR plus 1% (4.52% at December 31, 1992), or the base rate plus .125%, mature through 2000 and are collateralized by KLA's assets. The loan agreement restricts KLA's ability to incur additional indebtedness, restricts its dividend payments, requires it to maintain a specified fixed charge coverage ratio and contains other provisions and restrictive covenants customary in lending transactions of this type. See Note 20.

In connection with the KLA Loan, KLA has entered into interest rate swap agreements to mitigate the impact of changes in interest rates. These swap agreements, which mature December 31, 1997, effectively convert the interest rate on $150 million of the loan (at December 31, 1992) from the variable rate to a fixed rate of 9.4%. The principal amount covered by the swap agreements declines as the KLA Loan is repaid. The effective interest rate on the KLA Loan was 8.7% at December 31, 1992, including the impact of the swap agreements. At December 31, 1992, the fair value of the swap agreements payable is estimated to be $18 million, which amount represents the estimated cost to the Company if it were to terminate the swap agreements at that date. KLA is exposed to interest rate risk in the event of nonperformance by the other parties to the swap agreements. However, KLA does not anticipate nonperformance by such parties.

KII's wholly-owned Canadian subsidiary has a bank credit agreement which provides for a Canadian $45 million reducing term loan facility due June 1993. Borrowings bear interest, at the Company's option, at rates based upon the U.S. or Canadian prime rates, LIBOR or a market related fixed rate (7.5% at December 31, 1992). The Canadian credit agreement prohibits the subsidiary from affirmatively encumbering its assets, requires it to maintain minimum levels of equity, limits capital expenditures and the payment of dividends and contains other provisions and restrictive covenants customary in lending transactions of this type.

Rheox has a credit agreement providing for a $115 million seven-year term loan ($98 million outstanding at December 31, 1992) due in quarterly installments through December 1997 and a $15 million revolving credit/letter of credit facility due March 1994. At December 31, 1992, letters of credit aggregating $1 million were outstanding. Borrowings bear interest, at Rheox's option, at the prime rate plus 1.5% or LIBOR plus 2.5% (6.0% at December 31, 1992), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's additional indebtedness and dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type. NL has guaranteed $15 million of the principal and interest until the borrowings are reduced to $85 million.

In connection with the credit agreement, Rheox has entered into interest rate swap agreements to mitigate the impact of changes in interest rates on the term loan. These swap agreements, which mature December 31, 1994, effectively convert the interest rate on $60 million of the loan (at December 31, 1992) from a variable rate to a fixed rate of 8.1%. The principal amount covered by the swap agreements declines as the loan is repaid. The effective interest rate on the Rheox term loan was 7.5% at December 31, 1992, including the impact of the swap agreements. At December 31, 1992, the fair value of the swap agreements payable is estimated to be $1 million which amount represents the estimated cost to the Company if it were to terminate the swap agreements at that date. Rheox is exposed to interest rate risk in the event of nonperformance by the other parties to the agreements. However, Rheox does not anticipate nonperformance by such parties.

Substantially all notes payable and long-term debt of the Company, except to the extent of the interest rate swap agreements relating to the KLA Loan and the Rheox term loan as noted above, have variable interest rates which adjust with changes in market interest rates or have short terms to maturity, and the book value of such indebtedness is deemed to approximate fair value.

The aggregate maturities of long-term debt at December 31, 1992 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1993	$ 43,328
1994	144,336
1995	210,678
1996	240,717
1997	305,942
1998 and thereafter	90,283
	$1,035,284

Unused lines of credit available for short-term borrowings under U.S. and non-U.S. credit facilities approximated $24 million and $52 million, respectively, at December 31, 1992.

Other loans consist of non-U.S. mortgage and other borrowings of the Company's subsidiaries denominated primarily in non-U.S. currencies.

Note 10 — Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was $.3 million, $.6 million and $1.0 million in 1990, 1991 and 1992, respectively.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Service cost benefits earned during the year	$ 4,266	$ 5,151	$ 4,272
Interest cost on projected benefit obligations	13,068	12,705	13,804
Actual return on plan assets	(11,875)	(13,147)	(12,248)
Net amortization and deferrals	2,317	439	(1,346)
	$ 7,776	$ 5,148	$ 4,482

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations in 1991 and 1992 were (i) discount rates — 8% to 9% and (ii) rates of increase in future compensation levels — nil to 7%. The expected long-term rates of return on assets used ranged from 8% to 10%. Plan assets at December 31, 1992, are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

	Assets exceed accumulated benefits		Accumulated benefits exceed assets	
	December 31,		December 31,	
	1991	1992	1991	1992
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$28,709	$27,874	$141,337	$141,909
Nonvested benefits	1,288	933	3,004	3,297
Accumulated benefit obligations	29,997	28,807	144,341	145,206
Effect of projected salary increases	7,416	6,289	9,041	8,762
Projected benefit obligations	37,413	35,096	153,382	153,968
Plan assets at fair value	53,814	50,579	100,068	102,553
Plan assets over (under) projected benefit obligations	16,401	15,483	(53,314)	(51,415)
Unrecognized net loss (gain) from experience different from actuarial assumptions	1,267	718	(34,770)	(29,744)
Unrecognized prior service cost (credit)	4,505	3,646	(4,724)	(4,284)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(4,662)	(3,791)	6,749	5,017
Total prepaid (accrued) pension cost	17,511	16,056	(86,059)	(80,426)
Less current portion	—	—	(7,841)	(6,470)
Noncurrent prepaid (accrued) pension cost	$17,511	$16,056	$(78,218)	$(73,956)

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. The Company is phasing out such benefits for currently active U.S. employees over a ten-year period beginning in 1989. The majority of all retirees are required to contribute ›rtion of the cost of their benefits and certain current and future retirees are eligible for reduced health care ·s at age 65. The Company's policy is to fund medical claims as they are incurred, net of any ·ons by the retirees. Effective January 1, 1993, the Company's postretirement medical plans were ›ong other things, increase the deductible and maximum out-of-pocket amounts, increase the ·nt percentage and pass on future cost increases to the participants through increased ›reased reimbursements.

The rates used in determining the actuarial present value of the accumulated benefit obligations at December 31, 1992, as set forth in the table below, were (i) discount rate — 7.75%, (ii) rate of increase in future compensation levels — 5%, (iii) rate of increase in future health care costs — 14% in 1993, gradually declining to 6% in 2000 and thereafter and (iv) return on plan assets — 9%. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.5 million in 1992, and the actuarial present value of accumulated benefit obligations at December 31, 1992 would have increased by approximately $4 million.

	Amount (in thousands)
Actuarial present value of accumulated benefit obligations:	
Retiree benefits	$62,696
Other fully eligible active plan participants	1,151
Other active plan participants	2,336
	66,183
Plan assets at fair value	(7,640)
Accumulated postretirement benefit obligations in excess of plan assets	58,543
Unrecognized net gain from experience different from actuarial assumptions	1,588
Unrecognized prior service credit	16,618
Total accrued postretirement benefits cost	76,749
Less current portion	4,988
Noncurrent accrued postretirement benefits cost	$71,761

The components of the Company's net periodic postretirement benefit cost pursuant to SFAS No. 106 for 1992 are set forth below:

	Amount (In thousands)
Interest cost on accumulated benefit obligations	$6,189
Service cost benefits attributed to service during the year	130
Expected return on plan assets	(650)
	$5,669

The aggregate net pay-as-you-go cost to the Company for these benefits approximated $4 million and $7 million in 1990 and 1991, respectively.

Note 11 — Shareholders' equity:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
		(In thousands)	
Balance at December 31, 1989	66,797	736	66,061
Exercise of options and other	42	—	42
Purchase of treasury shares	—	1,968	(1,968)
Balance at December 31, 1990	66,839	2,704	64,135
Purchase of treasury shares	—	12,934	(12,934)
Balance at December 31, 1991	66,839	15,638	51,201
Purchase of treasury shares	—	311	(311)
Balance at December 31, 1992	66,839	15,949	50,890

During 1990, NL's Board of Directors authorized the purchase of up to five million shares of NL's common stock over an unspecified period of time, to be held as treasury shares available for general corporate purposes. Pursuant to this authorization, the Company purchased 2.0 million, 1.6 million and .3 million shares of its common stock in the open market at an aggregate cost of $22 million, $21 million and $4 million in 1990, 1991 and 1992, respectively. In September 1991, the Company purchased 11.3 million shares of its common stock pursuant to a "Dutch auction" self-tender offer for an aggregate cost of $181 million, including 10.9 million shares purchased from Valhi for $175 million.

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options and SARs granted pursuant to similar plans which preceded the NL Option Plan ("the Predecessor Option Plans") remain outstanding at December 31, 1992, no additional options may be granted under the Predecessor Option Plans.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to 100% of the fair market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan.

Changes in outstanding options granted pursuant to the NL Option Plan and the Predecessor Option Plans are summarized in the table below. At December 31, 1992, options to purchase 343,771 shares were exercisable and options to purchase 268,877 shares become exercisable in 1993. At December 31, 1992, an aggregate of 3.9 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands, except per share amounts)		
Outstanding at December 31, 1989	281	$ 7.77-26.17	$ 4,997
Granted	295	12.37-24.19	6,069
Exercised	(38)	7.77-13.42	(468)
Canceled or expired	(5)	8.65-10.78	(48)
Outstanding at December 31, 1990	533	8.65-26.17	10,550
Granted	522	10.50	5,486
Exercised	(4)	8.65-11.66	(44)
Outstanding at December 31, 1991	1,051	8.65-26.17	15,992
Granted	237	9.31	2,207
Canceled or expired	(10)	9.31-26.17	(126)
Outstanding at December 31, 1992	1,278	$ 8.65-24.19	$18,073

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance. During 1990, 50,000 shares of the 8.625% Series A redeemable preferred stock were retired.

Note 12 — Other income, net:

	Years ended December 31,		
	1990	1991	1992
	(In thousands)		
Royalty income	$ 1,968	$ 2,547	$ 1,014
Currency transaction gains, net	4,969	1,594	1,735
Disposition of property and equipment	(1,146)	(1,009)	(1,419)
Other, net	4,123	3,911	(133)
	$ 9,914	$ 7,043	$ 1,197

Note 13 — Income taxes:

The components of (i) income (loss) before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 34%, (iii) the provision for income taxes (benefit) and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1990	1991	1992
		(In thousands)	
Pretax income (loss):			
U.S.	$ 32,717	$(25,330)	$(52,724)
Non-U.S.	122,130	6,368	9,710
	$154,847	$(18,962)	$(43,014)
Expected tax expense (benefit), at 34%	$ 52,648	$ (6,447)	$(14,625)
Non-U.S. tax rates	(17,033)	(4,681)	(11,224)
Rate difference on capital loss carryback and capital loss for which no carryback was available	—	14,351	—
Expected benefit of certain U.S. expenses not recognized due primarily to deemed dividends from non-U.S. subsidiaries	11,599	—	—
Valuation allowance	—	—	20,237
Incremental tax on income of companies not included in the NL Tax Group	12,071	3,198	5,385
U.S. state income taxes	2,945	2,605	353
Other, net	(2,152)	(5,116)	333
	$ 60,078	$ 3,910	$ 459
Provision for income taxes:			
Current income taxes (benefit):			
U.S. federal	$ 6,116	$ (6,180)	$ (2,103)
U.S. state	2,946	2,604	(292)
Non-U.S.	(24,371)	14,904	21,803
	(15,309)	11,328	19,408
Deferred income taxes (benefit):			
U.S. federal	—	7,658	(612)
U.S. state	—	—	645
Non-U.S.	75,387	(15,076)	(18,982)
	75,387	(7,418)	(18,949)
	$ 60,078	$ 3,910	$ 459
Comprehensive tax provision (benefit) allocable to:			
Pretax income (loss)	$ 60,078	$ 3,910	$ 459
Extraordinary items, principally deferred income taxes	(22)	(7,241)	—
Stockholders' equity, principally deferred income taxes allocable to currency translation adjustments	13,885	1,023	(1,196)
	$ 73,941	$ (2,308)	$ (737)

The components of the net deferred tax liability at December 31, 1992 are summarized below:

	Deferred tax	
	Assets	Liabilities
	(In thousands)	
Tax effect of temporary differences relating to:		
Inventories	$ 3,823	$ (2,986)
Property and equipment	261	(101,409)
Accrued postretirement benefits cost	26,112	—
Accrued pension cost	7,808	(9,770)
Accrued environmental costs	21,404	—
Accrued liabilities and other deductible differences	14,484	—
Other taxable differences	—	(95,892)
Tax on unremitted earnings of non-U.S. subsidiaries	619	(39,277)
Tax loss and tax credit carryforwards	112,212	—
Valuation allowance	(86,031)	—
Gross deferred tax assets (liabilities)	100,692	(249,334)
Reclassification, principally netting by tax jurisdiction	(99,016)	99,016
Net total deferred tax assets (liabilities)	1,676	(150,318)
Net current deferred tax assets (liabilities)	1,676	(4,573)
Net noncurrent deferred tax assets (liabilities)	$ —	$(145,745)

The components of the provision for deferred income taxes for 1990 and 1991 (a disclosure required under APBO No. 11 income tax accounting but not by SFAS No. 109) is summarized below.

	Years ended December 31,	
	1990	1991
	(In thousands)	
Depreciation	$ 6,040	$ 2,525
Cash basis income and expense	5,886	(1,607)
Undistributed income of subsidiaries	63,082	(8,747)
Other, net	379	411
	$75,387	$(7,418)

At December 31, 1992, the Company had approximately $180 million of non-U.S. income tax loss carryforwards with no expiration dates. In addition, the Company had, for U.S. federal income tax purposes, capital loss carryforwards of approximately $18 million which expire during 1996, net operating loss carryforwards of $9 million which expire in 2007, and an alternative minimum tax credit carryforward of approximately $11 million with no expiration date.

The 1990 provision for deferred income taxes related to undistributed income of subsidiaries includes a reversal of a $48 million credit established in 1989 for non-U.S. income taxes refundable upon distribution, which distribution is attributable to 1990 for income tax purposes.

The Company is undergoing examinations of certain of its income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, and tax authorities have proposed or may propose tax deficiencies. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of all such examinations should not have a material adverse effect on the Company's consolidated financial position. In July 1992, the Company paid $15 million of previously accrued interest and income taxes related to the settlement of examinations of the Company's U.S. federal income tax returns for the years ended December 31, 1979 through 1984. At December 31, 1992, the Company's current assets include $102 million of refundable income taxes, primarily 1989 and 1990 German refund claims, which are currently being contested by German tax authorities.

In 1991, based upon revisions in the Company's estimate of liabilities for income taxes and related interest expense which may ultimately result from the examinations referred to above, the Company reduced its accrual for income tax related interest by $9 million. This change in estimate considered, among other things, the Company's settlement with the IRS of a matter related to the qualified status of certain of the Company's defined benefit pension plans, which plans were determined to be qualified with respect to the periods in question.

Note 14 — Other items:

Research, development and sales technical support expense approximated $11 million in 1990, $9 million in 1991 and $11 million in 1992.

Interest capitalized in connection with long-term capital projects was $8 million in 1990, $26 million in 1991 and $9 million in 1992.

Note 15 — Extraordinary items:

	Years ended December 31,		
	1990	1991	1992
	(In thousands)		
Gain (loss) on early extinguishment of indebtedness:			
7.5% sinking fund debentures	$ 60	$ 282	$ —
9.375% sinking fund debentures	(1,165)	—	—
Provision for income taxes	22	(6)	—
	(1,083)	276	—
Income tax benefit of utilization of tax loss and tax credit carryforwards	—	7,247	—
	$(1,083)	$7,523	$ —

In August 1990, the Company redeemed the then-outstanding 9.375% sinking fund debentures at 101⅞% of the $62 million principal amount outstanding.

Upon adoption of SFAS No. 109 in 1992, utilization of tax loss and tax credit carryforwards are not classified as extraordinary items.

Note 16 — Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company (except as otherwise set forth in this Annual Report on Form 10-K), the Company from time to time considers, reviews and evaluates, and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

During August 1991, the Company entered into a revolving demand loan agreement with Valhi in an amount not to exceed the lesser of $200 million or the amount Valhi has available under bank credit agreements. The Company advanced $150 million pursuant to this agreement which Valhi repaid in September 1991. Interest income on the amount advanced under the demand loan agreement was $.6 million in 1991.

Baroid Corporation, a former wholly-owned subsidiary of the Company, and the Company are parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis through December 31, 1993, subject to termination or renewal by mutual agreement. Management services fee expense pursuant to the Baroid ISA approximated $6.3 million in 1990, $4.3 million in 1991 and $2.3 million in 1992.

The Company is party to an intercorporate services agreement with Valhi (the "Valhi ISA") whereby Valhi provides certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi ISA was $1.6 million in 1990, $1.5 million in 1991 and $1.4 million in 1992.

The Company is party to an intercorporate services agreement with Tremont (the "Tremont ISA") whereby the Company provides certain management, financial and legal services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.3 million in 1991 and $.5 million in 1992.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.5 million in 1990, $.6 million in 1991 and $.6 million in 1992. Interest expense on balances with Tremont was $1.3 million in 1990.

Sales to Baroid in the ordinary course of business were $1.7 million in 1990, $1.8 million in 1991 and $2.1 million in 1992. Interest income on balances with Baroid was $.9 million in 1990.

Purchases in the ordinary course of business from unconsolidated affiliates were approximately $8 million in 1990 and $9 million in both 1991 and 1992.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (credit) ($(2.5) million in 1990, nil in both 1991 and 1992) in a manner similar to accounting for SARs. At December 31, 1992, employees of the Company held options to purchase 365,000 shares (338,000 shares vested) of Valhi common stock at exercise prices ranging from $5 to $15 per share.

In conjunction with the formation of Baroid, the Company and Baroid entered into a Cross-Indemnification Agreement pursuant to which, as amended, the Company agreed to indemnify Baroid with regard to all liabilities not expressly assumed by Baroid and Baroid agreed to indemnify the Company with regard to all liabilities assumed by Baroid.

Net amounts payable to affiliates, including dividends declared in 1991, are summarized in the following table.

	December 31,	
	1991	1992
	(In thousands)	
Tremont Corporation	$4,474	$4,056
Valhi, Inc.	3,718	30
	$8,192	$4,086

Note 17 — Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases. In addition, Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately 30% of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired on December 31, 1991, and to which an extension through 2011 has been agreed to in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive extension of the supplies and services agreement. Both the lease and the supplies and services agreements contain restrictions on the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expenses aggregated $7 million in 1990, $6 million in 1991 and $9 million in 1992. At December 31, 1992, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1993	$ 1,549	$2,786
1994	1,359	2,195
1995	1,433	1,659
1996	1,434	420
1997	1,418	190
1998 and thereafter	18,656	122
	$25,849	$7,372

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's Superfund National Priority List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. The Company believes it has adequately provided accruals for CERCLA and hazardous waste matters. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is involved in other litigation, including litigation regarding the Feed Materials Production Center in Ohio owned by the U.S. Department of Energy, formerly managed under contract by NLO, Inc., a wholly-owned subsidiary of the Company, and other matters.

See Item 1 — "Business" of this report for discussion of other environmental matters. See Item 3 — "Legal Proceedings" of this report for discussion of specific lead pigment, environmental and other litigation.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition.

Concentrations of credit risk

Sales of TiO_2 accounted for 87% and 88% of net sales in 1991 and 1992, respectively. Titanium dioxide pigments are sold to the paint, paper and plastics industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. Titanium dioxide pigments are sold to over 5,000 customers, none of which represents a significant portion of net sales. Over one-half of the Company's TiO_2 sales by volume were to Europe and approximately one-third were attributable to North America in both 1991 and 1992.

Consolidated cash and cash equivalents includes $40 million and $22 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1991 and 1992, respectively. Such securities are held in trust for the Company by a single U.S. bank.

Note 18 — Changes in accounting principles:

The Company (i) elected early compliance with both SFAS No. 106 (OPEB) and SFAS No. 109 (income taxes) as of January 1, 1992; (ii) elected immediate recognition of the OPEB transition obligation; and (iii) elected to apply SFAS No. 109 prospectively and not restate prior years. The cumulative effect of changes in accounting principles adjustment is shown below.

	Amount (In thousands)
Increase (decrease) in net assets at January 1, 1992:	
Accrued postretirement benefits cost	$(74,918)
Deferred income taxes, net	43,114
Loss from cumulative effect of changes in accounting principles	$(31,804)

Note 19 — Quarterly financial data (unaudited):

	Quarter ended,			
	March 31	June 30	September 30	December 31
	(In thousands, except per share amounts)			
Year ended December 31, 1992:				
Net sales	$226,091	$235,603	$232,297	$199,474
Cost of sales	158,891	169,896	164,133	136,109
Operating income	25,610	26,302	29,282	29,539
Loss before cumulative effect of changes in accounting principles	$ (7,510)	$ (8,467)	$(11,331)	$(17,288)
Cumulative effect of changes in accounting principles	(31,804)	—	—	—
Net loss	$(39,314)	$ (8,467)	$(11,331)	$(17,288)
Per share of common stock:				
Loss before cumulative effect of changes in accounting principles	$ (.15)	$ (.17)	$ (.22)	$ (.34)
Cumulative effect of changes in accounting principles	(.62)	—	—	—
Net loss	$ (.77)	$ (.17)	$ (.22)	$ (.34)
Weighted average shares outstanding	50,959	50,890	50,890	50,890
Year ended December 31, 1991:				
Net sales	$225,047	$217,247	$202,365	$195,636
Cost of sales	143,954	141,306	142,418	138,930
Operating income	47,101	38,062	30,364	23,434
Income (loss) before extraordinary items	$(39,367)	$ 17,603	$ 4,610	$ (6,831)
Extraordinary items	5,833	878	160	652
Net income (loss)	$(33,534)	$ 18,481	$ 4,770	$ (6,179)
Per share of common stock:				
Income (loss) before extraordinary items	$ (.61)	$ .28	$ .08	$ (.13)
Extraordinary items	.09	.01	.00	.01
Net income (loss)	$ (.52)	$ .29	$ .08	$ (.12)
Weighted average shares outstanding	64,134	63,957	61,098	51,743

The sum of quarterly income per common share is not equal to the related annual amount due to changes in weighted average common shares outstanding.

The Company adopted SFAS Nos. 106 and 109 in the fourth quarter of 1992 effective January 1, 1992 and, accordingly, the Company restated its results for the first three quarters of 1992. The effect of these changes in accounting principles on originally reported operating income and loss before cumulative effect of changes in accounting principles is summarized below.

	1992 Quarter ended		
	March 31	June 30	September 30
	(In thousands, except per share amounts)		
Operating income:			
As originally reported	$25,799	$26,260	$ 29,377
Adjustments	(189)	42	(95)
As restated	$25,610	$26,302	$ 29,282
Loss before cumulative effect of changes in accounting principles:			
As originally reported	$(4,413)	$(6,293)	$ (8,104)
Adjustments	(3,097)	(2,174)	(3,227)
As restated	$(7,510)	$(8,467)	$(11,331)
Per common share:			
As originally reported	$ (.09)	$ (.12)	$ (.16)
Adjustments	(.06)	(.05)	(.06)
As restated	$ (.15)	$ (.17)	$ (.22)

Note 20 — Subsequent events:

In January 1993, Kronos entered into a letter of intent to establish a manufacturing joint venture with Tioxide Group ("Tioxide"), a wholly-owned subsidiary of Imperial Chemical Industries PLC. The joint venture, which would be equally owned by Kronos and Tioxide, would operate the Lake Charles chloride process TiO_2 plant currently owned by Kronos. Under separate offtake agreements, Kronos and Tioxide would be required to purchase their equal share of TiO_2 produced at the plant. Under the terms of the letter of intent, Kronos would contribute the Lake Charles plant to the joint venture and receive approximately $200 million in cash from Tioxide. The letter of intent also provides for the companies to exchange certain technological information. The transaction is subject to, among other things, obtaining acceptable joint venture financing, preparation of definitive agreements, and review by U.S. antitrust authorities.

Kronos expects to use part of the cash payment and financing from the proposed joint venture to repay the outstanding principal amount of the KLA Loan. In the event that the joint venture transaction is not consummated, the Company believes that modification of the fixed charge coverage ratio in the KLA Loan agreement will be required in the second half of 1993. No discussions with the lenders have taken place with respect to this matter.

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 18 to the consolidated financial statements, in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND

Houston, Texas
March 5, 1993

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I — MARKETABLE SECURITIES
December 31, 1992
(In thousands)

Name of issuer and title of each issue	Number of shares/principal amount	Cost	Market value	Amount carried in balance sheet
Current assets —				
Common stock:				
Lockheed, Corp.	2	$ 83	$ 96	$ 96
Maxxam, Inc.	251	11,133	6,900	6,900
		11,216	6,996	6,996
U.S. Treasury securities	93,645	93,670	93,611	93,611
		$104,886	$100,607	$100,607
Noncurrent assets —				
Common stock:				
Keystone Consolidated Industries, Inc.(a)	326	$ 4,240	$ 3,261	$ 3,261
Valhi, Inc.	1,186	5,931	5,931	5,931
		10,171	9,192	9,192
U.S. Treasury securities	14,389	14,389	14,389	14,389
		$ 24,560	$ 23,581	$ 23,581

(a) A majority-owned subsidiary of Contran Corporation.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III — CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets
December 31, 1991 and 1992
(In thousands)

	1991	1992
Current assets:		
Cash and cash equivalents	$ 9,467	$ 11,043
Marketable securities	30,484	90,639
Accounts and notes receivable	3,314	2,319
Refundable income taxes	—	2,012
Receivable from subsidiaries and affiliates	4,138	—
Prepaid expenses	187	198
Total current assets	47,590	106,211
Other assets:		
Marketable securities	19,047	23,581
Investment in subsidiaries	41,437	(8,388)
Other	2,934	2,412
Total other assets	63,418	17,605
Property and equipment, net	4,446	4,241
	$115,454	$128,057
Current liabilities:		
Current maturities of long-term debt	$ 14,247	$ 4,374
Accounts payable and accrued liabilities	26,589	29,828
Payable to subsidiaries and affiliates	8,613	23,642
Income taxes	3,374	—
Deferred income taxes	—	2,506
Total current liabilities	52,823	60,350
Noncurrent liabilities:		
Long-term debt	15,000	10,000
Notes payable to subsidiary	—	65,000
Deferred income taxes	56,010	28,091
Accrued pension cost	13,105	12,765
Accrued postretirement benefits cost	—	45,072
Other	36,791	53,072
Total noncurrent liabilities	120,906	214,000
Shareholders' equity (deficit)	(58,275)	(146,293)
	$115,454	$128,057

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III — CONDENSED FINANCIAL INFORMATION OF REGISTRANT — (Continued)

Condensed Statements of Operations
Years ended December 31, 1990, 1991 and 1992
(In thousands)

	1990	1991	1992
Revenues and other income:			
Equity in income (loss) of subsidiaries	$125,821	$ 7,515	**$(10,703)**
Interest and dividend income	7,827	4,714	**2,829**
Securities transactions	3,937	(10,586)	**2,691**
Other, net	1,720	3,121	**1,791**
	139,305	4,764	**(3,392)**
Costs and expenses:			
General and administrative	46,009	48,042	**45,243**
Interest, net	15,088	(4,540)	**1,598**
	61,097	43,502	**46,841**
Income (loss) before income taxes, extraordinary items and cumulative effect of changes in accounting principles	78,208	(38,738)	**(50,233)**
Income tax benefit	15,298	14,753	**5,637**
Income (loss) before extraordinary items and cumulative effect of changes in accounting principles	93,506	(23,985)	**(44,596)**
Extraordinary items:			
Equity in income of subsidiaries	—	16,263	—
Income tax benefit of utilization of tax loss and tax credit carryforwards	—	(9,016)	—
Early extinguishment of indebtedness	(1,083)	276	—
	(1,083)	7,523	—
Cumulative effect of changes in accounting principles:			
NL	—	—	**(30,546)**
Equity in income of subsidiaries	—	—	**(1,258)**
	—	—	**(31,804)**
Net income (loss)	$ 92,423	$(16,462)	**$(76,400)**

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III — CONDENSED FINANCIAL INFORMATION OF REGISTRANT — (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1990, 1991 and 1992

(In thousands)

	1990	1991	1992
Cash flows from operating activities:			
Net income (loss)	$ 92,423	$ (16,462)	$(76,400)
Adjustments:			
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary items and cumulative effect of changes in accounting principles	(125,821)	(7,515)	10,703
Extraordinary items	—	(16,263)	—
Cumulative effect of changes in accounting principles	—	—	1,258
Distributions	8,731	317,000	54,000
Securities transactions	(3,937)	10,586	(2,691)
Cumulative effect of changes in accounting principles	—	—	30,546
Change in assets and liabilities, net	58,416	22,383	6,340
Other, net	(765)	(9,408)	1,243
Total adjustments	(63,376)	316,783	101,399
Net cash provided by operating activities	29,047	300,321	24,999
Cash flows from investing activities:			
Purchases of marketable securities	(27,308)	(46,654)	(1,238)
Proceeds from disposition of marketable securities	92,965	93,646	6,735
Capital expenditures	(2,247)	(260)	(214)
Investment in subsidiary	—	(3,248)	(3,896)
Loans to affiliates and subsidiaries:			
Loans	—	(150,000)	—
Collections	44,400	150,000	—
Other, net	—	(126)	(768)
Net cash provided by investing activities	107,810	43,358	619
Cash flows from financing activities:			
Additions to (principal payments on):			
Long-term debt	(62,365)	(9,025)	(14,873)
Loans from affiliates	(11,000)	(100,526)	12,298
Dividends paid	(40,056)	(34,724)	(17,807)
Redemption of Series A preferred stock	(5,000)	—	—
Purchases of treasury stock and other	(21,767)	(202,492)	(3,660)
Net cash used by financing activities	(140,188)	(346,767)	(24,042)
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	29,047	300,321	24,999
Investing activities	107,810	43,358	619
Financing activities	(140,188)	(346,767)	(24,042)
Net change from operating, investing and financing activities	(3,331)	(3,088)	1,576
Balance at beginning of year	15,886	12,555	9,467
Balance at end of year	$ 12,555	$ 9,467	$ 11,043

Notes to Condensed Financial Information

Note 1 — Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 — Net payable to (receivable from) subsidiaries and affiliates:

	December 31,	
	1991	1992
	(In thousands)	
Current:		
Tremont Corporation	$ 4,474	$ 4,056
Valhi, Inc.	3,718	30
Kronos and Rheox:		
Income taxes	(4,484)	2,680
Other, net	767	16,876
	$ 4,475	$23,642
Noncurrent:		
Note payable — Kronos	$ —	$65,000

Note 3 — Long-term debt:

The aggregate maturities of the Company's long-term debt at December 31, 1992 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1993	$ 4,374
1994	5,000
1995	5,000
	$14,374

The Company has guaranteed $15 million of Rheox's seven-year term loan until borrowings are reduced to $85 million. The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through June 1994.

NL INDUSTRIES, INC. AND SUBSIDIARIES
SCHEDULE V — PROPERTY AND EQUIPMENT
(In thousands)

Classification	Balance at beginning of year	Additions at cost	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1992:					
Land	$ 19,645	$ 11,493	$ (146)	$ (1,129)	$ 29,863
Buildings	150,235	74,924	(6,480)	(10,623)	208,056
Machinery and equipment	566,803	311,240	(28,403)	(38,109)	811,531
Mining properties	81,959	2,346	(491)	(8,083)	75,731
Construction in progress	338,685	(314,853) (a)	(407)	(2,383)	21,042
	$1,157,327	$ 85,150 (b)	$(35,927) (c)	$(60,327)	$1,146,223
Year ended December 31, 1991:					
Land	$ 19,096	$ 788	$ (103)	$ (136)	$ 19,645
Buildings	151,079	379	(258)	(965)	150,235
Machinery and equipment	547,077	31,368	(8,165)	(3,477)	566,803
Mining properties	81,363	1,718	(244)	(878)	81,959
Construction in progress	177,778	160,893 (a)	(426)	440	338,685
	$ 976,393	$ 195,146 (b)	$ (9,196)	$ (5,016)	$1,157,327
Year ended December 31, 1990:					
Land	$ 16,786	$ 417	$ (23)	$ 1,916	$ 19,096
Buildings	133,953	4,184	(111)	13,053	151,079
Machinery and equipment	465,921	43,057	(10,621)	48,720	547,077
Mining properties	72,515	3,863	(414)	5,399	81,363
Construction in progress	33,244	143,783 (a)	(208)	959	177,778
	$ 722,419	$ 195,304 (b)	$(11,377)	$ 70,047	$ 976,393

(a) Net of amounts transferred to applicable property and equipment accounts.
(b) Includes costs for chloride process TiO_2 plant in Lake Charles, Louisiana.
(c) Includes retirement of sulfate process TiO_2 plant in Langerbrugge, Belgium.

SCHEDULE VI — ACCUMULATED DEPRECIATION AND DEPLETION OF PROPERTY AND EQUIPMENT
(In thousands)

Classification	Balance at beginning of year	Additions charged to costs and expenses	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1992:					
Land	$ 5,948	$ 841	$ —	$ (414)	$ 6,375
Buildings	75,038	4,531	(6,339)	(5,334)	67,896
Machinery and equipment	272,467	35,933	(25,124)	(19,505)	263,771
Mining properties	65,290	3,535	(478)	(6,143)	62,204
	$418,743	$44,840	$(31,941) (a)	$(31,396)	$400,246
Year ended December 31, 1991:					
Land	$ 5,536	$ 473	$ (33)	$ (28)	$ 5,948
Buildings	72,666	3,125	(234)	(519)	75,038
Machinery and equipment	258,865	22,371	(6,643)	(2,126)	272,467
Mining properties	62,212	3,762	(244)	(440)	65,290
	$399,279	$29,731	$ (7,154)	$ (3,113)	$418,743
Year ended December 31, 1990:					
Land	$ 4,452	$ 440	$ (2)	$ 646	$ 5,536
Buildings	62,249	3,035	(96)	7,478	72,666
Machinery and equipment	219,577	22,821	(8,196)	24,663	258,865
Mining properties	55,676	3,164	(17)	3,389	62,212
	$341,954	$29,460	$ (8,311)	$ 36,176	$399,279

(a) Includes retirement of sulfate process TiO_2 plant in Langerbrugge, Belgium.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE VIII — VALUATION AND QUALIFYING ACCOUNTS
(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Balance at end of year
Year ended December 31, 1992:					
Allowance for doubtful accounts and notes receivable	$1,749	$ 945	$ (190) (a)	$(119)	$ 2,385
Amortization of intangibles	$7,270	$ 2,989	$ —	$(467)	$ 9,792
Valuation allowance for deferred income taxes	$ —	$86,031	$ —	$ —	$86,031
Year ended December 31, 1991:					
Allowance for doubtful accounts and notes receivable	$2,107	$ 478	$ (846) (a)	$ 10	$ 1,749
Amortization of intangibles	$4,211	$ 2,850	$ —	$ 209	$ 7,270
Year ended December 31, 1990:					
Allowance for doubtful accounts and notes receivable	$2,821	$ (9)	$ (973) (a)	$ 268	$ 2,107
Amortization of intangibles	$3,652	$ 6,065	$(5,788)	$ 282	$ 4,211

(a) Amounts written off, less recoveries.

SCHEDULE IX — SHORT-TERM BORROWINGS
(In thousands, except percentages)

Category of aggregate short-term borrowings	Balance at end of year	Weighted average interest rate	Maximum amount outstanding during the year	Average amount outstanding during the year(a)	Weighted average interest rate during the year(b)
Bank credit agreements and other:					
Year ended December 31, 1992	$ 315	7.3%	$ 1,100	$ 239	8.4%
Year ended December 31, 1991	$ 429	9.8%	$ 40,746	$ 5,484	11.1%
Year ended December 31, 1990	$40,746	11.1%	$454,217	$214,081	8.8%

(a) The average amount outstanding during the year is calculated based on the average of the month-end balances of short-term borrowings during the year.

(b) The weighted average interest rate during the year is calculated based on total interest expense on short-term borrowings divided by the average amount outstanding during the year.

SCHEDULE X — SUPPLEMENTARY INCOME STATEMENT INFORMATION
(In thousands)

	Years ended December 31,		
	1990	1991	1992
Maintenance and repairs	$81,073	$81,201	$93,036
Depreciation, depletion and amortization:			
Property and equipment	$29,460	$29,731	$44,840
Intangible assets	6,065	2,850	2,989
	$35,525	$32,581	$47,829
Taxes, other than payroll and income taxes	$10,705	$12,748	$15,319

DIRECTORS, OFFICERS AND EXECUTIVES

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer - NL Industries, Inc.

Kenneth R. Peak
President - Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman - Valhi, Inc. (diversified holding company)

Harold C. Simmons
Chairman of the Board - NL Industries, Inc.
Chairman and Chief Executive Officer - Valhi, Inc.

Michael A. Snetzer
President - Valhi, Inc.

Dr. Lawrence A. Wigdor
President and Chief Executive Officer - Kronos and Rheox

Admiral Elmo R. Zumwalt, Jr. (retired)
President - Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee
Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee
Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee
Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS AND EXECUTIVES

NL Industries, Inc.

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

Kronos

J. Landis Martin
Chairman of the Board

Dr. Lawrence A. Wigdor
President and Chief Executive Officer

Susan E. Alderton
Vice President and Treasurer

William R. Bronner
Vice President and Secretary

Anthony L. DeGisi
Vice President

Fred DeJong
Vice President

Dr. Siegfried Hartmann
Vice President

Dr. Christopher E. Jones
Vice President

Dennis G. Newkirk
Vice President and Controller

Edward J. Zadzora
Vice President

Rheox

Dr. Lawrence A. Wigdor
Chairman of the Board, Chief Executive Officer and President

Susan E. Alderton
Vice President and Treasurer

Henry H. Basson
Vice President

William R. Bronner
Vice President and Secretary

David J. Fisher
Vice President

Paul A. Kopasko
Vice President

Laurence I. Weissman
Vice President

SHAREHOLDER INFORMATION

Annual Meeting

The annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agency

First Chicago Trust Company of New York, P.O. Box 3981, Church Street Station, New York, New York 10008-3981. Telephone (212) 791-6422

Form 10-K Report

The Company's Annual Report on Form 10-K for the year ended December 31, 1992, filed with the Securities and Exchange Commission, is printed as part of this report. Additional copies are available to shareholders without charge. Requests should be addressed to NL Industries, Inc., Investor Relations Department, P.O. Box 60087, Houston, Texas 77205, or made by calling (800) 285-3519.

NL Industries, Inc.

1993

Annual

Report

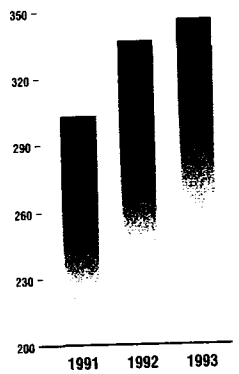
NL Industries, Inc. is a multinational company that manufactures and markets titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two principal operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. Rheox, Inc., NL's other principal operating subsidiary, is the world's largest producer of rheological additives for solvent-based systems and is also a supplier of rheological additives used in water-based systems. These products control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,200 people worldwide. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

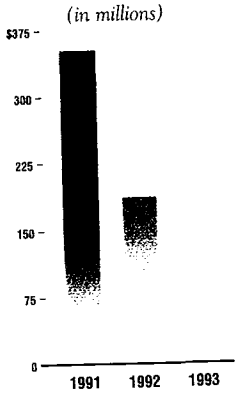
Annual Highlights

($ in millions, except per share data)	1991	1992	1993
Net sales	$ 840.3	$ 893.5	$805.3
Operating income	139.0	110.7	62.4
Loss before extraordinary items and cumulative effect of changes in accounting principles	(24.0)	(44.6)	(83.2)
Net loss	(16.5)	(76.4)	(109.8)
Loss per common share:			
Before extraordinary items	$ (.40)	$ (.88)	$(1.63)
Net loss	(.27)	(1.50)	(2.16)
Capital expenditures	$ 195.1	$ 85.2	$ 48.0
Cash and current marketable securities	$ 353.3	$ 187.9	$147.6
Long-term debt, including current maturities	$1,288.9	$1,035.3	$870.9
Operational data (metric tons):			
TiO_2 sales volume	302,000	336,000	346,000
TiO_2 production volume	293,000	358,000	352,000

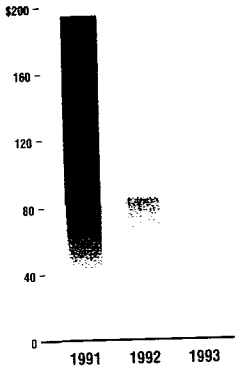
TiO_2 Sales Volume
(in thousands)



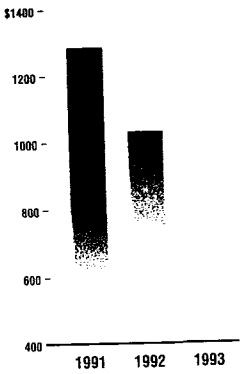
Cash & Marketable Securities
(in millions)



Capital Expenditures
(in millions)



Debt
(in millions)



T[illegible]LDERS

Our results for 1993 reflected the continuing difficult market environment for titanium dioxide pigments ("TiO_2"). The weak economic conditions of Western Europe, coupled with only a modest economic recovery in North America, continued to depress prices for TiO_2, prolonging the trend that began in early 1990. Although some pricing improvement was realized in the fourth quarter, weak pricing was the key factor contributing to the decline in our overall results.

Net sales decreased 10% to $805 million in 1993 due principally to lower TiO_2 prices, although our volume and market share increased slightly on record sales volume of 346,000 metric tons of TiO_2. Operating income for 1993 declined 44% to $62 million and after an extraordinary loss related to the settlement of interest rate swap agreements and other costs associated with the joint venture formation and debt refinancing described below, NL reported a net loss of $2.16 per share.

Notwithstanding these results, we continue to aggressively position NL to be a stronger company for the future. During 1993, we substantially improved our liquidity and financial flexibility, formed a strategic joint venture to own and operate Kronos' Louisiana plant and continued our cost reduction and environmental improvement efforts.

We continue to aggressively position NL to be a stronger company for the future. During 1993, we substantially improved our liquidity and financial flexibility.

In October 1993, the Company issued $350 million of Senior Notes and used the net proceeds to prepay a portion of its Deutsche mark (DM) denominated bank credit facility. The terms of the DM credit facility were amended to reschedule the repayment terms of the remaining term loan beginning in 1997, extend the final maturity and provide for DM 150 million of revolving credit availability.

In October 1993, Kronos, Inc., our TiO_2 subsidiary, formed a manufacturing joint venture and exchanged certain technologies with Tioxide Group Ltd. This transaction reduced long-term debt by $107 million and improved the Company's balance sheet. Kronos' production capacity subsequent to the formation of the joint venture is 10% higher than its 1993 sales volume and we believe is sufficient to provide Kronos with the capability to meet current market requirements and continue its worldwide presence in future years.

During 1993, Kronos continued its commitment to maintaining its competitive position by investing $47 million in capital improvements, including $30 million related to its environmental protection and compliance programs. In early 1994, Kronos completed its Norwegian onshore tailings disposal system and expects to complete its Canadian waste acid neutralization facility by mid-year. In order to reduce sulfur dioxide emissions into the atmosphere, Kronos is installing off-gas desulfurization systems at its German plants at an estimated cost of $24 million. Kronos' joint venture is installing an off-gas desulfurization system at an estimated cost of $15 million. The German systems are scheduled to be completed

in 1996 and the Louisiana system is scheduled for completion in 1995. Kronos will continue to commit substantial resources to its business and continue its efforts to be a leader in the area of environmental compliance.

Operating income of Kronos' TiO_2 business declined from $82 million in 1992 to $36 million in 1993, as the effects of depressed TiO_2 selling prices and the impact of production curtailments to reduce inventories were only partially offset by the reduction in start-up costs of the Louisiana plant, which commenced production during 1992. The worldwide TiO_2 industry continues to be adversely affected by excess production capacity and Kronos' average selling prices continued to decline during 1993. Most of the decline occurred in the first half of 1993; average prices declined only slightly during the third quarter and increased approximately 3% during the fourth quarter. The increase in the fourth quarter average selling prices reflects improved pricing in Europe.

We believe the TiO_2 industry has significant long-term potential. As gross domestic product grows in various regions of the world, TiO_2 consumption should increase due to its widespread application in end-use products and the absence of effective substitutes.

Rheox, Inc., our specialty chemicals subsidiary, produces rheological additives for both solvent-based and water-based systems. Rheological additives for solvent-based systems accounted for approximately 90% of Rheox's sales in 1993. Rheox introduced several new products in 1993 to the water-based additives market, which is larger and has more growth potential than the solvent-based additives market.

We believe the TiO_2 industry has significant long-term potential. As gross domestic product grows in various regions of the world, TiO_2 consumption should increase due to its widespread application in end-use products and the absence of effective substitutes. Also, construction of additional TiO_2 production capacity requires significant capital expenditures and substantial lead time for planning, obtaining environmental approvals and construction. We are not aware of any announced additions to production capacity in North America or Europe. With the October 1993 formation of the joint venture and debt refinancing, NL is well-positioned to take advantage of the economic recovery under way in North America and future improvements in market conditions.

Sincerely,

Harold Simmons

Harold C. Simmons
Chairman of the Board

J. Landis Martin

J. Landis Martin
President and Chief Executive Officer

March 1, 1994

KRONOS

Kronos is the world's fourth largest producer of titanium dioxide pigments, with annual production capacity of approximately 380,000 metric tons. Titanium dioxide pigments ("TiO_2") provide whiteness, brightness and opacity to a wide range of end-use products, including paints, plastics, papers, textiles, inks and ceramics.

Kronos has played a leading role in the development of the worldwide titanium dioxide pigments industry, with predecessor companies first commercializing this product during the early 1920s in both the United States and Norway. Since then Kronos has continually refined its technology and expanded its manufacturing capabilities to now include six manufacturing facilities located in five countries: Germany, Belgium, Norway, Canada and the United States and a mine located in Norway.

Currently, Kronos has an 11% worldwide market share with its largest markets being in Western Europe, which closely follows North America as the largest consumer of titanium dioxide pigments. Kronos is gaining increased sales volume in North America, aided by its strong technology, wide range of products, and new manufacturing facilities. Assisted by the economic recovery under way in the United States, the Company expects continued market share growth in this area.

Kronos' newest plant in Lake Charles, Louisiana utilizes the chloride process technology. Since October 1993, this plant has been owned and operated by a 50%-owned joint venture. Kronos believes the joint venture provides the Company with the production capacity to participate in the economic recovery in North America.

Kronos uses both the sulfate and chloride production processes to manufacture over 40 grades of titanium dioxide pigments for a broad range of applications. Approximately two-thirds of Kronos' production is based upon the newer chloride process. While the pigments produced by the two processes are generally interchangeable, chloride process pigments are increasingly preferred by major customers.

Wide acceptance of its plastic-grade pigments makes Kronos a world leader in sales to this market. Recognized by many as having the best multipurpose paint grades of titanium dioxide pigments, and with increased slurry capacity in North America, Kronos' position in the coatings industry is being further enhanced.

Kronos operates a rock ilmenite mine in Norway, which provides all of Kronos' feedstock for its European sulfate process pigment plants. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe, supplying nearly 40% of the European demand for sulfate feed material.

Kronos has substantially completed a major environmental protection and improvement program commenced in the early 1980s to replace or modify its TiO_2 production facilities for compliance with various environmental laws by their respective effective dates. All of Kronos' European plants now use either the low-waste yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Kronos has commenced construction of a $25 million waste acid neutralization facility for its Canadian sulfate process TiO_2 plant, which is expected to be completed in mid-1994. Although these upgrades increased operating costs, they are expected to reduce future capital expenditures that Kronos would otherwise need to incur as environmental standards are increased.

Kronos maintains an active research and development program and continuously works to improve both the sulfate and chloride technologies. Through this effort, Kronos has increased output in its four chloride process pigment plants so that all plants exceed original design capacity. These plant improvements have been accomplished with relatively little capital expenditure.

Kronos' water treatment chemicals business has successfully developed an extensive sales program in Europe for the iron compounds which result from both the chloride and sulfate processes. By converting the iron compounds to commercial products, disposal costs are reduced and additional revenue is generated.

RHEOX

Rheox manufactures and sells a wide variety of specialty chemicals to the paint, ink, lubricant, oil drilling, adhesives, sealants, household and personal care markets throughout the world. Rheox specialty chemicals are additives which modify the rheological properties of the many products sold in those markets. Rheox products improve the flow and appearance of trade paints and industrial finishes and make it possible to change oil into grease lubricants.

Rheox products are used to modify end-products made from either an oil or water base. Worldwide sales volume in 1993 increased 3% over 1992. The majority of the sales were solvent-based products. Rheox believes that water-based systems will account for an increasing portion of the market and more emphasis is being placed on developing water-based products, with approximately 10% of Rheox's 1993 sales derived from this end-use.

Rheox manufactures its products in five plants located in the United States and Europe, its key market areas. In 1993, four of the five plants received the worldwide-respected quality approval of ISO 9002 with approval at the fifth plant expected during 1994. This quality status is highly desired by customers who are demanding more stringent quality performance throughout the world.

The Company owns a mine in California which produces hectorite clays, a major raw material in its manufacturing process. The mine is believed to be the largest known commercial hectorite clay deposit in the world, assuring Rheox a stable low cost supply of this raw material.

A key Rheox strength is the extensive technical support given to customers from our laboratories in the United States and Germany. These laboratories are staffed with specialists in many of the industries served and they provide opportunities for our customers to develop improved products. A key part of the customer interface is a dedicated sales force in both North America and Europe. In addition, over 70 agents worldwide promote Rheox's products.

Rheox commercialized ten new products in 1993 and became the exclusive reseller of EFKA's (a Dutch producer) dispersants and defoamers for sale in North America. Among the new introductions are products for water-based coatings, environmental and construction markets. Product introductions included new water-based thickeners for paints which have no organic volatiles (no VOC) and low VOC additives for anti-perspirants. An improved product for auto underbody coatings generated sales in 1993, and Rheox expects an increase in sales of this product in 1994. A product developed for the remediation of organic chemical contaminated soil will have its first major trial in mid-1994.

One of the newer developments is a product which has the capability to de-ink recycled newspaper containing difficult-to-remove flexographic inks. Another product, which is capable of de-inking all newsprint, has been developed and is being tested for commercial use, with its first plant test in 1994.

A recent development with significant potential is the discovery of water retention additives which can replace cellulosics in the construction markets. This experimental family of products is being developed for joint compounds in the North American market and plasters in Europe. Currently the market for cellulosic-type additives in these applications is estimated at over $200 million per year. The products are in various stages of customer laboratory trials.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required] - For the fiscal year ended December 31, 1993

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-640

NL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	13-5267260 (IRS Employer Identification No.)
3000 North Sam Houston Parkway East, Houston, Texas (Address of principal executive offices)	77032 (Zip Code)

Registrant's telephone number, including area code: (713) 987-5000

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	New York Stock Exchange Pacific Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes X No ___

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

As of February 28, 1994, 50,889,943 shares of common stock were outstanding. The aggregate market value of the 17,037,953 shares of voting stock held by nonaffiliates as of such date approximated $151 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the Registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a New Jersey corporation in 1891, conducts its operations through its principal wholly-owned subsidiaries, Kronos, Inc. and Rheox, Inc. At December 31, 1993, Valhi, Inc. held approximately 49% of NL's outstanding stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company".

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2") with an estimated 11% share of the worldwide market. Approximately one-half of Kronos' 1993 sales volume was in Europe, where Kronos is the second largest producer of TiO_2. Kronos accounted for 87% of the Company's sales and 58% of its operating income in 1993. Rheox is the world's largest producer of rheological additives for solvent-based systems, supplying an estimated 40% of the worldwide market.

Kronos

Industry

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide range of products, including paints, paper, plastics, fibers and ceramics. TiO_2 is considered to be a "quality-of-life" product with demand affected by the gross domestic product in various regions of the world.

Demand, supply and pricing of TiO_2 have historically been cyclical and the last cyclical peak for TiO_2 prices occurred in early 1990. While prices for TiO_2 are currently depressed, the Company believes that the TiO_2 industry has significant long-term potential. However, the Company expects that the TiO_2 industry will continue to operate at lower capacity utilization levels over the next few years relative to the high utilization levels prevalent during the late 1980s, primarily because of the slow recovery from the worldwide recession and the impact of capacity additions since the late 1980s. The economic recovery has been particularly slow in Europe where a significant portion of the Company's TiO_2 manufacturing facilities are located. Kronos has an estimated 17% share of European TiO_2 sales and an estimated 9% share of U.S. TiO_2 sales. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. However, if the economies in Eastern Europe, the Far East and China continue to develop, a significant market for TiO_2 could emerge in those countries and Kronos believes that it is well positioned to participate in the Eastern European market.

Products and operations

The Company believes that there are no effective substitutes for TiO_2. However, extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used in a number of Kronos' markets. Generally, extenders are used to reduce to some extent the utilization of higher cost TiO_2. The use of extenders has not significantly affected TiO_2 consumption over the past decade because extenders generally have, to date, failed to match the performance characteristics of TiO_2. The Company believes that the use of extenders will not materially alter the growth of the TiO_2 business in the foreseeable future.

Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos' major customers include international paint, paper and plastics manufacturers.

Kronos is one of the world's leading producers and marketers of TiO_2. Kronos and its distributors and agents sell and provide technical services for its products to over 5,000 customers with the majority of sales in Europe, the United States and Canada.

Kronos' international operations are conducted through Kronos International, Inc. ("KII"), a German-based holding company formed in 1989 to manage and coordinate the Company's manufacturing operations in Germany, Canada, Belgium and Norway and its sales and marketing activities in over 100 countries worldwide. The Company believes that KII's structure allows it to capitalize on expertise and technology developed in Germany over a 60-year period.

Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets. By volume, one-half of Kronos' 1993 TiO_2 sales were to Europe, with 38% to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ores (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived from co-products of the pigment production processes). Water treatment chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using either the chloride or sulfate pigment production process. Although most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred in certain segments of the coatings and plastics applications, and sulfate process pigments are generally preferred for paper, fibers and ceramics applications. Due to environmental factors and customer considerations, the proportion of TiO_2 industry sales represented by chloride process pigments has increased relative to sulfate process pigments. Approximately two-thirds of Kronos' current production capacity is based on an efficient chloride process technology.

Kronos produced approximately 352,000 metric tons of TiO_2 in 1993, compared to approximately 358,000 metric tons in 1992 and 293,000 metric tons in 1991. The increase in production during 1992 was primarily at Kronos' chloride process plants, including the plant in Lake Charles, Louisiana. Kronos achieved record production levels of chloride process pigments in 1992 through improved operational efficiencies. In response to weakened demand, production rates were reduced in late 1992 and during 1993 in order to reduce inventory levels. Kronos believes its annual attainable production capacity is approximately 380,000 metric tons, including its one-half interest in the Louisiana plant.

The primary raw materials used in the TiO_2 chloride production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and rutile. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Ltd. (South Africa), approximately 50% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp. Natural rutile ore is purchased from a number of sources.

The primary raw materials used in the TiO_2 sulfate production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided all of Kronos' feedstock for its European sulfate process pigment plants in 1993. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe supplying, the Company believes, nearly 40% of the European demand, including the Company, for sulfate feedstock. Additionally, Kronos purchases sulfate grade slag under contracts negotiated annually with QIT and Tinfos Titanium and Iron K/S.

Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate in the near term; however, tightening supplies for the chloride process may be encountered in the late 1990s. Kronos does not anticipate experiencing any interruptions of its raw material supplies.

TiO_2 manufacturing joint venture

In October 1993, Kronos formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). The joint venture, which is equally owned by subsidiaries of Kronos and Tioxide (the "Partners"), owns and operates the Louisiana chloride process TiO_2 plant formerly owned by Kronos. Under the terms of the joint venture and related agreements, Kronos contributed the plant to the joint venture, Tioxide paid an aggregate of approximately $205 million, including its tranche of the joint venture debt, and Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Of the total consideration paid by Tioxide, $30 million was attributable to the exchange of technologies and is being reported as a component of operating income ratably over three years beginning in October 1993. Production from the plant is being shared equally by Kronos and Tioxide pursuant

to separate offtake agreements. The formation of the manufacturing joint venture resulted in a 12% decrease in Kronos' total TiO_2 production capacity; however, Kronos' remaining capacity is 10% higher than 1993 sales volume, and is believed to be sufficient to provide Kronos with the capability to meet current market requirements and continue its worldwide presence in future years.

A supervisory committee, composed of four members, two of whom are appointed by each Partner, directs the business and affairs of the joint venture, including production and output decisions. Two general managers, one appointed and compensated by each Partner, manage the day-to-day operations of the joint venture acting under the direction of the supervisory committee.

Upon formation, the joint venture obtained $216 million in new financing consisting of two equal tranches, one attributable to each Partner, which is serviced through the purchase of the plant's TiO_2 output in equal quantities by the Partners. The Partners are each required to make capital contributions to the joint venture to pay principal on their respective portion of the joint venture indebtedness. Kronos' pro rata share of the joint venture debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's operating expenses (fixed and variable costs of production and interest expense). Kronos' share of the fixed and variable production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity. In the past few years, supply has exceeded demand, in part due to new chloride process capacity coming on-stream. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980s, have had a negative impact since prices peaked in early 1990. Worldwide capacity additions in the TiO_2 market are slow to develop because of the significant capital expenditures and substantial lead time (typically three to five years in the Company's experience) for, among other things, planning, obtaining environmental approvals and construction.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and substantially all of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada.

Kronos' principal competitors are E.I. du Pont de Nemours & Co. ("DuPont"); Imperial Chemical Industries PLC (Tioxide); Hanson PLC (SCM Chemicals); Kemira Oy; Bayer AG; and Ishihara Sangyo Kaisha, Ltd.. These six competitors have estimated individual worldwide market shares ranging from 5% to 21%, and an estimated aggregate 65% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is Kronos' principal North American competitor.

Kronos has substantially completed a major environmental protection and improvement program commenced in the early 1980s to replace or modify its European TiO_2 production facilities for compliance with various environmental laws by their respective effective dates. All of Kronos' European plants now use either the low-waste yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Kronos has commenced construction of a $25 million waste acid neutralization facility for its Canadian sulfate process TiO_2 plant, which is expected to be completed in mid-1994. Although these upgrades increased operating costs, they are expected to reduce future capital expenditures that Kronos would otherwise need to incur as environmental standards are increased. The Company believes that certain competitors have not upgraded their facilities and are expected to do so in the future or be forced to curtail production due to lack of environmental compliance. See "Regulatory and Environmental Matters".

Rheox

Products and operations

Rheological additives control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays which have been chemically reacted with organic chemicals and compounds. Rheox produces rheological additives for both solvent-based and water-based systems. Rheox is the world's largest producer of rheological additives for solvent-based systems, supplying, the Company believes, approximately 40% of the worldwide market, and is also a supplier of rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for approximately 90% of Rheox's sales in 1993, with the remainder being principally rheological additives for water-based systems. Rheox introduced a number of new products during the past three years, many of which are for water-based systems, which currently represent a larger portion of the market than solvent-based systems and which the Company believes, in the long term, will account for an increasing portion of the market. Rheox also focused on product development for environmental applications with new products introduced for de-inking recycled paper and soil stabilization at contaminated sites.

Sales of rheological additives generally follow overall economic growth in Rheox's principal markets and are influenced by the volume of shipments of the worldwide coatings industry. Since Rheox's rheological additives are also used in industrial coatings, plant and equipment spending also has an influence on demand for this product line.

Manufacturing process and raw materials

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with a subsidiary of Dresser Industries, Inc. ("Dresser"), which has significant bentonite reserves in Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future and Dresser's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from Company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of hectorite clays in the world. Quaternary amines are purchased primarily from a

joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Competition

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors for rheological additives for solvent-based systems are Laporte PLC, Sud-Chemie AG and Akzo NV. Rheox's principal competitors for water-based systems are Rohm and Haas Company, Hercules Incorporated, The Dow Chemical Company and Union Carbide Corporation.

Research and Development

The Company's annual expenditures for research and development and technical support programs have averaged approximately $10 million annually during the past three years with Kronos accounting for approximately three-quarters of the annual total. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are directed primarily toward improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to rheological additives are conducted primarily in the United States and are directed towards the development of new products for water-based systems, environmental applications and new end-use applications for existing product lines.

Patents and Trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the formation of the manufacturing joint venture with Tioxide, Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Use by each recipient of the other's technology in Europe is restricted until October 1996. See "Kronos - TiO_2 manufacturing joint venture".

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign Operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada, and approximately one-third of Rheox's sales in the past three years have been attributable to European production. Approximately three-quarters of the Company's 1993 consolidated sales were attributable to non-U.S. customers, including 12% attributable to customers in areas other than Europe and Canada. See Note 3 to the Consolidated Financial Statements.

Political and economic uncertainties in certain of the countries in which the Company operates may expose it to risk of loss. The Company does not believe that there is currently any likelihood of material loss through political or economic instability, seizure, nationalization or similar event. The Company cannot predict, however, whether events of this type in the future could have a material effect on its operations. NL's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and Environmental Matters".

Customer Base and Seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1993, the Company employed approximately 3,200 persons, excluding the joint venture employees, with approximately 400 employees in the United States and approximately 2,800 at sites outside the United States. Hourly employees in production facilities worldwide are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and Environmental Matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain past and current operations and products of the Company have the potential to cause environmental or other damage. The Company has implemented and continues to implement various policies and programs in an effort to minimize these risks. The policy of the Company is to achieve compliance with applicable environmental laws and regulations at all its facilities and to strive to improve environmental performance. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. manufacturing operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants and the Louisiana plant owned and operated by the joint venture are in substantial compliance with applicable requirements

of these laws. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the plants to operate. The Company believes all its European plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory denominator is provided by the European Union (the "EU"). Germany, Belgium and the United Kingdom, members of the EU, follow the initiatives of the EU. Norway, although not a member, generally patterns its environmental regulatory actions after the EU. The Company believes Kronos is in substantial compliance with agreements reached with European environmental authorities and with an EU directive to control the effluents produced by TiO_2 production facilities. The Company believes Rheox is in substantial compliance with the environmental regulations in Germany and the United Kingdom.

In order to reduce sulfur dioxide emissions into the atmosphere, Kronos is installing off-gas desulfurization systems at its German plants at an estimated cost of $24 million. The manufacturing joint venture is installing an off-gas desulfurization system at the Louisiana plant at an estimated cost of $15 million. The German systems are scheduled to be completed in 1996 and the Louisiana system is scheduled for completion in 1995.

Kronos' ilmenite mine near Hauge i Dalane had a permit for the offshore disposal of tailings through February 1994. In February 1994, Kronos completed the $15 million onshore disposal system to replace the offshore disposal of tailings. Onshore disposal will result in a modest increase in the mine's operating costs.

The Quebec provincial government is an environmental regulatory body with authority over Kronos' Canadian TiO_2 production facilities in Varennes, Quebec, which currently consist of plants utilizing both the chloride and sulfate process technologies. The provincial government regulates discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos' right to discharge effluents from its Canadian sulfate process TiO_2 plant into the St. Lawrence River until June 1994, at which time Kronos' new $25 million waste acid neutralization facility is expected to be completed. In January 1993, the Quebec provincial government granted a permit to Kronos to construct the facility and established the future permit parameters, which Kronos will be required to meet upon completion of the facility.

Notwithstanding the above-described agreement, in March 1993 Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate process TiO_2 production facility. The penalty for these violations, if proven, could be up to Canadian $15 million. Additional charges, if brought, could involve additional penalties. The Company has moved to dismiss the case on constitutional grounds. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above.

The Company's future capital expenditures related to its ongoing environmental protection and improvement program are currently expected to be approximately $75 million, including $30 million in 1994.

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws, in approximately 80 governmental enforcement and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, many of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List or similar state lists. See Item 3 - "Legal Proceedings".

ITEM 2. PROPERTIES

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway), a facility in Varennes, Quebec, Canada and through the manufacturing joint venture described above, a one-half interest in a plant in Lake Charles, Louisiana which commenced production in 1992. Prior to October 1993, Kronos owned all of the Louisiana plant.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreement restrict Kronos' ability to transfer ownership or use of the Leverkusen facility.

All of Kronos' principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany. All of such production facilities are owned.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. Considering the Company's previous involvement in the lead pigment and lead-based paint businesses, there can be no assurance that additional litigation, similar to that described below, will not be filed. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed at the state, local and federal levels that seek

to (a) impose various obligations on present and former manufacturers of lead pigment and lead-based paint with respect to asserted health concerns associated with the use of such products and (b) effectively overturn court decisions in which the Company and other pigment manufacturers have been successful. One such bill that would subject lead pigment manufacturers to civil liability for damages caused by lead-based paint on the basis of market share, and extends certain statutes of limitations, passed the Massachusetts House of Representatives in 1993. The same bill has been reintroduced in the Massachusetts legislature in 1994. No legislation or regulations have been enacted to date which are expected to have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Any liability that may result is not reasonably capable of estimation.

In 1987, an action was filed against the Company and other defendants for injuries allegedly caused by lead pigment purportedly supplied by the defendants (*Spriggs v. Sherwin-Williams, et al.*, No. LE3121-5-87 Housing Court of Massachusetts, Hampden County). The complaint sought compensatory and punitive damages for alleged negligent product design, failure to warn, breach of warranty, and concert of action from the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA"). In November 1993, a stipulation of dismissal with prejudice was filed with the court.

In July 1992, the Company was served with a complaint entitled *Boston Housing Authority v. Sherwin-Williams Company*, C.A. No. 92-10624-Y, United States District Court for the District of Massachusetts. The complaint asserted a claim for contribution from the Company, other pigment manufacturers and the LIA based on their alleged negligence in product design, manufacture and distribution; negligent failure to warn; breach of warranty; aiding and abetting; and conspiracy. The plaintiff sought contribution to its $1.45 million cost of settling a claim by an individual who was allegedly injured by exposure to lead pigment in the period from 1973 to 1977. In November 1993, the parties filed a stipulation of dismissal with prejudice with the court.

In November and December 1990, the Company and others were served with third-party complaints in actions entitled *Coren, et al. v. Cardozo v. Sherwin-Williams, et al.* (No. 29101) and *Pacheco, et al. v. Ortiz v. The Sherwin-Williams Company, et al.* (No. 90-3067-B) in the Housing Court of Massachusetts, Suffolk County. The third-party complaints against the pigment manufacturers and the LIA contain allegations similar to those in the *Spriggs* action and also seek contribution and indemnification for any relief awarded to plaintiffs. In *Coren*, the third-party defendants removed the case to federal court. In 1992, the federal court dismissed the direct claims and remanded the indemnification and contribution claims to the housing court. Thereafter, the housing court granted the third-party defendants' motion to stay discovery, pending trial on the main action. The Company has answered the third-party complaint, denying all allegations of wrongdoing. In *Pacheco*, plaintiffs settled with the defendant landlords for less than $100,000. The third-party claims are in discovery. Third-party plaintiffs have proposed a stay of this matter pending the outcome of the appeal in another personal injury action, which was thereafter resolved in the Company's favor.

In October 1991, the Company and others were served with a third-party complaint by the owner of the plaintiff's apartment in an action entitled *Barros v. Pires v. Sherwin-Williams Co., et al.*, (Civ. No. 01011), in the Housing Court of Massachusetts, Suffolk County. The third party complaint against the pigment manufacturers and the LIA alleges negligent product design, negligent failure to warn, breach of warranty, aiding and abetting, and concert of action, and also seeks contribution and indemnification for any relief awarded to plaintiff for damages allegedly suffered due to exposure to lead-based paint. In May 1992, the court granted the third-party defendants' motion to dismiss. In June 1992, the third-party plaintiffs moved for reconsideration or for reversal of the dismissal.

In 1989 and 1990, the Housing Authority of New Orleans ("HANO") filed third-party complaints for indemnity and/or contribution against the pigment manufacturers and the LIA in 14 actions commenced by residents of HANO units seeking compensatory and punitive damages for injuries allegedly caused by lead pigment. The actions are pending in the Civil District Court for the Parish of Orleans, State of Louisiana. Subsequently, HANO agreed to dismiss all such complaints and to consolidate them for purposes of appeal. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other eight cases also included in the appeal, the court of appeals reversed the lower court decision dismissing the cases due to inadequate pleading of facts. These eight cases have been remanded to the district court for further proceedings. Discovery is proceeding.

In December 1991, the Company received a copy of a complaint filed in the Civil District Court for the Parish of Orleans seeking indemnification and/or contribution against the Company and eight other defendants for approximately $4.5 million in settlements paid to Housing Authority residents (*Housing Authority of New Orleans v. Hoechst Celanese Corp., et al.*, No. 91-28067). These claims appear to be based upon the same theories which HANO had previously filed. The Company has not been served.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability and denied the remainder of the motion. In January 1992, defendants appealed the denial. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In December 1992, plaintiffs filed a motion to stay the claims of the City of New York and the New York City Health and Hospitals Corporation pending resolution of the Housing Authority's claim. In May 1993, the Appellate Division of the Supreme Court affirmed the denial of the motion to dismiss plaintiffs' fraud, restitution, conspiracy and concert of action claims. In August 1993, the defendants' motion for leave to appeal was denied. Discovery is proceeding.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the PHA and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. Defendants moved to dismiss various claims, but the court dismissed only the claim for loss of consortium. Defendants answered the complaint denying allegations of wrongdoing. The case is in discovery.

In August 1992, the Company was named as a defendant and served with an amended complaint in *Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative liability. In October 1992, the Company and the other defendants moved to dismiss the complaint with prejudice. In July 1993, the court dismissed the complaint. In September 1993, the plaintiffs appealed.

In November 1993, the Company was served with a complaint in *Brenner, et al. v. American Cyanamid, et al.*, Supreme Court, State of New York, Erie County alleging injuries to two children purportedly caused by lead pigment. The complaint seeks $24 million in compensatory and $10 million in punitive damages for alleged negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, and alternative liability. In January 1994, the Company answered the complaint, denying liability.

The Company believes that the foregoing lead pigment actions are without merit and intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously.

The Company has filed declaratory judgment actions against various insurance carriers seeking costs of defense and indemnity coverage for certain of its environmental and lead pigment litigation. *NL Industries, Inc. v. Commercial Union Insurance Cos., et al.*, Nos. 90-2124, -2125 (HLS). In May 1990, the Company filed an action in the United States District Court for the District of New Jersey against Commercial Union Insurance Company ("Commercial Union") seeking to recover defense costs incurred in the *City of New York* lead pigment case and two other cases which have since been resolved in the Company's favor. In July 1991, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the Company's reasonable defense costs for such cases. In June 1992, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Commercial Union seeking to recover costs incurred in defending four additional lead pigment cases which have since been resolved in the Company's favor. In August 1993, the court granted the Company's motion for summary judgment and ordered Commercial Union

to pay the reasonable costs of defending those cases. The court has not made any rulings on defense costs or indemnity coverage with respect to the Company's pending environmental litigation or on indemnity coverage in the lead pigment litigation. No trial dates have been set. Other than rulings to date, the issue of whether insurance coverage for defense costs or indemnity or both will be found to exist depends upon a variety of factors, and there can be no assurance that such insurance coverage will exist in other cases. The Company has not included amounts in any accruals in anticipation of insurance coverage for lead pigment or environmental litigation.

Environmental matters and litigation

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws in approximately 80 governmental and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage, or both. Certain of these proceedings involve claims for substantial amounts. Although the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition to the matters noted above, certain current and former facilities of the Company, including several divested secondary lead smelter and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities.

The extent of CERCLA liability cannot be determined until the Remedial Investigation and Feasibility Study ("RIFS") is complete, the U.S. EPA issues a record of decision and costs are allocated among PRPs. The extent of liability under analogous state cleanup statutes and for common law equivalents are subject to similar uncertainties. The Company believes it has provided adequate accruals for reasonably estimable costs for CERCLA matters and other environmental liabilities. At December 31, 1993, the Company had accrued $70 million in respect of those environmental matters which are reasonably estimable. The Company determines the amount of accrual on a quarterly basis by analyzing and estimating the range of possible costs to the Company. Such costs include, among other things, remedial investigations, monitoring, studies, clean-up, removal and remediation. It is not possible to estimate the range of costs for certain sites. The Company has estimated that the upper end of the range of reasonably possible costs to the Company for sites for which it is possible to estimate costs is approximately $105 million. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future. More detailed descriptions of certain legal proceedings relating to environmental matters are set forth below.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

At Pedricktown, the U.S. EPA divided the site into two operable units. Operable unit one covers contaminated ground water, surface water, soils and stream sediments. The Company submitted the final RIFS for operable unit one to the U.S. EPA in May 1993. In July 1993, the U.S. EPA issued the proposed remediation plan for operable unit one, which the U.S. EPA estimates will cost approximately $24.5 million. In addition, the U.S. EPA proposed that a removal action be performed on the soils and sediments of a stream at the site, estimated to cost approximately $1.3 million. The U.S. EPA has not yet issued the record of decision. The U.S. EPA issued a Unilateral Administrative Order (Index No. II-CERCLA 20205) with respect to operable unit two in March 1992 to the Company and 30 other PRPs directing immediate removal activities including the cleanup of waste, surface water and building surfaces. The Company has agreed to pay approximately 50% of the operable unit two costs, up to $2.5 million.

At Granite City, the RIFS is complete, and the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others (*United States of America v. NL Industries, Inc., et al.*, Civ. No. 91-CV 00578) with respect to the Granite City smelter. The complaint seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was invalid, arbitrary, capricious and not in accordance with law. The complaint also seeks recovery of past costs of $.3 million and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. At a status conference in January 1993, the court ordered the parties to consider the submission of proposals to a Technical Advisory Committee, whose role would be to advise the court as to the technical issues in the case. The government has opposed the establishment of a Technical Advisory Committee. The court has not ruled on the matter. The government has agreed to reopen the administrative record to receive additional public comments on the selected remedy and the court stayed the action until the record is again closed.

Having completed the RIFS at Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc.*, Civ. No. 89-408, United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notices of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, which was initially estimated to cost approximately $17 million, exclusive of administrative and overhead costs and any additional costs for the disposition of recycled materials from the site. In January 1992, the

U.S. EPA issued unilateral administrative orders Docket No. 1091-01-10-106 to the Company and six other PRPs directing the performance of the remedy. The Company and others have commenced performance of the remedy and, through December 31, 1993, the Company and the PRPs had spent approximately $5.5 million. Based upon site operations to-date, the remedy is not proceeding in accordance with engineering expectations or cost projections; therefore, the Company and the other PRPs have met with the U.S. EPA to discuss alternative remedies. Pursuant to an interim allocation, the Company's share of remedial costs is approximately 50%. In November 1991, Gould Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.*, No. 91-1091, United States District Court for the District of Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and $5 million in punitive damages. The court granted Gould's motion to amend the complaint to add additional defendants (adjoining current and former landowners) and third party defendants (generators). The amended complaint deletes the fraud and punitive damages claims asserted against NL; thus, the pending action is essentially one for allocation of past and future cleanup costs. In March 1993, the parties agreed to a case management order limiting discovery until 1995, after which time full discovery will proceed. A trial date has been tentatively set for September 1996.

There are several actions pending relating to alleged contamination at other properties formerly owned or operated by the Company or its subsidiaries or their predecessors. In one of those cases, suit was filed in November 1992 against the Company asserting claims arising out of the sale of a former business of the Company to Exxon Chemical Company (*Exxon Chemical Company v. NL Industries, Inc.*, United States District Court for the Southern District of Texas, No. H-92-3360). The action seeks contractual indemnification, contribution under CERCLA for costs associated with the environmental assessment and cleanup at nine properties included in the sale, a declaration of liability for future environmental cleanup costs, and punitive damages for fraud. Plaintiff has asserted that past and future cleanup costs, business interruption, and asset value losses and legal and site assessment costs are approximately $25 million. In February 1994, the court entered an order referring the case to mediation which is to occur by April 1994.

The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc. The Company mined at the Baxter Springs subsite, where it is the largest viable PRP. The final RIFS was submitted to the U.S. EPA in May 1993. The estimated cost of proposed remedies at the Baxter Springs subsite ranges from approximately $1 million to $28 million, plus annual operation and maintenance costs.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois (*People of the State of Illinois v. NL Industries, et al.*, No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.27 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. In December 1993, the trial court denied the State's petition to reinstate the complaint, and dismissed the case with prejudice. In February 1994, the State filed a notice of appeal.

In 1980, the State of New York commenced litigation against the Company in connection with the operation of a plant in Colonie, New York formerly owned by the Company. *Flacke v. NL Industries, Inc.*, No. 1842-80 ("Flacke I") and *Flacke v. Federal Insurance Company and NL Industries, Inc.*, No. 3131-92 ("Flacke II"), New York Supreme Court, Albany County. The plant manufactured military and civilian products from depleted uranium and was acquired from the Company by the U.S. Department of Energy ("DOE") in 1984. Flacke I seeks penalties for alleged violations of New York's Environmental Conservation Law, and of a consent order entered into to resolve these alleged violations. Flacke II seeks forfeiture of a $200,000 surety bond posted in connection with the consent order, plus interest from February 1980. The Company denied liability in both actions. The litigation had been inactive since 1984. In July 1993, the State moved for partial summary judgment for approximately $1.5 million on certain of its claims in Flacke I and for summary judgment in Flacke II. In January 1994, the Company cross-moved for summary judgment in Flacke I and Flacke II.

Residents in the vicinity of the Company's former Philadelphia lead chemicals plant commenced a class action allegedly comprised of over 7,500 individuals seeking medical monitoring and damages allegedly caused by emissions from the plant. *Wagner, et al. v. Anzon and NL Industries, Inc.*, No. 87-4420, Court of Common Pleas, Philadelphia County. The complaint seeks compensatory and punitive damages from the Company and the current owner of the plant, and alleges causes of action for, among other things, negligence, strict liability, and nuisance. A class was certified to include persons who reside, owned or rented property, or who work or have worked within up to approximately three-quarters of a mile from the plant from 1960 through the present. The Company has answered the complaint, denying liability. The case is in discovery. Residents also filed consolidated actions in the United States District Court for the Eastern District of Pennsylvania, *Shinozaki v. Anzon, Inc.* and *Wagner and Antczak v. Anzon and NL Industries, Inc.* Nos. 87-3441 and 87-3502. The consolidated action is a putative class action seeking CERCLA response costs, including cleanup and medical monitoring, declaratory and injunctive relief and civil penalties for alleged violations of the Resource Conservation and Recovery Act ("RCRA"), and also asserting pendent common law claims for strict liability, trespass, nuisance and punitive damages. The court dismissed the common law claims without prejudice, dismissed two of the three RCRA claims as against the Company with prejudice, and stayed the case pending the outcome of the state court litigation. The trial is set for June 1994.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.*, Civ. No. 91-4098. The complaint seeks to recover $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. The Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because it believed they were in conflict with California law. The Company answered the complaint denying liability. The government now claims it expended in excess of $2.7 million for this matter. Trial was held in March and April 1993. The judge has preliminarily indicated that the Company will be ordered to pay response costs plus an amount which is the product of a multiplier of 1.625 to be applied to a portion of those costs, which amount has not yet been determined. In May 1993, the government submitted Proposed Supplemental Findings of Fact and Conclusions

of Law Regarding Response Costs and Penalty Amount stating that the amount owed is $6.7 million. The Company's response states that the total of recoverable response costs and penalty is $6.4 million. The court has not yet entered final judgment in this matter.

At a municipal and industrial waste disposal site in Batavia, New York, the Company and six others have been identified as PRPs. The U.S. EPA has divided the site into two operable units. Pursuant to an administrative consent order entered into with the U.S. EPA, the Company is conducting a RIFS for operable unit one, the closure of the industrial waste disposal section of the landfill. The Company's RIFS costs to date are approximately $1.9 million. With respect to the second operable unit, the extension of the municipal water supply, the U.S. EPA estimated the costs at $1 million plus annual operation and maintenance costs. The Company and the other PRPs are performing the work comprising operable unit two. The U.S. EPA has also demanded approximately $.9 million in past costs from the PRPs.

In July 1990, the Company notified the U.S. EPA that it was investigating the possibility that certain chemicals manufactured during the period in which Kronos owned a former subsidiary were not appropriately listed with the U.S. EPA pursuant to the Toxic Substances Control Act. The Company believes that the manufacture of the chemicals in question was initiated by a prior owner of the subsidiary. The Company intends to cooperate fully with the U.S. EPA in investigating this matter and determining whether any manufacture of non-listed chemicals occurred. If such manufacture is found to have occurred, the U.S. EPA may levy fines against the Company and possibly others. If any fines are levied, the Company will attempt to seek reimbursement from the prior owner of the subsidiary.

See Item 1 - "Business - Regulatory and Environmental Matters".

Other litigation

In April 1990, the Company filed a complaint in the United States District Court for the Central District of California against Lockheed Corporation and its directors in connection with Lockheed's 1990 annual meeting of stockholders, (*NL Industries, Inc. v. Lockheed Corporation, et al.*, No. CV-90-1950 RMT (Bx)), which complaint was subsequently amended. In December 1992, a unanimous jury verdict was returned in the Company's favor in the amount of $30 million, which award is a gain contingency not recorded as income by the Company. The jury found that Lockheed violated the federal securities laws by making false and misleading public statements about Lockheed's employee stock ownership plan. Lockheed has appealed. The Company has cross appealed with respect to its claims against Lockheed's directors. On February 24, 1994, the case was settled with a cash payment to the Company by Lockheed of $27 million resulting in net proceeds to the Company of approximately $20 million.

In January 1990, an action was filed in the United States District Court for the Southern District of Ohio against NLO, Inc., a subsidiary of the Company, and the Company on behalf of a putative class of former NLO employees and their families and former frequenters and invitees of the Feed Materials Production Center ("FMPC") in Ohio (*Day, et al. v. NLO, Inc.*, et al, No. C-1-90-067). The FMPC is owned by the DOE and was formerly managed under contract by NLO. The complaint seeks damages for, among other things, emotional distress and damage to personal property allegedly caused by exposure to radioactive and/or hazardous materials at the FMPC and punitive damages. A trial was held separately on the defendants' defense that the statute of limitations barred the plaintiffs'

claims. In November 1991, the jury returned a verdict against six of the ten named plaintiffs, finding that their claims were time barred. Without denying the plaintiffs' motion to vacate the verdict, the court certified this action as a class action. A merits trial is expected to be held in 1994. Although no assurance can be given, the Company believes that, consistent with a July 1987 DOE contracting officer's decision, the DOE will indemnify NLO in the event of an adverse decision just as it did when two previous cases relating to NLO's management of the FMPC were settled; therefore, the resolution of the *Day* matter is not expected to have a material adverse affect on the Company. In the 1987 decision, the contracting officer affirmed NLO's entitlement to indemnification under its contract for the operation of the FMPC for all liability, including the cost of defense, arising out of those two previous cases.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses, and the disposition of past properties and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1993.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of February 28, 1994, there were approximately 11,000 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape, and dividends declared during the periods indicated. On February 28, 1994, the closing price of NL common stock according to the NYSE Composite Tape was $8-7/8.

	High	Low	Dividends declared
Year ended December 31, 1992:			
First quarter	$12-7/8	$ 7-1/4	$.15
Second quarter	8-7/8	7-5/8	.15
Third quarter	8-1/2	6	.05
Fourth quarter	6-1/4	4	-
Year ended December 31, 1993:			
First quarter	$ 6-1/8	$ 4-1/4	-
Second quarter	5-5/8	3-3/8	-
Third quarter	6-1/8	3-7/8	-
Fourth quarter	6	4-1/2	-

The Company suspended its regular quarterly dividend in October 1992, in view of, among other things, the continuing weakness in TiO_2 prices. The Company's Senior Notes generally limit the ability of the Company to pay dividends to 50% of consolidated net income, as defined, subsequent to October 1993. At December 31, 1993, no amounts were available for dividends.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1989	1990	1991	1992	1993
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$1,000.9	$ 906.6	$ 840.3	$ 893.5	$ 805.3
Operating income	308.5	251.1	139.0	110.7	62.4
Income (loss) from continuing operations	170.3	93.5	(24.0)	(44.6)	(83.2)
Net income (loss)	172.9	92.4	(16.5)	(76.4)	(109.8)
Per common share:					
Income (loss) from continuing operations	$ 2.57	$ 1.42	$ (.40)	$ (.88)	$ (1.63)
Net income (loss)	2.61	1.40	(.27)	(1.50)	(2.16)
Cash dividends	$ .45	$ .60	$ .60	$ .35	$ -
BALANCE SHEET DATA (at year-end):					
Cash, cash equivalents and current marketable securities	$ 295.6	$ 443.1	$ 353.3	$ 187.9	$ 147.6
Current assets	586.2	884.4	795.5	635.8	467.5
Total assets	1,512.3	1,966.7	1,831.0	1,472.1	1,206.5
Current liabilities	647.0	400.4	360.2	248.8	232.5
Long-term debt including current maturities	403.0	1,269.7	1,288.9	1,035.3	870.9
Common shareholders' equity (deficit)	132.3	38.6	(58.3)	(146.3)	(264.8)
OTHER DATA:					
EBITDA (1)	$ 290.6	$ 242.3	$ 126.6	$ 115.1	$ 67.2
Interest expense, net (2)	24.5	60.7	59.9	104.3	95.1
Cash interest expense, net (3)	24.1	53.0	53.9	98.0	86.8
Capital expenditures	83.4	195.3	195.1	85.2	48.0

(1) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation depletion and amortization.

(2) Interest expense, net represents interest expense less general corporate interest and dividend income.

(3) Cash interest expense, net represents interest expense, net less deferred interest expense on the Senior Secured Discount Notes and amortization of deferred financing costs.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

General

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. The future profitability of the Company is dependent upon, among other things, improved pricing for TiO_2. Selling prices for TiO_2 are significantly influenced by industry capacity and demand. As discussed below, TiO_2 selling prices declined significantly from their peak in early 1990, and largely as a result thereof, Kronos' operating income and margins significantly declined during the past three years. In the fourth quarter of 1993, selling prices increased slightly in certain markets. Based on, among other things, the Company's current near-term outlook for its TiO_2 business, the Company expects its results for 1994, while improved from 1993, will still result in a net loss for the year.

Net sales and operating income

	Years ended December 31,			% Change	
	1991	1992	1993	1992-91	1993-92
	(In millions)				
Net sales:					
Kronos	$732.1	$784.6	$697.0	+7%	-11%
Rheox	108.2	108.9	108.3	+1%	-1%
	$840.3	$893.5	$805.3	+6%	-10%
Operating income:					
Kronos	$110.8	$ 81.9	$ 36.1	-26%	-56%
Rheox	28.2	28.8	26.3	+2%	-9%
	$139.0	$110.7	$ 62.4	-20%	-44%
Percent change in TiO_2:					
Sales volume				+11%	+3%
Average selling prices (in billing currencies)				-6%	-8%

The worldwide TiO_2 industry continues to be adversely affected by, among other things, production capacity in excess of current demand. Largely as a result thereof, TiO_2 selling prices continued to decline during most of 1993 and Kronos' operating income and margins significantly declined. Recessionary economic conditions in Europe and changes in the relative values of European currencies were principal additional factors influencing demand and pricing levels during 1993. In billing currency terms, Kronos' 1993 average TiO_2 selling prices were approximately 8% lower than in 1992 and were 6% lower in 1992 than in 1991. A significant amount of sales are denominated in currencies other than the U.S. dollar, and fluctuations in the value of the U.S. dollar relative to other currencies further decreased 1993 sales by $45 million compared to 1992 and increased 1992 sales by $22 million compared to 1991. Average TiO_2 prices at the end of 1993 were approximately 5% below year-end 1992 levels and approximately one-third below those of the last cyclical peak in early 1990. While TiO_2 prices are significantly below prior year levels, most of the 1993 decline occurred in the first half of the year as average prices declined only slightly during the third quarter and increased slightly during the fourth quarter.

TiO_2 sales volume of 346,000 metric tons in 1993 increased 3% compared to 1992, as increases in North American sales volume more than offset weakened demand in Europe. In response to weakened demand, and in order to reduce inventories, Kronos made further reductions in its TiO_2 production rates during 1993. TiO_2 sales volume increased 11% in 1992 compared to 1991, primarily in U.S. and European markets. Approximately one-half of Kronos' 1993 TiO_2 sales, by volume, were attributable to markets in Europe with approximately 38% attributable to North America and the balance to export markets.

As a result of continued cost reduction and containment efforts, Kronos' raw material and production costs increased only slightly in 1993 compared to year-ago levels. Start-up costs at the chloride process plant in Lake Charles, Louisiana, which commenced production during the first half of 1992, unfavorably impacted operating income in 1992. Kronos' 1992 operating income was also impacted by slightly lower unit production costs resulting from its continued emphasis on cost reduction efforts and increased production volumes. Kronos' water treatment chemicals business, which utilizes TiO_2 co-products, increased its contribution to operating income in 1992 but such contribution was lower in 1993 than in 1992.

Demand, supply and pricing of TiO_2 have historically been cyclical and, as noted above, the last cyclical peak for TiO_2 prices occurred in early 1990. Kronos believes that its operating income and margins for 1994 will be higher than in 1993 due principally to slightly higher sales and production volumes, and the favorable effect of the joint venture. However, the Company expects that the TiO_2 industry will continue to operate at lower capacity utilization levels over the next few years relative to the high utilization levels prevalent during the late 1980s, primarily because of the slow recovery from worldwide recession and the impact of capacity additions since the late 1980s. The economic recovery has been particularly slow in Europe, where a significant portion of Kronos' TiO_2 manufacturing facilities are located.

During the current period of depressed TiO_2 prices, the Company has operated with a strategy to maintain its competitive position. During the past three years, Kronos has increased its estimated worldwide market share from 10% to 11%. Kronos has implemented a cost reduction and control program which favorably impacted Kronos' operating results, and Kronos has continued its environmental improvement efforts. In October 1993, the Company formed a manufacturing joint venture with Tioxide and refinanced certain debt which, among other things, increased the Company's liquidity, reduced its aggregate debt level and extended its debt maturities. See also "Liquidity and Capital Resources".

The manufacturing joint venture, which is equally owned by subsidiaries of Kronos and Tioxide, owns and operates the chloride process TiO_2 plant in Lake Charles, Louisiana formerly owned by Kronos. Under the terms of the joint venture and related agreements, Kronos contributed the plant to the joint venture, Tioxide paid an aggregate of approximately $205 million, including its tranche of the joint venture debt, and Kronos and certain subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Of the total consideration paid by Tioxide, $30 million was attributable to the exchange of technologies and is being reported as a component of operating income ratably over three years from October 1993. Production from the plant is being shared equally by Kronos and Tioxide pursuant to separate offtake agreements. The formation of the joint venture resulted in a 12% decrease in Kronos' total TiO_2 production capacity; however, Kronos' remaining capacity is about 10% higher than Kronos' 1993 sales volume.

Rheox's operating results have been relatively consistent during the past three years. Changes in currency exchange rates had a negative effect in 1993 and a positive effect in 1992 compared to the respective prior year, and operating costs generally increased during both years.

The Company has substantial operations and assets located outside the United States. Foreign operations are subject to currency exchange rate fluctuations and the Company's results of operations have in the past been both favorably and unfavorably affected by the fluctuations in currency exchange rates. To the extent the Company both manufactures and sells in a given country, the impact of currency exchange rate fluctuations is to some extent mitigated.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Increase (decrease)	
	1991	1992	1993	1992-91	1993-92
		(In millions)			
Interest and dividends	$ 40.5	$ 14.2	$ 4.1	$(26.3)	$(10.1)
Securities transactions	(53.1)	(6.0)	4.4	47.1	10.4
Corporate expenses, net	(44.9)	(43.4)	(41.5)	1.5	1.9
	$(57.5)	$(35.2)	$(33.0)	$ 22.3	$ 2.2

Interest and dividend income fluctuates based upon the amount of funds invested and yields thereon. Amounts available for investment and the yields thereon in 1993 were lower than in 1992 and 1991.

After the two unsuccessful attempts to gain representation on the board of directors of Lockheed Corporation, the Company disposed of its interest in Lockheed in 1991, and the significant securities transactions loss in 1991 relates principally to that disposition. Securities transactions in 1992 and 1993 relate principally to U.S. Treasury securities. The Company does not anticipate acquiring marketable securities (other than U.S. Treasury or similar securities) in the foreseeable future.

The Company adopted the accounting for certain marketable debt and equity securities prescribed by SFAS No. 115 effective December 31, 1993. Accordingly, the timing of recognition of gains and losses related to marketable securities beginning in 1994 will, in certain respects, be different than in prior years.

Corporate expenses, net have decreased slightly during each of the past two years. In 1992, reductions in certain proxy solicitation and litigation settlement expenses of $5 million and $9 million, respectively, compared to 1991, were partially offset by an $11 million increase in environmental remediation costs.

Interest expense

Lower levels of indebtedness in 1993, principally Kronos' Deutsche Mark-denominated bank credit facility, and lower DM interest rates reduced the Company's interest expense in 1993 compared to the 1992 periods. In addition, 1992 interest expense reflected the benefit of $9 million of capitalized interest related principally to the Louisiana plant completed in March 1992. Interest expense increased from 1991 to 1992 due to the net effects of lower average levels of indebtedness, a $17 million decline in capitalized interest and a $9 million reduction in the Company's accrual for income tax related interest in 1991. Overall, the Company expects its October 1993 reduction and refinancing of certain indebtedness will result in a modest decrease in the Company's interest expense. See "Liquidity and Capital Resources".

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In both 1992 and 1993, the geographic mix, including losses in certain jurisdictions for which no current refund was available and in which recognition of a deferred tax asset is not currently considered appropriate, contributed significantly to the Company's effective tax rate varying from a normally expected rate. The Company's deferred income tax status at December 31, 1993 is discussed in "Liquidity and Capital Resources". In 1991, realization of the available capital loss carryback of the Company's securities transactions at a relatively low rate due to the alternative minimum tax rates in prior years also significantly impacted the Company's effective tax rate.

Extraordinary items

See Note 16 to the Consolidated Financial Statements.

Changes in accounting principles

See Notes 2 and 19 to the Consolidated Financial Statements.

Statement of Financial Accounting Standards ("SFAS") No. 112, "Employers' Accounting for Postemployment Benefits", requires the accrual method of accounting for benefits provided to former employees after employment but before retirement. The Company expects to adopt SFAS No. 112 in the first quarter of 1994. Adoption is not expected to have a material impact on the Company's consolidated financial position, results of operations or liquidity.

LIQUIDITY AND CAPITAL RESOURCES

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1991	1992	1993
	(In millions)		
Net cash provided (used) by:			
Operating activities	$ 58.1	$ (44.7)	$ (7.3)
Investing activities	(109.4)	234.9	181.9
Financing activities	(243.8)	(223.1)	(155.3)
Net cash provided (used) by operating, investing and financing activities	$(295.1)	$ (32.9)	$ 19.3

During 1993, the Company's operations continued to use significant amounts of cash. TiO_2 production rates were reduced in late 1992 and during 1993 in order to reduce inventory levels. The $30 million received from Tioxide in October 1993 related to the exchange of technologies, which is being recognized as a component of operating income over three years, favorably impacted 1993 cash flow from operating activities. Other relative changes in working capital items, which result principally from the timing of purchases, production and sales, also contributed to the comparative decrease in the Company's cash used by operating activities in 1993. The significant deterioration in the Company's cash flow from operating activities from 1991 to 1992 resulted primarily from the decline in earnings and the relative change in the Company's receivables, inventories and payables.

Cash provided by investing activities relates primarily to net sales of marketable securities in each period to fund debt repayments, capital expenditures and operations, and in 1993 includes $161 million net cash generated related to the formation of the manufacturing joint venture with Tioxide.

The Company's capital expenditures during the past three years include an aggregate of $204 million related to the completion of the Louisiana chloride process TiO_2 plant and an aggregate of $57 million ($30 million in 1993) for the Company's ongoing environmental protection and compliance programs, including a Canadian waste acid neutralization facility, a Norwegian onshore tailings disposal system and off-gas desulfurization systems. The Company's estimated 1994 capital expenditures are $44 million and include $30 million in the area of environmental protection and compliance primarily related to the Canadian waste acid neutralization facility and the German off-gas desulfurization systems. The capital expenditures of the manufacturing joint venture are not included in the Company's capital expenditures.

Net repayments of indebtedness in 1993 included payments on the DM bank credit facility of DM 552 million ($342 million when paid), a $110 million net reduction in indebtedness related to the Louisiana plant and $350 million proceeds from the Company's October 1993 public offering of debt, all as discussed below. Net repayments of indebtedness in 1992 included payments on the DM term loan aggregating DM 350 million ($225 million when paid) and $61 million drawn under Kronos' Louisiana plant credit facilities. Net borrowings in 1991 included a $115 million Rheox term loan, a $52 million increase in the Louisiana plant term construction loan and a DM 150 million ($87 million when paid) reduction in the DM term loan. NL and Kronos have agreed, under certain conditions, to provide Kronos' principal international subsidiary with up to an additional DM 125 million through January 1, 2001.

In October 1993, the Company (i) completed the formation of the manufacturing joint venture with Tioxide, including related refinancing of the Louisiana plant indebtedness, (ii) completed a public offering of $250 million of 11.75% Senior Secured Notes due 2003 and $100 million proceeds ($188 million principal amount at maturity) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes"), (iii) prepaid DM 552 million ($342 million when paid) of the DM bank credit facility and amended the DM loan agreement, and (iv) redeemed the remaining $10 million of the Company's 7.5% sinking fund debentures.

The DM bank credit facility, as amended, consists of a DM 448 million term loan and a DM 250 million revolving credit facility, of which DM 100 million is outstanding and DM 150 million was available for future borrowings at December 31, 1993. During February 1994, the Company borrowed an additional DM 25 million under the revolving credit facility. The final maturities of the term and revolving portion of the DM credit facility were extended to 1999 and 2000, respectively, with the first payment of the term loan due in 1997.

Upon formation, the manufacturing joint venture obtained $216 million in new financing consisting of two equal tranches, one attributable to each Partner, which is serviced through the purchase of the plant's TiO_2 output in equal quantities by the Partners. The Partners are required to make capital contributions to the joint venture to pay principal on their respective portion of the joint indebtedness. Kronos' pro rata share of the joint venture debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche.

Formation of the joint venture and related refinancing, issuance of the Notes and prepayment of a portion of the DM bank credit facility significantly improved the Company's liquidity and financial flexibility by (i) increasing cash and cash equivalents by approximately $75 million, (ii) reducing total outstanding indebtedness by approximately $109 million, (iii) providing for approximately DM 150 million of borrowing availability under the revolving portion of the amended DM bank credit facility, (iv) eliminating the near-term principal amortization requirements and extending the remaining principal amortization schedule of the DM bank credit facility, and (v) replacing approximately $100 million of outstanding debt with the Senior Secured Discount Notes which do not require cash interest payments for five years.

Financing activities also include treasury stock purchases, including $181 million expended in 1991 in connection with a "Dutch auction" self-tender offer. Dividends paid were $35 million in 1991 and $18 million in 1992. The Company suspended dividend payments in October 1992.

At December 31, 1993, the Company had cash, cash equivalents and current marketable securities aggregating $148 million (25% held by non-U.S. subsidiaries) including restricted cash and cash equivalents of $18 million. The Company's subsidiaries had $14 million and $117 million available for borrowing at December 31, 1993 under existing U.S. and non-U.S. credit facilities, respectively.

The Company has taken and continues to take measures to manage its near-term and long-term liquidity requirements, including cost reduction efforts, tightening of controls over working capital, deferral and reduction of capital expenditures, discontinuance of unrelated business acquisition activities, suspension of dividends, formation of the manufacturing joint venture and the refinancing discussed above. The Company currently expects to have sufficient liquidity to meet near-term obligations including operations, capital expenditures and debt service. A prolonged period of depressed selling prices and continued use of cash by operations would, however, over the long term, have an adverse effect on liquidity and financial condition.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. In June 1993, German tax authorities issued assessment reports in connection with examinations of the Company's German income tax returns disallowing the Company's claims for refunds, primarily for 1989 and 1990, aggregating DM 160 million ($92 million at year-end exchange rates), and proposing additional taxes of approximately DM 100 million ($58 million). The Company has applied for administrative relief from collection procedures and may grant a lien on certain German assets while the Company contests the proposed adjustments. Although the Company believes that it will ultimately prevail, in June 1993 the Company reclassified the DM 160 million of refundable income tax claims disallowed by the German tax authorities from current assets to noncurrent assets due to the uncertain timing of a resolution. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of all such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. Pursuant to the amended DM bank credit facility, any receipt of the refundable German income taxes will be applied ratably to prepay installments of the term portion of the DM bank credit facility, with any remaining proceeds of the tax refund used to permanently reduce the revolving credit portion.

At December 31, 1993, the Company had recorded net deferred tax liabilities of $139 million. The Company operates in several tax jurisdictions, in certain of which it has temporary differences that net to deferred tax assets (before valuation allowance). The Company has provided a deferred tax valuation allowance of $133 million, principally related to the U.S. and Germany, for deferred tax assets which the Company believes may not currently meet the "more likely than not" realization criteria for asset recognition.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and another Contran subsidiary.

The Company has been named as a defendant, PRP, or both, in a number of legal proceedings associated with environmental matters, including waste disposal sites currently or formerly owned, operated or used by the Company, many of which disposal sites or facilities are on the U.S. EPA's Superfund National Priorities List or similar state lists. On a regular basis, the Company evaluates the potential range of its liability at sites where it has been named as a PRP or defendant. The Company believes it has provided adequate accruals for reasonably estimable costs of such matters, but the Company's ultimate liability may be affected by a number of factors, including changes in remedial alternatives and costs and the allocation of such costs among PRPs. The Company is also a defendant in a number of legal proceedings seeking damages for personal injury and property damage arising out of the sale of lead pigments and lead-based paints. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Any liability that may result is not reasonably capable of estimation. The Company currently believes the disposition of all claims and disputes, individually or in the aggregate, should not have a

material adverse effect on the Company's consolidated financial position, results of operations or liquidity. There can be no assurance that additional matters of these types will not arise in the future. See Item 3 - "Legal Proceedings" and Note 18 to the Consolidated Financial Statements.

The Company periodically evaluates its liquidity requirements, capital needs and availability of resources in view of, among other things, its debt service requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to refinance or restructure indebtedness, raise additional capital, restructure ownership interests, sell interests in subsidiaries, marketable securities or other assets, or take a combination of such steps or other steps to increase or manage its liquidity and capital resources.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 17 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1993.

October 13, 1993 - reported items 5 and 7.
October 19, 1993 - reported items 5 and 7.
October 20, 1993 - reported items 5 and 7.
October 26, 1993 - reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Exhibit Index

Item No.	
3.1	By-Laws, as amended on June 28, 1990 - incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2	Certificate of Amended and Restated Certificate of Incorporation dated June 28, 1990 - incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1	Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation - incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
4.2	Indenture dated October 20, 1993 governing the Registrant's 11.75% Senior Secured Notes due 2003, including form of Senior Note - incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.3	Senior Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.4 Senior Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.5 Third Party Pledge and Intercreditor Agreement dated October 20, 1993 between Registrant, Chase Manhattan Bank (National Association) and Chemical Bank - incorporated by reference to Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.6 Indenture dated October 20, 1993 governing the Registrant's 13% Senior Secured Discount Notes due 2005, including form of Discount Note - incorporated by reference to Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.7 Discount Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.8 Discount Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.1 Amended and Restated Loan Agreement dated as of October 15, 1993 among Kronos International, Inc., the Banks set forth therein, Hypobank International S.A., as Agent and Banque Paribas, as Co-agent - incorporated by reference to Exhibit 10.17 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.2 Amended and Restated Liquidity Undertaking dated October 15, 1993 by the Registrant, Kronos, Inc. and Kronos International, Inc. to Hypobank International S.A., as agent, and the Banks set forth therein - incorporated by reference to Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.3 Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents - incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.

10.4 Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents-incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on form 10-Q for the quarter ended June 30, 1992.

10.5 Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents - incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

10.6 Credit Agreement dated as of October 18, 1993 among Louisiana Pigment Company, L.P., as Borrower, the Banks listed therein and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.7 Security Agreement dated October 18, 1993 from Louisiana Pigment Company, L.P., as Borrower, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.8 Security Agreement dated October 18, 1993 from Kronos Louisiana, Inc. as Grantor, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.9 KLA Consent and Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.10 Guaranty dated October 18, 1993, from Kronos, Inc., as guarantor, in favor of Lenders named therein, as Lenders, and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.11 Mortgage by Louisiana Pigment Company, L.P. dated October 18, 1993 in favor of Citibank, N.A. - incorporated by reference to Exhibit 10.16 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.12 Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.13 Contract dated September 9, 1971, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung concerning supplies and services (German language version and English translation thereof) - incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.14 Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) - incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.15 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.16 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.17 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.18 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.19 TCI/KCI Output Purchase Agreement dated as of October 18, 1993 between Tioxide Canada Inc. and Kronos Canada, Inc. - incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.20 TAI/KLA Output Purchase Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.21 Master Technology Exchange Agreement dated as of October 18, 1993 among Kronos, Inc., Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited - incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.22 Parents' Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos, Inc. - incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.23 Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos, Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.24* 1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.

10.25	Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.26*	1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.27	Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.28*	NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 - incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.29	Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1994.
10.30	Intercorporate Services Agreement by and between Contran Corporation and the Registrant effective as of January 1, 1994.
10.31	Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.32*	Employment Agreement dated as of January 1, 1990 among Kronos, Inc., the Registrant and Dr. Lawrence A. Wigdor - incorporated by reference to Exhibit 10.19 to Amendment 2 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1989.
10.33*	Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin - incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.34*	Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991 - incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Accountants.
99.1	Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 8 to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1993.

* Management contract, compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL Industries, Inc.
(Registrant)

By /s/ J. Landis Martin
J. Landis Martin, March 1, 1994
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/s/ J. Landis Martin
J. Landis Martin, March 1, 1994
Director, President and
Chief Executive Officer

/s/ Harold C. Simmons
Harold C. Simmons, March 1, 1994
Chairman of the Board

/s/ Glenn R. Simmons
Glenn R. Simmons, March 1, 1994
Director

/s/ Michael A. Snetzer
Michael A. Snetzer, March 1, 1994
Director

/s/ Kenneth R. Peak
Kenneth R. Peak, March 1, 1994
Director

/s/ Dr. Lawrence A. Wigdor
Dr. Lawrence A. Wigdor, March 1, 1994
Director, President and Chief Executive
Officer of Kronos and Rheox

/s/ Elmo R. Zumwalt, Jr.
Elmo R. Zumwalt,Jr., March 1, 1994
Director

/s/ Joseph S. Compofelice
Joseph S. Compofelice, March 1, 1994
Vice President and
Chief Financial Officer

/s/ Dennis G. Newkirk
Dennis G. Newkirk, March 1, 1994
Vice President and Controller
(Principal Accounting Officer)

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NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K

Items 8, 14(a) and 14(d)

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All other schedules are omitted because they are not applicable or not required, or because the required information is included in the consolidated financial statements or notes thereto.

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1992 and 1993, and the related consolidated statements of operations, shareholders' deficit, and cash flows for each of the three years in the period ended December 31, 1993. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1992 and 1993, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1993 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for certain investments in debt and equity securities in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, and in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes in accordance with SFAS Nos. 106 and 109, respectively.

COOPERS & LYBRAND

Houston, Texas
February 9, 1994 except for
Note 21, as to which the
date is February 24, 1994

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1992 and 1993

(In thousands, except per share data)

ASSETS	1992	1993
Current assets:		
Cash and cash equivalents	$ 87,333	$ 106,593
Marketable securities	100,607	41,045
Accounts and notes receivable, less allowance of $2,385 and $3,008	123,020	116,355
Refundable income taxes	101,537	386
Inventories	216,232	194,167
Prepaid expenses	5,413	5,637
Deferred income taxes	1,676	3,315
Total current assets	635,818	467,498
Other assets:		
Marketable securities	23,581	18,428
Refundable income taxes	-	91,994
Investment in joint ventures	2,434	190,787
Prepaid pension cost	16,056	16,307
Deferred income taxes	-	577
Other	48,241	42,355
Total other assets	90,312	360,448
Property and equipment:		
Land	29,863	18,237
Buildings	208,056	129,582
Machinery and equipment	811,531	515,090
Mining properties	75,731	72,711
Construction in progress	21,042	30,050
	1,146,223	765,670
Less accumulated depreciation and depletion	400,246	387,067
Net property and equipment	745,977	378,603
	$1,472,107	$1,206,549

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 1992 and 1993

(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' DEFICIT	1992	1993
Current liabilities:		
Notes payable	$ 315	$ -
Current maturities of long-term debt	43,328	35,716
Accounts payable and accrued liabilities	189,638	177,265
Payable to affiliates	4,086	9,566
Income taxes	6,825	6,353
Deferred income taxes	4,573	3,623
Total current liabilities	248,765	232,523
Noncurrent liabilities:		
Long-term debt	991,956	835,169
Deferred income taxes	145,745	138,977
Accrued pension cost	73,956	72,606
Accrued postretirement benefits cost	71,761	68,322
Other	83,878	121,309
Total noncurrent liabilities	1,367,296	1,236,383
Minority interest	2,339	2,438
Shareholders' deficit:		
Preferred stock - 5,000 shares authorized, no shares issued or outstanding	-	-
Common stock - $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,281	759,281
Adjustments:		
Currency translation	(111,820)	(115,803)
Pension liabilities	-	(3,442)
Marketable securities	(896)	(2,164)
Accumulated deficit	(433,250)	(543,059)
	221,670	103,168
Less treasury stock, at cost (15,949 shares)	367,963	367,963
Total shareholders' deficit	(146,293)	(264,795)
	$1,472,107	$1,206,549

Commitments and contingencies (Notes 13 and 18)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1991, 1992 and 1993

(In thousands, except per share data)

	1991	1992	1993
Revenues and other income:			
Net sales	$840,295	$893,465	$ 805,323
Interest and dividends	47,293	19,618	7,872
Securities transactions	(53,092)	(6,018)	4,363
Other, net	7,043	1,197	9,849
	841,539	908,262	827,407
Costs and expenses:			
Cost of sales	566,608	629,029	612,367
Selling, general and administrative	193,481	203,736	185,689
Interest	100,412	118,511	99,119
	860,501	951,276	897,175
Loss before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles	(18,962)	(43,014)	(69,768)
Income tax expense	3,910	459	12,713
Loss before minority interest, extraordinary items and cumulative effect of changes in accounting principles	(22,872)	(43,473)	(82,481)
Minority interest	1,113	1,123	730
Loss before extraordinary items and cumulative effect of changes in accounting principles	(23,985)	(44,596)	(83,211)
Extraordinary items	7,523	-	(27,815)
Cumulative effect of changes in accounting principles	-	(31,804)	1,217
Net loss	$(16,462)	$(76,400)	$(109,809)

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Years ended December 31, 1991, 1992 and 1993

(In thousands, except per share data)

	1991	1992	1993
Loss per share of common stock:			
Before extraordinary items and cumulative effect of changes in accounting principles	$(.40)	$ (.88)	$(1.63)
Extraordinary items	.13	-	(.55)
Cumulative effect of changes in accounting principles	-	(.62)	.02
Net loss	$(.27)	$(1.50)	$(2.16)
Weighted average common shares outstanding	60,233	50,907	50,890

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT

Years ended December 31, 1991, 1992 and 1993

(In thousands, except per share data)

	Common stock	Additional paid-in capital	Adjustments: Currency translation	Adjustments: Pension liabilities	Adjustments: Marketable securities	Accumulated deficit	Treasury stock	Total
Balance at December 31, 1990	$8,355	$759,273	$(136,277)	$ -	$(143,123)	$(287,857)	$(161,803)	$ 38,568
Net loss	-	-	-	-	-	(16,462)	-	(16,462)
Common dividends declared - $.60 per share	-	-	-	-	-	(34,724)	-	(34,724)
Adjustments	-	-	19,637	-	137,198	-	-	156,835
Purchases of treasury stock	-	-	-	-	-	-	(202,519)	(202,519)
Other, net	-	27	-	-	-	-	-	27
Balance at December 31, 1991	8,355	759,300	(116,640)	-	(5,925)	(339,043)	(364,322)	(58,275)
Net loss	-	-	-	-	-	(76,400)	-	(76,400)
Common dividends declared - $.35 per share	-	-	-	-	-	(17,807)	-	(17,807)
Adjustments	-	-	4,820	-	5,029	-	-	9,849
Purchases of treasury stock	-	-	-	-	-	-	(3,641)	(3,641)
Other, net	-	(19)	-	-	-	-	-	(19)
Balance at December 31, 1992	8,355	759,281	(111,820)	-	(896)	(433,250)	(367,963)	(146,293)
Net loss	-	-	-	-	-	(109,809)	-	(109,809)
Adjustments	-	-	(3,983)	(3,442)	(51)	-	-	(7,476)
Cumulative effect of change in accounting principle	-	-	-	-	(1,217)	-	-	(1,217)
Balance at December 31, 1993	$8,355	$759,281	$(115,803)	$(3,442)	$ (2,164)	$(543,059)	$(367,963)	$(264,795)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from operating activities:			
Net loss	$(16,462)	$(76,400)	$(109,809)
Adjustments:			
Depreciation, depletion and amortization	32,581	47,829	46,340
Deferred income taxes	(14,665)	(18,949)	(670)
Cumulative effect of changes in accounting principles	-	31,804	(1,217)
Minority interest	1,113	1,123	730
Net (gains) losses from:			
Securities transactions	53,092	6,018	(4,363)
Disposition of property and equipment	1,009	1,419	199
Pension cost, net	(377)	(2,024)	(2,134)
Other postretirement benefits, net	-	1,830	(2,422)
Other, net	(8,872)	3,442	(1,349)
Change in assets and liabilities:			
Accounts and notes receivable	(6,430)	(1,776)	(1,291)
Inventories	6,582	(33,814)	12,166
Prepaid expenses	4,885	207	(472)
Accounts payable and accrued liabilities	30,218	(6,111)	(1,567)
Income taxes	(43,629)	(13,501)	1,507
Accounts with affiliates	5,328	(4,106)	5,426
Other noncurrent assets	4,604	5,264	14,588
Other noncurrent liabilities	9,143	13,072	37,069
Total adjustments	74,582	31,727	102,540
Net cash provided (used) by operating activities	58,120	(44,673)	(7,269)

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from investing activities:			
Capital expenditures	$(195,146)	$ (85,150)	$ (47,986)
Marketable securities:			
Purchases	(536,435)	(156,573)	(11,053)
Dispositions	623,937	473,935	79,398
Proceeds from disposition of property and equipment	1,033	1,484	175,537
Investment in joint venture	-	-	(14,405)
Loans to affiliates:			
Loans	(150,000)	-	(210)
Collections	150,000	-	-
Other, net	(2,819)	1,168	670
Net cash provided (used) by investing activities	(109,430)	234,864	181,951
Cash flows from financing activities:			
Notes payable and long-term debt:			
Additions	178,195	63,603	465,554
Principal payments	(174,565)	(263,093)	(607,417)
Deferred financing costs	(8,188)	(1,881)	(12,860)
Repayments of loans from affiliates	(1,126)	-	-
Distributions to minority interest	(869)	(277)	(613)
Dividends paid	(34,724)	(17,807)	-
Purchases of treasury stock and other	(202,492)	(3,660)	-
Net cash used by financing activities	(243,769)	(223,115)	(155,336)
Net change during the year from operating, investing and financing activities	$(295,079)	$ (32,924)	$ 19,346

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash and cash equivalents:			
Net change during the year from:			
Operating, investing and financing activities	$(295,079)	$(32,924)	$ 19,346
Currency translation	(14,907)	(5,013)	(86)
	(309,986)	(37,937)	19,260
Balance at beginning of year	435,256	125,270	87,333
Balance at end of year	$ 125,270	$ 87,333	$106,593
Supplemental disclosures - cash paid for:			
Interest, net of amounts capitalized	$ 107,638	$137,996	$ 91,576
Income taxes	54,628	31,369	11,897

See accompanying notes to consolidated financial statements.

Note 1 - Organization and basis of presentation:

NL Industries, Inc. is primarily a holding company and conducts its operations through its wholly-owned subsidiaries, Kronos, Inc. (titanium dioxide pigments ("TiO_2")) and Rheox, Inc. (specialty chemicals).

At December 31, 1993, Valhi, Inc. held approximately 49% of NL's outstanding common stock and Tremont Corporation, a 48%-owned affiliate of Valhi, held an additional 18% of NL's outstanding common stock. Contran Corporation holds, directly or through subsidiaries, approximately 90% of Valhi's outstanding common stock. All of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of each of Contran, Valhi and NL and a director of Tremont, may be deemed to control each of such companies.

Note 2 - Summary of significant accounting policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated. Certain prior year amounts have been reclassified to conform to the 1993 presentation.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments, gains and losses from hedges of investments in non-U.S. entities and the related income tax effects are accumulated in the currency translation adjustments component of shareholders' deficit. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less. Cash and cash equivalents includes $6 million and $18 million at December 31, 1992 and 1993, respectively, which are restricted for letters of credit and certain indebtedness agreements.

Marketable securities and securities transactions

The Company adopted Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities" effective December 31, 1993, and the Company's marketable securities were classified as either "available-for-sale" or "trading" and are carried at market. Unrealized gains and losses on trading securities are recognized in income currently. Unrealized gains and losses on available-for-sale securities, and the related deferred income tax effects, are accumulated in the marketable securities adjustment component of shareholders' deficit. See Notes 4 and 19.

SFAS No. 115 superseded SFAS No. 12 under which marketable securities were generally carried at the lower of aggregate market or amortized cost and unrealized net gains were not recognized.

Realized gains or losses are computed based on specific identification of the securities sold.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in joint ventures

Investments in 20% to 50%-owned entities are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to 40 years for buildings and three to 20 years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Employee benefit plans

Accounting and funding policies for retirement plans and postretirement benefits other than pensions ("OPEB") are described in Note 11.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

Loss per share of common stock

Loss per share of common stock is based upon the weighted average number of common shares outstanding. Common stock equivalents are excluded from the computation because they are antidilutive.

Note 3 - Business and geographic segments:

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and leveling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. General corporate assets consist principally of cash, cash equivalents and marketable securities.

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Business segments			
Net sales:			
Kronos	$ 732,108	$ 784,568	$697,048
Rheox	108,187	108,897	108,275
	$ 840,295	$ 893,465	$805,323
Operating income:			
Kronos	$ 110,767	$ 81,941	$ 36,146
Rheox	28,194	28,792	26,254
	138,961	110,733	62,400
General corporate income (expense):			
Interest and dividends	40,502	14,234	4,104
Securities transactions	(53,092)	(6,018)	4,363
Expenses, net	(44,921)	(43,452)	(41,516)
Interest expense	(100,412)	(118,511)	(99,119)
	$ (18,962)	$ (43,014)	$(69,768)

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Capital expenditures:			
Kronos	$ 189,475	$ 81,872	$ 46,913
Rheox	5,358	3,064	1,069
General corporate	313	214	4
	$ 195,146	$ 85,150	$ 47,986
Depreciation, depletion and amortization:			
Kronos	$ 29,324	$ 44,360	$ 42,877
Rheox	2,974	3,184	3,176
General corporate	283	285	287
	$ 32,581	$ 47,829	$ 46,340
Geographic areas			
Net sales - point of origin:			
United States	$ 207,762	$ 238,170	$ 270,288
Europe	623,036	643,670	519,064
Canada	136,316	138,656	132,930
Eliminations	(126,819)	(127,031)	(116,959)
	$ 840,295	$ 893,465	$ 805,323
Net sales - point of destination:			
United States	$ 180,883	$ 204,270	$ 217,892
Europe	485,784	518,711	418,072
Canada	79,198	72,692	76,078
Other	94,430	97,792	93,281
	$ 840,295	$ 893,465	$ 805,323
Operating income:			
United States	$ 16,578	$ 629	$ 20,981
Europe	99,646	81,805	19,658
Canada	22,737	28,299	21,761
	$ 138,961	$ 110,733	$ 62,400

	December 31, 1992	December 31, 1993
	(In thousands)	
Identifiable assets		
Business segments:		
Kronos	$1,246,186	$1,008,453
Rheox	76,248	75,362
General corporate	149,673	122,734
	$1,472,107	$1,206,549
Geographic segments:		
United States	$ 498,029	$ 326,831
Europe	671,349	622,826
Canada	153,056	134,158
General corporate	149,673	122,734
	$1,472,107	$1,206,549

Note 4 - Marketable securities and securities transactions:

	December 31, 1992	December 31, 1993
	(In thousands)	
Current:		
Marketable equity securities	$ 6,996	$ -
U.S. Treasury securities	93,611	41,045
	$100,607	$41,045
Noncurrent:		
Marketable equity securities	$ 9,192	$18,428
U.S. Treasury securities	14,389	-
	$ 23,581	$18,428
Marketable equity securities:		
Current:		
Unrealized gains	$ 13	$ -
Unrealized losses	(4,233)	-
Cost	11,216	-
Aggregate market	$ 6,996	$ -
Noncurrent:		
Unrealized gains	$ -	$ 33
Unrealized losses	(979)	(2,951)
Cost	10,171	21,346
Aggregate market	$ 9,192	$18,428
Current U.S. Treasury securities:		
Unrealized gains (losses)	$ (59)	$ 52
Cost	93,670	40,993
Aggregate market	$ 93,611	$41,045

Upon adoption of SFAS No. 115 as of December 31, 1993, the Company classified its portfolio of U.S. Treasury Securities as trading securities and its marketable equity securities as available-for-sale.

Net gains and losses from securities transactions are composed of:

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Unrealized gains (losses):			
Marketable equity securities	$ (517)	$ (52)	$2,348
Other securities	2,337	(513)	1,172
Realized gains (losses):			
Marketable equity securities	(52,813)	(528)	(9)
Other securities	4,437	1,006	852
Writedown of noncurrent marketable equity securities	(6,536)	(5,931)	-
	$(53,092)	$(6,018)	$4,363

Note 5 - Inventories:

	December 31,	
	1992	1993
	(In thousands)	
Raw materials	$ 43,773	$ 19,785
Work in process	9,201	7,173
Finished products	123,317	135,102
Supplies	39,941	32,107
	$216,232	$194,167

Note 6 - Investment in joint ventures:

	December 31,	
	1992	1993
	(In thousands)	
TiO_2 manufacturing joint venture	$ -	$188,031
Other	2,434	2,756
	$2,434	$190,787

In October 1993, Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). Under the terms of the joint venture and related agreements, KLA contributed the Louisiana plant to the joint venture, Tioxide paid an aggregate of approximately $205 million, including its tranche of the joint venture debt, and Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with

Tioxide and certain of its affiliates. Of the total consideration paid by Tioxide, $30 million was attributable to the exchange of technologies. The manufacturing joint venture, which is equally owned by KLA and a subsidiary of Tioxide, owns and operates the Louisiana chloride process TiO_2 plant formerly owned by KLA. Upon formation, the joint venture obtained $216 million in new financing, which is collateralized by the partnership interests of the partners and substantially all of the assets of the joint venture. The new financing consists of two equal tranches, one attributable to each partner, and each tranche is serviced through (i) the purchase of the plant's TiO_2 output in equal quantities by the partners and (ii) cash capital contributions. KLA has entered into an Offtake Agreement which requires the purchase of one-half of the TiO_2 produced by the joint venture. Kronos' pro rata share of the joint venture debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche. See Note 10.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's operating expenses (fixed and variable costs of production and interest expense). Kronos' share of the fixed and variable production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

A summary balance sheet of the manufacturing joint venture is shown below.

	December 31, 1993
	(In thousands)
ASSETS	
Current assets	$ 44,477
Other assets	2,376
Property and equipment, net	347,344
	$394,197
LIABILITIES AND PARTNERS' EQUITY	
Long-term debt, including current portion:	
Kronos tranche	$104,143
Tioxide tranche	102,600
Other liabilities, primarily current	16,197
	222,940
Partners' equity	171,257
	$394,197

Note 7 - Other noncurrent assets:

	December 31, 1992	December 31, 1993
	(In thousands)	
Intangible assets, net of accumulated amortization of $9,792 and $11,941	$19,127	$15,317
Deferred financing costs, net	20,533	18,954
Other	8,581	8,084
	$48,241	$42,355

Note 8 - Accounts payable and accrued liabilities:

	December 31, 1992	December 31, 1993
	(In thousands)	
Accounts payable	$ 98,990	$ 89,010
Accrued liabilities:		
Employee benefits	38,506	32,350
Environmental costs	12,080	14,517
Interest	4,376	6,933
Miscellaneous taxes	3,980	2,240
Other	31,706	32,215
	90,648	88,255
	$189,638	$177,265

Note 9 - Other noncurrent liabilities:

	December 31, 1992	December 31, 1993
	(In thousands)	
Environmental costs	$59,403	$ 70,789
Insurance claims expenses	10,014	10,299
Employee benefits	10,392	10,084
Deferred technology fee income	-	26,881
Other	4,069	3,256
	$83,878	$121,309

Note 10 - Notes payable and long-term debt:

	December 31, 1992	December 31, 1993
	(In thousands)	
Notes payable - non-U.S. credit agreements	$ 315	$ -
Long-term debt:		
NL Industries:		
11.75% Senior Secured Notes	$ -	$250,000
13% Senior Secured Discount Notes	-	102,627
7.5% sinking fund debentures	14,374	-
	14,374	352,627
Kronos:		
DM bank credit facility	681,560	316,032
Joint venture term loan	-	104,143
Kronos Louisiana credit facility	215,000	-
Canadian bank credit agreement	3,942	-
5% to 8% bank loans payable through 2000	19,367	12,338
Other	2,230	2,175
	922,099	434,688
Rheox:		
Bank term loan	97,500	82,500
Other	1,311	1,070
	98,811	83,570
	1,035,284	870,885
Less current maturities	43,328	35,716
	$ 991,956	$835,169

In October 1993, NL issued $250 million principal amount of 11.75% Senior Secured Notes due 2003 and $188 million principal amount at maturity ($100 million proceeds at issuance) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes"). The Notes are collateralized by a series of intercompany notes from Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, to NL, the terms of which mirror those of the respective Notes (the "Mirror Notes"). The Senior Secured Notes are also collateralized by a first priority lien on the stock of Kronos and a second priority lien on the stock of Rheox. The Senior Secured Notes and the Senior Secured Discount Notes are redeemable, at the Company's option, after October 2000 and October 1998, respectively, except that up to one-third of the aggregate principal amount of the Senior Secured Discount Notes are redeemable (at 113% of the then-accreted value) upon any Common Stock Offering, as defined, prior to October 1996. For redemptions, other than redemptions pursuant to any Common Stock Offering, the redemption prices range from 101.5% (starting October 2000) declining to 100% (after October 2001) of the principal amount for the Senior Secured Notes and range from 106% (starting October 1998) declining to 100% (after October 2001) of the then-accreted value of the Senior Secured Discount Notes. In the event of a Change of Control, as defined, the Company would be required to make an offer to purchase the Notes at 101% of the principal amount of the Senior Secured Notes and 101% of the then-accreted value of the Senior Secured Discount Notes. The Notes are issued pursuant to indentures

which contain a number of covenants and restrictions which, among other things, restrict the ability of the Company and its subsidiaries to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of its assets to, another entity. At December 31, 1993, there were no amounts available for payment for dividends pursuant to the terms of the indentures. The Senior Secured Discount Notes do not require cash interest payments for the first five years. At December 31, 1993, the quoted market price per $100 principal amount at maturity of the Senior Secured Notes and the Senior Secured Discount Notes was $104 and $57.75, respectively.

The DM credit facility, as amended, consists of a DM 448 million term loan due from 1997 to 1999 and a DM 250 million revolving credit facility due no later than 2000, of which DM 100 million is outstanding and DM 150 million was available for future borrowings by KII at December 31, 1993. During February 1994, the Company borrowed an additional DM 25 million under the revolving credit facility. Borrowings bear interest at DM LIBOR plus 1.625% (8.19% at December 31, 1993). KII has entered into agreements with certain banks in the syndicate which caps DM LIBOR at 10.5% on DM 520 million principal amount of the loan. The principal amount subject to the cap declines as the loan is repaid. NL and Kronos have agreed, under certain circumstances, to provide KII with up to DM 125 million through January 1, 2001.

The DM credit facility is collateralized by pledges of the stock of certain KII subsidiaries. The credit agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Borrowings under KLA's tranche of the joint venture term loan bear interest at LIBOR plus 1.625% (5.01% at December 31, 1993) and are repayable in quarterly installments through September 2000. See Note 6.

Rheox has a credit agreement providing for a seven-year term loan due in quarterly installments through December 1997 and a $15 million revolving credit/letter of credit facility due March 1994. At December 31, 1993, letters of credit aggregating $1 million were outstanding. Borrowings bear interest, at Rheox's option, at prime rate plus 1.5% or LIBOR plus 2.5% (5.83% at December 31, 1993), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's ability to incur additional indebtedness, restricts its dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type. The Company has initiated discussions with the agent bank regarding the extension of the revolving credit/letter of credit facility.

In connection with the credit agreement, Rheox has entered into interest rate swap agreements to mitigate the impact of changes in interest rates on the term loan. These swap agreements, which mature December 31, 1994, effectively convert the interest rate on $60 million of the loan (at December 31, 1993) from a variable rate to a fixed rate of 8.1% The effective interest rate on the Rheox term loan was 7.3% at December 31, 1993, including the impact of the swap agreements. At December 31, 1993, the fair value of the swap agreements payable is estimated to be $1 million, which amount represents the estimated cost to the Company if it were to terminate the swap agreements at that date. Rheox is exposed to interest rate risk in the event of nonperformance by the other parties to the agreements. However, Rheox does not anticipate nonperformance by such parties.

Unused lines of credit available for short-term borrowings under U.S. and non-U.S. credit facilities approximated $14 million and $117 million, respectively, at December 31, 1993.

Other loans consist of non-U.S. mortgage and other borrowings of the Company's subsidiaries denominated primarily in non-U.S. currencies.

Substantially all of the long-term debt of subsidiaries, except to the extent of the interest rate swap agreements relating to the Rheox term loan as noted above, have variable interest rates which adjust with changes in market interest rates or have short terms to maturity, and the book value of such indebtedness is deemed to approximate fair value.

The aggregate maturities of long-term debt at December 31, 1993 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1994	$ 35,716
1995	39,327
1996	40,940
1997	101,100
1998	102,186
1999 and thereafter	636,489
	955,758
Less unamortized original issue discount on the Senior Secured Discount Notes	84,873
	$870,885

Note 11 - Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was $.6 million, $1.0 million and nil in 1991, 1992 and 1993, respectively.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations were (i) discount rates - 7% to 8.5% (1992 - 8% to 9%) and (ii) rates of increase in future compensation levels - nil to 6% (1992 - nil to 7%). The expected long-term rates of return on assets used ranged from 8% to 10% in both 1992 and 1993. Plan assets are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

SFAS No. 87, "Employers' Accounting for Pension Costs" requires that an additional pension liability be recognized when the unfunded accumulated pension benefit obligation exceeds the unfunded accrued pension liability. Variances from actuarially assumed rates, including the rate of return on pension plan assets, will result in additional increases or decreases in accrued pension liabilities, pension expense and funding requirements in future periods.

	Assets exceed accumulated benefits December 31,		Accumulated benefits exceed assets December 31,	
	1992	1993	1992	1993
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$27,874	$40,612	$141,909	$137,156
Nonvested benefits	933	3,160	3,297	2,893
Accumulated benefit obligations	28,807	43,772	145,206	140,049
Effect of projected salary increases	6,289	6,235	8,762	17,664
Projected benefit obligations	35,096	50,007	153,968	157,713
Plan assets at fair value	50,579	63,565	102,553	88,881
Plan assets over (under) projected benefit obligations	15,483	13,558	(51,415)	(68,832)
Unrecognized net loss (gain) from experience different from actuarial assumptions	718	774	(29,744)	(4,958)
Unrecognized prior service cost (credit)	3,646	3,121	(4,284)	(3,879)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(3,791)	(1,146)	5,017	2,586
Adjustment required to recognize minimum liability	-	-	-	(3,442)
Total prepaid (accrued) pension cost	16,056	16,307	(80,426)	(78,525)
Less current portion	-	-	(6,470)	(5,919)
Noncurrent prepaid (accrued) pension cost	$16,056	$16,307	$(73,956)	$(72,606)

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Service cost benefits earned during the year	$ 5,151	$ 4,272	$ 4,082
Interest cost on projected benefit obligations	12,705	13,804	14,430
Actual return on plan assets	(13,147)	(12,248)	(15,647)
Net amortization and deferrals	439	(1,346)	2,413
	$ 5,148	$ 4,482	$ 5,278

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. In 1989, the Company began phasing out such benefits for currently active U.S. employees over a ten-year period. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. The Company's policy is to fund medical claims as they are incurred, net of any contributions by the retirees. Effective January 1, 1993, the Company's postretirement medical plans were revised to, among other things, increase the deductible and maximum out-of-pocket amounts, increase the retiree copayment percentage and pass on future cost increases to the participants through increased contributions or decreased reimbursements.

The rates used in determining the actuarial present value of the accumulated benefit obligations were (i) discount rate - 7% (1992 - 7.75%), (ii) rate of increase in future compensation levels - 4% (1992 - 5%), (iii) rate of increase in future health care costs - 11% in 1994, gradually declining to 5% in 2000 and thereafter (1992 - 14% in 1993, gradually declining to 6% in 2000 and thereafter) and (iv) return on plan assets - 9% in both 1992 and 1993. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.4 million in 1993, and the actuarial present value of accumulated benefit obligations at December 31, 1993 would have increased by approximately $3.5 million.

	December 31,	
	1992	1993
	(In thousands)	
Actuarial present value of accumulated benefit obligations:		
Retiree benefits	$62,696	$61,686
Other fully eligible active plan participants	1,151	1,106
Other active plan participants	2,336	1,962
	66,183	64,754
Plan assets at fair value	7,640	8,095
Accumulated postretirement benefit obligations in excess of plan assets	58,543	56,659
Unrecognized net gain from experience different from actuarial assumptions	1,588	2,390
Unrecognized prior service credit	16,618	15,145
Total accrued postretirement benefits cost	76,749	74,194
Less current portion	4,988	5,872
Noncurrent accrued postretirement benefits cost	$71,761	$68,322

The components of the Company's net periodic postretirement benefit cost pursuant to SFAS No. 106 for 1992 and 1993 are set forth below:

	December 31,	
	1992	1993
	(In thousands)	
Interest cost on accumulated benefit obligations	$6,189	$ 4,911
Service cost benefits earned during the year	130	127
Expected return on plan assets	(650)	(647)
Net amortization and deferrals	-	(1,473)
	$5,669	$ 2,918

The aggregate net pay-as-you-go cost to the Company for these benefits approximated $7 million in 1991.

Note 12 - Shareholders' deficit:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
		(In thousands)	
Balance at December 31, 1990	66,839	2,704	64,135
Purchase of treasury shares	-	12,934	(12,934)
Balance at December 31, 1991	66,839	15,638	51,201
Purchase of treasury shares	-	311	(311)
Balance at December 31, 1992 and 1993	66,839	15,949	50,890

During 1990, NL's Board of Directors authorized the purchase of up to five million shares of NL's common stock over an unspecified period of time, to be held as treasury shares available for general corporate purposes. Pursuant to this authorization, the Company purchased 1.6 million and .3 million shares of its common stock in the open market at an aggregate cost of $21 million and $4 million in 1991 and 1992, respectively. In September 1991, the Company purchased 11.3 million shares of its common stock pursuant to a "Dutch auction" self-tender offer for an aggregate cost of $181 million, including 10.9 million shares purchased from Valhi for $175 million.

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options and SARs granted pursuant to similar plans which preceded the NL Option Plan ("the Predecessor Option Plans") remain outstanding at December 31, 1993, no additional options may be granted under the Predecessor Option Plans.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to 100% of the market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan.

Changes in outstanding options granted pursuant to the NL Option Plan and the Predecessor Option Plans are summarized in the table below. At December 31, 1993, options to purchase 610,081 shares were exercisable and options to purchase 259,000 shares become exercisable in 1994. At December 31, 1993, an aggregate of 3.5 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands,	except per share	amounts)
Outstanding at December 31, 1990	533	$ 8.65 - 26.17	$10,550
Granted	522	10.50	5,486
Exercised	(4)	8.65 - 11.66	(44)
Outstanding at December 31, 1991	1,051	8.65 - 26.17	15,992
Granted	237	9.31	2,207
Canceled or expired	(10)	9.31 - 26.17	(126)
Outstanding at December 31, 1992	1,278	8.65 - 24.19	18,073
Granted	451	5.00 - 7.00	2,645
Canceled or expired	(3)	8.65 - 10.78	(27)
Outstanding at December 31, 1993	1,726	$ 5.00 - 24.19	$20,691

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance.

Note 13 - Income taxes:

The components of (i) loss before income taxes, minority interest, extraordinary items and cumulative effect of changes in accounting principles ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 34% in 1991 and 1992 and 35% in 1993, (iii) the provision for income taxes and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Pretax income (loss):			
U.S.	$(25,330)	$(52,724)	$(41,579)
Non-U.S.	6,368	9,710	(28,189)
	$(18,962)	$(43,014)	$(69,768)
Expected tax benefit	$ (6,447)	$(14,625)	$(24,419)
Non-U.S. tax rates	(4,681)	(11,224)	(15,620)
Rate difference on capital loss carryback and capital loss for which no carryback was available	14,351	-	-
Rate change adjustment of deferred taxes	-	-	6,823
Valuation allowance	-	20,237	40,827
Incremental tax on income of companies not included in the NL Tax Group	3,198	5,385	2,553
U.S. state income taxes	2,605	353	486
Other, net	(5,116)	333	2,063
	$ 3,910	$ 459	$ 12,713
Provision for income taxes:			
Current income tax expense (benefit):			
U.S. federal	$ (6,180)	$ (2,103)	$ (915)
U.S. state	2,604	(292)	870
Non-U.S.	14,904	21,803	14,083
	11,328	19,408	14,038
Deferred income tax expense (benefit):			
U.S. federal	7,658	(612)	244
U.S. state	-	645	(384)
Non-U.S.	(15,076)	(18,982)	(1,185)
	(7,418)	(18,949)	(1,325)
	$ 3,910	$ 459	$ 12,713

	Years ended December 31,		
	1991	1992	1993
		(In thousands)	
Comprehensive tax provision (benefit) allocable to:			
Pretax loss	$ 3,910	$ 459	$12,713
Extraordinary items, principally deferred income taxes	(7,241)	-	-
Shareholders' deficit, principally deferred income taxes allocable to currency translation and marketable securities adjustments	1,023	(1,196)	(1,243)
	$(2,308)	$ (737)	$11,470

Changes in deferred income taxes related to the adoption of new accounting standards are disclosed in Note 19. During 1993, the Company's valuation allowance, in the aggregate, increased by $47 million. The components of the net deferred tax liability are summarized below:

	December 31,			
	1992		1993	
	Deferred tax		Deferred tax	
	Assets	Liabilities	Assets	Liabilities
		(In thousands)		
Tax effect of temporary differences relating to:				
Inventories	$ 3,823	$ (2,986)	$ 3,965	$ (2,532)
Property and equipment	261	(101,409)	2,694	(90,356)
Accrued postretirement benefits cost	26,112	-	25,955	-
Accrued pension cost	7,808	(9,770)	9,712	(9,224)
Accrued environmental costs	21,404	-	26,784	-
Other accrued liabilities and deductible differences	14,484	-	22,070	-
Other taxable differences	-	(95,892)	-	(104,940)
Tax on unremitted earnings of non-U.S. subsidiaries	619	(39,277)	577	(27,742)
Tax loss and tax credit carryforwards	112,212	-	137,706	-
Valuation allowance	(86,031)	-	(133,377)	
Gross deferred tax assets (liabilities)	100,692	(249,334)	96,086	(234,794)
Reclassification, principally netting by tax jurisdiction	(99,016)	99,016	(92,194)	92,194
Net total deferred tax assets (liabilities)	1,676	(150,318)	3,892	(142,600)
Net current deferred tax assets (liabilities)	1,676	(4,573)	3,315	(3,623)
Net noncurrent deferred tax assets (liabilities)	$ -	$(145,745)	$ 577	$(138,977)

The components of the provision for deferred income taxes for 1991 (a disclosure no longer required upon the adoption of SFAS No. 109) is summarized below.

	Year ended December 31, 1991 (In thousands)
Depreciation	$ 2,525
Cash basis income and expense	(1,607)
Undistributed income of subsidiaries	(8,747)
Other, net	411
	$(7,418)

At December 31, 1993, the Company had $250 million of non-U.S. income tax loss carryforwards with no expiration dates. In addition, the Company had, for U.S. federal income tax purposes, capital loss carryforwards of $17 million which expire during 1996, net operating loss carryforwards of $30 million, of which $7 million expires in 2007 and $23 million expires in 2008, and an alternative minimum tax credit carryforward of $11 million with no expiration date.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany are being examined and tax authorities have proposed or may propose tax deficiencies. In June 1993, the German tax authorities issued assessment reports in connection with examinations of the Company's German income tax returns, disallowing the Company's claims for refunds, primarily for 1989 and 1990, aggregating DM 160 million ($92 million at December 31, 1993) and proposing additional taxes of DM 100 million ($58 million at December 31, 1993). The Company has applied for administrative relief from collection procedures and may grant a lien on certain German assets while the Company contests the proposed adjustments. Although the Company believes it will ultimately prevail, in June 1993, the Company reclassified refundable income tax claims of approximately DM 160 million ($92 million) from current assets to noncurrent assets due to the uncertain timing of a resolution. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. In July 1992, the Company paid $15 million of previously accrued interest and income taxes related to the settlement of examinations of the Company's U.S. federal income tax returns for the years ended December 31, 1979 through 1984.

In 1991, based upon revisions in the Company's estimate of liabilities for income taxes and related interest expense which may ultimately result from the examinations referred to above, the Company reduced its accrual for income tax related interest by $9 million. This change in estimate considered, among other things, the Company's settlement with the IRS of a matter related to the qualified status of certain of the Company's defined benefit pension plans, which plans were determined to be qualified with respect to the periods in question.

Note 14 - Other income, net:

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Currency transaction gains, net	$ 1,594	$ 1,735	$ 3,299
Technology fee income	-	-	2,048
Royalty income	2,547	1,014	2,016
Disposition of property and equipment	(1,009)	(1,419)	(199)
Other, net	3,911	(133)	2,685
	$ 7,043	$ 1,197	$ 9,849

Note 15 - Other items:

Research, development and sales technical support expense approximated $9 million in 1991, $11 million in 1992 and $10 million in 1993.

Interest capitalized in connection with long-term capital projects was $26 million in 1991, $9 million in 1992 and $1 million in 1993.

Note 16 - Extraordinary items:

	Years ended December 31,		
	1991	1992	1993
	(In thousands)		
Gain (loss) on early extinguishment of indebtedness:			
7.5% sinking fund debentures	$ 282	$ -	$ -
Kronos Louisiana term loan and DM credit facility	-	-	(27,815)
Provision for income taxes	(6)	-	-
	276	-	(27,815)
Income tax benefit of utilization of tax loss and tax credit carryforwards	7,247	-	-
	$7,523	$ -	$(27,815)

The extraordinary loss in 1993 relates to the settlement of certain interest rate swap agreements for $20 million in cash in conjunction with repaying the Louisiana plant indebtedness and the write-off of deferred financing costs related to such repayment and the paydown of a portion of the DM bank credit facility.

Upon adoption of SFAS No. 109 in 1992, utilization of tax loss and tax credit carryforwards are not classified as extraordinary items.

Note 17 - Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business

combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company, the Company from time to time considers, reviews and evaluates, and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, and restrictions under the indentures and other agreements, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

During August 1991, the Company entered into a revolving demand loan agreement with Valhi in an amount not to exceed the lesser of $200 million or the amount Valhi has available under bank credit agreements. The Company advanced $150 million pursuant to this agreement which Valhi repaid in September 1991. Interest income on the amount advanced under the demand loan agreement was $.6 million in 1991.

Baroid Corporation, a former wholly-owned subsidiary of the Company and currently a subsidiary of Dresser Industries, Inc., and the Company are parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis subject to termination or renewal by mutual agreement. Management services fee expense pursuant to the Baroid ISA approximated $4.3 million in 1991, $2.3 million in 1992 and $.3 million in 1993.

The Company is a party to an intercorporate services agreement with Valhi (the "Valhi ISA") whereby Valhi provides certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi ISA was $1.5 million in 1991, $1.4 million in 1992 and $.7 million in 1993.

The Company was party to an intercorporate services agreement with Tremont (the "Tremont ISA") until June 1993 when the agreement was terminated. Under the terms of the contract, the Company provided certain management, financial and legal services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.3 million in 1991, $.5 million in 1992 and $.1 million in 1993.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.6 million in 1991, $.6 million in 1992 and $.4 million in 1993.

Sales to Baroid in the ordinary course of business were $1.8 million in 1991, $2.1 million in 1992 and $1.8 million in 1993.

Purchases in the ordinary course of business from unconsolidated joint ventures were approximately $9 million in 1991 and 1992 and $22 million in 1993.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (nil in 1991, 1992 and 1993) in a manner similar to accounting for SARs. At December 31, 1993, employees of the Company held options to purchase 365,000 shares (347,000 shares vested) of Valhi common stock at exercise prices ranging from $5 to $15 per share.

In conjunction with the formation of Baroid, the Company and Baroid entered into a Cross-Indemnification Agreement pursuant to which, as amended, the Company agreed to indemnify Baroid with regard to all liabilities not expressly assumed by Baroid and Baroid agreed to indemnify the Company with regard to all liabilities assumed by Baroid.

Net amounts payable to affiliates are summarized in the following table.

	December 31,	
	1992	1993
	(In thousands)	
Tremont Corporation	$4,056	$4,777
Louisiana Pigment Company, L.P.	-	4,789
Valhi, Inc.	30	-
	$4,086	$9,566

Note 18 - Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases. In addition, Kronos has a governmental concession through 2007 to operate its ilmenite mine in Norway.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreements restrict the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expense aggregated $6 million in 1991, $9 million in 1992 and $8 million in 1993. At December 31, 1993, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1994	$ 1,234	$1,776
1995	1,306	1,413
1996	1,307	777
1997	1,291	548
1998	1,263	468
1999 and thereafter	13,193	15
	$19,594	$4,997

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental

Protection Agency's Superfund National Priorities List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. At December 31, 1993, the Company had accrued $70 million in respect of those environmental matters which are reasonably estimable. It is not possible to estimate the range of costs for certain sites. The upper end of the range of reasonably possible costs to the Company for sites which it is possible to estimate costs is approximately $105 million. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is involved in other litigation, including litigation regarding the Feed Materials Production Center in Ohio owned by the U.S. Department of Energy, formerly managed under contract by NLO, Inc., a wholly-owned subsidiary of the Company, and other matters.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Concentrations of credit risk

Sales of TiO_2 accounted for almost 90% of net sales during the past three years. TiO_2 is sold to the paint, paper and plastics industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. TiO_2 is sold to over 5,000 customers, none of which represents a significant portion of net sales. In the past three years, approximately one-half of the Company's TiO_2 sales by volume were to Europe and approximately one-third in 1991 and 1992 and 38% in 1993 of sales were attributable to North America.

Consolidated cash and cash equivalents includes $22 million and $64 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1992 and 1993, respectively. Such securities are held in trust for the Company by a single U.S. bank.

Note 19 - Changes in accounting principles:

In 1993, the Company adopted SFAS No. 115 (marketable securities) as of December 31, 1993. In 1992, the Company (i) elected early compliance with both SFAS No. 106 (OPEB) and SFAS No. 109 (income taxes) as of January 1, 1992; (ii) elected immediate recognition of the OPEB transition obligation; and (iii) elected to apply SFAS No. 109 prospectively and not restate prior years. The cumulative effect of changes in accounting principles adjustments are shown below.

	Amount reflected in	
	Earnings	Equity component
	(In thousands)	
Increase (decrease) in net assets at December 31, 1993 - SFAS No. 115:		
Marketable securities	$1,872	$(1,872)
Deferred income taxes	(655)	655
	$1,217	$(1,217)

	Amount
	(In thousands)
Increase (decrease) in net assets at January 1, 1992 - SFAS Nos. 106 and 109:	
Accrued postretirement benefits cost	$(74,918)
Deferred income taxes, net	43,114
	$(31,804)

Note 20 - Quarterly financial data (unaudited):

	Quarter ended,			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Year ended December 31, 1992:				
Net sales	$226,091	$235,603	$232,297	$199,474
Cost of sales	158,891	169,896	164,133	136,109
Operating income	25,610	26,302	29,282	29,539
Loss before cumulative effect of changes in accounting principles	$ (7,510)	$ (8,467)	$(11,331)	$(17,288)
Cumulative effect of changes in accounting principles	(31,804)	-	-	-
Net loss	$(39,314)	$ (8,467)	$(11,331)	$(17,288)
Per share of common stock:				
Loss before cumulative effect of changes in accounting principles	$ (.15)	$ (.17)	$ (.22)	$ (.34)
Cumulative effect of changes in accounting principles	(.62)	-	-	-
Net loss	$ (.77)	$ (.17)	$ (.22)	$ (.34)
Weighted average shares outstanding	50,959	50,890	50,890	50,890
Year ended December 31, 1993:				
Net sales	$198,518	$221,378	$202,096	$183,331
Cost of sales	142,506	171,671	156,894	141,296
Operating income	23,105	15,166	12,773	11,356
Loss before extraordinary item and cumulative effect of change in accounting principle	$(13,490)	$(28,002)	$(18,722)	$(22,997)
Extraordinary item	-	-	-	(27,815)
Cumulative effect of change in accounting principle	-	-	-	1,217
Net loss	$(13,490)	$(28,002)	$(18,722)	$(49,595)

	Quarter ended,			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Per share of common stock:				
Loss before extraordinary item and cumulative effect of change in accounting principle	$(.27)	$(.55)	$(.37)	$(.44)
Extraordinary item	-	-	-	(.55)
Cumulative effect of change in accounting principle	-	-	-	.02
Net loss	$(.27)	$(.55)	$(.37)	$(.97)
Weighted average shares outstanding	50,890	50,890	50,890	50,890

Note 21 - Subsequent event:

On February 24, 1994, the Company settled its lawsuit against Lockheed Corporation and its directors in connection with Lockheed's 1990 annual meeting of stockholders. Under the terms of the settlement, Lockheed made a cash payment to the Company of $27 million with net proceeds to the Company of approximately $20 million.

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for marketable securities, and in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND

Houston, Texas
February 9, 1994 except for
Note 21, as to which the
date is February 24, 1994

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I - MARKETABLE SECURITIES (a)

December 31, 1993

(In thousands)

Name of issuer and title of each issue	Number of shares/principal amount	Cost	Market value	Amount carried in balance sheet
Current assets:				
Trading securities - U.S. Treasury Securities	40,406	$40,993	$41,045	$41,045
Noncurrent assets:				
Available-for-sale - common stock:				
Lockheed Corporation	2	$ 83	$ 116	$ 116
Maxxam, Inc.	250	11,092	9,188	9,188
Keystone Consolidated Industries, Inc. (b)	326	4,240	3,342	3,342
Valhi, Inc.	1,186	5,931	5,782	5,782
		$21,346	$18,428	$18,428

(a) The Company adopted SFAS No. 115 effective December 31, 1993.
(b) A majority-owned subsidiary of Contran Corporation.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets

December 31, 1992 and 1993

(In thousands)

	1992	1993
Current assets:		
Cash and cash equivalents	$ 11,043	$ 11,107
Marketable securities	90,639	41,045
Accounts and notes receivable	2,319	2,088
Refundable income taxes	2,012	-
Receivable from subsidiaries and affiliates	-	980
Prepaid expenses	198	248
Total current assets	106,211	55,468
Other assets:		
Marketable securities	23,581	18,428
Notes receivable from subsidiary	-	352,627
Investment in subsidiaries	(8,388)	(156,615)
Other	2,412	10,713
Total other assets	17,605	225,153
Property and equipment, net	4,241	3,925
	$ 128,057	$ 284,546
Current liabilities:		
Current maturities of long-term debt	$ 4,374	$ -
Accounts payable and accrued liabilities	29,828	38,176
Payable to subsidiaries and affiliates	23,642	4,777
Income taxes	-	93
Deferred income taxes	2,506	3,627
Total current liabilities	60,350	46,673
Noncurrent liabilities:		
Long-term debt	10,000	352,627
Note payable to subsidiary	65,000	-
Deferred income taxes	28,091	27,182
Accrued pension cost	12,765	16,164
Accrued postretirement benefits cost	45,072	42,216
Other	53,072	64,479
Total noncurrent liabilities	214,000	502,668
Shareholders' deficit	(146,293)	(264,795)
	$ 128,057	$ 284,546

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Operations

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Revenues and other income:			
Equity in income (loss) of subsidiaries	$ 7,515	$(10,703)	$ (49,766)
Interest and dividends	4,714	2,829	3,622
Interest income from subsidiary	-	-	8,358
Securities transactions	(10,586)	2,691	3,637
Other income (expense), net	3,121	1,791	2,597
	4,764	(3,392)	(31,552)
Costs and expenses:			
General and administrative	48,042	45,243	44,113
Interest, net	(4,540)	1,598	13,771
	43,502	46,841	57,884
Loss before income taxes, extraordinary items and cumulative effect of changes in accounting principles	(38,738)	(50,233)	(89,436)
Income tax benefit	14,753	5,637	6,225
Loss before extraordinary items and cumulative effect of changes in accounting principles	(23,985)	(44,596)	(83,211)
Extraordinary items:			
Equity in income of subsidiaries	16,263	-	(27,815)
Income tax benefit of utilization of tax loss and tax credit carryforwards	(9,016)	-	-
Early extinguishment of indebtedness	276	-	-
	7,523	-	(27,815)
Cumulative effect of changes in accounting principles:			
NL	-	(30,546)	1,217
Equity in income of subsidiaries	-	(1,258)	-
	-	(31,804)	1,217
Net loss	$(16,462)	$(76,400)	$(109,809)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from operating activities:			
Net loss	$ (16,462)	$(76,400)	$(109,809)
Adjustments:			
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary items and cumulative effect of changes in accounting principles	(7,515)	10,703	49,766
Extraordinary items	(16,263)	-	27,815
Cumulative effect of changes in accounting principles	-	1,258	-
Distributions	317,000	54,000	-
Securities transactions	10,586	(2,691)	(3,637)
Cumulative effect of changes in accounting principles	-	30,546	(1,217)
Change in assets and liabilities, net	22,383	6,340	14,593
Other, net	(9,408)	1,243	242
Total adjustments	316,783	101,399	87,562
Net cash provided (used) by operating activities	300,321	24,999	(22,247)
Cash flows from investing activities:			
Purchases of marketable securities	(46,654)	(1,238)	(10,899)
Proceeds from disposition of marketable securities	93,646	6,735	69,232
Capital expenditures	(260)	(214)	(4)
Investment in subsidiary	(3,248)	(3,896)	(6,478)
Loans to affiliates and subsidiaries:			
Loans	(150,000)	-	(341,500)
Collections	150,000	-	-
Other, net	(126)	(768)	667
Net cash provided (used) by investing activities	43,358	619	(288,982)

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1990	1991	1992	1993	1994
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$ 906.6	$ 840.3	$ 893.5	$ 805.3	$ 888.0
Operating income	251.1	139.0	110.7	62.4	111.4
Income (loss) from continuing operations	93.5	(24.0)	(44.6)	(83.2)	(24.0)
Net income (loss)	92.4	(16.5)	(76.4)	(109.8)	(24.0)
Per common share:					
Income (loss) from continuing operations	$ 1.42	$ (.40)	$ (.88)	$ (1.63)	$ (.47)
Net income (loss)	1.40	(.27)	(1.50)	(2.16)	(.47)
Cash dividends	$ .60	$ .60	$ .35	$ -	$ -
BALANCE SHEET DATA (at year-end):					
Cash, cash equivalents and current marketable securities	$ 443.1	$ 353.3	$ 187.9	$ 147.6	$ 156.3
Current assets	884.4	795.5	635.8	467.5	486.4
Total assets	1,966.7	1,831.0	1,472.1	1,206.5	1,162.4
Current liabilities	400.4	360.2	248.8	232.5	244.9
Long-term debt including current maturities	1,269.7	1,288.9	1,035.3	870.9	789.6
Shareholders' equity (deficit)	38.6	(58.3)	(146.3)	(264.8)	(293.1)
OTHER DATA:					
Net debt (1)	$ 867.4	$ 936.0	$ 847.7	$ 723.2	$ 633.4
EBITDA (2)	242.3	126.6	115.1	67.2	101.3
Interest expense, net (3)	60.7	59.9	104.3	95.1	78.9
Cash interest expense, net (4)	53.0	53.9	98.0	86.8	60.8
Capital expenditures	195.3	195.1	85.2	48.0	36.9
TiO_2 sales volumes (in thousands metric tons)	274	303	336	346	376
Average TiO_2 selling price index (1983=100)	175	147	139	127	131

(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization. EBITDA is presented because it is a widely accepted financial indicator of a company's ability to incur and service debt. However, EBITDA should not be considered as an alternative to (i) operating income or net income as an indicator of a company's operating performance or (ii) cash flows from operating activities as a measure of a company's liquidity.

(3) Interest expense, net represents interest expense less general corporate interest and dividend income.

(4) Cash interest expense, net represents interest expense, net less non-cash interest expense (deferred interest expense on the Senior Secured Discount Notes and amortization of deferred financing costs).

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

General

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. As discussed below, TiO_2 selling prices increased during 1994 after four consecutive years of a declining price trend. Kronos' operating income and margins improved significantly during 1994. Based on, among other things, the Company's near-term outlook for its TiO_2 business, the Company expects 1995 will be profitable with anticipated continuing improvements in TiO_2 prices and demand.

Net sales and operating income

	Years ended December 31,			% Change	
	1992	1993	1994	1993-92	1994-93
	(In millions)				
Net sales:					
Kronos	$784.6	$697.0	$770.1	-11%	+10%
Rheox	108.9	108.3	117.9	-1%	+9%
	$893.5	$805.3	$888.0	-10%	+10%
Operating income:					
Kronos	$ 81.9	$ 36.1	$ 80.5	-56%	+123%
Rheox	28.8	26.3	30.8	-9%	+17%
	$110.7	$ 62.4	$111.3	-44%	+78%
Percent change in TiO_2:					
Sales volume				+3%	+9%
Average selling prices (in billing currencies)				-8%	+3%

The improvement in Kronos' 1994 results was primarily due to higher average selling prices, higher production and sales volumes for TiO_2 and higher technology fee income. In billing currency terms, Kronos' 1994 average TiO_2 selling prices were approximately 3% higher than in 1993 and were 8% lower in 1993 compared to 1992. Average TiO_2 selling prices at year-end 1994 were 6% higher than year-earlier levels and were 10% above the low point reached in 1993.

Record sales volume of 376,000 metric tons of TiO_2 in 1994 represents an increase of 9% over 1993, with increases in Europe, North America and other regions. Due to increasing demand for TiO_2 and higher sales volumes, Kronos increased its capacity utilization to 94 after having reduced its TiO_2 production rates in response to weakened demand in late 1992 and 1993. TiO_2 sales volumes increased 3% in 1993 over 1992, as increases in North American sales volumes were partially offset by declining sales volumes in European markets. Approximately one-half of Kronos' 1994 TiO_2 sales, by volume, were attributable to markets in Europe with approximately 36% attributable to North America and the balance to other regions.

As a result of Kronos' continued emphasis on cost reduction and containment efforts, Kronos' unit production costs decreased slightly in 1994 and were only slightly higher in 1993 compared to year-earlier levels.

Demand, supply and pricing of TiO_2 have historically been cyclical and the last cyclical peak for TiO_2 prices occurred in early 1990. Kronos believes that its operating income and margins for 1995 will be higher than in 1994 due principally to the net effect of higher average TiO_2 selling prices and slightly higher sales and production volumes, offset in part by increased raw material costs.

Rheox's operating income improved in 1994 compared to 1993 due to higher sales volumes and lower operating costs. Operating costs increased during 1993 over 1992, contributing to the decline in Rheox's 1993 operating income. Changes in currency exchange rates had a slightly positive effect on sales and operating income in 1994 and a negative effect in 1993 compared to the respective prior year.

The Company has substantial operations and assets located outside the United States (principally Germany, Norway, Belgium and Canada). The U.S. dollar value of the Company's foreign sales and operating costs are subject to currency exchange rate fluctuations which may favorably or adversely impact reported earnings and effect the comparability of period to period operating results. A significant amount of the Company's sales are denominated in currencies other than the U.S. dollar (67% in 1994), principally major European currencies and the Canadian dollar. Certain raw materials, primarily titanium-containing feedstocks, are purchased in U.S. dollars, while labor and other production costs are primarily denominated in the local currency. Fluctuations in the value of the U.S. dollar relative to other currencies decreased 1994 sales by $2 million compared to 1993 and decreased 1993 sales by $45 million compared to 1992.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Change	
	1992	1993	1994	1993-92	1994-93
	(In millions)				
Securities earnings	$ 8.2	$ 8.5	$ 3.9	$ .3	$(4.6)
Corporate expenses, net	(43.4)	(41.5)	(44.7)	1.9	(3.2)
Interest expense	(118.5)	(99.1)	(83.9)	19.4	15.2
	$(153.7)	$(132.1)	$(124.7)	$21.6	$ 7.4

Securities earnings fluctuate in part based upon the amount of funds invested and yields thereon. Amounts available for investment have declined over the past two years. Corporate expenses, net, in 1994 were slightly higher compared with 1993 as a $20 million gain related to the first quarter 1994 settlement of the Company's lawsuit against Lockheed Corporation was offset by increases in provisions for environmental remediation and litigation costs. Corporate expenses were slightly lower in 1993 compared to 1992 as a $4 million increase in environmental remediation costs was more than offset by a $9 million reduction in certain proxy solicitation and litigation settlement expenses.

Interest expense

Lower levels of debt in 1993 and 1994, principally Kronos' Deutsche mark-denominated debt, and lower interest rates on such debt reduced interest expense in 1993 and 1994 compared to the respective prior-year periods. In addition, 1992 interest expense reflected the benefit of $9 million of capitalized interest related principally to the Louisiana plant completed in March 1992.

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In each of the past three years, the geographic mix, including losses in certain jurisdictions for which no current refund was available and in which recognition of a deferred tax asset is not currently considered appropriate, contributed significantly to the Company's effective tax rate varying from a normally-expected rate. The Company's deferred income tax status at December 31, 1994 is discussed in "Liquidity and Capital Resources".

Extraordinary item

See Note 16 to the Consolidated Financial Statements.

Changes in accounting principles

See Notes 2 and 19 to the Consolidated Financial Statements.

LIQUIDITY AND CAPITAL RESOURCES

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1992	1993	1994
		(In millions)	
Net cash provided (used) by:			
Operating activities	$ (44.7)	$ (7.3)	$ 181.7
Investing activities	234.9	181.9	(32.8)
Financing activities	(223.1)	(155.3)	(132.1)
Net cash provided (used) by operating, investing and financing activities	$ (32.9)	$ 19.3	$ 16.8

The TiO_2 industry is cyclical, with the previous peak in selling prices in early 1990 and the latest trough in the third quarter of 1993. During the recent TiO_2 down cycle, the Company's operations used significant amounts of cash. Receipt of the German tentative tax refund, discussed below, significantly increased the Company's cash flow from operating activities during 1994 and was a major factor in the Company's improved liquidity. The relative changes in the Company's inventories, receivables and payables (excluding the effect of currency translation) also contributed to the cash provided by operations. A $30 million technology exchange fee received from Tioxide in October 1993, which is being recognized as a component of operating income over three years, also favorably impacted cash flow from operating activities in 1993.

Cash provided (used) by investing activities includes capital expenditures in each period, and in 1993 included $161 million net cash generated from the formation of the manufacturing joint venture with Tioxide. Cash provided by investing activities also included net sales of marketable securities of $317 million in 1992 and $68 million in 1993, primarily used to fund debt repayments. In 1994, proceeds of $15 million from the sale of trading securities are a component of the cash provided from operations as a result of the adoption of SFAS 115.

The Company's capital expenditures during the past three years include an aggregate of $36 million related to the completion of the Louisiana chloride process TiO_2 plant and an aggregate of $63 million ($17 million in 1994) for the Company's ongoing environmental protection and compliance programs, including a Canadian waste acid neutralization facility, a Norwegian onshore tailings disposal system and off-gas desulfurization systems. The Company's estimated 1995 capital expenditures are $66 million and include $33 million in the area of environmental protection and compliance primarily related to the off-gas desulfurization systems and water treatment chemical purification systems. The Company plans to spend $25 million in capital expenditures ($7 million in 1995) related to a debottlenecking project at its Leverkusen, Germany chloride process TiO_2 facility that is expected to increase the Company's annual attainable production capacity by 20,000 metric tons. The capital expenditures of the manufacturing joint venture are not included in the Company's capital expenditures.

Net repayments of indebtedness in 1994 included a DM 225 million ($140 million when paid) reduction in the DM credit facility, $15 million paid on the Rheox bank term loan and $15 million paid on the joint venture term loan. In addition, the Company borrowed DM 75 million ($45 million) under the DM credit facility. Net repayments of indebtedness in 1993 included payments on the DM credit facility of DM 552 million ($342 million when paid), a $110 million net reduction in indebtedness related to the Louisiana plant and $350 million proceeds from the Company's public offering of debt. Net repayments of indebtedness in 1992 included payments on the DM term loan aggregating DM 350 million ($225 million when paid) and $61 million drawn under Kronos' Louisiana plant credit facilities. NL and Kronos have agreed, under certain conditions, to provide KII with up to an additional DM 125 million through January 1, 2001.

Financing activities also include dividends paid of $18 million in 1992. The Company suspended dividend payments in October 1992.

At December 31, 1994, the Company had cash, cash equivalents and current marketable securities aggregating $156 million (30% held by non-U.S. subsidiaries) including restricted cash and cash equivalents of $16 million. In addition, the Company's subsidiaries had $14 million and $195 million available for borrowing at December 31, 1994 under existing U.S. and non-U.S. credit facilities, respectively, of which $80 million of the non-U.S. amount is available only for (i) permanently reducing the DM term loan or (ii) paying future German income tax assessments, as described below.

The Company reduced its "net debt" (notes payable and long-term debt less cash, cash equivalents and current marketable securities) by $90 million during 1994. The Company currently expects to have sufficient liquidity to meet its obligations including operations, capital expenditures and debt service.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain assessment reports which had proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million), including interest, on a tentative basis. The Company applied DM 174 million ($108 million) of the German tentative tax refunds to reduce outstanding borrowings under its DM credit facility. The examination of the Company's German income tax returns is continuing and additional substantial proposed tax deficiency assessments are expected. Although the Company believes that it will ultimately prevail, the Company has granted a DM 100 million ($64 million at December 31, 1994) lien on its Nordenham, Germany TiO_2 plant, and may be required to provide additional security in favor of the German tax authorities until the assessments proposing tax deficiencies are resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operation or liquidity. Cash received for settlement of prior years' tax examinations aggregated $6 million in 1994 and the Company expects to make settlement payments of approximately $20 million in 1995.

At December 31, 1994, the Company had recorded net deferred tax liabilities of $175 million. The Company operates in numerous tax jurisdictions, in certain of which it has temporary differences that net to deferred tax assets (before valuation allowance). The Company has provided a deferred tax valuation allowance of $165 million, principally related to the U.S. and Germany, offsetting deferred tax assets which the Company believes may not currently meet the "more likely than not" realization criteria for asset recognition.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and other Contran subsidiaries.

The Company has been named as a defendant, PRP, or both, in a number of legal proceedings associated with environmental matters, including waste disposal sites or facilities currently or formerly owned, operated or used by the Company, many of which disposal sites or facilities are on the U.S. EPA's Superfund National Priorities List or similar state lists. On a quarterly basis, the Company evaluates the potential range of its liability at sites where it has been named as a PRP or defendant. The Company believes it has provided adequate accruals for reasonably estimable costs of such matters, but the Company's ultimate liability may be affected by a number of factors, including changes in remedial alternatives and costs and the allocation of such costs among PRPs. The Company is also a defendant in a number of legal proceedings seeking damages for personal injury and property damage arising out of the sale of lead pigments and lead-based paints. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability, if any, that may result is not reasonably capable of estimation. The Company currently believes the disposition of all claims and disputes, individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. There can be no assurance that additional matters of these types will not arise in the future. See Item 3 - "Legal Proceedings" and Note 18 to the Consolidated Financial Statements.

As discussed above, the Company has substantial operations located outside the United States for which the functional currency is not the U.S. dollar. As a result, the reported amount of the Company's assets and liabilities related to its non-U.S. operations, and therefore the Company's consolidated net assets, will fluctuate based upon changes in currency exchange rates. The carrying value of the Company's net investment in its German operations is a net liability due principally to its DM credit facility, while its net investment in its other non-U.S. operations are net assets.

The Company periodically evaluates its liquidity requirements, capital needs and availability of resources in view of, among other things, its debt service requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to refinance or restructure indebtedness, raise additional capital, restructure ownership interests, sell interests in subsidiaries, marketable securities or other assets, or take a combination of such steps or other steps to increase or manage its liquidity and capital resources.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 17 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1994 and the months of January and February 1995.

October 24, 1994 - reported items 5 and 7.
December 1, 1994 - reported items 5 and 7.
January 30, 1995 - reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Item No.	Exhibit Index
3.1	By-Laws, as amended on June 28, 1990 - incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2	Certificate of Amended and Restated Certificate of Incorporation dated June 28, 1990 - incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1	Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation - incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
4.2	Indenture dated October 20, 1993 governing the Registrant's 11.75% Senior Secured Notes due 2003, including form of Senior Note - incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.3	Senior Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.4	Senior Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.5	Third Party Pledge and Intercreditor Agreement dated October 20, 1993 between Registrant, Chase Manhattan Bank (National Association) and Chemical Bank - incorporated by reference to Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.6	Indenture dated October 20, 1993 governing the Registrant's 13% Senior Secured Discount Notes due 2005, including form of Discount Note - incorporated by reference to Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.7 Discount Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

4.8 Discount Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.1 Amended and Restated Loan Agreement dated as of October 15, 1993 among Kronos International, Inc., the Banks set forth therein, Hypobank International S.A., as Agent and Banque Paribas, as Co-agent - incorporated by reference to Exhibit 10.17 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.2 Amended and Restated Liquidity Undertaking dated October 15, 1993 by the Registrant, Kronos, Inc. and Kronos International, Inc. to Hypobank International S.A., as agent, and the Banks set forth therein - incorporated by reference to Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.3 Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents - incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.

10.4 Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents-incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on form 10-Q for the quarter ended June 30, 1992.

10.5 Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents - incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

10.6 Fourth and Fifth Amendments to the Credit Agreement, dated September 23, 1994 and December 15, 1994, respectively, between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents.

10.7 Credit Agreement dated as of October 18, 1993 among Louisiana Pigment Company, L.P., as Borrower, the Banks listed therein and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.8 Security Agreement dated October 18, 1993 from Louisiana Pigment Company, L.P., as Borrower, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.9 Security Agreement dated October 18, 1993 from Kronos Louisiana, Inc. as Grantor, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.10 KLA Consent and Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.11 Guaranty dated October 18, 1993, from Kronos, Inc., as guarantor, in favor of Lenders named therein, as Lenders, and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.12 Mortgage by Louisiana Pigment Company, L.P. dated October 18, 1993 in favor of Citibank, N.A. - incorporated by reference to Exhibit 10.16 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.13 Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.14 Contract dated September 9, 1971, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung concerning supplies and services (German language version and English translation thereof) - incorporated by reference to Exhibit 10.15 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.15 Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) - incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.16 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.17 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.18 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.19 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.20 TCI/KCI Output Purchase Agreement dated as of October 18, 1993 between Tioxide Canada Inc. and Kronos Canada, Inc. - incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.21 TAI/KLA Output Purchase Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.22 Master Technology Exchange Agreement dated as of October 18, 1993 among Kronos, Inc., Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited - incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.23 Parents' Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos, Inc. - incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.24 Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos, Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.25* 1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.

10.26	Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.27*	1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.28	Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.29*	NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 - incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.30	Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1994 - incorporated by reference to Exhibit 10.29 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1993.
10.31	Intercorporate Services Agreement by and between Contran Corporation and the Registrant effective as of January 1, 1994 - incorporated by reference to Exhibit 10.30 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1993.
10.32	Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.33*	Description of terms of an executive severance agreement between the Registrant and Joseph S. Compofelice - incorporated by reference to the last paragraph of page 16 entitled "Employment Agreements" of the Registrant's definitive proxy statement dated March 30, 1994.
10.34*	Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin - incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.35*	Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991 - incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Accountants.
27.1	Financial Data Schedules for the year ended December 31, 1994.
99.1	Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 10-K/A to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1994.

* Management contract, compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL Industries, Inc.
(Registrant)

By /s/ J. Landis Martin
J. Landis Martin, March 6, 1995
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/s/ J. Landis Martin
J. Landis Martin, March 6, 1995
Director, President and
Chief Executive Officer

/s/ Harold C. Simmons
Harold C. Simmons, March 6, 1995
Chairman of the Board

/s/ Glenn R. Simmons
Glenn R. Simmons, March 6, 1995
Director

/s/ Michael A. Snetzer
Michael A. Snetzer, March 6, 1995
Director

/s/ Kenneth R. Peak
Kenneth R. Peak, March 6, 1995
Director

/s/ Dr. Lawrence A. Wigdor
Dr. Lawrence A. Wigdor, March 6, 1994
Director, President and Chief Executive
Officer of Kronos and Rheox

/s/ Elmo R. Zumwalt, Jr.
Elmo R. Zumwalt, Jr., March 6, 1995
Director

/s/ Joseph S. Compofelice
Joseph S. Compofelice, March 6, 1995
Vice President and
Chief Financial Officer

/s/ Dennis G. Newkirk
Dennis G. Newkirk, March 6, 1995
Vice President and Controller
(Principal Accounting Officer)

NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K

Items 8, 14(a) and 14(d)

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1993 and 1994, and the related consolidated statements of operations, shareholders' deficit, and cash flows for each of the three years in the period ended December 31, 1994. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1993 and 1994, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1994 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for certain investments in debt and equity securities in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, and in 1992 the Company changed its method of accounting for postretirement benefits other than pensions and income taxes in accordance with SFAS Nos. 106 and 109, respectively.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 3, 1995

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1993 and 1994

(In thousands, except per share data)

ASSETS

	1993	1994
Current assets:		
Cash and cash equivalents	$ 106,593	$ 131,124
Marketable securities	41,045	25,165
Accounts and notes receivable, less allowance of $3,008 and $3,749	116,355	137,753
Refundable income taxes	386	1,162
Inventories	194,167	185,173
Prepaid expenses	5,637	3,878
Deferred income taxes	3,315	2,177
Total current assets	467,498	486,432
Other assets:		
Marketable securities	18,428	21,329
Refundable income taxes	91,994	-
Investment in joint ventures	190,787	187,480
Prepaid pension cost	16,307	19,329
Deferred income taxes	577	2,746
Other	42,355	37,267
Total other assets	360,448	268,151
Property and equipment:		
Land	18,237	20,665
Buildings	129,582	147,370
Machinery and equipment	515,090	582,138
Mining properties	72,711	87,035
Construction in progress	30,050	9,579
	765,670	846,787
Less accumulated depreciation and depletion	387,067	438,960
Net property and equipment	378,603	407,827
	$1,206,549	$1,162,410

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 1993 and 1994

(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' DEFICIT	1993	1994
Current liabilities:		
Current maturities of long-term debt	$ 35,716	$ 42,887
Accounts payable and accrued liabilities	177,265	168,327
Payable to affiliates	9,566	11,348
Income taxes	6,353	20,762
Deferred income taxes	3,623	1,590
Total current liabilities	232,523	244,914
Noncurrent liabilities:		
Long-term debt	835,169	746,762
Deferred income taxes	138,977	178,332
Accrued pension cost	72,606	76,242
Accrued postretirement benefits cost	68,322	65,299
Other	121,309	141,518
Total noncurrent liabilities	1,236,383	1,208,153
Minority interest	2,438	2,425
Shareholders' deficit:		
Preferred stock - 5,000 shares authorized, no shares issued or outstanding	-	-
Common stock - $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,281	759,281
Adjustments:		
Currency translation	(115,803)	(125,494)
Pension liabilities	(3,442)	(1,635)
Marketable securities	(2,164)	(12)
Accumulated deficit	(543,059)	(567,041)
Treasury stock, at cost (15,949 and 15,787 shares)	(367,963)	(366,536)
Total shareholders' deficit	(264,795)	(293,082)
	$1,206,549	$1,162,410

Commitments and contingencies (Notes 13 and 18)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1992, 1993 and 1994

(In thousands, except per share data)

	1992	1993	1994
Revenues and other income:			
Net sales	$893,465	$ 805,323	$887,954
Other, net	14,797	22,084	44,828
	908,262	827,407	932,782
Costs and expenses:			
Cost of sales	629,029	612,367	649,745
Selling, general and administrative	203,736	185,689	212,516
Interest	118,511	99,119	83,926
	951,276	897,175	946,187
Loss before income taxes, minority interest, extraordinary item and cumulative effect of changes in accounting principles	(43,014)	(69,768)	(13,405)
Income tax expense	459	12,713	9,734
Loss before minority interest, extraordinary item and cumulative effect of changes in accounting principles	(43,473)	(82,481)	(23,139)
Minority interest	1,123	730	843
Loss before extraordinary item and cumulative effect of changes in accounting principles	(44,596)	(83,211)	(23,982)
Extraordinary item	-	(27,815)	-
Cumulative effect of changes in accounting principles	(31,804)	1,217	-
Net loss	$(76,400)	$(109,809)	$(23,982)

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Years ended December 31, 1992, 1993 and 1994

(In thousands, except per share data)

	1992	1993	1994
Loss per share of common stock:			
Before extraordinary item and cumulative effect of changes in accounting principles	$ (.88)	$(1.63)	$ (.47)
Extraordinary item	-	(.55)	-
Cumulative effect of changes in accounting principles	(.62)	.02	-
Net loss	$(1.50)	$(2.16)	$ (.47)
Weighted average common shares outstanding	50,907	50,890	51,022

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT

Years ended December 31, 1992, 1993 and 1994

(In thousands, except per share data)

	Common stock	Additional paid-in capital	Adjustments			Accumulated deficit	Treasury stock	Total
			Currency translation	Pension liabilities	Marketable securities			
Balance at December 31, 1991	$8,355	$759,300	$(116,640)	$ -	$(5,925)	$(339,043)	$(364,322)	$ (58,275)
Net loss	-	-	-	-	-	(76,400)	-	(76,400)
Common dividends declared - $.35 per share	-	-	-	-	-	(17,807)	-	(17,807)
Adjustments	-	-	4,820	-	5,029	-	-	9,849
Purchases of treasury stock	-	-	-	-	-	-	(3,641)	(3,641)
Other, net	-	(19)	-	-	-	-	-	(19)
Balance at December 31, 1992	8,355	759,281	(111,820)	-	(896)	(433,250)	(367,963)	(146,293)
Net loss	-	-	-	-	-	(109,809)	-	(109,809)
Adjustments	-	-	(3,983)	(3,442)	(51)	-	-	(7,476)
Cumulative effect of change in accounting principle	-	-	-	-	(1,217)	-	-	(1,217)
Balance at December 31, 1993	8,355	759,281	(115,803)	(3,442)	(2,164)	(543,059)	(367,963)	(264,795)
Net loss	-	-	-	-	-	(23,982)	-	(23,982)
Treasury stock reissued	-	-	-	-	-	-	1,427	1,427
Adjustments	-	-	(9,691)	1,807	2,152	-	-	(5,732)
Balance at December 31, 1994	$8,355	$759,281	$(125,494)	$(1,635)	$ (12)	$(567,041)	$(366,536)	$(293,082)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from operating activities:			
Net loss	$(76,400)	$(109,809)	$(23,982)
Depreciation, depletion and amortization	47,829	46,340	34,592
Non-cash interest expense	6,270	8,309	18,071
Deferred income taxes	(18,949)	(670)	11,907
Cumulative effect of changes in accounting principles	31,804	(1,217)	-
Minority interest	1,123	730	843
Net (gains) losses from:			
Securities transactions	6,018	(4,363)	1,220
Disposition of property and equipment	1,419	199	1,981
Pension cost, net	(2,024)	(2,134)	(2,753)
Other postretirement benefits, net	1,830	(2,422)	(3,437)
Other, net	3,442	(1,349)	68
	2,362	(66,386)	38,510
Change in assets and liabilities:			
Accounts and notes receivable	(1,776)	(1,291)	(13,152)
Inventories	(33,814)	12,166	17,778
Prepaid expenses	207	(472)	3,221
Accounts payable and accrued liabilities	(6,111)	(4,132)	(17,343)
Income taxes	(13,501)	1,507	109,243
Accounts with affiliates	(4,106)	5,426	(2,024)
Other noncurrent assets	(1,006)	8,844	2,219
Other noncurrent liabilities	13,072	37,069	28,706
Marketable trading securities:			
Purchases	-	-	(870)
Dispositions	-	-	15,530
Net cash provided (used) by operating activities	(44,673)	(7,269)	181,818

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from investing activities:			
Capital expenditures	$ (85,150)	$ (47,986)	$ (36,931)
Marketable securities:			
Purchases	(156,573)	(11,053)	-
Dispositions	473,935	79,398	-
Proceeds from disposition of property and equipment	1,484	175,537	598
Investment in joint ventures, net	-	(14,405)	3,133
Loans to affiliates	-	(210)	-
Other, net	1,168	670	362
Net cash provided (used) by investing activities	234,864	181,951	(32,838)
Cash flows from financing activities:			
Indebtedness:			
Borrowings	61,722	452,694	44,490
Principal payments	(263,093)	(607,417)	(175,886)
Dividends paid	(17,807)	-	-
Other, net	(3,937)	(613)	(742)
Net cash used by financing activities	(223,115)	(155,336)	(132,138)
Net change during the year from operating, investing and financing activities	$ (32,924)	$ 19,346	$ 16,842

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash and cash equivalents:			
Net change during the year from:			
Operating, investing and financing activities	$(32,924)	$ 19,346	$ 16,842
Currency translation	(5,013)	(86)	7,689
	(37,937)	19,260	24,531
Balance at beginning of year	125,270	87,333	106,593
Balance at end of year	$ 87,333	$106,593	$ 131,124
Supplemental disclosures - cash paid (received) for:			
Interest, net of amounts capitalized	$137,996	$ 91,576	$ 66,801
Income taxes, net	31,369	11,897	(111,418)

See accompanying notes to consolidated financial statements.

Note 1 - Organization and basis of presentation:

NL Industries, Inc. conducts its operations primarily through its wholly-owned subsidiaries, Kronos, Inc. (titanium dioxide pigments ("TiO_2")) and Rheox, Inc. (specialty chemicals).

Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 52% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 90% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President, and Chief Executive Officer of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies.

Note 2 - Summary of significant accounting policies:

Principles of consolidation

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated. Certain prior year amounts have been reclassified to conform to the current year presentation. The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amount of revenues and expenses during the reporting period. Ultimate actual results may in some instances differ from previously estimated amounts.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments and the related income tax effects are accumulated in the currency translation adjustments component of shareholders' deficit. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less. Cash and cash equivalents includes $18 million and $16 million at December 31, 1993 and 1994, respectively, which are restricted for letters of credit and certain indebtedness agreements.

Marketable securities and securities transactions

Marketable securities are classified as either "available-for-sale" or "trading" and are carried at market based on quoted market prices. Unrealized gains and losses on trading securities are recognized in income currently. Unrealized gains and losses on available-for-sale securities, and the related deferred income tax effects, are accumulated in the marketable securities adjustment component of shareholders' deficit. See Note 4. Realized gains or losses are computed based on specific identification of the securities sold.

Prior to the adoption of Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities" as of December 31, 1993, marketable securities were generally carried at the lower of aggregate market or amortized cost and unrealized net gains were not recognized.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in joint ventures

Investments in 20% to 50%-owned entities are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted, not exceeding ten years.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to forty years for buildings and three to twenty years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Long-term debt

Long-term debt is stated net of unamortized original issue discount ("OID"). OID and deferred financing costs are amortized over the life of the applicable issue by the interest method.

Employee benefit plans

Accounting and funding policies for retirement plans and postretirement benefits other than pensions ("OPEB") are described in Note 11.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

Loss per share of common stock

Loss per share of common stock is based upon the weighted average number of common shares outstanding. Common stock equivalents are excluded from the computation because they are antidilutive or the dilutive effect is not material.

Note 3 - Business and geographic segments:

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and leveling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. General corporate assets consist principally of cash, cash equivalents and marketable securities. At December 31, 1994, the net amounts of non-U.S. subsidiaries included in consolidated net assets approximated $72 million.

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Business segments			
Net sales:			
Kronos	$ 784,568	$ 697,048	$770,077
Rheox	108,897	108,275	117,877
	$ 893,465	$ 805,323	$887,954
Operating income:			
Kronos	$ 81,941	$ 36,146	$ 80,515
Rheox	28,792	26,254	30,837
	110,733	62,400	111,352
General corporate income (expense):			
Securities earnings	8,216	8,467	3,855
Expenses, net	(43,452)	(41,516)	(44,686)
Interest expense	(118,511)	(99,119)	(83,926)
	$ (43,014)	$ (69,768)	$(13,405)
Capital expenditures:			
Kronos	$ 81,872	$ 46,913	$ 34,522
Rheox	3,064	1,069	2,283
General corporate	214	4	126
	$ 85,150	$ 47,986	$ 36,931
Depreciation, depletion and amortization:			
Kronos	$ 44,360	$ 42,877	$ 31,156
Rheox	3,184	3,176	3,153
General corporate	285	287	283
	$ 47,829	$ 46,340	$ 34,592
Geographic areas			
Net sales - point of origin:			
United States	$ 238,170	$ 270,288	$ 303,475
Europe	643,670	519,064	587,291
Canada	138,656	132,930	122,957
Eliminations	(127,031)	(116,959)	(125,769)
	$ 893,465	$ 805,323	$ 887,954

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Net sales - point of destination:			
United States	$ 204,270	$ 217,892	$ 238,568
Europe	518,711	418,072	468,915
Canada	72,692	76,078	64,374
Other	97,792	93,281	116,097
	$ 893,465	$ 805,323	$ 887,954
Operating income:			
United States	$ 629	$ 20,981	$ 49,358
Europe	81,805	19,658	50,273
Canada	28,299	21,761	11,721
	$ 110,733	$ 62,400	$ 111,352

	December 31,		
	1992	1993	1994
	(In thousands)		
Identifiable assets			
Business segments:			
Kronos	$1,246,186	$1,008,453	$ 950,200
Rheox	76,248	75,362	83,176
General corporate	149,673	122,734	129,034
	$1,472,107	$1,206,549	$1,162,410
Geographic segments:			
United States	$ 498,029	$ 326,831	$ 308,017
Europe	671,349	622,826	594,921
Canada	153,056	134,158	130,438
General corporate	149,673	122,734	129,034
	$1,472,107	$1,206,549	$1,162,410

Note 4 - Marketable securities and securities transactions:

	December 31,	
	1993	1994
	(In thousands)	
Trading securities - current U.S. Treasury securities:		
Unrealized gains (losses)	$ 52	$(1,124)
Cost	40,993	26,289
Aggregate market	$41,045	$25,165
Available-for-sale securities - noncurrent marketable equity securities:		
Unrealized gains	$ 33	$ 3,357
Unrealized losses	(2,951)	(3,374)
Cost	21,346	21,346
Aggregate market	$18,428	$21,329

Net gains and losses from securities transactions are composed of:

	Years ended December 31,		
	1992	1993	1994
		(In thousands)	
Unrealized gains (losses)	$ (565)	$3,520	$(1,177)
Realized gains (losses)	478	843	(43)
Writedown of noncurrent marketable equity securities	(5,931)	-	-
	$(6,018)	$4,363	$(1,220)

Note 5 - Inventories:

	December 31,	
	1993	1994
	(In thousands)	
Raw materials	$ 19,785	$ 30,118
Work in process	7,173	7,655
Finished products	135,102	112,410
Supplies	32,107	34,990
	$194,167	$185,173

Note 6 - Investment in joint ventures:

	December 31,	
	1993	1994
	(In thousands)	
TiO_2 manufacturing joint venture	$188,031	$185,122
Other	2,756	2,358
	$190,787	$187,480

In October 1993, Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, formed a manufacturing joint venture, Louisiana Pigment Company, L.P. ("LPC"), with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). LPC, which is equally owned by KLA and a subsidiary of Tioxide, owns and operates the Louisiana chloride process TiO_2 plant formerly owned by KLA. LPC has long-term debt that is collateralized by the partnership interests of the partners and substantially all of the assets of LPC. The long-term debt consists of two tranches, one attributable to each partner, and each tranche is serviced through (i) the purchase of the plant's TiO_2 output in equal quantities by the partners and (ii) cash capital contributions. KLA is required to purchase one-half of the TiO_2 produced by LPC. KLA's tranche of LPC's debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche. See Note 10.

LPC is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of LPC's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from LPC is sold, and its share of the interest expense is reported as a component of interest expense.

Summary balance sheets of LPC are shown below.

	December 31,	
	1993	1994
	(In thousands)	
ASSETS		
Current assets	$ 44,477	$ 38,052
Other assets	2,376	1,969
Property and equipment, net	347,344	344,806
	$394,197	$384,827
LIABILITIES AND PARTNERS' EQUITY		
Long-term debt, including current portion:		
Kronos tranche	$104,143	$ 88,715
Tioxide tranche	102,600	81,000
Other liabilities, primarily current	16,197	12,355
	222,940	182,070
Partners' equity	171,257	202,757
	$394,197	$384,827

Summary income statements of LPC are shown below.

	Period from October 18, 1993 to December 31, 1993	Year ended December 31, 1994
Revenues and other income:		
Kronos	$12,713	$ 70,492
Tioxide	12,617	67,218
Interest income	72	462
	25,402	138,172
Cost and expenses:		
Cost of sales	22,803	126,972
General and administrative	443	572
Interest	2,156	10,628
	25,402	138,172
Net income	$ -	$ -

Note 7 - Other noncurrent assets:

	December 31, 1993	December 31, 1994
	(In thousands)	
Intangible assets, net of accumulated amortization of $11,941 and $16,149	$15,317	$13,957
Deferred financing costs, net	18,954	16,079
Other	8,084	7,231
	$42,355	$37,267

Note 8 - Accounts payable and accrued liabilities:

	December 31, 1993	December 31, 1994
	(In thousands)	
Accounts payable	$ 89,010	$ 74,903
Accrued liabilities:		
Employee benefits	32,350	34,209
Environmental costs	14,517	10,433
Interest	6,933	6,485
Miscellaneous taxes	2,240	7,336
Other	32,215	34,961
	88,255	93,424
	$177,265	$168,327

Note 9 - Other noncurrent liabilities:

	December 31, 1993	December 31, 1994
	(In thousands)	
Environmental costs	$ 70,789	$ 93,655
Insurance claims expenses	10,299	14,716
Deferred technology fee income	26,881	18,305
Employee benefits	10,084	12,322
Other	3,256	2,520
	$121,309	$141,518

Note 10 - Long-term debt:

	December 31, 1993	December 31, 1994
	(In thousands)	
NL Industries:		
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	102,627	116,409
	352,627	366,409
Kronos:		
DM bank credit facility (DM 548,000 and DM 397,610, respectively)	316,032	255,703
LPC term loan	104,143	88,715
Other	14,513	10,507
	434,688	354,925
Rheox:		
Bank term loan	82,500	67,500
Other	1,070	815
	83,570	68,315
	870,885	789,649
Less current maturities	35,716	42,887
	$835,169	$746,762

The Company's $250 million principal amount of 11.75% Senior Secured Notes due 2003 and $188 million principal amount at maturity ($100 million proceeds at issuance) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes") are collateralized by a series of intercompany notes from Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, to NL, the terms of which mirror those of the respective Notes (the "Mirror Notes"). The Senior Secured Notes are also collateralized by a first priority lien on the stock of Kronos and a second priority lien on the stock of Rheox. The Senior Secured Notes and the Senior Secured Discount Notes are redeemable, at the Company's option, after October 2000 and October 1998, respectively, except that up to one-third of the aggregate principal amount of the Senior Secured Discount Notes are redeemable

(at 113% of the accreted value) upon any Common Stock Offering, as defined, prior to October 1996. For redemptions, other than redemptions pursuant to any Common Stock Offering, the redemption prices range from 101.5% (starting October 2000) declining to 100% (after October 2001) of the principal amount for the Senior Secured Notes and range from 106% (starting October 1998) declining to 100% (after October 2001) of the accreted value of the Senior Secured Discount Notes. In the event of a Change of Control, as defined, the Company would be required to make an offer to purchase the Notes at 101% of the principal amount of the Senior Secured Notes and 101% of the accreted value of the Senior Secured Discount Notes. The Notes are issued pursuant to indentures which contain a number of covenants and restrictions which, among other things, restrict the ability of the Company and its subsidiaries to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of its assets to, another entity. At December 31, 1994, there were no amounts available for payment for dividends pursuant to the terms of the indentures. The Senior Secured Discount Notes do not require cash interest payments for the first five years. The net carrying value of the Senior Secured Discount Notes per $100 principal amount at maturity was $54.73 and $62.08 at December 31, 1993 and 1994, respectively.

The DM credit facility, as amended, consists of a DM 398 million term loan due from March 1997 to September 1999 and a DM 250 million revolving credit facility due no later than September 2000. At December 31, 1994, all of the revolving credit facility was available for future borrowings by KII; however, DM 125 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments. Borrowings bear interest at DM LIBOR plus 1.625% (8.19% and 6.938% at December 31, 1993 and 1994, respectively). NL and Kronos have agreed, under certain circumstances, to provide KII with up to DM 125 million through January 1, 2001. The DM credit facility is collateralized by pledges of the stock of certain KII subsidiaries. The credit agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Borrowings under KLA's tranche of LPC's term loan bear interest at U.S. LIBOR plus 1.625% (5.01% and 8.125% at December 31, 1993 and 1994, respectively) and are repayable in quarterly installments through September 2000. See Note 6.

Rheox has a credit agreement providing for a seven-year term loan due in quarterly installments through December 1997 and a $15 million revolving credit/letter of credit facility due September 1995. Borrowings bear interest, at Rheox's option, at prime rate plus 1.5% or U.S. LIBOR plus 2.5% (5.83% and 9.01% at December 31, 1993 and 1994, respectively), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's ability to incur additional indebtedness, restricts its dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type. In connection with the credit agreement, Rheox had entered into interest rate swap agreements to mitigate the impact of changes in interest rates on the term loan. These swap agreements, which matured in December 1994, effectively converted the interest rate on $60 million of the loan from a variable rate to a fixed rate of 8.1%. At December 31, 1993, the effective interest rate on the term loan, including the impact of the swap agreements, was 7.3%.

Unused lines of credit available for borrowings under the Rheox U.S. facility and non-U.S. credit facilities totalled $14 million and $195 million, respectively, at December 31, 1994. Of the non-U.S. credit facilities available, $80 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments.

The aggregate maturities of long-term debt at December 31, 1994 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1995	$ 42,887
1996	41,308
1997	97,612
1998	101,354
1999	128,457
2000 and thereafter	449,122
	860,740
Less unamortized original issue discount on the Senior Secured Discount Notes	71,091
	$789,649

Note 11 - Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was $1.0 million, nil and $.3 million in 1992, 1993 and 1994, respectively.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations were (i) discount rates - 8.5% (1993 - 7% to 8.5%) and (ii) rates of increase in future compensation levels - nil to 6%. The expected long-term rates of return on assets used ranged from 8.5% to 9.0% (1993 - 8% to 10%). Plan assets are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

SFAS No. 87, "Employers' Accounting for Pension Costs" requires that an additional pension liability be recognized when the unfunded accumulated pension benefit obligation exceeds the unfunded accrued pension liability. Variances from actuarially-assumed rates, including the rate of return on pension plan assets, will result in additional increases or decreases in accrued pension liabilities, pension expense and funding requirements in future periods. At December 31, 1994, approximately 60% of the projected benefit obligations in excess of plan assets relate to non-U.S. plans.

	Assets exceed accumulated benefits December 31,		Accumulated benefits exceed assets December 31,	
	1993	1994	1993	1994
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$40,612	$43,248	$137,156	$132,317
Nonvested benefits	3,160	3,390	2,893	2,155
Accumulated benefit obligations	43,772	46,638	140,049	134,472
Effect of projected salary increases	6,235	5,938	17,664	19,620
Projected benefit obligations ("PBO")	50,007	52,576	157,713	154,092
Plan assets at fair value	63,565	66,293	88,881	108,377
Plan assets over (under) PBO	13,558	13,717	(68,832)	(45,715)
Unrecognized net loss (gain) from experience different from actuarial assumptions	774	2,876	(4,958)	(32,808)
Unrecognized prior service cost (credit)	3,121	3,195	(3,879)	(3,255)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(1,146)	(459)	2,586	2,606
Adjustment required to recognize minimum liability	-	-	(3,442)	(1,635)
Total prepaid (accrued) pension cost	16,307	19,329	(78,525)	(80,807)
Less current portion	-	-	(5,919)	(4,565)
Noncurrent prepaid (accrued) pension cost	$16,307	$19,329	$(72,606)	$(76,242)

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Service cost benefits	$ 4,272	$ 4,082	$ 4,905
Interest cost on PBO	13,804	14,430	15,371
Actual return on plan assets	(12,248)	(15,647)	(8,039)
Net amortization and deferrals	(1,346)	2,413	(5,940)
	$ 4,482	$ 5,278	$ 6,297

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. In 1989, the Company began phasing out such benefits for currently active U.S. employees over a ten-year period. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. The Company's policy is to fund medical claims as they are incurred, net of any contributions by the retirees. Effective January 1, 1993, the Company's postretirement medical plans were revised to, among other things, increase the deductible and maximum out-of-pocket amounts, increase the retiree copayment percentage and pass on future cost increases to the participants through increased contributions or decreased reimbursements.

The rates used in determining the actuarial present value of the accumulated benefit obligations were (i) discount rate - 8.5% (1993 - 7%), (ii) rate of increase in future compensation levels - 6% (1993 - 4%), (iii) rate of increase in future health care costs - 10% in 1995, gradually declining to 5% in 2000 and thereafter and (iv) expected return on plan assets - 9%. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.2 million in 1994, and the actuarial present value of accumulated benefit obligations at December 31, 1994 would have increased by approximately $2.0 million.

	December 31, 1993	December 31, 1994
	(In thousands)	
Actuarial present value of accumulated benefit obligations:		
Retiree benefits	$61,686	$51,895
Other fully eligible active plan participants	1,106	1,229
Other active plan participants	1,962	1,797
	64,754	54,921
Plan assets at fair value	8,095	7,217
Accumulated postretirement benefit obligations in excess of plan assets	56,659	47,704
Unrecognized net gain from experience different from actuarial assumptions	2,390	9,251
Unrecognized prior service credit	15,145	13,672
Total accrued postretirement benefits cost	74,194	70,627
Less current portion	5,872	5,328
Noncurrent accrued postretirement benefits cost	$68,322	$65,299

The components of the Company's net periodic postretirement benefit cost are set forth below:

	Years ended December 31, 1992	1993	1994
	(In thousands)		
Interest cost on accumulated benefit obligations	$6,189	$ 4,911	$ 4,338
Service cost benefits earned during the year	130	127	99
Expected return on plan assets	(650)	(647)	(688)
Net amortization and deferrals	-	(1,473)	(1,495)
	$5,669	$ 2,918	$ 2,254

Note 12 - Shareholders' deficit:

Common stock

	Shares of common stock: Issued	Treasury stock	Outstanding
	(In thousands)		
Balance at December 31, 1991	66,839	15,638	51,201
Purchase of treasury shares	-	311	(311)
Balance at December 31, 1992 and 1993	66,839	15,949	50,890
Treasury shares reissued	-	(162)	162
Balance at December 31, 1994	66,839	15,787	51,052

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options and SARs granted pursuant to similar plans which preceded the NL Option Plan ("the Predecessor Option Plans") remain outstanding at December 31, 1994, no additional options may be granted under the Predecessor Option Plans.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to or greater than 100% of the market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan. At December 31, 1994, 100,000 shares of common stock, restricted for periods up to 14 months, are included in common shares outstanding.

Changes in outstanding options granted pursuant to the NL Option Plan and the Predecessor Option Plans are summarized in the table below. At December 31, 1994, options to purchase 850,582 shares were exercisable and options to purchase 388,200 shares become exercisable in 1995. Of the exercisable options at December 31, 1994, options to purchase 468,912 shares had exercise prices less than the Company's December 31, 1994 quoted market price of $12.625 per share. At December 31, 1994, an aggregate of 2.7 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands, except per share amounts)		
Outstanding at December 31, 1991	1,051	$8.65 - 26.17	$15,992
Granted	237	9.31	2,207
Canceled or expired	(10)	9.31 - 26.17	(126)
Outstanding at December 31, 1992	1,278	8.65 - 24.19	18,073
Granted	451	5.00 - 7.00	2,645
Canceled or expired	(3)	8.65 - 10.78	(27)
Outstanding at December 31, 1993	1,726	5.00 - 24.19	20,691
Granted	673	8.69 - 10.69	6,297
Exercised	(13)	9.31 - 10.50	(119)
Canceled or expired	(13)	5.00 - 10.13	(114)
Outstanding at December 31, 1994	2,373	$5.00 - 24.19	$26,755

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance.

Note 13 - Income taxes:

The components of (i) loss before income taxes, minority interest, extraordinary item and cumulative effect of changes in accounting principles ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 35% (34% in 1992), (iii) the provision for income taxes and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Pretax income (loss):			
U.S.	$(52,724)	$(41,579)	$ (6,241)
Non-U.S.	9,710	(28,189)	(7,164)
	$(43,014)	$(69,768)	$(13,405)
Expected tax benefit	$(14,625)	$(24,419)	$ (4,692)
Non-U.S. tax rates	(11,224)	(15,620)	(7,108)
Rate change adjustment of deferred taxes	-	6,823	-
Valuation allowance	20,237	40,827	24,309
Settlement of U.S. tax audits	-	-	(5,437)
Incremental tax on income of companies not included in the NL Tax Group	5,385	2,553	790
Other, net	686	2,549	1,872
	$ 459	$ 12,713	$ 9,734
Provision for income taxes:			
Current income tax expense (benefit):			
U.S.	$ (2,395)	$ (45)	$ (4,747)
Non-U.S.	21,803	14,083	2,574
	19,408	14,038	(2,173)
Deferred income tax expense (benefit):			
U.S.	33	(140)	4,405
Non-U.S.	(18,982)	(1,185)	7,502
	(18,949)	(1,325)	11,907
	$ 459	$ 12,713	$ 9,734

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Comprehensive tax provision (benefit) allocable to:			
Pretax income (loss)	$ 459	$12,713	$9,734
Shareholders' deficit, principally deferred income taxes allocable to currency translation and marketable securities adjustments	(1,196)	(1,243)	7
	$ (737)	$11,470	$9,741

Changes in deferred income taxes related to the adoption of new accounting standards are disclosed in Note 19. The Company's valuation allowance increased in the aggregate (including the effect of foreign currency translation) by $47 million in 1993 and $31 million in 1994. The components of the net deferred tax liability are summarized below:

	December 31,			
	1993		1994	
	Deferred tax		Deferred tax	
	Assets	Liabilities	Assets	Liabilities
	(In thousands)			
Tax effect of temporary differences relating to:				
Inventories	$ 3,965	$ (2,532)	$ 4,275	$ (2,885)
Property and equipment	2,694	(90,356)	423	(102,817)
Accrued postretirement benefits cost	25,955	-	24,968	-
Accrued pension cost	9,712	(9,224)	9,363	(11,529)
Accrued environmental costs	26,784	-	34,108	-
Other accrued liabilities and deductible differences	22,070	-	32,031	-
Other taxable differences	-	(104,940)	-	(139,378)
Tax on unremitted earnings of non-U.S. subsidiaries	577	(27,742)	452	(22,416)
Tax loss and tax credit carryforwards	137,706	-	162,906	-
Valuation allowance	(133,377)	-	(164,500)	-
Gross deferred tax assets (liabilities)	96,086	(234,794)	104,026	(279,025)
Reclassification, principally netting by tax jurisdiction	(92,194)	92,194	(99,103)	99,103
Net total deferred tax assets (liabilities)	3,892	(142,600)	4,923	(179,922)
Net current deferred tax assets (liabilities)	3,315	(3,623)	2,177	(1,590)
Net noncurrent deferred tax assets (liabilities)	$ 577	$(138,977)	$ 2,746	$(178,332)

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain assessment reports which had proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million), including interest, on a tentative basis. The Company applied DM 174 million ($108 million) of the German tentative tax refunds to reduce outstanding borrowings under its DM credit facility. The examination of the Company's 1989 and 1990 income tax returns is continuing and additional substantial proposed tax deficiency assessments are expected. Although the Company believes that it will ultimately prevail, the Company has granted a DM 100 million ($64 million at December 31, 1994) lien on its Nordenham, Germany TiO_2 plant, and may be required to provide additional security in favor of the German tax authorities until the assessments proposing tax deficiencies are resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. In November 1994, the Joint Committee on Taxation (Congressional Review) approved the Company's settlement with the Internal Revenue Service regarding examinations of the Company's 1985 and 1986 U.S. federal income tax returns which resulted in a $5 million tax benefit. In 1995, the Company expects to make examination settlement payments of $20 million in final settlement of certain German tax examinations relating to tax years prior to 1989.

At December 31, 1994, the Company had approximately $300 million of income tax loss carryforwards with no expiration dates, primarily in Germany. As a result of the German tentative tax refunds and redetermination of prior year's U.S. tax liabilities, at December 31, 1994, the Company does not anticipate having any U.S. tax attributes, including net operating loss and alternative minimum tax credits, available for carryforward for U.S. federal income tax purposes.

Note 14 - Other income, net:

	Years ended December 31,		
	1992	1993	1994
	(In thousands)		
Securities earnings:			
Interest and dividends	$14,234	$ 4,104	$ 5,075
Securities transactions	(6,018)	4,363	(1,220)
	8,216	8,467	3,855
Litigation settlement gains	-	-	22,978
Technology fee income	-	2,048	10,344
Currency transaction gains, net	1,735	3,299	1,735
Royalty income	1,014	2,016	1,508
Disposition of property and equipment	(1,419)	(199)	(1,981)
Other, net	5,251	6,453	6,389
	$14,797	$22,084	$44,828

Litigation settlement gains includes $20 million related to the Company's 1994 settlement of its lawsuit against Lockheed Corporation. Technology fee income is being amortized by the straight-line method over a three-year period beginning October 1993.

Note 15 - Other items:

Advertising costs, expensed as incurred, were $2.6 million in 1992, $2.1 million in 1993 and $1.9 million in 1994.

Research, development and sales technical support costs, expensed as incurred, approximated $11 million in 1992 and $10 million in both 1993 and 1994.

Interest capitalized in connection with long-term capital projects was $9 million in 1992 and $1 million in both 1993 and 1994.

Note 16 - Extraordinary item:

The extraordinary loss in 1993 relates to the settlement of certain interest rate swap agreements for $20 million in cash in conjunction with prepaying the Louisiana plant indebtedness and from the write-off of deferred financing costs related to such prepayment and the paydown of a portion of the DM bank credit facility. The Louisiana plant indebtedness loan agreement required the Company to enter into the interest rate swap agreements and both the debt and related swaps were collateralized by the Louisiana plant. The Company was required to prepay the Louisiana plant indebtedness and settle the swaps prior to the formation of LPC (thus making the swaps inseparable from the debt).

Note 17 - Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company, the Company from time to time considers, reviews and evaluates, and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, and restrictions under the indentures and other agreements, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

The Company is a party to an intercorporate services agreements with Valhi and Contran (the "Valhi and Contran ISAs") whereby Valhi and Contran provide certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi and Contran ISAs was $1.4 million in 1992, $.7 million in 1993 and $.6 million in 1994.

Baroid Corporation, a former wholly-owned subsidiary of the Company and a subsidiary of Dresser Industries, Inc., and the Company were parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis subject to termination or renewal by mutual agreement. Management services fee expense pursuant to the Baroid ISA approximated $2.3 million in 1992, $.3 million in 1993 and $.2 million in 1994.

The Company was party to an intercorporate services agreement with Tremont (the "Tremont ISA") until June 1993 when the agreement was terminated. Under the terms of the contract, the Company provided certain management, financial and legal services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.5 million in 1992 and $.1 million in 1993.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.6 million in 1992, $.4 million in 1993 and nil in 1994.

Sales to Baroid in the ordinary course of business were $2.1 million in 1992 and $1.8 million in both 1993 and 1994.

Purchases in the ordinary course of business from unconsolidated joint ventures, including LPC, were approximately $9 million in 1992, $22 million in 1993 and $74 million in 1994.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (nil in 1992 and 1993 and $64,000 in 1994) in a manner similar to accounting for SARs. At December 31, 1994, employees of the Company held options to purchase 365,000 shares (356,000 shares vested) of Valhi common stock at exercise prices ranging from $5 to $15 per share. At December 31, 1994, 30,000 of these options were exercisable at prices less than Valhi's quoted market price per share of $7.625.

The Company and TRE Insurance, a wholly-owned subsidiary of Tremont, are parties to an Insurance Sharing Agreement with respect to certain loss payments and reserves established by TRE Insurance that (i) arise out of claims against other entities for which the Company is responsible and (ii) are subject to payment by TRE Insurance under certain reinsurance contracts. Also, TRE Insurance will credit the Company with respect to certain underwriting profits or credit recoveries that TRE Insurance receives from independent reinsurers that relate to retained liabilities.

Net amounts payable to affiliates are summarized in the following table.

	December 31,	
	1993	1994
	(In thousands)	
Tremont Corporation	$4,777	$ 4,780
LPC	4,789	6,565
Other	-	3
	$9,566	$11,348

Amounts payable to LPC are generally for the purchase of TiO_2 (see Note 6), and amounts payable to Tremont relate to the Company's Insurance Sharing Agreement described above.

Note 18 - Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreements restrict the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expense aggregated $9 million in 1992 and $8 million in both 1993 and 1994. At December 31, 1993, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1995	$ 1,782	$1,582
1996	1,550	1,083
1997	1,432	602
1998	1,455	325
1999	1,325	116
2000 and thereafter	13,200	17
	$20,744	$3,725

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities and certain others have been asserted as class actions. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. The Company has not accrued any amounts for the pending lead pigment litigation. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the Company may be jointly and severally liable for such costs, in most cases, it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. At December 31, 1994, the Company had accrued $87 million in respect of those environmental matters which are reasonably estimable. It is not possible to estimate the range of costs for certain sites. The upper end of the range of reasonably possible costs to the Company for sites which it is possible to estimate costs is approximately $160 million. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of

amounts currently estimated by the Company to be required for such matters. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. Further, there can be no assurance that additional environmental matters will not arise in the future.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Concentrations of credit risk

Sales of TiO_2 accounted for almost 90% of net sales during the past three years. TiO_2 is sold to the paint, paper and plastics industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. TiO_2 is sold to over 5,000 customers, none of which represents a significant portion of net sales. In each of the past three years, approximately one-half of the Company's TiO_2 sales by volume were to Europe and approximately 33% in 1992, 38% in 1993 and 36% in 1994 of sales were attributable to North America.

Consolidated cash and cash equivalents includes $64 million and $80 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1993 and 1994, respectively, of which $56 million and $73 million, respectively, of such securities are held in trust for the Company by a single U.S. bank.

Note 19 - Changes in accounting principles:

In 1993, the Company adopted SFAS No. 115 (marketable securities) as of December 31, 1993. In 1992, the Company (i) elected early compliance with both SFAS No. 106 (OPEB) and SFAS No. 109 (income taxes) as of January 1, 1992; (ii) elected immediate recognition of the OPEB transition obligation; and (iii) elected to apply SFAS No. 109 prospectively and not restate prior years. The cumulative effect of changes in accounting principles adjustments are shown below.

	Amount reflected in	
	Earnings	Equity component
	(In thousands)	
Increase (decrease) in net assets at December 31, 1993 - SFAS No. 115:		
Marketable securities	$1,872	$(1,872)
Deferred income taxes	(655)	655
	$1,217	$(1,217)

	Amount
	(In thousands)
Increase (decrease) in net assets at January 1, 1992 - SFAS Nos. 106 and 109:	
Accrued postretirement benefits cost	$(74,918)
Deferred income taxes, net	43,114
	$(31,804)

Note 20 - Financial instruments:

Summarized below is the estimated fair value and related net carrying value of the Company's financial instruments.

	December 31, 1993		December 31, 1994	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In millions)			
Cash and cash equivalents	$ 106.6	$106.6	$ 131.1	$131.1
Marketable securities - classified as:				
Trading securities	41.1	41.1	25.2	25.2
Available-for-sale	18.4	18.4	21.3	21.3
Notes payable and long-term debt:				
Fixed rate with market quotes:				
Senior Secured Notes	$ 250.0	$260.0	$ 250.0	$247.1
Senior Secured Discount Notes	102.6	108.3	116.4	114.8
Rheox debt with rates fixed via interest rate swaps	60.0	61.0	-	-
Variable rate debt	458.3	458.3	423.2	423.2
Common shareholders' equity (deficit)	$(264.8)	$229.0	$(293.1)	$644.5

Fair value of the Company's marketable securities and Notes are based upon quoted market prices and the fair value of the Company's common shareholder's equity (deficit) is based upon quoted market prices for NL's common stock. The fair value of debt on which interest rates have been effectively fixed through the use of interest rate swaps (a portion of Rheox's U.S. term loans in 1993) is deemed to approximate the book value of the debt plus or minus the fair value of the related swaps. The fair value of Rheox's interest rate swaps is estimated to be a $1 million payable at December 31, 1993. Such fair value represents the estimated amount the Company would pay if it were to terminate the swap agreements at that date. The fair value of swap agreements is estimated by obtaining quotes from the counter party financial institutions. The fair value of variable interest rate debt is deemed to approximate book value. With the exception of certain interest rate cap agreements that have a carrying value of $.5 million and a fair value of nil, the Company holds no derivative financial instruments at December 31, 1994.

Note 21 - Quarterly financial data (unaudited):

	Quarter ended,			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Year ended December 31, 1993:				
Net sales	$198,518	$221,378	$202,096	$183,331
Cost of sales	142,506	171,671	156,894	141,296
Operating income	23,105	15,166	12,773	11,356
Loss before extraordinary item and cumulative effect of change in accounting principle	$(13,490)	$(28,002)	$(18,722)	$(22,997)
Extraordinary item	-	-	-	(27,815)
Cumulative effect of change in accounting principle	-	-	-	1,217
Net loss	$(13,490)	$(28,002)	$(18,722)	$(49,595)
Per share of common stock:				
Loss before extraordinary item and cumulative effect of change in accounting principle	$ (.27)	$ (.55)	$ (.37)	$ (.44)
Extraordinary item	-	-	-	(.55)
Cumulative effect of change in accounting principle	-	-	-	.02
Net loss	$ (.27)	$ (.55)	$ (.37)	$ (.97)
Weighted average shares outstanding	50,890	50,890	50,890	50,890
Year ended December 31, 1994:				
Net sales	$201,849	$237,113	$225,200	$223,792
Cost of sales	146,956	178,925	168,033	155,831
Operating income	22,313	26,242	27,093	35,704
Net income (loss)	$ (6,367)	$(15,534)	$ (4,578)	$ 2,497
Net income (loss) per share of common stock	$ (.12)	$ (.30)	$ (.09)	$ .05
Weighted average shares outstanding	50,965	51,040	51,040	51,045

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 19 to the consolidated financial statements, the Company changed its method of accounting for marketable securities in 1993 and, the Company changed its method of accounting for postretirement benefits other than pensions and income taxes in 1992. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 3, 1995

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets

December 31, 1993 and 1994

(In thousands)

	1993	1994
Current assets:		
Cash and cash equivalents	$ 11,107	$ 18,371
Marketable securities	41,045	25,165
Accounts and notes receivable	2,088	1,274
Receivable from subsidiaries	980	2,854
Prepaid expenses	248	747
Total current assets	55,468	48,411
Other assets:		
Marketable securities	18,428	21,329
Notes receivable from subsidiary	352,627	366,409
Investment in subsidiaries	(156,615)	(181,751)
Other	10,713	9,214
Total other assets	225,153	215,201
Property and equipment, net	3,925	3,732
	$ 284,546	$ 267,344
Current liabilities:		
Accounts payable and accrued liabilities	$ 38,176	$ 33,248
Payable to affiliates	4,777	4,783
Income taxes	93	186
Deferred income taxes	3,627	1,436
Total current liabilities	46,673	39,653
Noncurrent liabilities:		
Long-term debt	352,627	366,409
Deferred income taxes	27,182	9,546
Accrued pension cost	16,164	14,021
Accrued postretirement benefits cost	42,216	40,711
Other	64,479	90,086
Total noncurrent liabilities	502,668	520,773
Shareholders' deficit	(264,795)	(293,082)
	$ 284,546	$ 267,344

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Operations

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Revenues and other income:			
Equity in income (loss) of subsidiaries	$(10,703)	$ (49,766)	$ 7,925
Interest and dividends	2,829	3,622	2,538
Interest income from subsidiary	-	8,358	43,157
Securities transactions	2,691	3,637	(1,220)
Other income, net	1,791	2,597	3,135
	(3,392)	(31,552)	55,535
Costs and expenses:			
General and administrative	45,243	44,113	69,875
Interest	1,598	13,771	44,003
	46,841	57,884	113,878
Loss before income taxes, extraordinary item and cumulative effect of changes in accounting principles	(50,233)	(89,436)	(58,343)
Income tax benefit	5,637	6,225	34,361
Loss before extraordinary item and cumulative effect of changes in accounting principles	(44,596)	(83,211)	(23,982)
Extraordinary item - equity in income of subsidiaries	-	(27,815)	-
Cumulative effect of changes in accounting principles:			
NL	(30,546)	1,217	-
Equity in income of subsidiaries	(1,258)	-	-
	(31,804)	1,217	-
Net loss	$(76,400)	$(109,809)	$(23,982)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from operating activities:			
Net loss	$(76,400)	$(109,809)	$(23,982)
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary item and cumulative effect of changes in accounting principles	10,703	49,766	(7,925)
Extraordinary item	-	27,815	-
Cumulative effect of changes in accounting principles	1,258	-	-
Distributions	54,000	-	30,000
Non-cash interest expense	-	165	845
Deferred income taxes	843	1,510	(20,577)
Securities transactions	(2,691)	(3,637)	1,220
Cumulative effect of changes in accounting principles	30,546	(1,217)	-
Other, net	400	(1,268)	(3,836)
	18,659	(36,675)	(24,255)
Change in assets and liabilities, net	6,340	14,428	23,263
Marketable trading securities:			
Purchases	-	-	(870)
Dispositions	-	-	15,530
Net cash provided (used) by operating activities	24,999	(22,247)	13,668
Cash flows from investing activities:			
Investment in subsidiary	(3,896)	(6,478)	(6,630)
Capital expenditures	(214)	(4)	(126)
Loans to subsidiaries	-	(341,500)	-
Purchases of marketable securities	(1,238)	(10,899)	-
Proceeds from disposition of marketable securities	6,735	69,232	-
Other, net	(768)	667	402
Net cash provided (used) by investing activities	619	(288,982)	(6,354)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows (Continued)

Years ended December 31, 1992, 1993 and 1994

(In thousands)

	1992	1993	1994
Cash flows from financing activities:			
Borrowings of (principal payments on):			
Long-term debt	$(14,873)	$ 327,340	$ (170)
Loans from affiliates	12,298	(16,047)	-
Dividends paid	(17,807)	-	-
Other, net	(3,660)	-	120
Net cash provided (used) by financing activities	(24,042)	311,293	(50)
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	24,999	(22,247)	13,668
Investing activities	619	(288,982)	(6,354)
Financing activities	(24,042)	311,293	(50)
Net change from operating, investing and financing activities	1,576	64	7,264
Balance at beginning of year	9,467	11,043	11,107
Balance at end of year	$ 11,043	$ 11,107	$ 18,371

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Notes to Condensed Financial Information

Note 1 - Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 - Net payable to (receivable from) subsidiaries and affiliates:

	December 31,	
	1993	1994
	(In thousands)	
Current:		
Tremont Corporation	$ 4,777	$ 4,780
Other	-	3
Kronos and Rheox:		
Income taxes	3,123	1,043
Other, net	(4,103)	(3,897)
	$ 3,797	$ 1,929
Noncurrent:		
Note receivable - Kronos	$(352,627)	$(366,409)

Note 3 - Long-term debt:

	December 31,	
	1993	1994
	(In thousands)	
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	102,627	116,409
	$352,627	$366,409

See Note 10 of the Consolidated Financial Statements for a description of the Notes.

The aggregate maturities of the Company's long-term debt at December 31, 1994 are shown in the table below.

	Amount (In thousands)
Senior Secured Notes due 2003	$250,000
Senior Secured Discount Notes due 2005	187,500
	437,500
Less unamortized original issue discount on the Senior Secured Discount Notes	71,091
	$366,409

The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through January 1, 2001.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Balance at end of year
Year ended December 31, 1994:					
Allowance for doubtful accounts and notes receivable	$ 3,008	$ 1,141	$ (616)(a)	$ 216	$ 3,749
Amortization of intangibles	$ 11,941	$ 2,901	$ -	$ 1,307	$ 16,149
Valuation allowance for deferred income taxes	$133,377	$24,309	$ -	$ 6,814	$164,500
Year ended December 31, 1993:					
Allowance for doubtful accounts and notes receivable	$ 2,385	$ 1,216	$ (476)(a)	$ (117)	$ 3,008
Amortization of intangibles	$ 9,792	$ 2,863	$ -	$ (714)	$ 11,941
Valuation allowance for deferred income taxes	$ 86,031	$50,562(b)	$ -	$(3,216)	$133,377
Year ended December 31, 1992:					
Allowance for doubtful accounts and notes receivable	$ 1,749	$ 945	$ (190)(a)	$ (119)	$ 2,385
Amortization of intangibles	$ 7,270	$ 2,989	$ -	$ (467)	$ 9,792
Valuation allowance for deferred income taxes	$ -	$86,031(b)	$ -	$ -	$ 86,031

(a) Amounts written off, less recoveries.

(b) Includes (i) amounts recorded at the date of adoption of SFAS 109 in 1992 reported as a component of cumulative effect of changes in accounting principles and (ii) amounts recorded as part of extraordinary item in 1993.

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer – NL Industries, Inc.

Kenneth R. Peak
President – Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman – Valhi, Inc. (diversified industrial management company)

Harold C. Simmons
Chairman of the Board – NL Industries, Inc.
Chairman, Chief Executive Officer and President – Valhi, Inc.

Michael A. Snetzer
Chairman and Chief Executive Officer – Medite Corporation

Dr. Lawrence A. Wigdor
President and Chief Executive Officer – Kronos and Rheox

Admiral Elmo R. Zumwalt, Jr. (retired)
President – Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee

Kenneth R. Peak, Chairman

Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee

Kenneth R. Peak, Chairman

General Thomas P. Stafford

Admiral Elmo R. Zumwalt, Jr.

Nominations Committee

Michael A. Snetzer, Chairman

Kenneth R. Peak

Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President; President and Chief Executive Officer – Kronos and Rheox

Joseph S. Compofelice
Vice President and Chief Financial Officer

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

SHAREHOLDER INFORMATION

Annual Meeting

The 1995 annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be marked, signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agency

First Chicago Trust Company of New York, P.O. Box 2500, Jersey City, New Jersey 07303-2500. Telephone (201) 324-0498.

Form 10–K Report

The Company's Annual Report on Form 10-K for the year ended December 31, 1994, filed with the Securities and Exchange Commission, is printed as part of this report. Additional copies are available to shareholders without charge. Requests should be addressed to Investor Relations Department, NL Industries, Inc., 16825 Northchase Drive, Suite 1200, Houston, Texas 77060, or made by calling (800) 285-3519.

NL Industries, Inc.

1995

Annual

Report

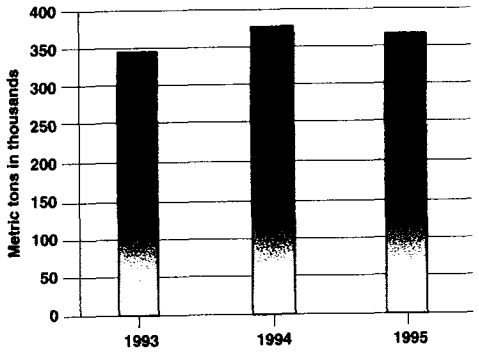
ANNUAL HIGHLIGHTS

($ in millions, except per share and volume data)	1993	1994	1995
Net sales	$ 805.3	$888.0	$1,023.9
Operating income	62.4	111.4	199.7
Net income (loss)	(109.8)	(24.0)	85.6
Net income (loss) per common share	$ (2.16)	$ (.47)	$ 1.66
Capital expenditures	$ 48.0	$ 36.9	$ 64.2
Cash and current marketable securities	$ 147.6	$156.3	$ 141.3
Total debt	$ 870.9	$789.6	$ 822.9
Net debt (1)	$ 723.3	$633.3	$ 681.6
EBITDA (2)	$ 67.2	$101.3	$ 212.1
Operational data (in metric tons):			
TiO_2 sales volumes	346,000	376,000	366,000
TiO_2 production volumes	352,000	357,000	393,000

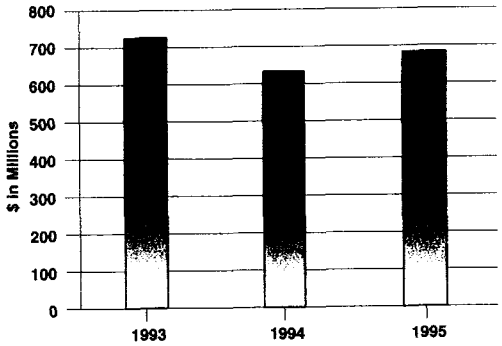
(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization.

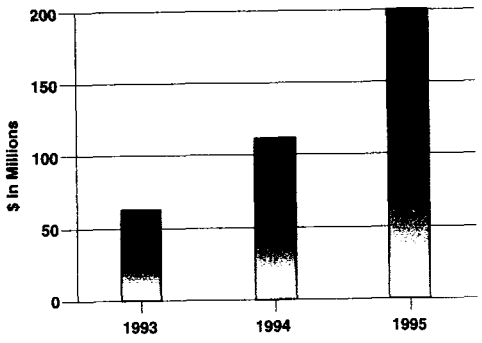
TiO2 Sales Volumes



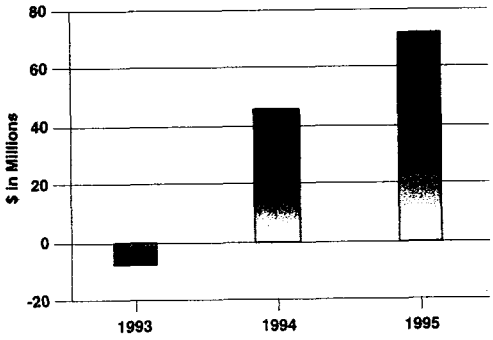
Net Debt



Operating Income



Cash Flow from Operating Activities



(1994 excludes German tax refunds)

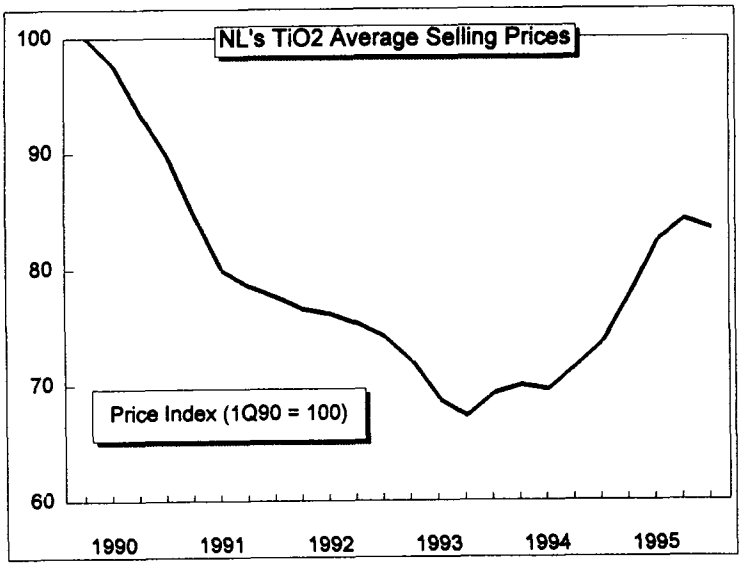
TO OUR SHAREHOLDERS

We are pleased to report solid financial results for NL in 1995. Improving performance by most of the world's economies during the past few years set the stage for an increase in TiO_2 prices beginning in the third quarter of 1993 through the first half of 1995. This price strength coupled with stringent management of our manufacturing costs and increased production volumes led to net income of $86 million in 1995 versus 1994's $24 million net loss. 1995 revenues climbed beyond the $1 billion level for the first time since 1989. Although we see some short-term softness in demand and pricing of TiO_2 in 1996, we remain optimistic about NL's continuing recovery over the longer term. Improvement would enable us to use our cash flow to reduce our debt levels and maintain our recently announced quarterly dividend of $.10 per share.

TiO_2 PRICING

Our operating results are closely tied to the selling price of TiO_2. While NL can affect minor components of the price equation, such as product differentiation, NL cannot control the major components. These include the strength of the economies in markets where we sell our product (i.e. demand) and industry capacity (i.e. supply).

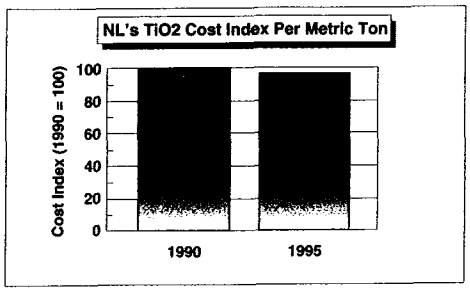
In the late 1980s industry capacity increased, partly in response to high TiO_2 prices. Unfortunately, much of this new capacity came on stream as worldwide economies cooled. As a result, prices decreased and NL's financial results suffered. In late 1993, prices began to rise as worldwide economies improved. Our customers built inventories in the latter part of 1994 and Kronos sold a record 376,000 metric tons of TiO_2 at prices that were 3% higher than 1993. Economies continued growing during the first half of 1995 and prices in the second quarter of 1995 were a full 13% higher than year-end 1994. During the last half of 1995, prices began to decline. NL's TiO_2 average prices in the fourth quarter of 1995 were 18% below the peak levels reached in the first quarter of 1990 indicating, we believe, that the industry may still have significant up-side potential.



The decrease in prices in the last half of 1995 appears to be attributable to a number of factors, including the following. First, price increases in the first half of the year outpaced economic conditions. Second, customers drew down inventories. And third, worldwide economies generally grew at a somewhat slower pace resulting in softened demand. Economic forecasts project lower gross domestic product growth rates in 1996 than 1995 in both Germany and the U.S. These factors, coupled with the increase in capacity resulting from major industry debottlenecking projects, causes us concern for pricing levels in 1996. However, over the longer term, we believe prices should rise as they are well below both the price level we believe is necessary to provide adequate returns to justify greenfield plant construction, and historical peaks.

CONTROLLING COSTS

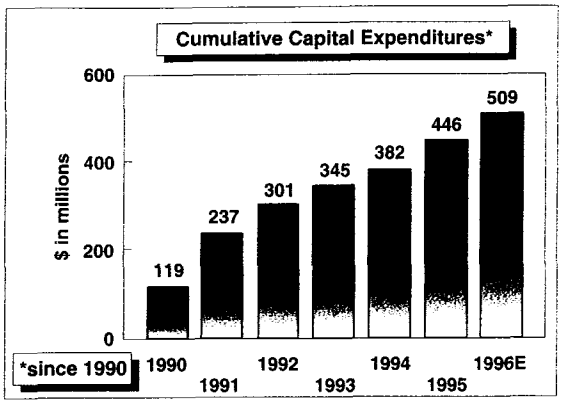
In 1995 we were able to operate our plants slightly above rated capacity, producing record volumes. In addition to having more product to sell, the cost per ton of product was reduced by spreading fixed annual costs over more tons produced. We have paid close attention to managing our expenses. Employment levels since 1990 have decreased 6%, and other costs have been kept in line as well. Because of higher selling prices, higher production volumes and lower unit costs, NL's TiO_2 operating margins rose from 10% in 1994 to 18% in 1995, although still well below peak operating margins of 34% reached in 1989. We have reduced production in 1996 to manage our inventory levels, and expect this will unfavorably impact financial results in 1996.

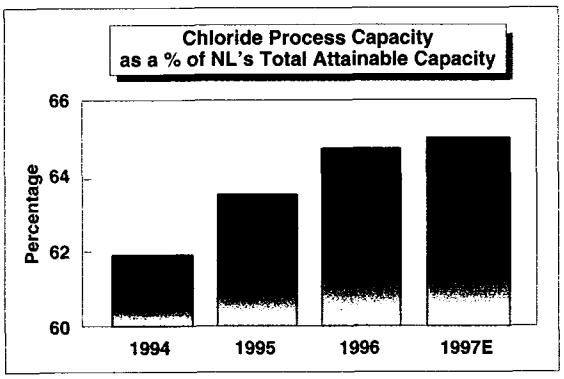


INVESTING IN THE FUTURE

NL invests its capital in two key areas. First, NL invests in plant expansions when the expected per ton return on assets is favorable. And second, NL invests in environmental improvements to comply with environmental regulations of the countries in which our manufacturing plants are located.

NL has continued to invest in plant expansions during the most recent downturn when investments made economic sense. Since 1990, NL has invested more than $400 million in capital projects and the annual attainable capacity has grown from 320,000 metric tons in 1990 to about 390,000 metric tons today. Currently, NL is spending $25 million on a 20,000 metric ton debottlenecking project that we expect to be fully on stream in 1997. This additional capacity will allow NL to more fully capitalize on cyclical upturns, without having to carry excessive fixed costs during future downturns. NL's new capacity is concentrated at our chloride process plants, where, most industry experts agree, the future growth of the industry lies. TiO_2 that is produced using the chloride process is preferred by most of our customers within the paint and plastic industries, and with the additional new capacity, approximately 65% of our production capacity will be from the chloride process.





NL's environmental investments are an important part of doing business in the world today, and we are committed to keeping our plants in regulatory compliance.

While we are excited and optimistic about the future of NL, we are cautious about the outlook for 1996 and are hopeful that economic conditions in our key markets will improve in the second half of 1996. Notwithstanding our near-term caution, the anticipated long-term trend should enable NL to make progress in deleveraging its balance sheet and strengthening its overall financial position.

Harold Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

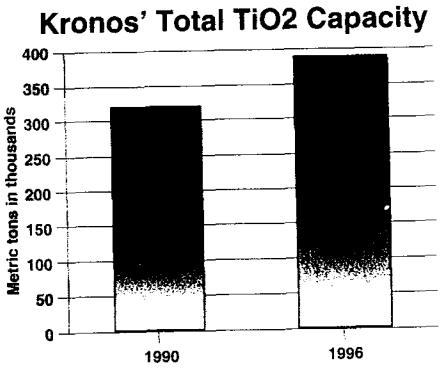
March 3, 1996

KRONOS

Operating income for Kronos in 1995 was $161.2 million, more than doubling its 1994 operating income of $80.5 million. This strong increase was primarily due to increased selling prices, which were 15% higher than the previous year. Although selling prices were significantly higher in 1995, average prices in the fourth quarter of 1995 were 1% lower than the third quarter. After a strong start in 1995, sales volumes for the year slipped 3% below 1994 due in part, we believe, to customers choosing to draw down inventories. Overall, Kronos accounted for 87% of NL's sales, and 81% of its operating income.

Kronos is the fourth largest producer of titanium dioxide pigments in the world with annual production capacity of 390,000 metric tons, and has played a leading role in the development of the titanium dioxide industry for more than 70 years. Titanium dioxide is a white pigment which provides whiteness, brightness, and opacity to a wide range of products used in everyday life, such as paints, plastics, paper, textiles, pharmaceuticals, cosmetics and inks. Titanium dioxide pigments are also used in health and personal care products. Kronos has an estimated 11% market share worldwide with its pigments sales concentrated primarily in the largest geographic markets for consumption of titanium dioxide pigments - Europe and North America. To serve these markets, Kronos has manufacturing facilities in Germany, Belgium, Norway, Canada, and the United States. Kronos' ilmenite mine in Norway provides the basic feedstock for a significant part of its production requirements for manufacturing sulfate process titanium dioxide pigments.

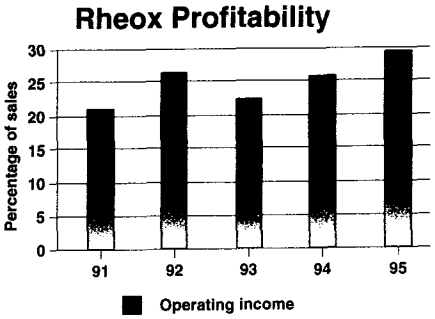
Kronos uses both chloride and sulfate technologies to manufacture more than 40 grades of titanium dioxide pigments for a broad range of applications. Approximately two-thirds of Kronos' capacity is based upon its own chloride process technology. Pigments produced by either method can be used in most applications, however, chloride pigments are preferred for plastics and high durability coatings. Kronos has a widely-accepted product line in plastics applications.



Kronos produced a record 393,000 metric tons of titanium dioxide pigments in 1995, with all chloride process plants exceeding previous records. Kronos maintains an active research and development program to improve both the sulfate and chloride technologies. Through this effort during the last four years, Kronos has increased the production capacity of its four chloride process plants so that each plant now exceeds its original design capacity by more than 25%. Currently underway is the expansion of its chloride process plant in Leverkusen, Germany. When completed in 1997, this project will bring Kronos' annual capacity to approximately 400,000 metric tons.

Kronos is committed to its policy of compliance with environmental regulations and laws, and of striving to improve its environmental performance. Kronos has successfully developed an extensive sales program in Europe for the iron salts resulting from both chloride and sulfate processes as waste water treatment chemicals used by municipal and industrial customers, and as a raw material for producing iron pigments. Early in 1996, Kronos completed an $11 million facility in Leverkusen, Germany to purify the iron salts from the chloride process, thereby widening their sales applications in the water treatment industry. Gypsum recovered in the neutralization of sulfate iron salts in Canada is sold to a local wallboard producer. Over the next two years Kronos estimates it will spend $30 million on environmental projects, primarily sulphur recovery units .

RHEOX



Operating income for 1995 increased $7.7 million over 1994 to a record of $38.5 million on higher sales volumes, higher prices, and lower operating costs. Worldwide sales increased 10% to $129.8 million in 1995.

Rheox manufactures and sells a wide variety of specialty chemical products to the coatings, ink, lubricant, oil drilling, adhesives, sealants, household and personal care markets throughout the world. Along with product quality, a key Rheox strength is its extensive customer technical service support system. Rheox's laboratories in the United States and Germany are staffed with employees and specialists trained in many of the industries Rheox serves, and provide opportunities for customers to develop improved products and applications. An important part of the customer interface is a dedicated sales force both in North America and Europe. In addition, about 70 agents worldwide promote Rheox products.

Rheox manufactures its products in five plants located in the United States, Germany, and the United Kingdom. All plants have achieved ISO 9001 or 9002 certification which is recognized worldwide as the standard of quality. This commitment to quality is highly desired by international customers.

Rheox's hectorite clay mine in California, believed to be the largest known commercial hectorite clay deposit in the world, gives Rheox a cost advantage in the manufacturing of its core organoclay product line. Quaternary amines, another primary raw material, are primarily purchased from a 50% owned joint venture company.

Rheox products are specialty chemicals used primarily to improve the flow characteristics of the end products of the markets into which it sells. For example, Rheox products improve the application and appearance of trade paints and industrial finishes, and make it possible to convert oils into greases. These specialty chemicals have applications in water and solvent-based systems. The majority of Rheox's sales were for use in solvent-based systems. However, Rheox continues to emphasize the development of products for water-based applications, with approximately 17% of Rheox's sales now derived from products compatible with water-based systems.

Since 1990, Rheox has expanded its global presence and has aggressively developed and introduced new products. Rheox commercialized 15 new products in 1995. Among them are additives for water-based coatings, which have no organic volatiles, additives for high solids systems, and a broadened oil field product line. Rheox continued to aggressively expand its business and technology base in 1995 by developing a specialty wax business, expanding its additives into the metal working fluid market and by marketing a novel line of specialty high performance defoamers, dispersants and dispersing agents.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

X ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required] - For the fiscal year ended December 31, 1995

OR

___ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-640

NL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	13-5267260 (IRS Employer Identification No.)
16825 Northchase Drive, Suite 1200, Houston, Texas (Address of principal executive offices)	77060 (Zip Code)

Registrant's telephone number, including area code: (713) 423-3300

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	New York Stock Exchange Pacific Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes X No ___

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. X

As of February 29, 1996, 51,093,118 shares of common stock were outstanding. The aggregate market value of the 14,571,028 shares of voting stock held by nonaffiliates as of such date approximated $202 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

Forward-Looking Information.

The statements contained in this Annual Report on Form 10-K ("Annual Report") which are not historical facts, including, but not limited to, statements found (i) under the captions "Kronos-Industry", "Kronos-Products and operations", "Kronos-Manufacturing process and raw materials", "Kronos-Competition", "Rheox-Products and operations", "Rheox-Manufacturing process and raw materials", "Patents and Trademarks", "Foreign Operations", and "Regulatory and Environmental Matters", all contained in Item 1. Business, (ii) under the captions "Lead pigment litigation" and "Environmental matters and litigation", both contained in Item 3. Legal Proceedings, and (iii) under the captions "Results of Operations" and "Liquidity and Capital Resources", both contained in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, are forward-looking statements that involve a number of risks and uncertainties. The actual results of the future events described in such forward-looking statements in this Annual Report could differ materially from those stated in such forward-looking statements. Among the factors that could cause actual results to differ materially are the risks and uncertainties discussed in this Annual Report, including, without limitation, the portions referenced above, and the uncertainties set forth from time to time in the Company's other public reports and filings and public statements.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a New Jersey corporation in 1891, conducts its operations through its principal wholly-owned subsidiaries, Kronos, Inc. and Rheox, Inc. Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 54% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 91% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President and Chief Executive Officer of each of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company".

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2") with an estimated 11% share of the worldwide market. Approximately one-half of Kronos' 1995 sales volume was in Europe, where Kronos is the second largest producer of TiO_2. In 1995, Kronos accounted for 87% of the Company's sales and 81% of its operating income. Rheox is the world's largest producer of rheological additives for solvent-based systems.

The Company's objective is to maximize total shareholder returns by (i) focusing on continued cost control, (ii) deleveraging during the current upturn of the TiO_2 industry and (iii) investing in certain cost effective debottlenecking projects to increase TiO_2 production capacity.

Kronos

Industry

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. TiO_2 is considered to be a "quality-of-life" product with demand affected by the gross domestic product in various regions of the world.

Demand, supply and pricing of TiO_2 have historically been cyclical. The last cyclical peak for TiO_2 prices occurred in early 1990, with a cyclical low in the third quarter of 1993. The Company believes the TiO_2 industry continues to have long-term potential. During the last TiO_2 downturn, industry capacity utilization dropped from almost 100% to approximately 85%. Industry utilization increased to about 91% in 1995, and Kronos' selling prices in fourth quarter of 1995 were about 24% above the 1993 low point. Although TiO_2 demand in Europe and the U.S. is expected to be relatively flat during the first half of 1996, the Company expects industry capacity utilization rates will increase over the next several years. The Company's expectations as to the future prospects of the TiO_2 industry are based upon several factors beyond the Company's control, principally continued worldwide growth of gross domestic product and the absence of

technological advancements in or modifications to TiO_2 processes that would result in material and unanticipated increases in production efficiencies. To the extent that actual developments differ from the Company's expectations, the Company's and the TiO_2 industry's future performance could be unfavorably affected.

Kronos has an estimated 18% share of European TiO_2 sales and an estimated 9% share of U.S. TiO_2 sales. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. If the economies in Eastern Europe, the Far East and China continue to develop, a significant market for TiO_2 could emerge in those countries. Kronos believes that, due to its strong presence in Western Europe, it is well positioned to participate in growth in the Eastern European market . Geographic segment information is contained in Note 3 to the Consolidated Financial Statements.

Products and operations

The Company believes that there are no effective substitutes for TiO_2. However, extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used in a number of Kronos' markets. Generally, extenders are used to reduce to some extent the utilization of higher cost TiO_2. The use of extenders has not significantly affected TiO_2 consumption over the past decade because extenders generally have, to date, failed to match the performance characteristics of TiO_2. The Company believes that the use of extenders will not materially alter the growth of the TiO_2 business in the foreseeable future.

Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos' major customers include international paint, plastics and paper manufacturers.

Kronos is one of the world's leading producers and marketers of TiO_2. Kronos and its distributors and agents sell and provide technical services for its products to over 5,000 customers with the majority of sales in Europe, the United States and Canada. Kronos' international operations are conducted through Kronos International, Inc., a German-based holding company formed in 1989 to manage and coordinate the Company's manufacturing operations in Germany, Canada, Belgium and Norway, and its sales and marketing activities in over 100 countries worldwide. Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets. By volume, one-half of Kronos' 1995 TiO_2 sales were to Europe, with 36% to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ore (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived from co-products of the pigment production processes). Water treatment chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using both the chloride process and the sulfate process. Approximately two-thirds of Kronos' current production capacity is based on its chloride process which generates less waste than the sulfate process. The waste acid resulting from the sulfate process is either neutralized or reprocessed at Kronos or third party facilities. Although most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred in certain coatings and plastics applications, and sulfate process pigments are generally preferred for paper, fibers and ceramics applications. Due to environmental factors and customer considerations, the proportion of TiO_2 industry sales represented by chloride process pigments has increased relative to sulfate process pigments in the past few years, and chloride process production facilities currently represent approximately 55% of industry capacity.

Kronos produced a record 393,000 metric tons of TiO_2 in 1995, compared to 357,000 metric tons in 1994 and 352,000 metric tons in 1993. Kronos believes its annual attainable production capacity is approximately 390,000 metric tons, including its one-half interest in the joint venture-owned Louisiana plant (see "TiO_2 manufacturing joint venture"). Following the completion of the $25 million debottlenecking expansion of its Leverkusen, Germany chloride process plant in 1997, the Company expects its worldwide annual attainable production capacity to increase to approximately 400,000 metric tons.

The primary raw materials used in the TiO_2 chloride production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and natural rutile ore. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Limited (South Africa), approximately 50% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp., under a long-term supply contract that expires in 2000. Natural rutile ore, another chloride feedstock, is purchased primarily from RGC Mineral Sands Limited (Australia), under a long-term supply contract that expires in 2000. Raw materials under these contracts are expected to meet Kronos' chloride feedstock requirements over the next several years.

The primary raw materials used in the TiO_2 sulfate production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided all of Kronos' feedstock for its European sulfate process pigment plants in 1995. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe. Kronos also purchases sulfate grade slag under contracts negotiated annually with QIT and Tinfos Titanium and Iron K/S.

Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate through the remainder of the decade. Kronos does not anticipate experiencing any interruptions of its raw material supplies because of its long-term supply contracts, although political and economic instability in the countries from which the Company purchases its raw material supplies could adversely affect the availability.

TiO_2 manufacturing joint venture

In October 1993, Kronos formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). The joint venture, which is equally owned by subsidiaries of Kronos and Tioxide (the "Partners"), owns and operates the Louisiana chloride process TiO_2 plant formerly owned by Kronos. Production from the plant is shared equally by Kronos and Tioxide pursuant to separate offtake agreements.

A supervisory committee, composed of four members, two of whom are appointed by each Partner, directs the business and affairs of the joint venture, including production and output decisions. Two general managers, one appointed and compensated by each Partner, manage the day-to-day operations of the joint venture acting under the direction of the supervisory committee.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity and customers generally were served on an allocation basis. During the early 1990s, supply exceeded demand, primarily due to new chloride process capacity coming on-stream. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980s, had a negative impact during the subsequent downturn. During 1994 and the first half of 1995, improved industry capacity utilization resulted in increases in worldwide TiO_2 prices. Average TiO_2 prices in the fourth quarter of 1995 were 14% higher than the fourth quarter of 1994, and were about 17% lower than the previous peak.

Capacity additions that are the result of construction of grassroot plants in the worldwide TiO_2 market require significant capital expenditures and substantial lead time (typically three to five years in the Company's experience) for, among other things, planning, obtaining environmental approvals and construction. No grassroot plants have been announced, but industry capacity in the next few years can be expected to increase as Kronos and its competitors complete debottlenecking projects at existing plants. Based on the factors described under the caption "Kronos-Industry" above, the Company expects that the average annual increase in industry capacity from announced debottlenecking projects will be less than the average annual demand growth for TiO_2 during the next few years.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and substantially all of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada.

Kronos' principal competitors are E.I. du Pont de Nemours & Co. ("DuPont"); Imperial Chemical Industries PLC (Tioxide); Hanson PLC (SCM Chemicals); Kemira Oy; Kerr-McGee Corporation; Ishihara Sangyo Kaisha, Ltd.; Bayer AG; and Thann et Mulhouse. These eight competitors have estimated individual worldwide market shares ranging from 4% to 21%, and an estimated aggregate 76% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is Kronos' principal North American competitor.

Rheox

Products and operations

Rheological additives control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays which have been chemically reacted with organic chemicals and compounds. Rheox produces rheological additives for both solvent-based and water-based systems. Rheox believes it is the world's largest producer of rheological additives for solvent-based systems and is also a supplier of rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for about 80% of Rheox's sales in 1995, with the remainder being principally rheological additives for water-based systems. Rheox introduced a number of new products during the past few years, the majority of which are for water-based systems, which represent a larger portion of the market than solvent-based systems. The Company believes water-based additives will account for an increasing portion of its sales in the long term.

Sales of rheological additives generally follow overall economic growth in Rheox's principal markets and are influenced by the volume of shipments of the worldwide coatings industry. Since Rheox's rheological additives are used in industrial coatings, plant and equipment spending has an influence on demand for this product line.

Manufacturing process and raw materials

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with a subsidiary of Dresser Industries, Inc. ("Dresser"), which has significant bentonite reserves in Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future, and Dresser's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from Company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of

hectorite clays in the world. Quaternary amines are purchased primarily from a joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Competition

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors for rheological additives for solvent-based systems are Laporte PLC and Sud-Chemie AG. Rheox's principal competitors for water-based systems are Rohm and Haas Company, Hercules Incorporated, The Dow Chemical Company and Union Carbide Corporation.

Research and Development

The Company's expenditures for research and development and technical support programs have averaged approximately $10 million annually during the past three years with Kronos accounting for approximately three-quarters of the annual spending. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are directed primarily toward improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to rheological additives are conducted primarily in the United States and are directed towards the development of new products for water-based systems, environmental applications and new end-use applications for existing product lines.

Patents and Trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the formation of the manufacturing joint venture with Tioxide, Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Use by each recipient of the other's technology in Europe is restricted until October 1996. The Company does not expect that the technology sharing arrangement with Tioxide will materially impact the Company's competitive position within the TiO_2 industry. See "Kronos - TiO_2 manufacturing joint venture."

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign Operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada, and approximately one-third of Rheox's sales in each of the past three years have been from European production. Approximately three-quarters of the Company's 1995 consolidated sales were to non-U.S. customers, including 12% to customers in areas other than Europe and Canada. Foreign operations are subject to, among other things, currency exchange rate fluctuations and the Company's results of operations have in the past been both favorably and unfavorably affected by fluctuations in currency exchange rates. Effects of fluctuations in currency exchange rates on the Company's results of operations are discussed in Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Political and economic uncertainties in certain of the countries in which the Company operates may expose it to risk of loss. The Company does not believe that there is currently any likelihood of material loss through political or economic instability, seizure, nationalization or similar event. The Company cannot predict, however, whether events of this type in the future could have a material effect on its operations. The Company's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and Environmental Matters."

Customer Base and Seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1995, the Company employed approximately 3,200 persons, excluding the joint venture employees, with approximately 400 employees in the United States and approximately 2,800 at sites outside the United States. Hourly employees in production facilities worldwide, including the TiO_2 joint venture, are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and Environmental Matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain past and current operations and products of the Company have the potential to cause environmental or other damage. The Company has implemented and continues to implement various

policies and programs in an effort to minimize these risks. The policy of the Company is to achieve compliance with applicable environmental laws and regulations at all its facilities and to strive to improve its environmental performance. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could adversely affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. manufacturing operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants and the Louisiana plant owned and operated by the joint venture are in substantial compliance with applicable requirements of these laws or compliance orders issued thereunder. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the plants to operate. The Company believes that all its plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory denominator is provided by the European Union (the "EU"). Germany, Belgium and the United Kingdom, each members of the EU, follow the initiatives of the EU. Norway, although not a member, generally patterns its environmental regulatory actions after the EU. The Company believes that Kronos is in substantial compliance with agreements reached with European environmental authorities and with an EU directive to control the effluents produced by TiO_2 production facilities. The Company also believes that Rheox is in substantial compliance with the environmental regulations in Germany and the United Kingdom.

In order to reduce sulfur dioxide emissions into the atmosphere consistent with applicable environmental regulations, Kronos is currently installing off-gas desulfurization systems at its Norwegian and German plants at an estimated cost of $30 million and expects to complete the systems in 1996 and 1997, respectively. The manufacturing joint venture has installed a $16 million off-gas desulfurization system at the Louisiana plant which commenced operation in 1995. In addition, Kronos expects to complete an $11 million water treatment chemical purification project at its Leverkusen, Germany facility in 1996.

The Quebec provincial government has environmental regulatory authority over Kronos' Canadian chloride and sulfate process TiO_2 production facilities in Varennes, Quebec. The provincial government regulates discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos'

right to discharge effluents from its Canadian sulfate process TiO_2 plant into the St. Lawrence River until June 1994. Kronos completed a waste acid neutralization facility and discontinued discharging waste acid effluents into the St. Lawrence River in June 1994. Notwithstanding the foregoing, in March 1993 Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate process TiO_2 production facility. The penalty for these violations, if proven, could be up to Canadian $15 million. Additional charges, if brought, could involve additional penalties. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above, and is vigorously contesting the charge.

The Company's capital expenditures related to its ongoing environmental protection and improvement programs are currently expected to be approximately $23 million in 1996 and $5 million in 1997.

The Company has been named as a defendant, potentially responsible party ("PRP"), or both, pursuant to CERCLA and similar state laws in approximately 80 governmental enforcement and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priorities List or similar state lists. See Item 3 - "Legal Proceedings".

ITEM 2. PROPERTIES

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, Kronos has a facility in Varennes, Quebec, Canada and, through the manufacturing joint venture described above, a one-half interest in a plant in Lake Charles, Louisiana. Certain of the Company's properties collateralize long-term debt agreements. See Note 10 to the Consolidated Financial Statements.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with almost one-third of Kronos' current TiO_2 production capacity, is located within an extensive manufacturing complex owned by Bayer AG, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement expiring in 2011, Bayer provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Both the lease and the supplies and services agreement restrict Kronos' ability to transfer ownership or use of the Leverkusen facility.

All of Kronos' principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession with an unlimited term to operate its ilmenite mine in Norway.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany. All of such production facilities are owned.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. Considering the Company's previous involvement in the lead pigment and lead-based paint businesses, there can be no assurance that additional litigation, similar to that described below, will not be filed. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed that seek to (a) impose various obligations on present and former manufacturers of lead pigment and lead-based paint with respect to asserted health concerns associated with the use of such products and (b) effectively overturn court decisions in which the Company and other pigment manufacturers have been successful. Examples of such proposed legislation include bills proposed in Massachusetts and Ohio which would permit civil liability for damages on the basis of market share and, in the case of Massachusetts, extend certain statutes of limitations. No legislation or regulations have been enacted to date which are expected to have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation in view of the inherent uncertainties involved in court and jury rulings in pending and possible future cases, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability that may result, if any, cannot reasonably be estimated.

In 1989 and 1990, the Housing Authority of New Orleans ("HANO") filed third-party complaints for indemnity and/or contribution against the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA") in 14 actions commenced by residents of HANO units seeking compensatory and punitive damages for injuries allegedly caused by lead pigment. The actions in the Civil District Court for the Parish of Orleans, State of Louisiana were dismissed by the district court in 1990. Subsequently, HANO agreed to consolidate all the cases and appealed. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other cases included in the appeal, the court of appeals reversed the lower court decision dismissing the cases. These cases were remanded to the District Court for further proceedings. In November 1994, the District Court granted defendants' motion for summary judgment in one of the remaining cases and in June 1995 the District Court granted defendants' motion for summary judgment in several of the remaining cases. After such grant, only two cases remained pending.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the

hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability and denied the remainder of the motion. In January 1992, defendants appealed the denial. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In May 1993, the Appellate Division of the Supreme Court affirmed the denial of the motion to dismiss plaintiffs' fraud, restitution, conspiracy and concert of action claims. In August 1993, the defendants' motion for leave to appeal was denied. In May 1994, the trial court granted the defendants' motion to dismiss the plaintiffs' restitution and indemnification claims, and plaintiffs have appealed. Defendants' motion for summary judgment on the remaining fraud claim was denied in August 1995; defendants have noticed an appeal. In December 1995, defendants moved for summary judgment on the basis that the fraud claim was time-barred; the motion is pending.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the Philadelphia Housing Authority and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel has asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. In April 1994, the court granted defendants' motion for summary judgment and the dismissal was affirmed by the Superior Court in October 1995. Plaintiffs sought review in the Pennsylvania Supreme Court in November 1995 and the request for review is pending.

In August 1992, the Company was served with an amended complaint in *Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative liability. In October 1992, the Company and the other defendants moved to dismiss the complaint with prejudice. In July 1993, the court dismissed the complaint. In December 1994, the Ohio Court of Appeals reversed the trial court dismissal and remanded the case to the trial court.

In November 1993, the Company was served with a complaint in *Brenner, et al. v. American Cyanamid, et al.*, (No. 12596-93) Supreme Court, State of New York, Erie County alleging injuries to two children purportedly caused by lead pigment. The complaint seeks $24 million in compensatory and $10 million in punitive damages for alleged negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, and alternative liability. In January 1994, the Company answered the complaint, denying liability. Discovery is proceeding.

In January 1995, the Company was served with complaints in *Wright (Alvin)* and *Wright (Allen) v. Lead Industries, et. al.*, (Nos. 94-363042 and 363043), Circuit Court, Baltimore City, Maryland. Plaintiffs are two brothers (one deceased) who allege injuries due to exposure to lead pigment. The complaints, as amended in April 1995, seek more than $100 million in compensatory and punitive damages for alleged strict liability, negligence, conspiracy, fraud and unfair and deceptive trade practices claims. In July 1995, the trial court granted, in part, the defendants' motion to dismiss, and dismissed the plaintiffs' fraud and unfair and deceptive trade practices claims. A trial date has been set in these consolidated cases for October 1996, and discovery is proceeding. In February 1996, the Company filed a motion for summary judgement, which is pending.

In November 1995, the Company was served with the complaint in *Jefferson v. Lead Industry Association, et. al.* (No. 95-2835), filed in the U.S. District Court for the Eastern District of Louisiana. The complaint asserts claims against the LIA and the lead pigment defendants on behalf of a putative class of allegedly injured children in Louisiana. The complaint purports to allege claims for strict liability, negligence, failure to warn, breach of alleged warranties, fraud and misrepresentation, and conspiracy, and seeks actual and punitive damages. The complaint asserts several theories of liability, including joint and several and market share liability. The Company moved to dismiss the complaint in February 1996.

In January 1996, the Company was served with a complaint on behalf of individual intervenors in *German, et. al. v. Federal Home Loan Mortgage Corp., et. al.*, (U.S. Dist. Court, Southern District of New York, Civil Action No. 93 Civ. 6941 (RWS)). This class action lawsuit had originally been brought against the City of New York and other landlord defendants. The intervenors' complaint alleges claims against the Company and other former manufacturers of lead pigment for medical monitoring, property abatement, and other injunctive relief, based on various causes of action, including negligent product design, negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, breach of express and implied warranties, and nuisance. The intervenors purport to represent a class of children and pregnant women who reside in New York City.

The Company believes that the foregoing lead pigment actions are without merit and intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously.

The Company has filed actions seeking declaratory judgment and other relief against various insurance carriers with respect to costs of defense and indemnity coverage for certain of its environmental and lead pigment litigation. *NL Industries, Inc. v. Commercial Union Insurance Cos., et al.*, Nos. 90-2124, -2125 (HLS) (District Court of New Jersey). The action relating to lead pigment litigation defense costs filed in May 1990 against Commercial Union Insurance Company ("Commercial Union") seeks to recover defense costs incurred in the *City of New York* lead pigment case and two other cases which have since been resolved in the Company's favor. In July 1991, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the Company's reasonable defense costs for such cases. In June 1992, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Commercial Union seeking to recover costs incurred in defending four additional lead pigment cases which have since been resolved in the Company's

favor. In August 1993, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the reasonable costs of defending those cases. In July 1994, the court entered judgment on the order requiring Commercial Union to pay previously-incurred Company costs in defending those cases. In September 1995, the U.S. Court of Appeals for the Third Circuit reversed and remanded for further consideration the decision by the trial court that Commercial Union was obligated to pay the Company's reasonable defense costs in certain of the lead pigment cases. The trial court had made its decision applying New Jersey law; the appeals court concluded that New York and not New Jersey law applied and remanded the case to the trial court for a determination under New York law. Other than granting motions for summary judgment brought by two excess liability insurance carriers, which contended that their policies contained unique pollution exclusion language, and certain summary judgment motions regarding policy periods, the court has not made any final rulings on defense costs or indemnity coverage with respect to the Company's pending environmental litigation. The Court has not made any final ruling on indemnity coverage in the lead pigment litigation. No trial dates have been set. Other than rulings to date, the issue of whether insurance coverage for defense costs or indemnity or both will be found to exist depends upon a variety of factors, and there can be no assurance that such insurance coverage will exist in other cases. The Company has not considered any potential insurance recoveries for lead pigment or environmental litigation in determining related accruals.

Environmental matters and litigation

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws in approximately 80 governmental and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. EPA's Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage, or both. Certain of these proceedings involve claims for substantial amounts. Although the Company may be jointly and severally liable for such costs, in most cases it is only one of a number of PRPs who are also jointly and severally liable. In addition to the matters noted above, certain current and former facilities of the Company, including several divested secondary lead smelter and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities.

The extent of CERCLA liability cannot be determined until the Remedial Investigation and Feasibility Study ("RIFS") is complete, the U.S. EPA issues a record of decision and costs are allocated among PRPs. The extent of liability under analogous state cleanup statutes and for common law equivalents are subject to similar uncertainties. The Company believes it has provided adequate accruals for reasonably estimable costs for CERCLA matters and other environmental liabilities. At December 31, 1995, the Company had accrued $100 million with respect to those environmental matters which are reasonably estimable. The Company determines the amount of accrual on a quarterly basis by analyzing and estimating the range of possible costs to the Company. Such costs include, among other things, remedial investigations, monitoring, studies, clean-up, removal and remediation. It is not possible to estimate the range of costs for certain sites. The Company has estimated that the upper end of the range of reasonably possible costs to the Company for sites for which it is possible to estimate costs is approximately $169 million. No assurance can be given that actual costs

will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future. More detailed descriptions of certain legal proceedings relating to environmental matters are set forth below.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

At Pedricktown, the U.S. EPA divided the site into two operable units. Operable unit one covers contaminated ground water, surface water, soils and stream sediments. The Company submitted the final RIFS for operable unit one to the U.S. EPA in May 1993. In July 1994, the U.S. EPA issued the Record of Decision for operable unit one. The U.S. EPA estimates the cost to complete operable unit one is $18.7 million. The U.S. EPA recently issued a notice requesting that the PRPs enter into an agreement to perform the remedial design phase of operable unit one. In addition, the U.S. EPA incurred past costs in the estimated amount of $4 million to $5 million. The U.S. EPA issued an order with respect to operable unit two in March 1992 to the Company and 30 other PRPs directing immediate removal activities including the cleanup of waste, surface water and building surfaces. The Company has complied with the order, and the work with respect to operable unit two is completed. The Company has paid approximately 50% of operable unit two costs, or $2.5 million.

At Granite City, the RIFS is complete, and in 1990 the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others (*United States of America v. NL Industries, Inc., et al.*, Civ. No. 91-CV 00578) with respect to the Granite City smelter. The complaint seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was invalid, arbitrary, capricious and not in accordance with law. The complaint also seeks recovery of past costs of $.3 million and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. In August 1994, when the U.S. EPA reinitiated the residential yard soils remediation in Granite City after an agreed-upon stay of the cleanup pending completion of a health study and reopening of the

administrative record, the PRPs and the City of Granite City sought an injunction against the U.S. EPA to prevent further cleanup until after the record was reopened for submittal of additional comments on the selected remedy. In September 1995, the U.S. EPA released its decision selecting cleanup remedies for the Granite City site. The cost of the remedies selected by the U.S. EPA aggregates, in its estimation, $40.8 million to $67.8 million, although its decision states that the higher amount is not considered to be representative of expected costs. The Company believes that certain components of the U.S. EPA's estimated costs may be erroneous and presently intends to challenge portions of the U.S. EPA's selection of the remedy. There is no allocation among the PRPs for these costs.

Having completed the RIFS at Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc.*, Civ. No. 89-408, United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notices of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, which was initially estimated to cost approximately $17 million, exclusive of administrative and overhead costs and any additional costs, for the disposition of recycled materials from the site. In January 1992, the U.S. EPA issued unilateral administrative orders to the Company and six other PRPs directing the performance of the remedy. The Company and the other PRPs commenced performance of the remedy. Based upon site operations to date, the remedy is not proceeding in accordance with engineering expectations or cost projections; therefore, the Company and the other PRPs have met with the U.S. EPA to discuss alternative remedies for the site. The U.S. EPA authorized the Company and the other PRPs to cease performing most aspects of the selected remedy. In September 1994, the Company and the other PRPs submitted a focused feasibility study to the U.S. EPA, which proposes alternative remedies for the site. In January 1996, the Company and the other PRP's submitted to U.S. EPA the Amended Remedy Document ("ARD"), recommending selection of a new remedy for the site. The U.S. EPA has indicated that it intends to notice the ARD for public comment in 1996 and will thereafter select a new remedy for the site. Pursuant to an interim allocation, the Company's share of remedial costs is approximately 50%. In November 1991, Gould, Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.*, No. 91-1091, United States District Court for the District of Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and punitive damages. The court granted Gould's motion to amend the complaint to add additional defendants (adjoining current and former landowners) and third party defendants (generators). The amended complaint deletes the fraud and punitive damages claims asserted against NL; thus, the pending action is essentially one for reallocation of past and future cleanup costs. Discovery is proceeding. A trial date has been tentatively set for September 1996.

The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc. A former subsidiary of the Company mined at the Baxter Springs subsite, where it is the largest viable PRP. The final RIFS was submitted to the U.S. EPA in May 1993. In August 1994, the U.S. EPA issued its proposed plan for the cleanup of the Baxter Springs and Treece sites in Cherokee County. The proposed remedy is estimated by U.S. EPA to cost $6 million.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois (*People of the State of Illinois v. NL Industries, et al.*, No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.3 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. In December 1993, the trial court denied the State's petition to reinstate the complaint, and dismissed the case with prejudice. In February 1996, the appeals court affirmed the dismissal. The time in which review by the state Supreme Court may be sought has not expired.

In 1980, the State of New York commenced litigation against the Company in connection with the operation of a plant in Colonie, New York formerly owned by the Company. *Flacke v. NL Industries, Inc.*, No. 1842-80 ("Flacke I") and *Flacke v. Federal Insurance Company and NL Industries, Inc.*, No. 3131-92 ("Flacke II"), New York Supreme Court, Albany County. The plant manufactured military and civilian products from depleted uranium and was acquired from the Company by the U.S. Department of Energy ("DOE") in 1984. Flacke I seeks penalties for alleged violations of New York's Environmental Conservation Law, and of a consent order entered into to resolve these alleged violations. Flacke II seeks forfeiture of a $200,000 surety bond posted in connection with the consent order, plus interest from February 1980. The Company denied liability in both actions. The litigation had been inactive from 1984 until July 1993 when the State moved for partial summary judgment for approximately $1.5 million on certain of its claims in Flacke I and for summary judgment in Flacke II. In January 1994, the Company cross-moved for summary judgment in Flacke I and Flacke II. All summary judgment motions have been denied and both parties have appealed.

Residents in the vicinity of the Company's former Philadelphia lead chemicals plant commenced a class action allegedly comprised of over 7,500 individuals seeking medical monitoring and damages allegedly caused by emissions from the plant. *Wagner, et al. v. Anzon, Inc. and NL Industries, Inc.*, No. 87-4420, Court of Common Pleas, Philadelphia County. The complaint sought compensatory and punitive damages from the Company and the current owner of the plant, and alleged causes of action for, among other things, negligence, strict liability, and nuisance. A class was certified to include persons who resided, owned or rented property, or who work or have worked within up to approximately three-quarters of a mile from the plant from 1960 through the present. The Company answered the complaint, denying liability. In December 1994, the jury returned a verdict in favor of the Company. Plaintiffs have appealed. Residents also filed consolidated actions in the United States District Court for the Eastern District of Pennsylvania, *Shinozaki v. Anzon, Inc.* and *Wagner and Antczak v. Anzon and NL Industries, Inc.* Nos. 87-3441, 87-3502, 87-4137 and 87-5150. The consolidated action is a putative class action seeking CERCLA response costs, including cleanup and medical monitoring, declaratory and injunctive relief and civil penalties for alleged violations of the Resource Conservation and Recovery Act ("RCRA"), and also asserting pendent common law claims for strict liability, trespass, nuisance and punitive damages. The court dismissed the common law claims without prejudice, dismissed two of the three RCRA claims as against the Company with prejudice, and stayed the case pending the outcome of the state court litigation.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.*, Civ. No. 91-4098, seeking recovery of $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. The Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because it believed they were in conflict with California law. The Company answered the complaint denying liability. The government claims it expended in excess of $2.7 million for this matter. Trial was held in March and April 1993. In April 1994, the court entered final judgment in this matter directing the Company to pay $6.3 million plus interest. The court ruled that the Company was liable for approximately $2.7 million in response costs plus approximately $3.6 million in penalties for failure to comply with the administrative order. Both the Company and the government have appealed. In August 1994, this matter was referred to mediation, which is pending.

At a municipal and industrial waste disposal site in Batavia, New York, the Company and six others have been identified as PRPs. The U.S. EPA has divided the site into two operable units. Pursuant to an administrative consent order entered into with the U.S. EPA, the Company conducted a RIFS for operable unit one, the closure of the industrial waste disposal section of the landfill. The Company's RIFS costs are approximately $2 million. In June 1995, the U.S. EPA issued the record of decision for operable unit one, which is estimated by the U.S. EPA to cost approximately $12.3 million. In September 1995, the U.S. EPA and certain PRPs entered into an administrative order on consent for the remedial design phase of the remedy for operable unit one. The Company and other PRPs entered into an interim cost sharing arrangement for this phase of work. With respect to the second operable unit, the extension of the municipal water supply, the U.S. EPA estimated the costs at $1.2 million plus annual operation and maintenance costs. The Company and the other PRPs are performing the work comprising operable unit two. The U.S. EPA has also demanded approximately $.9 million in past costs from the PRPs.

See Item 1 - "Business - Regulatory and Environmental Matters".

Other litigation

Rhodes, et al. v. ACF Industries, Inc., et al. (Circuit Court of Putnam County, West Virginia, No. 95-C-261). Twelve plaintiffs brought this action against the Company and various other defendants in July 1995. Plaintiffs allege that they were employed by demolition and disposal contractors, and claim that as a result of the defendants' negligence they were exposed to asbestos during demolition and disposal of materials from defendants' premises in West Virginia. Plaintiffs allege personal injuries and seek compensatory damages totaling $18.5 million and punitive damages totaling $55.5 million. The Company has filed an answer denying plaintiffs' allegations. Discovery is proceeding.

The Company has been named as a defendant in various lawsuits alleging personal injuries as a result of exposure to asbestos in connection with formerly-owned operations. Various of these actions remain pending. One such case, *In re: Monongalia Mass II*, (Circuit Court of Monongalia County, West Virginia, Nos. 93-C-362, et al.), involving approximately 1,800 plaintiffs, is scheduled to begin trial in August 1996. The Company is aware that claims on behalf of approximately 400 additional plaintiffs have been filed, but the Company has not yet been served with those claims. The Company intends to defend these matters vigorously.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses, and the disposition of past properties and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1995.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of February 29, 1996, there were approximately 9,500 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape. On February 29, 1996, the closing price of NL common stock according to the NYSE Composite Tape was $13 7/8.

	High	Low
Year ended December 31, 1994:		
First quarter	$ 9-5/8	$ 4-3/8
Second quarter	9-1/2	6-1/8
Third quarter	11-7/8	8-3/8
Fourth quarter	13-1/4	9
Year ended December 31, 1995:		
First quarter	$13-1/2	$11-3/4
Second quarter	16-5/8	11-7/8
Third quarter	17-1/2	13-1/2
Fourth quarter	16-5/8	10-7/8

The Company's Senior Notes generally limit the ability of the Company to pay dividends to 50% of consolidated net income, as defined, subsequent to October 1993. The Company did not pay a dividend in 1993, 1994 or 1995. At December 31, 1995, $6 million was available for dividends. On February 15, 1996, the Company announced the resumption of a regular quarterly dividend by declaring a $.10 per share cash dividend to be paid to shareholders of record on March 1, 1996. The declaration and payment of future dividends and the amount thereof will be dependent upon the Company's results of operations, financial condition, contractual restrictions and other factors deemed relevant by the Company's Board of Directors.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with the Consolidated Financial Statements and Notes thereto, and Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Years ended December 31,				
	1991	1992	1993	1994	1995
	(In millions, except per share amounts)				
INCOME STATEMENT DATA:					
Net sales	$ 840.3	$ 893.5	$ 805.3	$ 888.0	$1,023.9
Operating income	139.0	110.7	62.4	111.4	199.7
Income (loss) from continuing operations	(24.0)	(44.6)	(83.2)	(24.0)	85.6
Net income (loss)	(16.5)	(76.4)	(109.8)	(24.0)	85.6
Per common share:					
Income (loss) from continuing operations	$ (.40)	$ (.88)	$ (1.63)	$ (.47)	$ 1.66
Net income (loss)	(.27)	(1.50)	(2.16)	(.47)	1.66
Cash dividends	$ .60	$ .35	$ -	$ -	$ -
BALANCE SHEET DATA (at year-end):					
Cash, cash equivalents and current marketable securities	$ 353.3	$ 187.9	$ 147.6	$ 156.3	$ 141.3
Current assets	795.5	635.8	467.5	486.4	551.1
Total assets	1,831.0	1,472.1	1,206.5	1,162.4	1,271.7
Current liabilities	360.2	248.8	232.5	244.9	302.4
Long-term debt including current maturities	1,288.9	1,035.3	870.9	789.6	783.7
Shareholders' deficit	(58.3)	(146.3)	(264.8)	(293.1)	(209.4)
OTHER DATA:					
Net debt (1)	$ 936.0	$ 847.7	$ 723.2	$ 633.4	$ 681.6
EBITDA (2)	126.6	115.1	67.2	101.3	212.1
Interest expense, net (3)	59.9	104.3	95.1	78.9	75.4
Cash interest expense, net (4)	53.9	98.0	86.8	60.8	59.7
Capital expenditures	195.1	85.2	48.0	36.9	64.2
TiO_2 sales volumes (in thousands metric tons)	303	336	346	376	366
Average TiO_2 selling price index (1983=100)	147	139	127	131	150

(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization. EBITDA is presented as a supplement to the Company's operating income and cash flow from operations because the Company believes that certain parties find EBITDA a useful tool for measuring the Company's performance and ability to service debt. EBITDA is not a substitute for either operating income or cash flow from operations.

(3) Interest expense, net represents interest expense less general corporate interest and dividend income.

(4) Cash interest expense, net represents interest expense, net less non-cash interest expense (deferred interest expense on the Senior Secured Discount Notes and amortization of deferred financing costs).

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

RESULTS OF OPERATIONS

General

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. As discussed below, TiO_2 selling prices increased during 1994 and the first nine months of 1995 after four consecutive years of a declining price trend. Kronos' operating income and margins improved significantly during 1994 and 1995.

Net sales and operating income

	Years ended December 31,			% Change	
	1993	1994	1995	1994-93	1995-94
	(In millions)				
Net sales:					
Kronos	$697.0	$770.1	$ 894.1	+10%	+16%
Rheox	108.3	117.9	129.8	+9%	+10%
	$805.3	$888.0	$1,023.9	+10%	+15%
Operating income:					
Kronos	$ 36.1	$ 80.6	$ 161.2	+123%	+100%
Rheox	26.3	30.8	38.5	+17%	+25%
	$ 62.4	$111.4	$ 199.7	+78%	+79%
Percent change in TiO_2:					
Sales volume				+9%	-3%
Average selling prices (in billing currencies)				+3%	+15%

The improvement in Kronos' 1995 results was primarily due to higher average TiO_2 selling prices and higher TiO_2 production volumes, partially offset by lower TiO_2 sales volumes. In billing currency terms, Kronos' 1995 average TiO_2 selling prices were approximately 15% higher than in 1994 and were 3% higher in 1994 compared to 1993. However, the majority of the 1995 increase in average selling prices occurred during the first half of the year and average TiO_2 selling prices in the fourth quarter of 1995 were 1% lower than the third quarter of 1995.

Sales volume of 366,000 metric tons of TiO_2 in 1995 decreased 3% compared to the record level of 1994, with declines in both Europe and North America, due to softening demand in the second half of 1995 and customers building inventories during 1994 and early 1995. Kronos increased its production to 94% of its capacity in 1994 and to full capacity in 1995. Kronos has curtailed production rates in early 1996 in response to soft demand and its high inventory levels. Kronos anticipates TiO_2 demand will remain soft during the first half of 1996, although industry capacity utilization rates are expected to increase over the next several years. Kronos' TiO_2 sales volumes increased 9% in 1994 over 1993, with increases in all major regions. Approximately one-half of Kronos' 1995 TiO_2 sales, by volume, were attributable to markets in Europe with approximately 36% attributable to North America and the balance to other regions.

Demand, supply and pricing of TiO_2 have historically been cyclical and the last cyclical peak for TiO_2 prices occurred in early 1990. Kronos believes that its operating margins for 1996 could be lower than in 1995 due principally to the net effect of higher sales volumes, offset by increased raw material costs, lower production volumes and lower technology fee income.

Rheox's operating income improved in 1995 compared to 1994 due to higher sales volumes and selling prices. Operating income increased during 1994 over 1993 due to higher sales volumes and lower operating costs.

The Company has substantial operations and assets located outside the United States (principally Germany, Norway, Belgium and Canada). The U.S. dollar value of the Company's foreign sales and operating costs are subject to currency exchange rate fluctuations which may slightly impact reported earnings and may effect the comparability of period to period operating results. A significant amount of the Company's sales are denominated in currencies other than the U.S. dollar (64% in 1995), principally major European currencies and the Canadian dollar. Certain purchases of raw materials, primarily titanium-containing feedstocks, are denominated in U.S. dollars, while labor and other production costs are primarily denominated in local currencies. Fluctuations in the value of the U.S. dollar relative to other currencies increased 1995 sales by $54 million compared to 1994 and decreased 1994 sales by $2 million compared to 1993.

General corporate

The following table sets forth certain information regarding general corporate income (expense).

	Years ended December 31,			Change	
	1993	1994	1995	1994-93	1995-94
	(In millions)				
Securities earnings	$ 8.5	$ 3.9	$ 7.4	$(4.6)	$ 3.5
Corporate expenses, net	(41.5)	(44.7)	(26.6)	(3.2)	18.1
Interest expense	(99.1)	(83.9)	(81.6)	15.2	2.3
	$(132.1)	$(124.7)	$(100.8)	$ 7.4	$23.9

Securities earnings fluctuate in part based upon the amount of funds invested and yields thereon. Corporate expenses, net were significantly lower in 1995 compared to 1994 due to lower provisions for environmental remediation and litigation costs. Corporate expenses in 1994 were slightly higher than 1993 as a $20 million gain related to the settlement of a lawsuit was offset by increases in provisions for environmental remediation and litigation costs.

Interest expense

Interest expense in 1994 and 1995 declined compared to the respective prior-year periods due to lower levels of debt, principally Kronos' Deutsche mark-denominated debt, and lower interest rates on such DM-denominated debt.

Provision for income taxes

The principal reasons for the difference between the U.S. federal statutory income tax rates and the Company's effective income tax rates are explained in Note 13 to the Consolidated Financial Statements. The Company's operations are conducted on a worldwide basis and the geographic mix of income can significantly impact the Company's effective income tax rate. In 1995, due to the Company's return to profitability, the Company recognized approximately $10 million of U.S. deferred tax assets which the Company believes satisfy the "more-likely-than-not" recognition criteria. During the fourth quarter of 1995, the Company recorded deferred tax benefits of $6.6 million due to the reduction in dividend withholding tax rates pursuant to ratification of the new U.S./Canada income tax treaty. In 1993 and 1994, the geographic mix of income, including losses in certain jurisdictions for which no current refund was available and recognition of a deferred tax asset was not considered appropriate, contributed to the Company's effective tax rate varying from a normally-expected rate. The Company's deferred income tax status at December 31, 1995 is discussed in "Liquidity and Capital Resources".

Extraordinary item

See Note 16 to the Consolidated Financial Statements.

Change in accounting principle

See Notes 2 and 19 to the Consolidated Financial Statements.

LIQUIDITY AND CAPITAL RESOURCES

The Company's consolidated cash flows provided by operating, investing and financing activities for each of the past three years are presented below.

	Years ended December 31,		
	1993	1994	1995
	(In millions)		
Net cash provided (used) by:			
Operating activities	$ (7.3)	$ 181.7	$ 71.5
Investing activities	181.9	(32.8)	(62.2)
Financing activities	(155.3)	(132.1)	(3.3)
Net cash provided by operating, investing and financing activities	$ 19.3	$ 16.8	$ 6.0

The TiO_2 industry is cyclical, with the previous peak in selling prices in early 1990 and the latest trough in the third quarter of 1993. During the last TiO_2 downturn, the Company's operations used significant amounts of cash. Since the 1993 trough, the Company's cash provided by operating activities substantially improved as the Company's operating income improved. Changes in the Company's inventories, receivables and payables (excluding the effect of currency translation) also contributed to the cash provided by operations in 1993 and 1994; however, such changes used cash in 1995 primarily due to increased inventory levels. Receipt of the German tentative tax refund, discussed below, significantly increased the Company's cash flow from operating activities during 1994. A $30 million technology exchange fee received from Tioxide in October 1993, which is being recognized as a component of operating income over three years, also favorably impacted cash flow from operating activities in 1993.

Cash provided (used) by investing activities includes capital expenditures in each period, and in 1993 included $161 million net cash generated from the formation of the manufacturing joint venture with Tioxide. Cash provided by investing activities also included net sales of marketable securities of $68 million in 1993 primarily used to fund debt repayments. In 1994 and 1995, net proceeds of $15 million and $26 million, respectively, from the sale of trading securities are components of the cash provided from operations as a result of the adoption of SFAS No. 115.

The Company's capital expenditures during the past three years include an aggregate of $73 million ($26 million in 1995) for the Company's ongoing environmental protection and compliance programs, including a Canadian waste acid neutralization facility, a Norwegian onshore tailings disposal system and off-gas desulfurization systems. The Company's estimated 1996 and 1997 capital expenditures are $63 million and $56 million, respectively, and include $23 million and $5 million, respectively, in the area of environmental protection and compliance primarily related to the off-gas desulfurization systems and water treatment chemical purification project. The Company spent $9 million in 1995, and plans to spend an additional $11 million in 1996 and $5 million in 1997, in capital expenditures related to a debottlenecking project at its Leverkusen, Germany chloride process TiO_2 facility that is expected to increase the Company's worldwide annual attainable production to approximately 400,000 metric tons in 1997. The capital expenditures of the manufacturing joint venture are not included in the Company's capital expenditures.

Net repayments of indebtedness in 1995 included $30 million in payments on the Rheox bank term loan, including $10 million of prepayments, and $15 million in scheduled repayments on the joint venture term loan. In addition, the Company borrowed $51 million under DM-denominated short-term credit facilities of which $11 million was repaid. In 1994 the Company borrowed DM 75 million ($45 million when borrowed) under the DM credit facility. Repayments of indebtedness in 1994 included DM 225 million ($140 million when paid) paid on the DM credit facility, $15 million paid on the Rheox bank term loan and $15 million paid on the joint venture term loan. Net repayments of indebtedness in 1993 included payments on the DM credit facility of DM 552 million ($342 million when paid), a $110 million net reduction in indebtedness related to the Louisiana plant and $350 million proceeds from the Company's public offering of debt.

At December 31, 1995, the Company had cash and cash equivalents aggregating $141 million (25% held by non-U.S. subsidiaries) including restricted cash and cash equivalents of $10 million. In addition, the Company's subsidiaries had $5 million and $191 million available for borrowing at December 31, 1995 under existing U.S. and non-U.S. credit facilities, respectively, of which $87 million of the non-U.S. amount is available only for (i) permanently reducing the DM term loan or (ii) paying future German income tax assessments, as described below. In January 1996, the Company borrowed DM 30 million under the revolving credit portion of the DM credit facility.

Based upon the Company's expectations for the TiO_2 industry and anticipated demands on the Company's cash resources as discussed herein, the Company expects to have sufficient liquidity to meet its obligations including operations, capital expenditures and debt service. To the extent that actual developments differ from Company's expectations, the Company's liquidity could be adversely affected. On February 15, 1996, the Company announced the resumption of a regular quarterly dividend by declaring a $.10 per share cash dividend to be paid to shareholders of record on March 1, 1996.

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million when received), including interest, on a tentative basis while examination of the Company's German income tax returns continued. The Company recently reached agreement in principle with the German tax authorities regarding such examinations which will resolve certain significant tax contingencies for years through 1990. The Company expects to finalize assessments and pay tax deficiencies of approximately DM 50 million ($35 million at December 31, 1995), including interest, in settlement of these issues during the first half of 1996. The Company considers the agreement in principle to be a favorable resolution of the contingencies and the anticipated payment is within previously-accrued amounts for such matters.

Certain other German tax contingencies remain outstanding and will continue to be litigated. No assurances can be given that this litigation will be resolved in the Company's favor in view of the inherent uncertainties involved in court rulings. Although the Company believes that it will ultimately prevail in the litigation, the Company has granted a DM 100 million ($70 million at December 31, 1995) lien on its Nordenham, Germany TiO_2 plant in favor of the German tax authorities until the litigation is resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

At December 31, 1995, the Company had net deferred tax liabilities of $157 million. The Company operates in numerous tax jurisdictions, in certain of which it has temporary differences that net to deferred tax assets (before valuation allowance). The Company has provided a deferred tax valuation allowance of $196 million at December 31, 1995, principally related to the U.S. and Germany, partially offsetting deferred tax assets which the Company believes do not currently meet the "more-likely-than-not" recognition criteria.

In addition to the chemicals businesses conducted through Kronos and Rheox, the Company also has certain interests and associated liabilities relating to certain discontinued or divested businesses and other holdings of marketable equity securities including securities issued by Valhi and other Contran subsidiaries.

The Company has been named as a defendant, PRP, or both, in a number of legal proceedings associated with environmental matters, including waste disposal sites or facilities currently or formerly owned, operated or used by the Company, many of which disposal sites or facilities are on the U.S. EPA's Superfund National Priorities List or similar state lists. On a quarterly basis, the Company evaluates the potential range of its liability at sites where it has been named as a PRP or defendant. The Company believes it has provided adequate accruals for reasonably estimable costs of such matters, but the Company's ultimate liability may be affected by a number of factors, including changes in remedial alternatives and costs and the allocation of such costs among PRPs. The Company is also a defendant in a number of legal proceedings seeking damages for personal injury and property damage arising out of the sale of lead pigments and lead-based paints. The Company has not accrued any amounts for the pending lead

pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability, that may result, if any, cannot reasonably be estimated. The Company currently believes the disposition of all claims and disputes, individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. There can be no assurance that additional matters of these types will not arise in the future. See Item 3 - "Legal Proceedings" and Note 18 to the Consolidated Financial Statements.

As discussed above, the Company has substantial operations located outside the United States for which the functional currency is not the U.S. dollar. As a result, the reported amount of the Company's assets and liabilities related to its non-U.S. operations, and therefore the Company's consolidated net assets, will fluctuate based upon changes in currency exchange rates. The carrying value of the Company's net investment in its German operations is a net liability due principally to its DM credit facility, while its net investment in its other non-U.S. operations are net assets.

The Company periodically evaluates its liquidity requirements, alternative uses of capital, capital needs and availability of resources in view of, among other things, its debt service and capital expenditure requirements and estimated future operating cash flows. As a result of this process, the Company has in the past and may in the future seek to reduce, refinance or restructure indebtedness, raise additional capital, modify its dividend policy, restructure ownership interests, sell interests in subsidiaries or other assets, or take a combination of such steps or other steps to manage its liquidity and capital resources. In the normal course of its business, the Company may review opportunities for the acquisition of businesses and assets in the chemicals industry. In the event of any future acquisition, the Company may consider using available cash, issuing equity securities or increasing its indebtedness to the extent permitted by the agreements governing the Company's existing debt. See Note 10 to the Consolidated Financial Statements.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is contained in a separate section of this Annual Report. See "Index of Financial Statements and Schedules" on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this Item is incorporated by reference to NL's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this report (the "NL Proxy Statement").

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this Item is incorporated by reference to the NL Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item is incorporated by reference to the NL Proxy Statement. See also Note 17 to the Consolidated Financial Statements.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES, AND REPORTS ON FORM 8-K

(a) and (d) Financial Statements and Schedules

The consolidated financial statements and schedules listed by the Registrant on the accompanying Index of Financial Statements and Schedules (see page F-1) are filed as part of this Annual Report.

(b) Reports on Form 8-K

Reports on Form 8-K for the quarter ended December 31, 1995 and thereafter through the date of this report.

October 19, 1995 - reported items 5 and 7.
January 25, 1996 - reported items 5 and 7.
February 15, 1996 - reported items 5 and 7.

(c) Exhibits

Included as exhibits are the items listed in the Exhibit Index. NL will furnish a copy of any of the exhibits listed below upon payment of $4.00 per exhibit to cover the costs to NL of furnishing the exhibits. Instruments defining the rights of holders of long-term debt issues which do not exceed 10% of consolidated total assets will be furnished to the Securities and Exchange Commission upon request.

Exhibit Index

Item No.	
3.1	By-Laws, as amended on June 28, 1990 - incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.
3.2	Certificate of Amended and Restated Certificate of Incorporation dated June 28, 1990 - incorporated by reference to Exhibit 1 to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on June 28, 1990.
4.1	Registration Rights Agreement dated October 30, 1991, by and between the Registrant and Tremont Corporation - incorporated by reference to Exhibit 4.3 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
4.2	Indenture dated October 20, 1993 governing the Registrant's 11.75% Senior Secured Notes due 2003, including form of Senior Note - incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.3	Senior Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.4	Senior Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.5	Third Party Pledge and Intercreditor Agreement dated October 20, 1993 between Registrant, Chase Manhattan Bank (National Association) and Chemical Bank - incorporated by reference to Exhibit 4.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.6	Indenture dated October 20, 1993 governing the Registrant's 13% Senior Secured Discount Notes due 2005, including form of Discount Note - incorporated by reference to Exhibit 4.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.7	Discount Mirror Notes dated October 20, 1993 - incorporated by reference to Exhibit 4.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
4.8	Discount Note Subsidiary Pledge Agreement dated October 20, 1993 between Registrant and Kronos, Inc. - incorporated by reference to Exhibit 4.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.1 Amended and Restated Loan Agreement dated as of October 15, 1993 among Kronos International, Inc., the Banks set forth therein, Hypobank International S.A., as Agent and Banque Paribas, as Co-agent - incorporated by reference to Exhibit 10.17 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.2 Amended and Restated Liquidity Undertaking dated October 15, 1993 by the Registrant, Kronos, Inc. and Kronos International, Inc. to Hypobank International S.A., as agent, and the Banks set forth therein - incorporated by reference to Exhibit 10.18 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.3 Credit Agreement dated as of March 20, 1991 between Rheox, Inc. and Subsidiary Guarantors and The Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd., as Co-agents - incorporated by reference to Exhibit 10.4 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1990.

10.4 Amendments 1 and 2 dated May 1, 1991 and February 15, 1992, respectively, to the Credit Agreement between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents-incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on form 10-Q for the quarter ended June 30, 1992.

10.5 Third amendment to the Credit Agreement, dated March 5, 1993 between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd as Co-Agents - incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.

10.6 Fourth and Fifth Amendments to the Credit Agreement, dated September 23, 1994 and December 15, 1994, respectively, between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents - incorporated by reference to Exhibit 10.6 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1994.

10.7 Sixth and Seventh Amendments to the Credit Agreement, dated September 23, 1995 and February 2 1996, respectively, between Rheox, Inc. and Subsidiary Guarantors and the Chase Manhattan Bank (National Association) and the Nippon Credit Bank, Ltd. as Co-Agents.

10.8 Credit Agreement dated as of October 18, 1993 among Louisiana Pigment Company, L.P., as Borrower, the Banks listed therein and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.11 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.9 Security Agreement dated October 18, 1993 from Louisiana Pigment Company, L.P., as Borrower, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.12 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.10 Security Agreement dated October 18, 1993 from Kronos Louisiana, Inc. as Grantor, to Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.13 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.11 KLA Consent and Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.14 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.12 Guaranty dated October 18, 1993, from Kronos, Inc., as guarantor, in favor of Lenders named therein, as Lenders, and Citibank, N.A., as Agent - incorporated by reference to Exhibit 10.15 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.13 Mortgage by Louisiana Pigment Company, L.P. dated October 18, 1993 in favor of Citibank, N.A. - incorporated by reference to Exhibit 10.16 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.14 Lease Contract dated June 21, 1952, between Farbenfabrieken Bayer Aktiengesellschaft and Titangesellschaft mit beschrankter Haftung (German language version and English translation thereof) - incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.15 Contract on Supplies and Services among Bayer AG, Kronos Titan-GmbH and Kronos International, Inc. dated June 30, 1995 (English translation from German language document) - incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1995.

10.16 Agreement dated February 8, 1984, between Bayer AG and Kronos Titan GmbH (German language version and English translation thereof) - incorporated by reference to Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1985.

10.17 Richards Bay Slag Sales Agreement dated May 1, 1995 between Richards Bay Iron and Titanium (Proprietary) Limited and Kronos, Inc.

10.18 Formation Agreement dated as of October 18, 1993 among Tioxide Americas Inc., Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.19 Joint Venture Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.20 Amendment No. 1 to Joint Venture Agreement dated as of December 20, 1995 between Tioxide Americas Inc. and Kronos Louisiana, Inc.

10.21 Kronos Offtake Agreement dated as of October 18, 1993 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.22 Amendment No. 1 to Kronos Offtake Agreement dated as of December 20, 1995 between Kronos Louisiana, Inc. and Louisiana Pigment Company, L.P.

10.23 Tioxide Americas Offtake Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P. - incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.24 Amendment No. 1 to Tioxide Americas Offtake Agreement dated as of December 20, 1995 between Tioxide Americas Inc. and Louisiana Pigment Company, L.P.

10.25 TCI/KCI Output Purchase Agreement dated as of October 18, 1993 between Tioxide Canada Inc. and Kronos Canada, Inc. - incorporated by reference to Exhibit 10.6 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.26 TAI/KLA Output Purchase Agreement dated as of October 18, 1993 between Tioxide Americas Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.7 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.27 Master Technology Exchange Agreement dated as of October 18, 1993 among Kronos, Inc., Kronos Louisiana, Inc., Kronos International, Inc., Tioxide Group Limited and Tioxide Group Services Limited - incorporated by reference to Exhibit 10.8 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.28 Parents' Undertaking dated as of October 18, 1993 between ICI American Holdings Inc. and Kronos, Inc. - incorporated by reference to Exhibit 10.9 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.

10.29	Allocation Agreement dated as of October 18, 1993 between Tioxide Americas Inc., ICI American Holdings, Inc., Kronos, Inc. and Kronos Louisiana, Inc. - incorporated by reference to Exhibit 10.10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1993.
10.30*	1985 Long Term Performance Incentive Plan of NL Industries, Inc., as adopted by the Board of Directors on February 27, 1985 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on April 24, 1985.
10.31	Form of Director's Indemnity Agreement between NL and the independent members of the Board of Directors of NL - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1987.
10.32*	1989 Long Term Performance Incentive Plan of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held on May 2, 1989.
10.33	Savings Plan for Employees of NL Industries, Inc. as adopted by the Board of Directors on February 14, 1989 - incorporated by reference to Exhibit B to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held May 2, 1989.
10.34*	NL Industries, Inc. 1992 Non-Employee Director Stock Option Plan, as adopted by the Board of Directors on February 13, 1992 - incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A for the annual meeting held April 30, 1992.
10.35	Intercorporate Services Agreement by and between Valhi, Inc. and the Registrant effective as of January 1, 1995 - incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1995.
10.36	Intercorporate Services Agreement by and between Contran Corporation and the Registrant effective as of January 1, 1995 - incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 1995.
10.37	Intercorporate Services Agreement by and between Tremont Corporation and the Registrant effective as of January 1, 1995.
10.38	Insurance Sharing Agreement, effective January 1, 1990, by and between the Registrant, NL Insurance, Ltd. (an indirect subsidiary of Tremont Corporation) and Baroid Corporation - incorporated by reference to Exhibit 10.20 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.

10.39*	Description of terms of an executive severance agreement between the Registrant and Joseph S. Compofelice - incorporated by reference to the last paragraph of page 16 entitled "Employment Agreements" of the Registrant's definitive proxy statement dated March 30, 1994.
10.40*	Description of terms of an executive severance agreement between the Registrant and Lawrence A. Wigdor - incorporated by reference to the last paragraph on page 16 entitled "Employment Agreements" of the Registrant's definitive proxy statement dated March 29, 1995.
10.41*	Executive Severance Agreement effective as of December 31, 1991 by and between the Registrant and J. Landis Martin - incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1991.
10.42*	Supplemental Executive Retirement Plan for Executives and Officers of NL Industries, Inc. effective as of January 1, 1991 - incorporated by reference to Exhibit 10.26 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1992.
10.43*	Agreement to Defer Bonus Payment dated December 28, 1995 between the Registrant and Lawrence A. Wigdor and related trust agreement.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Accountants.
27.1	Financial Data Schedules for the year ended December 31, 1995.
99.1	Annual Report of Savings Plan for Employees of NL Industries, Inc. (Form 11-K) to be filed under Form 10-K/A to the Registrant's Annual Report on Form 10-K within 180 days after December 31, 1995.

* Management contract, compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NL Industries, Inc.
(Registrant)

By /s/ J. Landis Martin
J. Landis Martin, March 1, 1996
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

/s/ J. Landis Martin
J. Landis Martin, March 1, 1996
Director, President and
Chief Executive Officer

/s/ Harold C. Simmons
Harold C. Simmons, March 1, 1996
Chairman of the Board

/s/ Glenn R. Simmons
Glenn R. Simmons, March 1, 1996
Director

/s/ Joseph S. Compofelice
Joseph S. Compofelice, March 1, 1996
Director, Vice President and
Chief Financial Officer

/s/ Kenneth R. Peak
Kenneth R. Peak, March 1, 1996
Director

/s/ Dr. Lawrence A. Wigdor
Dr. Lawrence A. Wigdor, March 1, 1996
Director, President and Chief
Executive Officer of Kronos and Rheox

/s/ Elmo R. Zumwalt, Jr.
Elmo R. Zumwalt, Jr., March 1, 1996
Director

/s/ Dennis G. Newkirk
Dennis G. Newkirk, March 1, 1996
Vice President and Controller
(Principal Accounting Officer)

NL INDUSTRIES, INC.

ANNUAL REPORT ON FORM 10-K

Items 8, 14(a) and 14(d)

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Shareholders and Board of Directors of NL Industries, Inc.:

We have audited the accompanying consolidated balance sheets of NL Industries, Inc. as of December 31, 1994 and 1995, and the related consolidated statements of operations, shareholders' deficit, and cash flows for each of the three years in the period ended December 31, 1995. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of NL Industries, Inc. as of December 31, 1994 and 1995, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 1995 in conformity with generally accepted accounting principles.

As discussed in Notes 2 and 19 to the consolidated financial statements, in 1993 the Company changed its method of accounting for certain investments in debt and equity securities in accordance with Statement of Financial Accounting Standards No. 115.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 8, 1996

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

December 31, 1994 and 1995

(In thousands, except per share data)

ASSETS	1994	1995
Current assets:		
Cash and cash equivalents	$ 131,124	$ 141,333
Marketable securities	25,165	-
Accounts and notes receivable, less allowance of $3,749 and $4,039	137,753	147,428
Refundable income taxes	1,162	4,941
Inventories	185,173	251,630
Prepaid expenses	3,878	3,217
Deferred income taxes	2,177	2,522
Total current assets	486,432	551,071
Other assets:		
Marketable securities	21,329	20,944
Investment in joint ventures	187,480	185,893
Prepaid pension cost	19,329	22,576
Deferred income taxes	2,746	788
Other	37,267	31,165
Total other assets	268,151	261,366
Property and equipment:		
Land	20,665	22,902
Buildings	147,370	166,349
Machinery and equipment	582,138	648,458
Mining properties	87,035	97,190
Construction in progress	9,579	11,187
	846,787	946,086
Less accumulated depreciation and depletion	438,960	486,870
Net property and equipment	407,827	459,216
	$1,162,410	$1,271,653

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS (CONTINUED)

December 31, 1994 and 1995

(In thousands, except per share data)

LIABILITIES AND SHAREHOLDERS' DEFICIT	1994	1995
Current liabilities:		
Notes payable	$ -	$ 39,247
Current maturities of long-term debt	42,887	43,369
Accounts payable and accrued liabilities	168,327	165,985
Payable to affiliates	11,348	10,181
Income taxes	20,762	40,088
Deferred income taxes	1,590	3,555
Total current liabilities	244,914	302,425
Noncurrent liabilities:		
Long-term debt	746,762	740,334
Deferred income taxes	178,332	157,192
Accrued pension cost	76,242	69,311
Accrued postretirement benefits cost	65,299	60,235
Other	141,518	148,511
Total noncurrent liabilities	1,208,153	1,175,583
Minority interest	2,425	3,066
Shareholders' deficit:		
Preferred stock - 5,000 shares authorized, no shares issued or outstanding	-	-
Common stock - $.125 par value; 150,000 shares authorized; 66,839 shares issued	8,355	8,355
Additional paid-in capital	759,281	759,281
Adjustments:		
Currency translation	(125,494)	(126,934)
Pension liabilities	(1,635)	(1,908)
Marketable securities	(12)	(525)
Accumulated deficit	(567,041)	(481,432)
Treasury stock, at cost (15,787 and 15,748 shares)	(366,536)	(366,258)
Total shareholders' deficit	(293,082)	(209,421)
	$1,162,410	$1,271,653

Commitments and contingencies (Notes 13 and 18)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

Years ended December 31, 1993, 1994 and 1995

(In thousands, except per share data)

	1993	1994	1995
Revenues and other income:			
Net sales	$ 805,323	$887,954	$1,023,939
Other, net	22,084	44,828	22,241
	827,407	932,782	1,046,180
Costs and expenses:			
Cost of sales	612,367	649,745	676,184
Selling, general and administrative	185,689	212,516	189,477
Interest	99,119	83,926	81,617
	897,175	946,187	947,278
Income (loss) before income taxes, minority interest, extraordinary item and cumulative effect of change in accounting principle	(69,768)	(13,405)	98,902
Income tax expense	12,713	9,734	12,671
Income (loss) before minority interest, extraordinary item and cumulative effect of change in accounting principle	(82,481)	(23,139)	86,231
Minority interest	730	843	622
Income (loss) before extraordinary item and cumulative effect of change in accounting principle	(83,211)	(23,982)	85,609
Extraordinary item	(27,815)	-	-
Cumulative effect of change in accounting principle	1,217	-	-
Net income (loss)	$(109,809)	$(23,982)	$ 85,609

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS (CONTINUED)

Years ended December 31, 1993, 1994 and 1995

(In thousands, except per share data)

	1993	1994	1995
Income (loss) per share of common stock:			
Before extraordinary item and cumulative effect of change in accounting principle	$(1.63)	$ (.47)	$ 1.66
Extraordinary item	(.55)	-	-
Cumulative effect of change in accounting principle	.02	-	-
Net income (loss)	$(2.16)	$ (.47)	$ 1.66
Weighted average common shares outstanding	50,890	51,022	51,512

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' DEFICIT

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	Common stock	Additional paid-in capital	Adjustments			Accumulated deficit	Treasury stock	Total
			Currency translation	Pension liabilities	Marketable securities			
Balance at December 31, 1992	$8,355	$759,281	$(111,820)	$ -	$ (896)	$(433,250)	$(367,963)	$(146,293)
Net loss	-	-	-	-	-	(109,809)	-	(109,809)
Adjustments	-	-	(3,983)	(3,442)	(51)	-	-	(7,476)
Cumulative effect of change in accounting principle	-	-	-	-	(1,217)	-	-	(1,217)
Balance at December 31, 1993	8,355	759,281	(115,803)	(3,442)	(2,164)	(543,059)	(367,963)	(264,795)
Net loss	-	-	-	-	-	(23,982)	-	(23,982)
Treasury stock reissued	-	-	-	-	-	-	1,427	1,427
Adjustments	-	-	(9,691)	1,807	2,152	-	-	(5,732)
Balance at December 31, 1994	8,355	759,281	(125,494)	(1,635)	(12)	(567,041)	(366,536)	(293,082)
Net income	-	-	-	-	-	85,609	-	85,609
Treasury stock reissued	-	-	-	-	-	-	278	278
Adjustments	-	-	(1,440)	(273)	(513)	-	-	(2,226)
Balance at December 31, 1995	$8,355	$759,281	$(126,934)	$(1,908)	$ (525)	$(481,432)	$(366,258)	$(209,421)

See accompanying notes to consolidated financial statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from operating activities:			
Net income (loss)	$(109,809)	$(23,982)	$ 85,609
Depreciation, depletion and amortization	46,340	34,592	38,989
Noncash interest expense	8,309	18,071	19,396
Deferred income taxes	(670)	11,907	(29,248)
Cumulative effect of change in accounting principle	(1,217)	-	-
Minority interest	730	843	622
Net (gains) losses from:			
Securities transactions	(4,363)	1,220	(1,175)
Disposition of property and equipment	199	1,981	2,713
Pension cost, net	(2,134)	(2,753)	(7,248)
Other postretirement benefits, net	(2,422)	(3,437)	(4,169)
Other, net	(1,349)	68	(477)
	(66,386)	38,510	105,012
Change in assets and liabilities:			
Accounts and notes receivable	(1,291)	(13,152)	(1,483)
Inventories	12,166	17,778	(57,378)
Prepaid expenses	(472)	3,221	1,148
Accounts payable and accrued liabilities	(4,132)	(17,343)	(17,700)
Income taxes	1,507	109,243	14,861
Accounts with affiliates	5,426	(2,024)	(4,059)
Other noncurrent assets	8,844	2,219	1,587
Other noncurrent liabilities	37,069	28,706	3,233
Marketable trading securities:			
Purchases	-	(870)	(762)
Dispositions	-	15,530	27,102
Net cash provided (used) by operating activities	(7,269)	181,818	71,561

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from investing activities:			
Capital expenditures	$ (47,986)	$ (36,931)	$(64,196)
Marketable securities:			
Purchases	(11,053)	-	-
Dispositions	79,398	-	-
Proceeds from disposition of property and equipment	175,537	598	182
Investment in joint ventures, net	(14,405)	3,133	1,793
Loans to affiliates	(210)	-	-
Other, net	670	362	-
Net cash provided (used) by investing activities	181,951	(32,838)	(62,221)
Cash flows from financing activities:			
Indebtedness:			
Borrowings	452,694	44,490	57,556
Principal payments	(607,417)	(175,886)	(61,128)
Other, net	(613)	(742)	264
Net cash used by financing activities	(155,336)	(132,138)	(3,308)
Net change during the year from operating, investing and financing activities	$ 19,346	$ 16,842	$ 6,032

NL INDUSTRIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash and cash equivalents:			
Net change during the year from:			
Operating, investing and financing activities	$ 19,346	$ 16,842	$ 6,032
Currency translation	(86)	7,689	4,177
	19,260	24,531	10,209
Balance at beginning of year	87,333	106,593	131,124
Balance at end of year	$106,593	$ 131,124	$141,333
Supplemental disclosures - cash paid (received) for:			
Interest, net of amounts capitalized	$ 91,576	$ 66,801	$ 62,078
Income taxes, net	11,897	(111,418)	27,965

See accompanying notes to consolidated financial statements.

Note 1 - Organization and basis of presentation:

NL Industries, Inc. conducts its operations primarily through its wholly-owned subsidiaries, Kronos, Inc. (titanium dioxide pigments or "TiO_2") and Rheox, Inc. (specialty chemicals).

Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 54% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 91% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons, of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President, and Chief Executive Officer of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies.

Note 2 - Summary of significant accounting policies:

Principles of consolidation and management's estimates

The accompanying consolidated financial statements include the accounts of NL and its majority-owned subsidiaries (collectively, the "Company"). All material intercompany accounts and balances have been eliminated. Certain prior year amounts have been reclassified to conform to the current year presentation. The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amount of revenues and expenses during the reporting period. Ultimate actual results may in some instances differ from previously estimated amounts.

Translation of foreign currencies

Assets and liabilities of subsidiaries whose functional currency is deemed to be other than the U.S. dollar are translated at year-end rates of exchange and revenues and expenses are translated at weighted average exchange rates prevailing during the year. Resulting translation adjustments and the related income tax effects are accumulated in the currency translation adjustment component of shareholders' deficit. Currency transaction gains and losses are recognized in income currently.

Cash and cash equivalents

Cash equivalents include U.S. Treasury securities purchased under short-term agreements to resell, bank deposits, and government and commercial notes and bills with original maturities of three months or less. Cash and cash equivalents includes $16 million and $10 million at December 31, 1994 and 1995, respectively, which are restricted for letters of credit and certain indebtedness agreements.

Marketable securities and securities transactions

Marketable securities are classified as either "available-for-sale" or "trading" and are carried at market based on quoted market prices. Unrealized gains and losses on trading securities are recognized in income currently. Unrealized gains and losses on available-for-sale securities, and the related deferred income tax effects, are accumulated in the marketable securities adjustment component of shareholders' deficit. See Note 4. Realized gains or losses are computed based on specific identification of the securities sold.

Prior to the adoption of Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities" as of December 31, 1993, marketable securities were generally carried at the lower of aggregate market or amortized cost and unrealized net gains were not recognized.

Inventories

Inventories are stated at the lower of cost (principally average cost) or market. Amounts are removed from inventories at average cost.

Investment in joint ventures

Investments in 20% to 50%-owned entities are accounted for by the equity method.

Intangible assets

Intangible assets, included in other noncurrent assets, are amortized by the straight-line method over the periods expected to be benefitted, not exceeding ten years.

Property, equipment, depreciation and depletion

Property and equipment are stated at cost. Interest costs related to major, long-term capital projects are capitalized as a component of construction costs. Maintenance, repairs and minor renewals are expensed; major improvements are capitalized.

Depreciation is computed principally by the straight-line method over the estimated useful lives of ten to forty years for buildings and three to twenty years for machinery and equipment. Depletion of mining properties is computed by the unit-of-production and straight-line methods.

Long-term debt

Long-term debt is stated net of unamortized original issue discount ("OID"). OID is amortized over the period during which interest is not paid and deferred financing costs are amortized over the life of the applicable issue, both by the interest method.

Employee benefit plans

Accounting and funding policies for retirement plans and postretirement benefits other than pensions ("OPEB") are described in Note 11.

Net sales

Sales are recognized as products are shipped.

Income taxes

Deferred income tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the income tax and financial reporting carrying amounts of assets and liabilities, including investments in subsidiaries and unconsolidated affiliates not included in the Company's U.S. tax group (the "NL Tax Group").

Income (loss) per share of common stock

Income (loss) per share of common stock is based on the weighted average number of common shares and equivalents outstanding. Common stock equivalents, consisting of nonqualified stock options, are excluded from the computation when their effect is antidilutive.

Note 3 - Business and geographic segments:

The Company's operations are conducted in two business segments - TiO_2 conducted by Kronos and specialty chemicals conducted by Rheox. Titanium dioxide pigments are used to impart whiteness, brightness and opacity to a wide variety of products, including paints, plastics, paper, fibers and ceramics. Specialty chemicals include rheological additives which control the flow and leveling characteristics of a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. General corporate assets consist principally of cash, cash equivalents and marketable securities. At December 31, 1994 and 1995, the net assets of non-U.S. subsidiaries included in consolidated net assets approximated $72 million and $121 million, respectively.

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Business segments			
Net sales:			
Kronos	$ 697,048	$ 770,077	$ 894,149
Rheox	108,275	117,877	129,790
	$ 805,323	$ 887,954	$1,023,939
Operating income:			
Kronos	$ 36,146	$ 80,515	$ 161,175
Rheox	26,254	30,837	38,544
	62,400	111,352	199,719
General corporate income (expense):			
Securities earnings	8,467	3,855	7,419
Expenses, net	(41,516)	(44,686)	(26,619)
Interest expense	(99,119)	(83,926)	(81,617)
	$ (69,768)	$ (13,405)	$ 98,902
Capital expenditures:			
Kronos	$ 46,913	$ 34,522	$ 60,699
Rheox	1,069	2,283	3,464
General corporate	4	126	33
	$ 47,986	$ 36,931	$ 64,196
Depreciation, depletion and amortization:			
Kronos	$ 42,877	$ 31,156	$ 35,706
Rheox	3,176	3,153	3,089
General corporate	287	283	194
	$ 46,340	$ 34,592	$ 38,989
Geographic areas			
Net sales - point of origin:			
United States	$ 270,288	$ 303,475	$ 339,568
Europe	519,064	587,291	703,206
Canada	132,930	122,957	139,341
Eliminations	(116,959)	(125,769)	(158,176)
	$ 805,323	$ 887,954	$1,023,939

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Net sales - point of destination:			
United States	$ 217,892	$ 238,568	$ 258,850
Europe	418,072	468,915	580,794
Canada	76,078	64,374	60,472
Other	93,281	116,097	123,823
	$ 805,323	$ 887,954	$1,023,939
Operating income:			
United States	$ 20,981	$ 49,358	$ 75,650
Europe	19,658	50,273	103,096
Canada	21,761	11,721	20,973
	$ 62,400	$ 111,352	$ 199,719

	December 31,		
	1993	1994	1995
	(In thousands)		
Identifiable assets			
Business segments:			
Kronos	$1,008,453	$ 950,200	$1,063,369
Rheox	75,362	83,176	83,620
General corporate	122,734	129,034	124,664
	$1,206,549	$1,162,410	$1,271,653
Geographic segments:			
United States	$ 326,831	$ 308,017	$ 311,374
Europe	622,826	594,921	690,353
Canada	134,158	130,438	145,262
General corporate	122,734	129,034	124,664
	$1,206,549	$1,162,410	$1,271,653

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows (Continued)

Years ended December 31, 1991, 1992 and 1993

(In thousands)

	1991	1992	1993
Cash flows from financing activities:			
Additions to (principal payments on):			
Long-term debt	$ (9,025)	$(14,873)	$ 335,688
Loans from affiliates	(100,526)	12,298	(16,047)
Deferred financing fees	-	-	(8,348)
Dividends paid	(34,724)	(17,807)	-
Purchases of treasury stock and other	(202,492)	(3,660)	-
Net cash provided (used) by financing activities	(346,767)	(24,042)	311,293
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	300,321	24,999	(22,247)
Investing activities	43,358	619	(288,982)
Financing activities	(346,767)	(24,042)	311,293
Net change from operating, investing and financing activities	(3,088)	1,576	64
Balance at beginning of year	12,555	9,467	11,043
Balance at end of year	$ 9,467	$ 11,043	$ 11,107

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE III - CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Notes to Condensed Financial Information

Note 1 - Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 - Net payable to (receivable from) subsidiaries and affiliates:

	December 31,	
	1992	1993
	(In thousands)	
Current:		
Tremont Corporation	$ 4,056	$ 4,777
Valhi, Inc.	30	-
Kronos and Rheox:		
Income taxes	2,680	3,123
Other, net	16,876	(4,103)
	$23,642	$ 3,797
Noncurrent:		
Note payable (receivable) - Kronos	$65,000	$(352,627)

Note 3 - Long-term debt:

	December 31,	
	1992	1993
	(In thousands)	
11.75% Senior Secured Notes	$ -	$250,000
13% Senior Secured Discount Notes	-	102,627
7.5% sinking fund debentures	14,374	-
	14,374	352,627
Less current maturities	4,374	-
	$10,000	$352,627

See Note 10 of the Consolidated Financial Statements for a description of the Notes.

The aggregate maturities of the Company's long-term debt at December 31, 1993 are shown in the table below.

	Amount (In thousands)
Years ending December 31, 1999 and thereafter	$437,500
Less unamortized original issue discount on the Senior Secured Discount Notes	84,873
	$352,627

The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through January 1, 2001.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE V-PROPERTY AND EQUIPMENT

(In thousands)

Classification	Balance at beginning of year	Additions at cost	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1993:					
Land	$ 29,863	$ 7,221	$ (17,685)	$ (1,162)	$ 18,237
Buildings	208,056	2,592	(72,723)	(8,343)	129,582
Machinery and equipment	811,531	24,032	(287,419)	(33,054)	515,090
Mining properties	75,731	630	(27)	(3,623)	72,711
Construction in progress	21,042	13,511 (a)	(2,578)	(1,925)	30,050
	$1,146,223	$ 47,986	$(380,432)(c)	$(48,107)	$ 765,670
Year ended December 31, 1992:					
Land	$ 19,645	$ 11,493	$ (146)	$ (1,129)	$ 29,863
Buildings	150,235	74,924	(6,480)	(10,623)	208,056
Machinery and equipment	566,803	311,240	(28,403)	(38,109)	811,531
Mining properties	81,959	2,346	(491)	(8,083)	75,731
Construction in progress	338,685	(314,853)(a)	(407)	(2,383)	21,042
	$1,157,327	$ 85,150 (b)	$ (35,927)	$(60,327)	$1,146,223
Year ended December 31, 1991:					
Land	$ 19,096	$ 788	$ (103)	$ (136)	$ 19,645
Buildings	151,079	379	(258)	(965)	150,235
Machinery and equipment	547,077	31,368	(8,165)	(3,477)	566,803
Mining properties	81,363	1,718	(244)	(878)	81,959
Construction in progress	177,778	160,893 (a)	(426)	440	338,685
	$ 976,393	$ 195,146 (b)	$ (9,196)	$ (5,016)	$1,157,327

(a) Net of amounts transferred to applicable property and equipment accounts.
(b) Includes costs for chloride process TiO_2 plant in Lake Charles, Louisiana.
(c) Includes contribution of a chloride process TiO_2 plant in Lake Charles, Louisiana to the new manufacturing joint venture.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE VI-ACCUMULATED DEPRECIATION AND DEPLETION OF PROPERTY AND EQUIPMENT

(In thousands)

Classification	Balance at beginning of year	Additions charged to costs and expenses	Retirements	Currency translation adjustments	Balance at end of year
Year ended December 31, 1993:					
Land	$ 6,375	$ 917	$ (785)	$ (448)	$ 6,059
Buildings	67,896	4,443	(3,096)	(4,302)	64,941
Machinery and equipment	263,771	35,549	(28,578)	(16,535)	254,207
Mining properties	62,204	2,568	(27)	(2,885)	61,860
	$400,246	$43,477	$(32,486)(a)	$(24,170)	$387,067
Year ended December 31, 1992:					
Land	$ 5,948	$ 841	$ -	$ (414)	$ 6,375
Buildings	75,038	4,531	(6,339)	(5,334)	67,896
Machinery and equipment	272,467	35,933	(25,124)	(19,505)	263,771
Mining properties	65,290	3,535	(478)	(6,143)	62,204
	$418,743	$44,840	$(31,941)	$(31,396)	$400,246
Year ended December 31, 1991:					
Land	$ 5,536	$ 473	$ (33)	$ (28)	$ 5,948
Buildings	72,666	3,125	(234)	(519)	75,038
Machinery and equipment	258,865	22,371	(6,643)	(2,126)	272,467
Mining properties	62,212	3,762	(244)	(440)	65,290
	$399,279	$29,731	$ (7,154)	$ (3,113)	$418,743

(a) Includes contribution of a chloride process TiO_2 plant in Lake Charles, Louisiana to the new manufacturing joint venture.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE VIII - VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Balance at end of year
Year ended December 31, 1993:					
Allowance for doubtful accounts and notes receivable	$ 2,385	$ 1,216	$ (476)(a)	$ (117)	$ 3,008
Amortization of intangibles	$ 9,792	$ 2,863	$ -	$ (714)	$ 11,941
Valuation allowance for deferred income taxes	$86,031	$50,562	$ -	$(3,216)	$133,377
Year ended December 31, 1992:					
Allowance for doubtful accounts and notes receivable	$ 1,749	$ 945	$ (190)(a)	$ (119)	$ 2,385
Amortization of intangibles	$ 7,270	$ 2,989	$ -	$ (467)	$ 9,792
Valuation allowance for deferred income taxes	$ -	$86,031	$ -	$ -	$ 86,031
Year ended December 31, 1991:					
Allowance for doubtful accounts and notes receivable	$ 2,107	$ 478	$ (846)(a)	$ 10	$ 1,749
Amortization of intangibles	$ 4,211	$ 2,850	$ -	$ 209	$ 7,270

(a) Amounts written off, less recoveries.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE IX - SHORT-TERM BORROWINGS

(In thousands, except percentages)

Category of aggregate short-term borrowings	Balance at end of year	Weighted average interest rate	Maximum amount outstanding during the year	Average amount outstanding during the year (a)	Weighted average interest rate during the year (b)
Bank credit agreements and other:					
Year ended December 31, 1992	$ 315	7.3%	$ 1,100	$ 239	8.4%
Year ended December 31, 1991	$ 429	9.8%	$ 40,746	$ 5,484	11.1%

(a) The average amount outstanding during the year is calculated based on the average of the month-end balances of short-term borrowings during the year.

(b) The weighted average interest rate during the year is calculated based on total interest expense on short-term borrowings divided by the average amount outstanding during the year.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE X - SUPPLEMENTARY INCOME STATEMENT INFORMATION

(In thousands)

	Years ended December 31,		
	1991	1992	1993
Maintenance and repairs	$81,201	$93,036	$80,580
Depreciation, depletion and amortization:			
Property and equipment	$29,731	$44,840	$43,477
Intangible assets	2,850	2,989	2,863
	$32,581	$47,829	$46,340
Taxes, other than payroll and income taxes	$12,748	$15,319	$ 6,811

BOARD OF DIRECTORS

J. Landis Martin
President and Chief Executive Officer – NL Industries, Inc.

Kenneth R. Peak
President – Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman – Valhi, Inc. (diversified industrial management company)

Harold C. Simmons
Chairman of the Board – NL Industries, Inc.
Chairman and Chief Executive Officer – Valhi, Inc.

Michael A. Snetzer
President – Valhi, Inc.

Dr. Lawrence A. Wigdor
President and Chief Executive Officer – Kronos and Rheox

Admiral Elmo R. Zumwalt, Jr. (retired)
President – Admiral Zumwalt Consultants, Inc. (consulting)

BOARD COMMITTEES

Audit Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee

Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee

Michael A. Snetzer, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President;
President and Chief Executive Officer – Kronos and Rheox

Joseph S. Compofelice
Vice President and Chief Financial Officer

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

SHAREHOLDER INFORMATION

Annual Meeting

The 1994 annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be marked, signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agency

First Chicago Trust Company of New York,
P.O. Box 2500, Jersey City, New Jersey 07303-2500.
Telephone (201) 324-0498.

Form 10-K Report

The Company's Annual Report on Form 10-K for the year ended December 31, 1993, filed with the Securities and Exchange Commission, is printed as part of this report. Additional copies are available to shareholders without charge. Requests should be addressed to NL Industries, Inc., Investor Relations Department, P.O. Box 60087, Houston, Texas 77205, or made by calling (800) 285-3519.

Note 4 - Marketable securities and securities transactions:

	December 31, 1994	December 31, 1995
	(In thousands)	
Trading securities - current U.S. Treasury securities:		
Unrealized losses	$(1,124)	$ -
Cost	26,289	-
Aggregate market	$25,165	$ -
Available-for-sale securities - noncurrent marketable equity securities:		
Unrealized gains	$ 3,357	$ 1,962
Unrealized losses	(3,374)	(2,770)
Cost	21,346	21,752
Aggregate market	$21,329	$20,944

Net gains and losses from trading securities are composed of:

	Years ended December 31, 1993	1994	1995
		(In thousands)	
Unrealized gains (losses)	$3,520	$(1,177)	$1,125
Realized gains (losses)	843	(43)	50
	$4,363	$(1,220)	$1,175

Note 5 - Inventories:

	December 31, 1994	December 31, 1995
	(In thousands)	
Raw materials	$ 30,118	$ 35,075
Work in process	7,655	9,132
Finished products	112,410	172,330
Supplies	34,990	35,093
	$185,173	$251,630

Note 6 - Investment in joint ventures:

	December 31, 1994	December 31, 1995
	(In thousands)	
TiO_2 manufacturing joint venture	$185,122	$183,129
Other	2,358	2,764
	$187,480	$185,893

In October 1993, Kronos Louisiana, Inc. ("KLA"), a wholly-owned subsidiary of Kronos, formed a manufacturing joint venture, Louisiana Pigment Company, L.P. ("LPC"), with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). LPC, which is equally owned by KLA and a subsidiary of Tioxide, owns and operates the Louisiana chloride process TiO_2 plant formerly owned by KLA. LPC has long-term debt that is collateralized by the partnership interests of the partners and substantially all of the assets of LPC. The long-term debt consists of two tranches, one attributable to each partner, and each tranche is serviced through (i) the purchase of the plant's TiO_2 output in equal quantities by the partners and (ii) cash capital contributions. KLA is required to purchase one-half of the TiO_2 produced by LPC. KLA's tranche of LPC's debt is reflected as outstanding indebtedness of the Company because Kronos has guaranteed the purchase obligation relative to the debt service of its tranche. See Note 10.

LPC is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of LPC's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from LPC is sold, and its share of the interest expense is reported as a component of interest expense.

Summary balance sheets of LPC are shown below.

	December 31, 1994	December 31, 1995
	(In thousands)	
ASSETS		
Current assets	$ 38,027	$ 49,398
Other assets	1,969	1,553
Property and equipment, net	344,806	335,254
	$384,802	$386,205
LIABILITIES AND PARTNERS' EQUITY		
Long-term debt, including current portion:		
Kronos tranche	$ 88,715	$ 73,286
Tioxide tranche	81,000	59,400
Other liabilities, primarily current	12,330	17,719
	182,045	150,405
Partners' equity	202,757	235,800
	$384,802	$386,205

Summary income statements of LPC are shown below.

	Period from October 18, 1993 to December 31, 1993	Years ended December 31, 1994	1995
	(In thousands)		
Revenues and other income:			
Kronos	$12,713	$ 70,492	$ 76,365
Tioxide	12,617	67,218	75,241
Interest income	72	462	653
	25,402	138,172	152,259
Cost and expenses:			
Cost of sales	22,803	126,972	140,103
General and administrative	443	572	385
Interest	2,156	10,628	11,771
	25,402	138,172	152,259
Net income	$ -	$ -	$ -

Note 7 - Other noncurrent assets:

	December 31, 1994	1995
	(In thousands)	
Intangible assets, net of accumulated amortization of $16,149 and $20,562	$13,957	$11,803
Deferred financing costs, net	16,079	13,199
Other	7,231	6,163
	$37,267	$31,165

Note 8 - Accounts payable and accrued liabilities:

	December 31, 1994	1995
	(In thousands)	
Accounts payable	$ 74,903	$ 68,734
Accrued liabilities:		
Employee benefits	34,209	49,884
Environmental costs	10,433	6,000
Interest	6,485	6,633
Miscellaneous taxes	7,336	2,557
Other	34,961	32,177
	93,424	97,521
	$168,327	$165,985

Note 9 - Other noncurrent liabilities:

	December 31, 1994	December 31, 1995
	(In thousands)	
Environmental costs	$ 93,655	$112,827
Insurance claims expenses	14,716	12,088
Deferred technology fee income	18,305	8,456
Employee benefits	12,322	13,148
Other	2,520	1,992
	$141,518	$148,511

Note 10 - Notes payable and long-term debt:

	December 31, 1994	December 31, 1995
	(In thousands)	
Notes payable (DM 56,000)	$ -	$ 39,247
NL Industries:		
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	116,409	132,034
	366,409	382,034
Kronos:		
DM bank credit facility (DM 397,610)	255,703	276,895
LPC term loan	88,715	73,286
Other	10,507	13,672
	354,925	363,853
Rheox:		
Bank term loan	67,500	37,263
Other	815	553
	68,315	37,816
	789,649	783,703
Less current maturities	42,887	43,369
	$746,762	$740,334

The Company's $250 million principal amount of 11.75% Senior Secured Notes due 2003 and $188 million principal amount at maturity ($100 million proceeds at issuance) of 13% Senior Secured Discount Notes due 2005 (collectively, the "Notes") are collateralized by a series of intercompany notes from Kronos International, Inc. ("KII"), a wholly-owned subsidiary of Kronos, to NL, the terms of which mirror those of the respective Notes (the "Mirror Notes"). The Senior Secured Notes are also collateralized by a first priority lien on the stock of Kronos and a second priority lien on the stock of Rheox. The Senior Secured Notes and the Senior Secured Discount Notes are redeemable, at the Company's option, after October 2000 and October 1998, respectively, except that up to one-third of the aggregate principal amount of the Senior Secured Discount

Notes are redeemable (at 113% of the accreted value) upon any Common Stock Offering, as defined, prior to October 1996. For redemptions, other than redemptions pursuant to any Common Stock Offering, the redemption prices range from 101.5% (starting October 2000) declining to 100% (after October 2001) of the principal amount for the Senior Secured Notes and range from 106% (starting October 1998) declining to 100% (after October 2001) of the accreted value of the Senior Secured Discount Notes. In the event of a Change of Control, as defined, the Company would be required to make an offer to purchase the Notes at 101% of the principal amount of the Senior Secured Notes and 101% of the accreted value of the Senior Secured Discount Notes. The Notes are issued pursuant to indentures which contain a number of covenants and restrictions which, among other things, restrict the ability of the Company and its subsidiaries to incur debt, incur liens, pay dividends or merge or consolidate with, or sell or transfer all or substantially all of its assets to, another entity. At December 31, 1995, there was $6 million available for payment for dividends pursuant to the terms of the indentures. The Senior Secured Discount Notes do not require cash interest payments for the first five years. The net carrying value of the Senior Secured Discount Notes per $100 principal amount at maturity was $62.08 and $70.42 at December 31, 1994 and 1995, respectively. At December 31, 1995, the quoted market price of the Senior Secured Notes was $107.06 per $100 principal amount and the quoted market price of the Senior Secured Discount Notes was $80.95 per $100 principal amount (1994 - $98.80 and $61.30, respectively).

The DM credit facility, as amended, consists of a DM 398 million term loan due from March 1997 to September 1999 and a DM 250 million revolving credit facility due no later than September 2000. At December 31, 1995, all of the revolving credit facility was available for future borrowings by KII; however, DM 125 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments. In January 1996, the Company borrowed DM 30 million under the revolving credit facility. Borrowings bear interest at DM LIBOR plus 1.625% (6.938% and 5.5% at December 31, 1994 and 1995, respectively). NL and Kronos have agreed, under certain circumstances, to provide KII with up to DM 125 million through January 1, 2001. The DM credit facility is collateralized by pledges of the stock of certain KII subsidiaries. The credit agreement restricts KII's ability to incur additional indebtedness, restricts its dividends and other payments to affiliates, requires it to maintain specified debt service coverage and other ratios, and contains other provisions and restrictive covenants customary in lending transactions of this type.

Borrowings under KLA's tranche of LPC's term loan bear interest at U.S. LIBOR plus 1.625% (8.125% and 7.315% at December 31, 1994 and 1995, respectively) and are repayable in quarterly installments through September 2000. See Note 6.

Rheox has a credit agreement providing for a seven-year term loan due in quarterly installments through December 1997 and a $5 million revolving credit facility due September 1996. Borrowings bear interest, at Rheox's option, at the prime rate plus 1.5% or U.S. LIBOR plus 2.5% (9.01% and 8.32% at December 31, 1994 and 1995, respectively), and are collateralized by the stock of Rheox and its domestic subsidiary and by Rheox's U.S. assets. The credit agreement restricts Rheox's ability to incur additional indebtedness, restricts its dividend payments and contains other provisions and restrictive covenants customary in lending transactions of this type.

Notes payable at December 31, 1995 consists of DM 56 million of short-term borrowings due in 1996 from non-U.S. banks with interest rates ranging from 4.25% to 4.856%.

Unused lines of credit available for borrowings under the Rheox U.S. facility and non-U.S. credit facilities totalled $5 million and $191 million, respectively, at December 31, 1995. Of the non-U.S. credit facilities available, $87 million is available only for (i) permanently reducing the DM term loan or (ii) paying future German tax assessments.

The aggregate maturities of long-term debt at December 31, 1995 are shown in the table below.

Years ending December 31,	Amount (In thousands)
1996	$ 43,369
1997	97,585
1998	110,602
1999	138,031
2000	11,845
2001 and thereafter	437,737
	839,169
Less unamortized original issue discount on the Senior Secured Discount Notes	55,466
	$783,703

Note 11 - Employee benefit plans:

Company-sponsored pension plans

The Company maintains various defined benefit and defined contribution pension plans covering substantially all employees. Personnel employed by non-U.S. subsidiaries are covered by separate plans in their respective countries and U.S. employees are covered by various plans including the Retirement Programs of NL Industries, Inc. (the "NL Pension Plan").

A majority of U.S. employees are eligible to participate in a contributory savings plan with partial matching contributions by the Company. The Company's expense related to matching contributions was nil in 1993, $.7 million in 1994 and $.8 million in 1995.

Defined pension benefits are generally based upon years of service and compensation under fixed-dollar, final pay or career average formulas, and the related expenses are based upon independent actuarial valuations. The funding policy for U.S. defined benefit plans is to contribute amounts which satisfy funding requirements of the Employee Retirement Income Security Act of 1974, as amended, and the Retirement Protection Act of 1994. Non-U.S. defined benefit pension plans are funded in accordance with applicable statutory requirements.

The funded status of the Company's defined benefit pension plans is set forth below. The rates used in determining the actuarial present value of benefit obligations were (i) discount rates - 7% and 8.5% (1994 - 8.5%) and (ii)

rates of increase in future compensation levels - 3.5% to 6% (1994 - 5% to 6%). The expected long-term rates of return on assets used ranged from 8% to 9% (1994 - 8.5% to 9%). Plan assets are comprised primarily of investments in U.S. and non-U.S. corporate equity and debt securities, short-term investments, mutual funds and group annuity contracts.

SFAS No. 87, "Employers' Accounting for Pension Costs" requires that an additional pension liability be recognized when the unfunded accumulated pension benefit obligation exceeds the unfunded accrued pension liability. Variances from actuarially-assumed rates, including the rate of return on pension plan assets, will result in additional increases or decreases in accrued pension liabilities, pension expense and funding requirements in future periods. A one percentage point decrease in the discount rate would increase the projected benefit obligations at December 31, 1995 by $31 million. At December 31, 1995, 67% of the projected benefit obligations in excess of plan assets relate to non-U.S. plans.

	Assets exceed accumulated benefits December 31,		Accumulated benefits exceed assets December 31,	
	1994	1995	1994	1995
	(In thousands)			
Actuarial present value of benefit obligations:				
Vested benefits	$43,248	$47,181	$132,317	$156,275
Nonvested benefits	3,390	3,744	2,155	2,562
Accumulated benefit obligations	46,638	50,925	134,472	158,837
Effect of projected salary increases	5,938	7,885	19,620	22,373
Projected benefit obligations ("PBO")	52,576	58,810	154,092	181,210
Plan assets at fair value	66,293	71,345	108,377	124,632
Plan assets over (under) PBO	13,717	12,535	(45,715)	(56,578)
Unrecognized net loss (gain) from experience different from actuarial assumptions	2,876	7,155	(32,808)	(20,643)
Unrecognized prior service cost (credit)	3,195	3,147	(3,255)	(2,711)
Unrecognized transition obligations (assets) being amortized over 15 to 18 years	(459)	(261)	2,606	2,517
Adjustment required to recognize minimum liability	-	-	(1,635)	(1,908)
Total prepaid (accrued) pension cost	19,329	22,576	(80,807)	(79,323)
Less current portion	-	-	(4,565)	(10,012)
Noncurrent prepaid (accrued) pension cost	$19,329	$22,576	$(76,242)	$(69,311)

The components of the net periodic defined benefit pension cost are set forth below.

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Service cost benefits	$ 4,082	$ 4,905	$ 4,325
Interest cost on PBO	14,430	15,371	17,853
Return on plan assets	(15,647)	(8,039)	(16,574)
Net amortization and deferrals	2,413	(5,940)	(2,399)
	$ 5,278	$ 6,297	$ 3,205

Incentive bonus programs

The Company has incentive bonus programs for certain employees providing for annual payments, which may be in the form of NL common stock, based on formulas involving the profitability of Kronos and Rheox in relation to the annual operating plan of the employee's business unit and individual performance.

Postretirement benefits other than pensions

In addition to providing pension benefits, the Company currently provides certain health care and life insurance benefits for eligible retired employees. Certain of the Company's U.S. and Canadian employees may become eligible for such postretirement health care and life insurance benefits if they reach retirement age while working for the Company. In 1989, the Company began phasing out such benefits for currently active U.S. employees over a ten-year period. The majority of all retirees are required to contribute a portion of the cost of their benefits and certain current and future retirees are eligible for reduced health care benefits at age 65. The Company's policy is to fund medical claims as they are incurred, net of any contributions by the retirees.

The rates used in determining the actuarial present value of the accumulated benefit obligations were (i) discount rate - 7.5% (1994 - 8.5%), (ii) rate of increase in future compensation levels - 4.5% (1994 - 6%), (iii) rate of increase in future health care costs - 9% in 1996, gradually declining to 5% in 2000 and thereafter and (iv) expected return on plan assets - 9%. Variances from actuarially-assumed rates will result in additional increases or decreases in accrued OPEB cost, net periodic OPEB cost and funding requirements in future periods. If the health care cost trend rate was increased by one percentage point for each year, postretirement benefit expense would have increased approximately $.3 million in 1995, and the actuarial present value of accumulated benefit obligations at December 31, 1995 would have increased by approximately $2.9 million. A one percentage point decrease in the discount rate would increase the actuarial present value of accumulated benefit obligations at December 31, 1995 by approximately $4 million.

	December 31,	
	1994	1995
	(In thousands)	
Actuarial present value of accumulated benefit obligations:		
Retiree benefits	$51,895	$53,211
Other fully eligible active plan participants	1,229	1,228
Other active plan participants	1,797	2,322
	54,921	56,761
Plan assets at fair value	7,217	7,103
Accumulated postretirement benefit obligations in excess of plan assets	47,704	49,658
Unrecognized net gain from experience different from actuarial assumptions	9,251	4,676
Unrecognized prior service credit	13,672	12,199
Total accrued postretirement benefits cost	70,627	66,533
Less current portion	5,328	6,298
Noncurrent accrued postretirement benefits cost	$65,299	$60,235

The components of the Company's net periodic postretirement benefit cost are set forth below:

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Interest cost on accumulated benefit obligations	$ 4,911	$ 4,338	$ 4,415
Service cost benefits earned during the year	127	99	101
Return on plan assets	(647)	(688)	(637)
Net amortization and deferrals	(1,473)	(1,495)	(1,870)
	$ 2,918	$ 2,254	$ 2,009

Note 12 - Shareholders' deficit:

Common stock

	Shares of common stock		
	Issued	Treasury stock	Outstanding
	(In thousands)		
Balance at December 31, 1992 and 1993	66,839	15,949	50,890
Treasury shares reissued	-	(162)	162
Balance at December 31, 1994	66,839	15,787	51,052
Treasury shares reissued	-	(39)	39
Balance at December 31, 1995	66,839	15,748	51,091

Common stock options

The 1989 Long Term Performance Incentive Plan of NL Industries, Inc. (the "NL Option Plan") provides for the discretionary grant of restricted common stock, stock options, stock appreciation rights ("SARs") and other incentive compensation to officers and other key employees of the Company. Although certain stock options granted pursuant to a similar plan which preceded the NL Option Plan ("the Predecessor Option Plan") remain outstanding at December 31, 1995, no additional options may be granted under the Predecessor Option Plan.

Up to five million shares of NL common stock may be issued pursuant to the NL Option Plan. The NL Option Plan provides for the grant of options that qualify as incentive options and for options which are not so qualified. Generally, stock options and SARs (collectively, "options") are granted at a price equal to or greater than 100% of the market price at the date of grant, vest over a five year period and expire ten years from the date of grant. Restricted stock, forfeitable unless certain periods of employment are completed, is held in escrow in the name of the grantee until the restriction period expires. No SARs have been granted under the NL Option Plan. At December 31, 1995, 50,000 shares of common stock, restricted until February 1996, are included in common shares outstanding.

In addition to the NL Option Plan, the Company maintains a stock option plan for its non-employee directors. At December 31, 1995, there were options to acquire 8,000 shares of common stock outstanding of which 6,000 were fully vested.

Changes in outstanding options granted pursuant to the NL Option Plan, the Predecessor Option Plan and the non-employee director plan are summarized in the table below. At December 31, 1995, options to purchase 1,189,907 shares were exercisable and options to purchase 548,798 shares become exercisable in 1996. Of the exercisable options at December 31, 1995, options to purchase 693,237 shares had exercise prices less than the Company's December 31, 1995 quoted market price of $12.125 per share. At December 31, 1995, an aggregate of 2.7 million shares were available for future grants under the NL Option Plan.

	Shares	Exercise price per share	Amount payable upon exercise
	(In thousands, except per share amounts)		
Outstanding at December 31, 1992	1,272	$ 8.13 - 24.19	$18,013
Granted	453	4.81 - 7.00	2,655
Canceled	(7)	5.00 - 9.31	(44)
Outstanding at December 31, 1993	1,718	4.81 - 24.19	20,624
Granted	675	8.69 - 10.69	6,315
Exercised	(13)	9.31 - 10.50	(120)
Canceled	(6)	5.00 - 9.31	(46)
Outstanding at December 31, 1994	2,374	4.81 - 24.19	26,773
Granted	94	11.81 - 14.81	1,150
Exercised	(39)	5.00 - 10.78	(282)
Canceled	(36)	5.00 - 11.81	(320)
Outstanding at December 31, 1995	2,393	$ 4.81 - 24.19	$27,321

The Company expects to elect the disclosure alternative prescribed by SFAS No. 123 "Accounting for Stock-Based Compensation" and to continue to account for stock-based employee compensation in accordance with Accounting Principles Board Opinion No. 25 ("APBO"), "Accounting for Stock Issued to Employees" and its various interpretations. Under APBO No. 25, no compensation cost is generally recognized for fixed stock options in which the exercise price is not less than the market price on the grant date. Under the disclosure alternative of SFAS No. 123, the Company will disclose, starting with the year ended December 31, 1996, its pro forma net income and earnings per share as if the fair value based accounting method of SFAS No. 123 had been used to account for stock-based compensation cost for all awards granted after January 1, 1995.

Preferred stock

The Company is authorized to issue a total of five million shares of preferred stock. The rights of preferred stock as to dividends, redemption, liquidation and conversion are determined upon issuance.

Note 13 - Income taxes:

The components of (i) income (loss) before income taxes, minority interest, extraordinary item and cumulative effect of change in accounting principle ("pretax income (loss)"), (ii) the difference between the provision for income taxes attributable to pretax income (loss) and the amounts that would be expected using the U.S. federal statutory income tax rate of 35%, (iii) the provision for income taxes and (iv) the comprehensive tax provision (benefit) are presented below.

	Years ended December 31,		
	1993	1994	1995
		(In thousands)	
Pretax income (loss):			
U.S.	$(41,579)	$ (6,241)	$ 43,125
Non-U.S.	(28,189)	(7,164)	55,777
	$(69,768)	$(13,405)	$ 98,902
Expected tax expense (benefit)	$(24,419)	$ (4,692)	$ 34,616
Non-U.S. tax rates	(15,620)	(7,108)	(7,016)
Rate change adjustment of deferred taxes	6,823	-	(6,593)
Valuation allowance	40,827	24,309	(9,588)
Settlement of U.S. tax audits	-	(5,437)	-
Incremental tax on income of companies not included in the NL Tax Group	2,553	790	499
U.S. state income taxes	486	534	721
Other, net	2,063	1,338	32
	$ 12,713	$ 9,734	$ 12,671
Provision for income taxes:			
Current income tax expense (benefit):			
U.S. federal	$ (915)	$ (5,222)	$ 249
U.S. state	870	475	2,135
Non-U.S.	14,083	2,574	39,535
	14,038	(2,173)	41,919
Deferred income tax expense (benefit):			
U.S. federal	244	4,058	(9,005)
U.S. state	(384)	347	(1,026)
Non-U.S.	(1,185)	7,502	(19,217)
	(1,325)	11,907	(29,248)
	$ 12,713	$ 9,734	$ 12,671
Comprehensive tax provision (benefit) allocable to:			
Pretax income (loss)	$12,713	$9,734	$12,671
Shareholders' deficit, principally deferred income taxes allocable to currency translation and marketable securities adjustments	(1,243)	7	10
	$11,470	$9,741	$12,681

The Company's valuation allowance increased in the aggregate by $47 million in 1993 and $31 million in each of 1994 and 1995. During 1995, both the Company's gross deferred tax assets and the offsetting valuation allowance were increased by $34 million as a result of recharacterizations of certain tax attributes primarily due to changes in certain tax return elections. In addition, the valuation allowance was reduced by approximately $10 million due to recognition of the future tax benefit of certain tax credits which the Company believes satisfies the "more-likely-than-not" recognition criteria as a result of the Company's return to profitability. The components of the net deferred tax liability are summarized below:

	December 31,			
	1994		1995	
	Deferred tax		Deferred tax	
	Assets	Liabilities	Assets	Liabilities
	(In thousands)			
Tax effect of temporary differences relating to:				
Inventories	$ 4,275	$ (2,885)	$ 5,277	$ (5,644)
Property and equipment	423	(97,421)	574	(109,418)
Accrued postretirement benefits cost	24,691	-	23,200	-
Accrued pension cost	9,363	(11,529)	8,978	(14,942)
Accrued environmental costs	34,108	-	38,214	-
Other accrued liabilities and deductible differences	32,308	-	26,496	-
Other taxable differences	-	(144,774)	-	(101,621)
Tax on unremitted earnings of non-U.S. subsidiaries	452	(22,416)	281	(22,526)
Tax loss and tax credit carryforwards	162,906	-	189,263	-
Valuation allowance	(164,500)	-	(195,569)	-
Gross deferred tax assets (liabilities)	104,026	(279,025)	96,714	(254,151)
Reclassification, principally netting by tax jurisdiction	(99,103)	99,103	(93,404)	93,404
Net total deferred tax assets (liabilities)	4,923	(179,922)	3,310	(160,747)
Net current deferred tax assets (liabilities)	2,177	(1,590)	2,522	(3,555)
Net noncurrent deferred tax assets (liabilities)	$ 2,746	$(178,332)	$ 788	$(157,192)

Certain of the Company's income tax returns in various U.S. and non-U.S. jurisdictions, including Germany, are being examined and tax authorities have proposed or may propose tax deficiencies. During 1994, the German tax authorities withdrew certain proposed tax deficiencies of DM 100 million and remitted tax refunds aggregating DM 225 million ($136 million), including interest, on a tentative basis while examination of the Company's German income tax returns continued. The Company recently reached agreement in principle with

the German tax authorities which will resolve certain significant tax contingencies for years through 1990. The Company expects to finalize assessments and pay tax deficiencies of approximately DM 50 million ($35 million at December 31, 1995), including interest, in settlement of these issues during the first half of 1996. The Company considers the agreement in principle to be a favorable resolution of the contingencies and the anticipated payment is within previously-accrued amounts for such matters.

Certain other German tax contingencies remain outstanding and will continue to be litigated. No assurances can be given that this litigation will be resolved in the Company's favor in view of the inherent uncertainties involved in court rulings. Although the Company believes that it will ultimately prevail in the litigation, the Company has granted a DM 100 million ($70 million at December 31, 1995) lien on its Nordenham, Germany TiO_2 plant in favor of the German tax authorities until the litigation is resolved. The Company believes that it has adequately provided accruals for additional income taxes and related interest expense which may ultimately result from all such examinations and believes that the ultimate disposition of such examinations should not have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

During the fourth quarter of 1995, the Company recorded tax benefits of $6.6 million due to the reduction in dividend withholding tax rates pursuant to ratification of the new U.S./Canada income tax treaty.

During 1995, the Company utilized $14 million of foreign tax credit carryforwards and U.S. net operating loss carryforwards from prior years to reduce its 1995 U.S. federal income tax expense. At December 31, 1995, for U.S. federal income tax purposes, the Company had approximately $27 million of foreign tax credit carryforwards expiring during 1997 through 1999 and approximately $9 million of alternative minimum tax credit carryforwards with no expiration date. The Company also had approximately $350 million of income tax loss carryforwards in Germany with no expiration date.

Note 14 - Other income, net:

	Years ended December 31,		
	1993	1994	1995
	(In thousands)		
Securities earnings:			
Interest and dividends	$ 4,104	$ 5,075	$ 6,244
Securities transactions	4,363	(1,220)	1,175
	8,467	3,855	7,419
Litigation settlement gains	-	22,978	-
Technology fee income	2,048	10,344	10,660
Currency transaction gains, net	3,299	1,735	561
Royalty income	2,016	1,508	-
Disposition of property and equipment	(199)	(1,981)	(2,713)
Other, net	6,453	6,389	6,314
	$22,084	$44,828	$22,241

Litigation settlement gains includes $20 million related to the Company's 1994 settlement of its lawsuit against Lockheed Corporation. Technology fee income is being amortized by the straight-line method over a three-year period beginning October 1993.

Note 15 - Other items:

Advertising costs, expensed as incurred, were $2.1 million in 1993, $1.9 million in 1994 and $2.1 million in 1995.

Research, development and sales technical support costs, expensed as incurred, approximated $10 million in each of 1993 and 1994, and $11 million in 1995.

Interest capitalized in connection with long-term capital projects was $1 million in each of 1993, 1994 and 1995.

Note 16 - Extraordinary item:

The extraordinary loss in 1993 relates to the settlement of certain interest rate swap agreements for $20 million in cash in conjunction with prepaying the Louisiana plant indebtedness and from the write-off of deferred financing costs related to such prepayment and the paydown of a portion of the DM bank credit facility. The Louisiana plant indebtedness loan agreement required the Company to enter into the interest rate swap agreements and both the debt and related swaps were collateralized by the Louisiana plant. The Company was required to prepay the Louisiana plant indebtedness and settle the swaps prior to the formation of LPC.

Note 17 - Related party transactions:

The Company may be deemed to be controlled by Harold C. Simmons. Corporations that may be deemed to be controlled by or affiliated with Mr. Simmons sometimes engage in (a) intercorporate transactions such as guarantees, management and expense sharing arrangements, shared fee arrangements, joint ventures, partnerships, loans, options, advances of funds on open account, and sales, leases and exchanges of assets, including securities issued by both related and unrelated parties and (b) common investment and acquisition strategies, business combinations, reorganizations, recapitalizations, securities repurchases, and purchases and sales (and other acquisitions and dispositions) of subsidiaries, divisions or other business units, which transactions have involved both related and unrelated parties and have included transactions which resulted in the acquisition by one related party of a publicly-held minority equity interest in another related party. While no transactions of the type described above are planned or proposed with respect to the Company other than as set forth in this Annual Report on Form 10-K, the Company from time to time considers, reviews and evaluates and understands that Contran, Valhi and related entities consider, review and evaluate, such transactions. Depending upon the business, tax and other objectives then relevant, and restrictions under the indentures and other agreements, it is possible that the Company might be a party to one or more such transactions in the future.

It is the policy of the Company to engage in transactions with related parties on terms, in the opinion of the Company, no less favorable to the Company than could be obtained from unrelated parties.

The Company is a party to an intercorporate services agreements with Valhi and Contran (the "Valhi and Contran ISAs") whereby Valhi and Contran provide certain management, financial and administrative services to the Company on a fee basis. Management services fee expense related to the Valhi and Contran ISAs was $.7 million in 1993, $.6 million in 1994 and $.5 million in 1995.

Baroid Corporation, a former wholly-owned subsidiary of the Company and a subsidiary of Dresser Industries, Inc., and the Company were parties to an intercorporate services agreement (the "Baroid ISA") pursuant to which, as amended, Baroid agreed to make certain services available to the Company on a fee basis. The agreement was terminated in 1994. Management services fee expense pursuant to the Baroid ISA approximated $.3 million in 1993, $.2 million in 1994.

The Company is party to an intercorporate services agreement with Tremont (the "Tremont ISA"). Under the terms of the contract, the Company provides certain management and financial services to Tremont on a fee basis. Management services fee income related to the Tremont ISA was $.1 million in 1993, nil in 1994 and $.1 million in 1995.

Purchases from Tremont in the ordinary course of business pursuant to a long-term supply contract were $.4 million in 1993 and nil in each of 1994 and 1995.

Sales to Baroid in the ordinary course of business were $1.8 million in 1993 and 1994, and $1.6 million in 1995.

Purchases in the ordinary course of business from unconsolidated joint ventures, including LPC, were approximately $22 million in 1993, $74 million in 1994 and $79 million in 1995.

Certain employees of the Company have been granted options to purchase Valhi common stock under the terms of Valhi's stock option plans. The Company and Valhi have agreed that the Company will pay Valhi the aggregate difference between the option price and the market value of Valhi's common stock on the exercise date of such options. For financial reporting purposes, the Company accounts for the related expense (income) (nil in 1993, $64,000 in 1994 and $(25,000) in 1995) in a manner similar to accounting for SARs. At December 31, 1995, employees of the Company held options to purchase 365,000 shares (362,000 shares vested) of Valhi common stock at exercise prices ranging from $4.76 to $14.66 per share. At December 31, 1995, 27,000 of the vested options were exercisable at prices less than Valhi's quoted market price per share of $6.375.

The Company and TRE Insurance, a wholly-owned subsidiary of Tremont, are parties to an Insurance Sharing Agreement with respect to certain loss payments and reserves established by TRE Insurance that (i) arise out of claims against other entities for which the Company is responsible and (ii) are subject to payment by TRE Insurance under certain reinsurance contracts. Also, TRE Insurance will credit the Company with respect to certain underwriting profits or credit recoveries that TRE Insurance receives from independent reinsurers that relate to retained liabilities.

Net amounts payable to affiliates are summarized in the following table.

	December 31, 1994	December 31, 1995
	(In thousands)	
Tremont Corporation	$ 4,780	$ 3,525
LPC	6,565	6,677
Other	3	(21)
	$11,348	$10,181

Amounts payable to LPC are generally for the purchase of TiO_2 (see Note 6), and amounts payable to Tremont relate to the Company's Insurance Sharing Agreement described above.

Note 18 - Commitments and contingencies:

Leases

The Company leases, pursuant to operating leases, various manufacturing and office space and transportation equipment. Most of the leases contain purchase and/or various term renewal options at fair market and fair rental values, respectively. In most cases management expects that, in the normal course of business, leases will be renewed or replaced by other leases.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement expiring in 2011, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Both the lease and the supplies and services agreements restrict the Company's ability to transfer ownership or use of the Leverkusen facility.

Net rent expense aggregated $8 million in 1993 and 1994, and $9 million in 1995. At December 31, 1995, minimum rental commitments under the terms of noncancellable operating leases were as follows:

Years ending December 31,	Real Estate	Equipment
	(In thousands)	
1996	$ 2,097	$1,869
1997	1,722	1,250
1998	1,721	649
1999	1,544	203
2000	934	17
2001 and thereafter	13,818	-
	$21,836	$3,988

Capital expenditures

At December 31, 1995, the estimated cost to complete capital projects in process approximated $49 million, including $41 million related to environmental protection and compliance programs and a debottlenecking expansion project at the Company's Leverkusen, Germany chloride process TiO_2 facility.

Purchase commitments

The Company has long-term supply contracts that provide for the Company's chloride feedstock requirements through 2000. The agreements require the Company to purchase certain minimum quantities of feedstock with average minimum annual purchase commitments aggregating approximately $115 million.

Legal proceedings

Lead pigment litigation. Since 1987, the Company, other past manufacturers of lead pigments for use in paint and lead-based paint and the Lead Industries Association have been named as defendants in various legal proceedings seeking damages for personal injury and property damage allegedly caused by the use of lead-based paints. Certain of these actions have been filed by or on behalf of large United States cities or their public housing authorities and certain others have been asserted as class actions. These legal proceedings seek recovery under a variety of theories, including negligent product design, failure to warn, breach of warranty, conspiracy/concert of action, enterprise liability, market share liability, intentional tort, and fraud and misrepresentation.

The plaintiffs in these actions generally seek to impose on the defendants responsibility for lead paint abatement and asserted health concerns associated with the use of lead-based paints, which was permitted for interior residential use in the United States until 1973, including damages for personal injury, contribution and/or indemnification for medical expenses, medical monitoring expenses and costs for educational programs. Most of these legal proceedings are in various pre-trial stages; several are on appeal.

The Company believes that these actions are without merit, intends to continue to deny all allegations of wrongdoing and liability and to defend all actions vigorously. The Company has not accrued any amounts for the pending lead pigment litigation. Considering the Company's previous involvement in the lead and lead pigment businesses, there can be no assurance that additional litigation similar to that currently pending will not be filed.

Environmental matters and litigation. Some of the Company's current and former facilities, including several divested secondary lead smelters and former mining locations, are the subject of civil litigation, administrative proceedings or of investigations arising under federal and state environmental laws. Additionally, in connection with past disposal practices, the Company has been named a potential responsible party ("PRP") pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA") in approximately 80 governmental enforcement and private actions associated with hazardous waste sites and former mining locations, some of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List. These actions seek cleanup costs and/or damages for personal injury or property damage. While the

Company may be jointly and severally liable for such costs, in most cases it is only one of a number of PRPs who are also jointly and severally liable. In addition, the Company is a party to a number of lawsuits filed in various jurisdictions alleging CERCLA or other environmental claims. At December 31, 1995, the Company had accrued $100 million in respect of those environmental matters which are reasonably estimable. It is not possible to estimate the range of costs for certain sites. The upper end of the range of reasonably possible costs to the Company for sites which it is possible to estimate costs is approximately $169 million. The Company's estimates of such liabilities have not been discounted to present value, and the Company has not recognized any potential insurance recoveries. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. Further, there can be no assurance that additional environmental matters will not arise in the future.

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain operations and products of the Company have the potential to cause environmental or other damage. The Company continues to implement various policies and programs in an effort to minimize these risks. The Company's policy is to comply with environmental laws and regulations at all of its facilities and to continually strive to improve environmental performance in association with applicable industry initiatives. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

Other litigation. The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses.

The Company currently believes the disposition of all claims and disputes individually or in the aggregate, should not have a material adverse effect on the Company's consolidated financial condition, results of operations or liquidity.

Concentrations of credit risk

Sales of TiO_2 accounted for almost 90% of net sales during the past three years. TiO_2 is sold to the paint, plastics and paper industries. Such markets are generally considered "quality-of-life" markets whose demand for TiO_2 is influenced by the relative economic well-being of the various geographic regions. TiO_2 is sold to over 5,000 customers, none of which represents a significant portion of net sales. In each of the past three years, approximately one-half of the Company's TiO_2 sales by volume were to Europe and approximately 38% in 1993 and 36% in both 1994 and 1995 of sales were attributable to North America.

Consolidated cash and cash equivalents includes $80 million and $103 million invested in U.S. Treasury securities purchased under short-term agreements to resell at December 31, 1994 and 1995, respectively, of which $73 million and $88 million, respectively, of such securities are held in trust for the Company by a single U.S. bank.

Note 19 - Change in accounting principle:

In 1993, the Company adopted SFAS No. 115 (marketable securities) as of December 31, 1993. The cumulative effect of change in accounting principle adjustments are shown below.

	Amount reflected in	
	Earnings	Equity component
	(In thousands)	
Increase (decrease) in net assets at December 31, 1993 - SFAS No. 115:		
Marketable securities	$1,872	$(1,872)
Deferred income taxes	(655)	655
	$1,217	$(1,217)

Note 20 - Financial instruments:

Summarized below is the estimated fair value and related net carrying value of the Company's financial instruments.

	December 31, 1994		December 31, 1995	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(In millions)			
Cash and cash equivalents	$ 131.1	$131.1	$ 141.3	$141.3
Marketable securities - classified as:				
Trading securities	25.2	25.2	-	-
Available-for-sale	21.3	21.3	20.9	20.9
Notes payable and long-term debt:				
Fixed rate with market quotes:				
Senior Secured Notes	$ 250.0	$247.1	$ 250.0	$267.7
Senior Secured Discount Notes	116.4	114.8	132.0	151.8
Variable rate debt	423.2	423.2	440.9	440.9
Common shareholders' equity (deficit)	$(293.1)	$644.5	$(209.4)	$619.5

Fair value of the Company's marketable securities and Notes are based upon quoted market prices and the fair value of the Company's common shareholder's equity (deficit) is based upon quoted market prices for NL's common stock. The Company held no derivative financial instruments at December 31, 1994 and 1995.

Note 21 - Quarterly financial data (unaudited):

	Quarter ended			
	March 31	June 30	Sept. 30	Dec. 31
	(In thousands, except per share amounts)			
Year ended December 31, 1994:				
Net sales	$201,849	$237,113	$225,200	$223,792
Cost of sales	146,956	178,925	168,033	155,831
Operating income	22,313	26,242	27,093	35,704
Net income (loss)	$ (6,367)	$(15,534)	$ (4,578)	$ 2,497
Net income (loss) per share of common stock	$ (.12)	$ (.30)	$ (.09)	$ .05
Weighted average shares outstanding	50,965	51,040	51,040	51,045
Year ended December 31, 1995:				
Net sales	$250,875	$283,474	$255,339	$234,251
Cost of sales	169,768	187,896	169,058	149,462
Operating income	41,968	57,549	50,590	49,612
Net income	$ 13,062	$ 21,002	$ 17,426	$ 34,119(a)
Net income per share of common stock	$ .26	$ .41	$ .34	$ .66(a)
Weighted average shares outstanding	51,176	51,552	51,628	51,486

(a) Income tax benefits in the fourth quarter of 1995 include the recognition of $10 million of deferred tax assets related to the expected realization of the tax benefit of certain tax credits resulting from the Company's return to profitability and $6.6 million related to the reduction in U.S./Canada dividend withholding tax rates. See Note 13.

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULES

Our report on the consolidated financial statements of NL Industries, Inc. is included on page F-2 of this Annual Report on Form 10-K. As discussed in Notes 2 and 19 to the consolidated financial statements, the Company changed its method of accounting for marketable securities in 1993. In connection with our audits of such financial statements, we have also audited the related financial statement schedules listed in the index on page F-1.

In our opinion, the financial statement schedules referred to above, when considered in relation to the basic financial statements taken as a whole, present fairly, in all material respects, the information required to be included therein.

COOPERS & LYBRAND L.L.P.

Houston, Texas
February 8, 1996

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT

Condensed Balance Sheets

December 31, 1994 and 1995

(In thousands)

	1994	1995
Current assets:		
Cash and cash equivalents	$ 18,371	$ 40,080
Marketable securities	25,165	-
Accounts and notes receivable	1,274	203
Receivable from subsidiaries	2,854	4,273
Refundable income taxes	-	1,662
Prepaid expenses	747	729
Total current assets	48,411	46,947
Other assets:		
Marketable securities	21,329	20,944
Notes receivable from subsidiary	366,409	382,034
Investment in subsidiaries	(181,751)	(89,395)
Other	9,214	7,582
Total other assets	215,201	321,165
Property and equipment, net	3,732	3,562
	$ 267,344	$ 371,674
Current liabilities:		
Accounts payable and accrued liabilities	$ 33,248	$ 28,116
Payable to affiliates	4,783	3,498
Income taxes	186	-
Deferred income taxes	1,436	1,905
Total current liabilities	39,653	33,519
Noncurrent liabilities:		
Long-term debt	366,409	382,034
Deferred income taxes	9,546	10,211
Accrued pension cost	14,021	10,835
Accrued postretirement benefits cost	40,711	37,430
Other	90,086	107,066
Total noncurrent liabilities	520,773	547,576
Shareholders' deficit	(293,082)	(209,421)
	$ 267,344	$ 371,674

Contingencies (Note 4)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Operations

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Revenues and other income:			
Equity in income (loss) of subsidiaries	$ (49,766)	$ 7,925	$ 99,734
Interest and dividends	3,622	2,538	2,739
Interest income from subsidiary	8,358	43,157	45,551
Securities transactions	3,637	(1,220)	1,175
Other income, net	2,597	3,135	460
	(31,552)	55,535	149,659
Costs and expenses:			
General and administrative	44,113	69,875	27,079
Interest	13,771	44,003	45,842
	57,884	113,878	72,921
Income (loss) before income taxes, extraordinary item and cumulative effect of change in accounting principle	(89,436)	(58,343)	76,738
Income tax benefit	6,225	34,361	8,871
Income (loss) before extraordinary item and cumulative effect of change in accounting principle	(83,211)	(23,982)	85,609
Extraordinary item - equity in income of subsidiaries	(27,815)	-	-
Cumulative effect of change in accounting principle - NL	1,217	-	-
Net income (loss)	$(109,809)	$(23,982)	$ 85,609

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from operating activities:			
Net income (loss)	$(109,809)	$(23,982)	$ 85,609
Undistributed earnings of subsidiaries:			
Equity in (income) loss before extraordinary item and cumulative effect of change in accounting principle	49,766	(7,925)	(99,734)
Extraordinary item	27,815	-	-
Distributions from subsidiaries	-	30,000	15,000
Noncash interest expense	165	845	842
Deferred income taxes	1,510	(20,577)	1,411
Securities transactions	(3,637)	1,220	(1,175)
Cumulative effect of change in accounting principle	(1,217)	-	-
Other, net	(1,268)	(3,836)	(5,819)
	(36,675)	(24,255)	(3,866)
Change in assets and liabilities, net	14,428	23,263	8,042
Marketable trading securities:			
Purchases	-	(870)	(762)
Dispositions	-	15,530	27,102
Net cash provided (used) by operating activities	(22,247)	13,668	30,516
Cash flows from investing activities:			
Investment in subsidiary	(6,478)	(6,630)	(9,062)
Capital expenditures	(4)	(126)	(33)
Loans to subsidiaries	(341,500)	-	-
Purchases of marketable securities	(10,899)	-	-
Proceeds from disposition of marketable securities	69,232	-	-
Other, net	667	402	10
Net cash used by investing activities	(288,982)	(6,354)	(9,085)

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I-CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Condensed Statements of Cash Flows (Continued)

Years ended December 31, 1993, 1994 and 1995

(In thousands)

	1993	1994	1995
Cash flows from financing activities:			
Borrowings of (principal payments on):			
Long-term debt	$ 327,340	$ (170)	$ -
Loans from affiliates	(16,047)	-	-
Other, net	-	120	278
Net cash provided (used) by financing activities	311,293	(50)	278
Cash and cash equivalents:			
Increase (decrease) from:			
Operating activities	(22,247)	13,668	30,516
Investing activities	(288,982)	(6,354)	(9,085)
Financing activities	311,293	(50)	278
Net change from operating, investing and financing activities	64	7,264	21,709
Balance at beginning of year	11,043	11,107	18,371
Balance at end of year	$ 11,107	$18,371	$40,080

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT (Continued)

Notes to Condensed Financial Information

Note 1 - Basis of presentation:

The Consolidated Financial Statements of NL Industries, Inc. (the "Company") and the related Notes to Consolidated Financial Statements are incorporated herein by reference.

Note 2 - Net receivable from (payable to) subsidiaries and affiliates:

	December 31,	
	1994	1995
	(In thousands)	
Current:		
Tremont Corporation	$ (4,780)	$ (3,525)
Other	(3)	27
Kronos and Rheox:		
Income taxes	(1,043)	567
Other, net	3,897	3,706
	$ (1,929)	$ 775
Noncurrent:		
Note receivable - Kronos	$366,409	$382,034

Note 3 - Long-term debt:

	December 31,	
	1994	1995
	(In thousands)	
11.75% Senior Secured Notes	$250,000	$250,000
13% Senior Secured Discount Notes	116,409	132,034
	$366,409	$382,034

See Note 10 of the Consolidated Financial Statements for a description of the Notes.

The aggregate maturities of the Company's long-term debt at December 31, 1995 are shown in the table below.

	Amount (In thousands)
Senior Secured Notes due 2003	$250,000
Senior Secured Discount Notes due 2005	187,500
	437,500
Less unamortized original issue discount on the Senior Secured Discount Notes	55,466
	$382,034

The Company and Kronos have agreed, under certain circumstances, to provide Kronos' principal international subsidiary with up to DM 125 million through January 1, 2001.

Note 4 - Contingencies:

See *Legal proceedings* in Note 18 to the Consolidated Financial Statements.

NL INDUSTRIES, INC. AND SUBSIDIARIES

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

(In thousands)

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Currency translation adjustments	Other	Balance at end of year
Year ended December 31, 1995:						
Allowance for doubtful accounts and notes receivable	$ 3,749	$ 289	$ (166)(a)	$ 167	$ -	$ 4,039
Amortization of intangibles	$ 16,149	$3,241	$ -	$ 1,172	$ -	$ 20,562
Valuation allowance for deferred income taxes	$164,500	$(9,588)	$ -	$ 6,451	$34,206(c)	$195,569
Year ended December 31, 1994:						
Allowance for doubtful accounts and notes receivable	$ 3,008	$ 1,141	$ (616)(a)	$ 216	$ -	$ 3,749
Amortization of intangibles	$ 11,941	$ 2,901	$ -	$ 1,307	$ -	$ 16,149
Valuation allowance for deferred income taxes	$133,377	$24,309	$ -	$ 6,814	$ -	$164,500
Year ended December 31, 1993:						
Allowance for doubtful accounts and notes receivable	$ 2,385	$ 1,216	$ (476)(a)	$ (117)	$ -	$ 3,008
Amortization of intangibles	$ 9,792	$ 2,863	$ -	$ (714)	$ -	$ 11,941
Valuation allowance for deferred income taxes	$ 86,031	$50,562(b)	$ -	$(3,216)	$ -	$133,377

(a) Amounts written off, less recoveries.
(b) Includes amounts recorded as part of extraordinary item.
(c) Direct offset to the increase in gross deferred income tax assets resulting from recharacterization of certain tax attributes due primarily to changes in certain income tax return elections.

BOARD OF DIRECTORS

Harold C. Simmons
Chairman of the Board - NL Industries, Inc.
Chairman, Chief Executive Officer and President - Valhi, Inc.

Joseph S. Compofelice
Vice President and Chief Financial Officer - NL Industries, Inc.

J. Landis Martin
President and Chief Executive Officer - NL Industries, Inc.

Kenneth R. Peak
President - Peak Enernomics, Inc. (energy consultant)

Glenn R. Simmons
Vice Chairman - Valhi, Inc.

Dr. Lawrence A. Wigdor
President and Chief Executive Officer - Kronos, Inc. and Rheox, Inc.

Admiral Elmo R. Zumwalt, Jr. (retired)
President - Admiral Zumwalt Consultants, Inc. (consulting)
Retired United States Navy Admiral and Chief of Naval Operations

BOARD COMMITTEES

Audit Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Management Development and Compensation Committee

Kenneth R. Peak, Chairman
Admiral Elmo R. Zumwalt, Jr.

Nominations Committee

Glenn R. Simmons, Chairman
Kenneth R. Peak
Admiral Elmo R. Zumwalt, Jr.

Stock-Based Compensation Committee

Kenneth R. Peak, Chairman
General Thomas P. Stafford
Admiral Elmo R. Zumwalt, Jr.

CORPORATE OFFICERS

Harold C. Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

Dr. Lawrence A. Wigdor
Executive Vice President; President and Chief Executive Officer - Kronos, Inc. and Rheox, Inc.

Joseph S. Compofelice
Vice President and Chief Financial Officer

Susan E. Alderton
Vice President and Treasurer

David B. Garten
Vice President, General Counsel and Secretary

Dennis G. Newkirk
Vice President and Controller

SHAREHOLDER INFORMATION

Annual Meeting

The 1996 annual meeting of NL shareholders will be held as described in the Notice of Annual Meeting and Proxy Statement sent to the Company's shareholders as of the record date for the annual meeting. Shareholders are encouraged to attend.

Proxy cards should be marked, signed, dated, and returned promptly to ensure that all shares are represented at the annual meeting and voted in accordance with the instruction of their owners.

Registrar and Transfer Agent

First Chicago Trust Company of New York
P. O. Box 2500, Jersey City, New Jersey 07303-2500.
Telephone (201) 324-1225
Internet address:
http:/ / www.fctc.com
E-Mail address:
FCTC@delphi.com

ABOUT THE COMPANY

NL Industries, Inc. is a worldwide manufacturer and marketer of titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. Rheox, Inc., NL's other operating subsidiary, is the world's largest producer of rheological additives for solvent-based systems, and is also a supplier of rheological additives used in water-based systems.

NL is headquartered in Houston, Texas, and employs approximately 3,200 people worldwide. NL's common stock is traded on the New York and Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

FORWARD-LOOKING INFORMATION

The statements contained in this Annual Report to Shareholders which are not historical facts, including, without limitation, statements found in the Letter to Shareholders, are forward-looking statements that involve a number of risks and uncertainties and actual results could differ materially from those stated in such forward-looking statements. The factors that could cause actual results to differ include future global economic conditions, global titanium dioxide pigment productive capacity, competitive products and prices and the risks and uncertainties discussed in the Annual Report on Form 10-K for the year ended December 31, 1995 and in the Company's other securities filings.

NL Industries, Inc.

1994

Annual

Report

NL Industries, Inc. is a worldwide manufacturer and marketer of titanium dioxide pigments and specialty chemicals. Customers in over 100 countries are supplied from facilities located throughout Europe and North America. Kronos, Inc., the larger of NL's two operating subsidiaries, is the world's fourth largest supplier of titanium dioxide pigments. These pigments are used for imparting whiteness, brightness and opacity to a wide range of products, including paints, plastics, paper, fibers and ceramics. Rheox, Inc., NL's other operating subsidiary, is the world's largest producer of rheological additives for solvent-based systems and is also a supplier of rheological additives used in water-based systems. These products control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics.

NL is headquartered in Houston, Texas, and employs over 3,100 people worldwide. NL's common stock is traded on the New York and the Pacific Stock Exchanges under the symbol "NL" and its price is quoted under "NL Ind" in the daily stock tables carried by most newspapers.

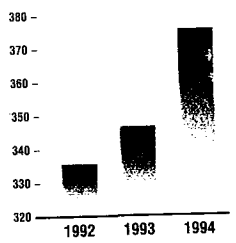
Annual Highlights

($ in millions, except per share and volume data)	1992	1993	1994
Net sales	$ 893.5	$ 805.3	$ 888.0
Operating income	110.7	62.4	111.4
Loss before extraordinary item and cumulative effect of changes in accounting principles	(44.6)	(83.2)	(24.0)
Net loss	(76.4)	(109.8)	(24.0)
Loss per common share:			
Before extraordinary item and cumulative effect of changes in accounting principles	$ (.88)	$ (1.63)	$ (.47)
Net loss	(1.50)	(2.16)	(.47)
Capital expenditures	$ 85.2	$ 48.0	$ 36.9
Cash, cash equivalents and current marketable securities	$ 187.9	$ 147.6	$ 156.3
Total debt	$ 1,035.3	$ 870.9	$ 789.6
Net debt [1]	$ 847.7	$ 723.2	$ 633.4
EBITDA [2]	$ 115.1	$ 67.2	$ 101.3
Operational data (in metric tons):			
TiO_2 sales volumes	336,000	346,000	376,000
TiO_2 production volumes	358,000	352,000	357,000

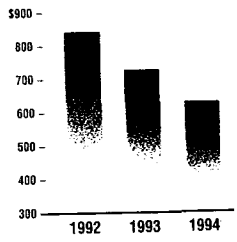
(1) Net debt represents notes payable and long-term debt less cash, cash equivalents and current marketable securities.

(2) EBITDA, as presented, represents operating income less corporate expense, net, plus depreciation, depletion and amortization.

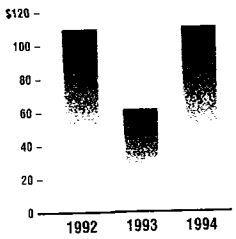
TiO_2 Sales Volume
(MT in thousands)



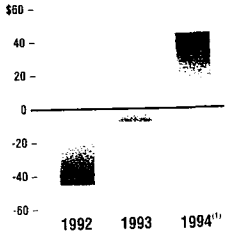
Net Debt
($ in millions)



Operating Income
($ in millions)



Cash Flow from Operating Activities
($ in millions)



[1] Excludes German tentative tax refunds.

To our Shareholders

The 1994 results for NL Industries, Inc. reflect the end of the cyclical downtrend in our titanium dioxide pigments ("TiO_2") market that began in early 1990. While our results of operations in 1994 were far from satisfactory, they represent a significant improvement over 1993.

The generally strong economic growth in the United States, Europe and the Far East helped push industry worldwide capacity utilization for TiO_2 to an estimated 92% in 1994. As a result, beginning in late 1993, TiO_2 product prices began to rise. During 1994, Kronos' average TiO_2 prices increased 3% over 1993 and, by the end of 1994, prices were 6% above year-end 1993 prices. It appears that the bottom of the last cycle was during the third quarter of 1993. Prices have risen 10% since then.

As a result of these price increases, TiO_2 sales volume growth and record operating income at Rheox, in the fourth quarter of 1994 we reported our first quarter of net income in three years.

During 1994, Kronos achieved record TiO_2 sales volumes of 376,000 metric tons, a 9% increase over 1993. Sales volume increases were experienced in the North American and European markets and other regions. The combination of slightly higher TiO_2 prices, sales volume increases and continued emphasis on cost controls enabled Kronos to increase its operating income by 123% in 1994.

As a result of price increases, TiO_2 sales volume growth and record operating income at Rheox, in the fourth quarter of 1994 we reported our first quarter of net income in three years.

In the last five years, Kronos invested over $375 million in capital expenditures in its TiO_2 business. Continuing the commitment to its TiO_2 business, the Board of Directors recently approved a $100 million capital expenditure program ($66 million spending in 1995) which includes $25 million related to a debottlenecking project at our Leverkusen, Germany chloride process facility that will add approximately 20,000 metric tons of annual capacity in 1997.

In 1994, Rheox achieved a record level of operating income of $31 million. Rheox continues to focus on new product introductions within the growing water-based applications market. In 1994, Rheox introduced 14 new water-based products, and water-based products now account for 16% of its worldwide sales revenues.

NL's balance sheet improved in 1994 as net debt was reduced by $90 million, aided by the receipt of $136 million in tentative tax refunds from the German government. A significant

portion of the refunds were used to reduce our DM revolving and term loan in Germany. The examination of our German tax returns is continuing and additional substantial proposed assessments are expected. Although we expect ultimately to prevail, the Company may have to grant additional security during what may be a lengthy process to resolve these tax matters. Our liquidity position has improved, with over $150 million in cash, cash equivalents and current marketable securities and $129 million in available credit capacity at year end. We remain focused on our goal of reducing debt levels.

While our belief that the TiO_2 industry has significant long-term growth potential has not wavered during the recent difficult years, it is a welcome relief to be beginning what we hope is an extended period of improving market conditions.

While our belief that the TiO_2 industry has significant long-term growth potential has not wavered during the recent difficult years, it is a welcome relief to be beginning what we hope is an extended period of improving market conditions. Recent debottlenecking announcements, including our own, appear to add a level of additional supply that should not change the near-term capacity utilization landscape.

We believe that capacity utilization should be in the high 90% level for the next several years and, as a result, the industry should do quite well. We expect these factors to enable NL to be profitable in 1995 and, if sustained for the next several years, we will be able to strengthen our financial position.

Harold Simmons
Chairman of the Board

J. Landis Martin
President and Chief Executive Officer

KRONOS

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2"), with annual production capacity of approximately 380,000 metric tons. TiO_2 provides whiteness, brightness and opacity to a wide range of end-use products, including paints, plastics, papers, textiles, inks and ceramics.

Kronos has played a leading role in the development of the worldwide TiO_2 industry, with its predecessors first commercializing TiO_2 during the early 1920s in both the United States and Europe. Since then, Kronos has refined its technology and expanded its manufacturing capabilities to include six manufacturing facilities located in five countries – Germany, Belgium, Norway, Canada and the United States, and an ilmenite mine located in Norway.

Kronos has 11% of the worldwide TiO_2 market. Its largest markets are in Europe and North America. These two markets are the world's largest consumers of TiO_2 and Kronos improved its market position in each during 1994. Kronos' improved sales volumes throughout the world were aided by a wide range of high quality products.

Kronos' operating profits are highly dependent on the selling price of TiO_2. Selling prices are strongly influenced by the supply and demand for TiO_2 and, historically, have been cyclical. These cycles generally last for several years. During 1994, the average selling price of TiO_2 began to rise for the first time in four years, and Kronos believes that the cyclical upturn should last for several years.

Kronos uses both the chloride and sulfate production processes to manufacture over forty grades of its TiO_2 for a broad range of applications. Approximately two-thirds of Kronos' production is based upon the chloride process. While the pigments produced by the two processes are generally interchangeable, chloride process pigments are generally preferred by Kronos' larger customers. Kronos is particularly strong in plastics applications where it has a widely-accepted product line.

Kronos operates a rock ilmenite mine in Norway that provides all of Kronos' feedstock for its European sulfate process pigment plants. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers, supplying nearly 40% of the Western European demand for sulfate process feedstock.

Kronos constantly works to improve both its chloride and sulfate technologies through focused research and development programs. During the past several years, Kronos increased output at each of its four chloride process pigment plants, including its 50%-owned Lake Charles, Louisiana plant, so that all plants exceed original design capacity. These plant improvements were accomplished with comparatively modest capital expenditures. Kronos plans to spend $25 million in capital expenditures over the next three years for a debottlenecking project at its Leverkusen, Germany chloride process plant that is expected to increase its annual attainable production capacity by approximately 20,000 metric tons in 1997.

Kronos' water treatment chemicals business has successfully developed an extensive sales program in Europe for the iron salts which result from both the chloride and sulfate processes. By converting the iron compounds to commercial products, disposal costs are reduced and additional revenue is generated.

RHEOX

Rheox manufactures and sells a wide variety of specialty chemicals to the paint, ink, lubricant, oil drilling, adhesives, sealants, household and personal care markets throughout the world. Rheox specialty chemicals are additives which modify the rheological properties of the many products sold in those markets. For example, Rheox products improve the appearance of trade paints and industrial finishes and make it possible to change oil into grease lubricants.

Rheox products are used to modify end-products made from either an oil or water base. Worldwide sales volume in 1994 increased 9% over 1993. The majority of the sales were solvent-based products. Rheox continues to place an increasing amount of emphasis on the development of products for the water-based markets. About 16% of Rheox's sales revenue worldwide are derived from this end use.

Rheox manufactures its products in five plants located in the United States and Europe, its key market areas. All five plants have the worldwide-respected quality approval of ISO 9001 or 9002. This quality status is highly desired by customers who are demanding more stringent quality performance throughout the world.

Rheox owns a mine in California which produces hectorite clays, a major raw material in our manufacturing process. The mine is believed to be the largest known commercial hectorite clay deposit in the world, assuring Rheox a stable low cost supply of this raw material. Quaternary amines, another primary raw material, are purchased from Enenco, a 50%-owned joint venture company.

A key Rheox strength is the extensive technical support given to customers from our laboratories in the United States and Germany. These laboratories are staffed with specialists from many of the industries served and they provide opportunities for our customers to develop improved products. An important part of the customer interface is a dedicated sales force in both North America and Europe. In addition, about 70 agents worldwide promote Rheox's products.

Rheox commercialized 14 new products in 1994 for the coatings, construction, ink, grease and oil drilling markets. Among the new introductions are products for water-based coatings which have zero organic volatiles ("no VOC") and a family of liquid thickeners for the industrial coatings and polyester markets which also have no VOC.

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [Fee Required] - For the fiscal year ended December 31, 1994

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-640

NL INDUSTRIES, INC.
(Exact name of registrant as specified in its charter)

New Jersey (State or other jurisdiction of incorporation or organization)	13-5267260 (IRS Employer Identification No.)
16825 Northchase Drive, Suite 1200, Houston, Texas (Address of principal executive offices)	77060 (Zip Code)

Registrant's telephone number, including area code: (713) 423-3300

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock ($.125 par value)	New York Stock Exchange Pacific Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes X No ___

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

As of February 28, 1995, 51,052,443 shares of common stock were outstanding. The aggregate market value of the 15,091,253 shares of voting stock held by nonaffiliates as of such date approximated $179 million.

Documents incorporated by reference:

The information required by Part III is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

General

NL Industries, Inc., organized as a New Jersey corporation in 1891, conducts its operations through its principal wholly-owned subsidiaries, Kronos, Inc. and Rheox, Inc. Valhi, Inc. and Tremont Corporation, each affiliates of Contran Corporation, hold 52% and 18%, respectively, of NL's outstanding common stock. Contran holds, directly or through subsidiaries, approximately 90% of Valhi's and 44% of Tremont's outstanding common stock. Substantially all of Contran's outstanding voting stock is held by trusts established for the benefit of the children and grandchildren of Harold C. Simmons of which Mr. Simmons is the sole trustee. Mr. Simmons, the Chairman of the Board of NL and the Chairman of the Board, President and Chief Executive Officer of each of Contran and Valhi and a director of Tremont, may be deemed to control each of such companies. NL and its consolidated subsidiaries are sometimes referred to herein collectively as the "Company".

Kronos is the world's fourth largest producer of titanium dioxide pigments ("TiO_2") with an estimated 11% share of the worldwide market. Approximately one-half of Kronos' 1994 sales volume was in Europe, where Kronos is the second largest producer of TiO_2. Kronos accounted for 87% of the Company's sales and 72% of its operating income in 1994. Rheox is the world's largest producer of rheological additives for solvent-based systems, supplying an estimated 40% of the worldwide market.

The Company's objectives are to (i) focus on continued cost control, (ii) deleverage during the current up cycle and (iii) invest in certain cost effective debottlenecking projects to increase TiO_2 production capacity.

Kronos

Industry

Titanium dioxide pigments are chemical products used for imparting whiteness, brightness and opacity to a wide range of products, including paints, paper, plastics, fibers and ceramics. TiO_2 is considered to be a "quality-of-life" product with demand affected by the gross domestic product in various regions of the world.

Demand, supply and pricing of TiO_2 have historically been cyclical. The last cyclical peak for TiO_2 prices occurred in early 1990 with a cyclical low point reached in the third quarter of 1993. The Company's average selling prices for TiO_2 began an upward trend during 1994 and prices at the end of 1994 were about 10% higher than the 1993 low point, but were still approximately 26% below those of the last cyclical peak in 1990.

The Company believes that the TiO_2 industry has significant long-term potential. During the early 1990s, the TiO_2 industry operated at lower capacity utilization levels relative to the high utilization levels prevalent during the late 1980s, in part because of the slow recovery from the worldwide recession but primarily due to the impact of capacity additions since the late 1980s. The

Company expects that the TiO_2 industry will recover more slowly compared with the previous recovery in the late 1980s, primarily because of the more gradual nature of recent growth of the worldwide economy and the impact of capacity additions since the late 1980s. Recent improvements in economic growth rates have resulted in increased demand for TiO_2. Industry capacity utilization, which the Company believes was less than 90% during 1990 through 1993, was about 92% in 1994 and is continuing to rise due to improved demand.

Kronos has an estimated 18% share of European TiO_2 sales and an estimated 9% share of U.S. TiO_2 sales. Consumption per capita in the United States and Western Europe far exceeds that in other areas of the world and these regions are expected to continue to be the largest geographic markets for TiO_2 consumption. If the economies in Eastern Europe, the Far East and China continue to develop, a significant market for TiO_2 could emerge in those countries and Kronos believes that it is well positioned to participate in growth in the Eastern European market. Geographic segment information is contained in Note 3 to the Consolidated Financial Statements.

Products and operations

The Company believes that there are no effective substitutes for TiO_2. However, extenders such as kaolin clays, calcium carbonate and polymeric opacifiers are used in a number of Kronos' markets. Generally, extenders are used to reduce to some extent the utilization of higher cost TiO_2. The use of extenders has not significantly affected TiO_2 consumption over the past decade because extenders generally have, to date, failed to match the performance characteristics of TiO_2. The Company believes that the use of extenders will not materially alter the growth of the TiO_2 business in the foreseeable future.

Kronos currently produces over 40 different TiO_2 grades, sold under the *Kronos* and *Titanox* trademarks, which provide a variety of performance properties to meet customers' specific requirements. Kronos' major customers include international paint, paper and plastics manufacturers.

Kronos is one of the world's leading producers and marketers of TiO_2. Kronos and its distributors and agents sell and provide technical services for its products to over 5,000 customers with the majority of sales in Europe, the United States and Canada.

Kronos' international operations are conducted through Kronos International, Inc. ("KII"), a German-based holding company formed in 1989 to manage and coordinate the Company's manufacturing operations in Germany, Canada, Belgium and Norway, and its sales and marketing activities in over 100 countries worldwide. The Company believes that KII's structure allows it to capitalize on expertise and technology developed in Germany over a 60-year period.

Kronos and its predecessors have produced and marketed TiO_2 in North America and Europe for over 70 years. As a result, Kronos believes that it has developed considerable expertise and efficiency in the manufacture, sale, shipment and service of its products in domestic and international markets. By volume, one-half of Kronos' 1994 TiO_2 sales were to Europe, with 36% to North America and the balance to export markets.

Kronos is also engaged in the mining and sale of ilmenite ore (a raw material used in the sulfate pigment production process), and the manufacture and sale of iron-based water treatment chemicals (derived from co-products of the pigment production processes). Water treatment chemicals are used as treatment and conditioning agents for industrial effluents and municipal wastewater and in the manufacture of iron pigments.

Manufacturing process and raw materials

TiO_2 is manufactured by Kronos using either the chloride or sulfate pigment production process. Although most end-use applications can use pigments produced by either process, chloride process pigments are generally preferred in certain segments of the coatings and plastics applications, and sulfate process pigments are generally preferred for paper, fibers and ceramics applications. Due to environmental factors and customer considerations, the proportion of TiO_2 industry sales represented by chloride process pigments has increased relative to sulfate process pigments in the past few years. Approximately two-thirds of Kronos' current production capacity is based on an efficient chloride process technology.

Kronos produced 357,000 metric tons of TiO_2 in 1994, compared to 352,000 metric tons in 1993 and 358,000 metric tons in 1992. Kronos believes its annual attainable production capacity is approximately 380,000 metric tons, including its one-half interest in the joint venture-owned Louisiana plant (see "TiO_2 manufacturing joint venture"). The Company plans to spend $25 million in capital expenditures over the next three years for a debottlenecking project at its Leverkusen, Germany chloride process plant that is expected to increase the Company's annual attainable production capacity by 20,000 metric tons to approximately 400,000 tons in 1997.

The primary raw materials used in the TiO_2 chloride production process are chlorine, coke and titanium-containing feedstock derived from beach sand ilmenite and rutile. Chlorine and coke are available from a number of suppliers. Titanium-containing feedstock suitable for use in the chloride process is available from a limited number of suppliers around the world, principally in Australia, Africa, India and the United States. Kronos purchases slag refined from beach sand ilmenite from Richards Bay Iron and Titanium (Proprietary) Ltd. (South Africa), approximately 50% of which is owned by Q.I.T. Fer et Titane Inc. ("QIT"), an indirect subsidiary of RTZ Corp. Natural rutile ore is purchased primarily from suppliers located in Australia and Africa.

The primary raw materials used in the TiO_2 sulfate production process are sulfuric acid and titanium-containing feedstock derived primarily from rock and beach sand ilmenite. Sulfuric acid is available from a number of suppliers. Titanium-containing feedstock suitable for use in the sulfate process is available from a limited number of suppliers around the world. Currently, the principal active sources are located in Norway, Canada, Australia, India and South Africa. As one of the few vertically-integrated producers of sulfate process pigments, Kronos operates a rock ilmenite mine near Hauge i Dalane, Norway, which provided all of Kronos' feedstock for its European sulfate process pigment plants in 1994. Kronos' mine is also a commercial source of rock ilmenite for other sulfate process producers in Europe. The Company believes it supplies nearly 40% of the Western European demand, including the Company, for sulfate feedstock. Kronos also purchases sulfate grade slag under contracts negotiated annually with QIT and Tinfos Titanium and Iron K/S.

Kronos believes the availability of titanium-containing feedstock for both the chloride and sulfate processes is adequate in the near term; however, tightening supplies for the chloride process may be encountered in the late 1990s. Kronos does not anticipate experiencing any interruptions of its raw material supplies.

TiO_2 manufacturing joint venture

In October 1993, Kronos formed a manufacturing joint venture with Tioxide Group, Ltd., a wholly-owned subsidiary of Imperial Chemicals Industries PLC ("Tioxide"). The joint venture, which is equally owned by subsidiaries of Kronos and Tioxide (the "Partners"), owns and operates the Louisiana chloride process TiO_2 plant formerly owned by Kronos. Production from the plant is shared equally by Kronos and Tioxide pursuant to separate offtake agreements.

A supervisory committee, composed of four members, two of whom are appointed by each Partner, directs the business and affairs of the joint venture, including production and output decisions. Two general managers, one appointed and compensated by each Partner, manage the day-to-day operations of the joint venture acting under the direction of the supervisory committee.

The manufacturing joint venture is intended to be operated on a break-even basis and, accordingly, Kronos' transfer price for its share of the TiO_2 produced is equal to its share of the joint venture's production costs and interest expense. Kronos' share of the production costs are reported as cost of sales as the related TiO_2 acquired from the joint venture is sold, and its share of the joint venture's interest expense is reported as a component of interest expense.

Competition

The TiO_2 industry is highly competitive. During the late 1980s worldwide demand approximated available supply and the major producers, including Kronos, were operating at or near available capacity and customers generally were served on an allocation basis. During the early 1990s, supply exceeded demand, primarily due to new chloride process capacity coming on-stream. Relative supply/demand relationships, which had a favorable impact on industry-wide prices during the late 1980s, had a negative impact during the recent downward cycle. During 1994, demand growth resulting from improved economic conditions, coupled with limited capacity increases, improved industry capacity utilization to about 92% and resulted in increases in worldwide prices. During the last upturn cycle, which ended in early 1990, peak average TiO_2 prices were about 70% higher than the previous trough.

New plant capacity additions in the worldwide TiO_2 market are slow to develop because of the significant capital expenditures and substantial lead time (typically three to five years in the Company's experience) for, among other things, planning, obtaining environmental approvals and construction.

Kronos competes primarily on the basis of price, product quality and technical service, and the availability of high performance pigment grades. Although certain TiO_2 grades are considered specialty pigments, the majority of grades and substantially all of Kronos' production are considered commodity pigments with price generally being the most significant competitive factor. Kronos has an estimated worldwide TiO_2 market share of 11%, and believes that it is the leading marketer of TiO_2 in a number of countries, including Germany and Canada.

Kronos' principal competitors are E.I. du Pont de Nemours & Co. ("DuPont"); Imperial Chemical Industries PLC (Tioxide); Hanson PLC (SCM Chemicals); Kemira Oy; Ishihara Sangyo Kaisha, Ltd.; Bayer AG; Thann et Mulhouse; and Kerr-McGee Corporation. These eight competitors have estimated individual worldwide market shares ranging from 4% to 21%, and an estimated aggregate 74% share. DuPont has over one-half of total U.S. TiO_2 production capacity and is Kronos' principal North American competitor.

Kronos has completed a major environmental protection and improvement program that commenced in the early 1980s to replace or modify its TiO_2 production facilities for compliance with various environmental laws by their respective effective dates. All of Kronos' plants now use either the low waste-yielding chloride process, or the sulfate process with reprocessing or neutralization of waste acid. Although these upgrades increased operating costs, they are expected to reduce future capital expenditures that Kronos would otherwise need to incur as environmental standards are increased. See "Regulatory and Environmental Matters".

Rheox

Products and operations

Rheological additives control the flow and leveling characteristics for a variety of products, including paints, inks, lubricants, sealants, adhesives and cosmetics. Organoclay rheological additives are clays which have been chemically reacted with organic chemicals and compounds. Rheox produces rheological additives for both solvent-based and water-based systems. Rheox believes it is the world's largest producer of rheological additives for solvent-based systems, supplying approximately 40% of the worldwide market, and is also a supplier of rheological additives used in water-based systems. Rheological additives for solvent-based systems accounted for 84% of Rheox's sales in 1994, with the remainder being principally rheological additives for water-based systems. Rheox introduced a number of new products during the past three years, many of which are for water-based systems, which currently represent a larger portion of the market than solvent-based systems. As a result, the portion of Rheox's sales representing additives for water-based systems has increased from 10% to 16% during the past few years. The Company believes water-based additives will account for an increasing portion of the market in the long term. Rheox also focused on product development for environmental applications with new products introduced for non-volatile additives in both water-based and solvent-based coatings.

Sales of rheological additives generally follow overall economic growth in Rheox's principal markets and are influenced by the volume of shipments of the worldwide coatings industry. Since Rheox's rheological additives are used in industrial coatings, plant and equipment spending has an influence on demand for this product line.

Manufacturing process and raw materials

The primary raw materials utilized in the production of rheological additives are bentonite clays, hectorite clays, quaternary amines, polyethylene waxes and castor oil derivatives. Bentonite clays are currently purchased under a three-year contract, renewable through 2004, with a subsidiary of Dresser Industries, Inc. ("Dresser"), which has significant bentonite reserves in

Wyoming. This contract assures Rheox the right to purchase its anticipated requirements of bentonite clays for the foreseeable future, and Dresser's reserves are believed to be sufficient for such purpose. Hectorite clays are mined from Company-owned reserves in Newberry Springs, California, which the Company believes are adequate to supply its needs for the foreseeable future. The Newberry Springs ore body contains the largest known commercial deposit of hectorite clays in the world. Quaternary amines are purchased primarily from a joint venture company 50%-owned by Rheox and are also generally available on the open market from a number of suppliers. Castor oil-based rheological additives are purchased from sources in the United States and abroad. Rheox has a supply contract with a manufacturer of these products which may not be terminated without 180 days notice by either party.

Competition

Competition in the specialty chemicals industry is generally concentrated in the areas of product uniqueness, quality and availability, technical service, knowledge of end-use applications and price. Rheox's principal competitors for rheological additives for solvent-based systems are Laporte PLC and Sud-Chemie AG. Rheox's principal competitors for water-based systems are Rohm and Haas Company, Hercules Incorporated, The Dow Chemical Company and Union Carbide Corporation.

Research and Development

The Company's annual expenditures for research and development and technical support programs have averaged approximately $10 million annually during the past three years with Kronos accounting for approximately three-quarters of the annual spending. Research and development activities related to TiO_2 are conducted principally at the Leverkusen, Germany facility. Such activities are directed primarily toward improving both the chloride and sulfate production processes, improving product quality and strengthening Kronos' competitive position by developing new pigment applications. Activities relating to rheological additives are conducted primarily in the United States and are directed towards the development of new products for water-based systems, environmental applications and new end-use applications for existing product lines.

Patents and Trademarks

Patents held for products and production processes are believed to be important to the Company and contribute to the continuing business activities of Kronos and Rheox. The Company continually seeks patent protection for its technical developments, principally in the United States, Canada and Europe, and from time to time enters into licensing arrangements with third parties. In connection with the formation of the manufacturing joint venture with Tioxide, Kronos and certain of its subsidiaries exchanged proprietary chloride process and product technologies with Tioxide and certain of its affiliates. Use by each recipient of the other's technology in Europe is restricted until October 1996. See "Kronos - TiO_2 manufacturing joint venture".

The Company's major trademarks, including *Kronos*, *Titanox* and *Rheox*, are protected by registration in the United States and elsewhere with respect to those products it manufactures and sells.

Foreign Operations

The Company's chemical businesses have operated in international markets since the 1920s. Most of Kronos' current production capacity is located in Europe and Canada, and approximately one-third of Rheox's sales in the past three years have been attributable to European production. Approximately three-quarters of the Company's 1994 consolidated sales were attributable to non-U.S. customers, including 13% attributable to customers in areas other than Europe and Canada. Foreign operations are subject to, among other things, currency exchange rate fluctuations and the Company's results of operations have in the past been both favorably and unfavorably affected by fluctuations in currency exchange rates. Effects of fluctuations in currency exchange rates on the Company's results of operations are discussed in Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Political and economic uncertainties in certain of the countries in which the Company operates may expose it to risk of loss. The Company does not believe that there is currently any likelihood of material loss through political or economic instability, seizure, nationalization or similar event. The Company cannot predict, however, whether events of this type in the future could have a material effect on its operations. The Company's manufacturing and mining operations are also subject to extensive and diverse environmental regulation in each of the foreign countries in which they operate. See "Regulatory and Environmental Matters".

Customer Base and Seasonality

The Company believes that neither its aggregate sales nor those of any of its principal product groups are concentrated in or materially dependent upon any single customer or small group of customers. Neither the Company's business as a whole nor that of any of its principal product groups is seasonal to any significant extent. Due in part to the increase in paint production in the spring to meet the spring and summer painting season demand, TiO_2 sales are generally higher in the second and third calendar quarters than in the first and fourth calendar quarters. Sales of rheological additives are influenced by the worldwide industrial protective coatings industry, where second calendar quarter sales are generally the strongest.

Employees

As of December 31, 1994, the Company employed approximately 3,100 persons (down from approximately 3,200 at December 31, 1993), excluding the joint venture employees, with approximately 400 employees in the United States and approximately 2,700 at sites outside the United States. Hourly employees in production facilities worldwide are represented by a variety of labor unions, with labor agreements having various expiration dates. The Company believes its labor relations are good.

Regulatory and Environmental Matters

Certain of the Company's businesses are and have been engaged in the handling, manufacture or use of substances or compounds that may be considered toxic or hazardous within the meaning of applicable environmental laws. As with other companies engaged in similar businesses, certain past and current operations and products of the Company have the potential to cause environmental or other damage. The Company has implemented and continues to implement various policies and programs in an effort to minimize these risks. The policy of the Company is to achieve compliance with applicable environmental laws and regulations at all its facilities and to strive to improve its environmental performance. It is possible that future developments, such as stricter requirements of environmental laws and enforcement policies thereunder, could adversely affect the Company's production, handling, use, storage, transportation, sale or disposal of such substances.

The Company's U.S. manufacturing operations are governed by federal environmental and worker health and safety laws and regulations, principally the Resource Conservation and Recovery Act, the Occupational Safety and Health Act, the Clean Air Act, the Clean Water Act, the Safe Drinking Water Act, the Toxic Substances Control Act and the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act ("CERCLA"), as well as the state counterparts of these statutes. The Company believes that all of its U.S. plants and the Louisiana plant owned and operated by the joint venture are in substantial compliance with applicable requirements of these laws. From time to time, the Company's facilities may be subject to environmental regulatory enforcement under such statutes. Resolution of such matters typically involves the establishment of compliance programs. Occasionally, resolution may result in the payment of penalties, but to date such penalties have not involved amounts having a material adverse effect on the Company's consolidated financial position, results of operations or liquidity.

The Company's European and Canadian production facilities operate in an environmental regulatory framework in which governmental authorities typically are granted broad discretionary powers which allow them to issue operating permits required for the plants to operate. The Company believes that all its plants are in substantial compliance with applicable environmental laws.

While the laws regulating operations of industrial facilities in Europe vary from country to country, a common regulatory denominator is provided by the European Union (the "EU"). Germany, Belgium and the United Kingdom, members of the EU, follow the initiatives of the EU. Norway, although not a member, generally patterns its environmental regulatory actions after the EU. The Company believes that Kronos is in substantial compliance with agreements reached with European environmental authorities and with an EU directive to control the effluents produced by TiO_2 production facilities. The Company believes that Rheox is in substantial compliance with the environmental regulations in Germany and the United Kingdom.

In order to reduce sulfur dioxide emissions into the atmosphere, Kronos is currently installing off-gas desulfurization systems at its German and Norwegian plants at an estimated cost of $32 million and expects to complete the systems in 1996. Kronos intends to install a $10 million off-gas desulfurization system at its Belgian plant by 1998. The manufacturing joint venture has installed a $17 million off-gas desulfurization system at the Louisiana plant which commenced operation in early 1995. In addition, Kronos expects to complete an $11 million water treatment chemical purification project at its Leverkusen, Germany facility in 1996.

Kronos' ilmenite mine near Hauge i Dalane had a permit for the offshore disposal of tailings through February 1994. In February 1994, Kronos completed an onshore disposal system to replace the offshore disposal of tailings.

The Quebec provincial government has environmental regulatory authority over Kronos' Canadian chloride and sulfate process TiO_2 production facilities in Varennes, Quebec. The provincial government regulates discharges into the St. Lawrence River. In May 1992, the Quebec provincial government extended Kronos' right to discharge effluents from its Canadian sulfate process TiO_2 plant into the St. Lawrence River until June 1994. Kronos completed a new $25 million waste acid neutralization facility and discontinued discharging waste acid effluents into the St. Lawrence River in June 1994. Notwithstanding the above-described agreement, in March 1993 Kronos' Canadian subsidiary and two of its directors were charged by the Canadian federal government with five violations of the Canadian Fisheries Act relating to discharges into the St. Lawrence River from the Varennes sulfate process TiO_2 production facility. The penalty for these violations, if proven, could be up to Canadian $15 million. Additional charges, if brought, could involve additional penalties. The Company has moved to dismiss the case. The Company believes that this charge is inconsistent with the extension granted by provincial authorities, referred to above.

The Company's future capital expenditures related to its ongoing environmental protection and improvement program are currently expected to be approximately $57 million, including $33 million in 1995.

The Company has been named as a defendant, potentially responsible party ("PRP"), or both, pursuant to CERCLA and similar state laws, in approximately 80 governmental enforcement and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, many of which are on the U.S. Environmental Protection Agency's Superfund National Priorities List or similar state lists. See Item 3 - "Legal Proceedings".

ITEM 2. PROPERTIES

Kronos currently operates four TiO_2 facilities in Europe (Leverkusen and Nordenham, Germany; Langerbrugge, Belgium; and Fredrikstad, Norway). In North America, Kronos has a facility in Varennes, Quebec, Canada and, through the manufacturing joint venture described above, a one-half interest in a plant in Lake Charles, Louisiana which commenced production in 1992. Certain of the Company's properties collateralize long-term debt agreements. See Note 10 to the Consolidated Financial Statements.

Kronos' principal German operating subsidiary leases the land under its Leverkusen TiO_2 production facility pursuant to a lease expiring in 2050. The Leverkusen facility, with approximately one-third of Kronos' current TiO_2 production capacity, is located within the lessor's extensive manufacturing complex, and Kronos is the only unrelated party so situated. Under a separate supplies and services agreement, which expired in 1991 and to which an extension through 2011 has been agreed in principle, the lessor provides some raw materials, auxiliary and operating materials and utilities services necessary to operate the Leverkusen facility. Kronos and the lessor are continuing discussions regarding a definitive agreement for the extension of the supplies and services agreement. Both the lease and the supplies and services agreement restrict Kronos' ability to transfer ownership or use of the Leverkusen facility.

All of Kronos' principal production facilities described above are owned, except for the land under the Leverkusen facility. Kronos has a governmental concession with an unlimited term to operate its ilmenite mine in Norway.

Specialty chemicals are produced by Rheox at facilities in Charleston, West Virginia; Newberry Springs, California; St. Louis, Missouri; Livingston, Scotland and Nordenham, Germany. All of such production facilities are owned.

ITEM 3. LEGAL PROCEEDINGS

Lead pigment litigation

The Company was formerly involved in the manufacture of lead pigments for use in paint and lead-based paint. The Company has been named as a defendant or third party defendant in various legal proceedings alleging that the Company and other manufacturers are responsible for personal injury and property damage allegedly associated with the use of lead pigments. The Company is vigorously defending such litigation. Considering the Company's previous involvement in the lead pigment and lead-based paint businesses, there can be no assurance that additional litigation, similar to that described below, will not be filed. In addition, various legislation and administrative regulations have, from time to time, been enacted or proposed that seek to (a) impose various obligations on present and former manufacturers of lead pigment and lead-based paint with respect to asserted health concerns associated with the use of such products and (b) effectively overturn court decisions in which the Company and other pigment manufacturers have been successful. One such bill that would subject lead pigment manufacturers to civil liability for damages caused by lead-based paint on the basis of market share, and that extends certain statutes of limitations, passed the Massachusetts House of Representatives in 1993. The same bill, reintroduced in the Massachusetts legislature in 1994 and defeated in the House of Representatives, was again reintroduced in 1995. No legislation or regulations have been enacted to date which are expected to have a material adverse effect on the Company's consolidated financial position, results of operations or liquidity. The Company has not accrued any amounts for the pending lead pigment litigation. Although no assurance can be given that the Company will not incur future liability in respect of this litigation, based on, among other things, the results of such litigation to date, the Company believes that the pending lead pigment litigation is without merit. Liability, if any, that may result is not reasonably capable of estimation.

In 1989 and 1990, the Housing Authority of New Orleans ("HANO") filed third-party complaints for indemnity and/or contribution against the Company, other alleged manufacturers of lead pigment (together with the Company, the "pigment manufacturers") and the Lead Industries Association (the "LIA") in 14 actions commenced by residents of HANO units seeking compensatory and punitive damages for injuries allegedly caused by lead pigment. The actions in the Civil District Court for the Parish of Orleans, State of Louisiana were dismissed by the district court in 1990. Subsequently, HANO agreed to consolidate all the cases and appealed eleven of them. In March 1992, the Louisiana Court of Appeals, Fourth Circuit, dismissed HANO's appeal as untimely with respect to three of these cases. With respect to the other eight cases included in the appeal, the court of appeals reversed the lower court decision dismissing the cases due to inadequate pleading of facts. These eight cases have been remanded to the district court for further proceedings. In November 1994, the district court granted defendants' motion for summary judgment in one of the eight remaining cases.

In December 1991, the Company received a copy of a complaint filed in the Civil District Court for the Parish of Orleans seeking indemnification and/or contribution against the Company and eight other defendants for approximately $4.5 million in settlements paid to HANO residents (*Housing Authority of New Orleans v. Hoechst Celanese Corp., et al.*, No. 91-28067). These claims appear to be based upon the same theories which HANO had previously filed. The Company has not been served.

In June 1989, a complaint was filed in the Supreme Court of the State of New York, County of New York, against the pigment manufacturers and the LIA. Plaintiffs seek damages, contribution and/or indemnity in an amount in excess of $50 million for monitoring and abating alleged lead paint hazards in public and private residential buildings, diagnosing and treating children allegedly exposed to lead paint in city buildings, the costs of educating city residents to the hazards of lead paint, and liability in personal injury actions against the City and the Housing Authority based on alleged lead poisoning of city residents (*The City of New York, the New York City Housing Authority and the New York City Health and Hospitals Corp. v. Lead Industries Association, Inc., et al.*, No. 89-4617). In December 1991, the court granted the defendants' motion to dismiss claims alleging negligence and strict liability and denied the remainder of the motion. In January 1992, defendants appealed the denial. The Company has answered the remaining portions of the complaint denying all allegations of wrongdoing, and the case is in discovery. In December 1992, plaintiffs filed a motion to stay the claims of the City of New York and the New York City Health and Hospitals Corporation pending resolution of the Housing Authority's claim. In May 1993, the Appellate Division of the Supreme Court affirmed the denial of the motion to dismiss plaintiffs' fraud, restitution, conspiracy and concert of action claims. In August 1993, the defendants' motion for leave to appeal was denied. In May 1994, the trial court granted the defendants' motion to dismiss the plaintiffs' restitution and indemnification claims, and plaintiffs have appealed. Defendants have moved for summary judgment on the remaining fraud claim.

In March 1992, the Company was served with a complaint in *Skipworth v. Sherwin-Williams Co., et al.* (No. 92-3069), Court of Common Pleas, Philadelphia County. Plaintiffs are a minor and her legal guardians seeking damages from lead paint and pigment producers, the LIA, the Philadelphia Housing Authority and the owners of the plaintiffs' premises for bodily injuries allegedly suffered by the minor from lead-based paint. Plaintiffs' counsel has asserted that approximately 200 similar complaints would be served shortly, but no such complaints have yet been served. In April 1994, the court granted defendants' motion for summary judgment and plaintiffs appealed that decision in June 1994.

In August 1992, the Company was named as a defendant and served with an amended complaint in *Jackson, et al. v. The Glidden Co., et al.*, Court of Common Pleas, Cuyahoga County, Cleveland, Ohio (Case No. 236835). Plaintiffs seek compensatory and punitive damages for personal injury caused by the ingestion of lead, and an order directing defendants to abate lead-based paint in buildings. Plaintiffs purport to represent a class of similarly situated persons throughout the State of Ohio. The amended complaint identifies 18 other defendants who allegedly manufactured lead products or lead-based paint, and asserts causes of action under theories of strict liability, negligence per se, negligence, breach of express and implied warranty, fraud, nuisance, restitution, and negligent infliction of emotional distress. The complaint asserts several theories of liability including joint and several, market share, enterprise and alternative

liability. In October 1992, the Company and the other defendants moved to dismiss the complaint with prejudice. In July 1993, the court dismissed the complaint. In December 1994, the Ohio Court of Appeals reversed the trial court dismissal and remanded the case to the trial court.

In November 1993, the Company was served with a complaint in *Brenner, et al. v. American Cyanamid, et al.*, Supreme Court, State of New York, Erie County alleging injuries to two children purportedly caused by lead pigment. The complaint seeks $24 million in compensatory and $10 million in punitive damages for alleged negligent failure to warn, strict products liability, fraud and misrepresentation, concert of action, civil conspiracy, enterprise liability, market share liability, and alternative liability. In January 1994, the Company answered the complaint, denying liability. Discovery is proceeding.

In January 1995, the Company was served with complaints in *Wright (Alvin)* and *Wright (Allen) v. Lead Industries, et. al.*, (Nos. 94-363042 and 363043), Circuit Court, Baltimore City, Maryland. Plaintiffs are two brothers (one deceased) who allege injuries due to exposure to lead pigment. Each complaint seeks more than $100 million in compensatory and punitive damages for alleged strict liability, breach of warranty, negligence, conspiracy and fraud claims.

The Company believes that the foregoing lead pigment actions are without merit and intends to continue to deny all allegations of wrongdoing and liability and to defend such actions vigorously.

The Company has filed declaratory judgment actions against various insurance carriers seeking costs of defense and indemnity coverage for certain of its environmental and lead pigment litigation. *NL Industries, Inc. v. Commercial Union Insurance Cos., et al.*, Nos. 90-2124, -2125 (HLS). In May 1990, the Company filed an action in the United States District Court for the District of New Jersey against Commercial Union Insurance Company ("Commercial Union") seeking to recover defense costs incurred in the *City of New York* lead pigment case and two other cases which have since been resolved in the Company's favor. In July 1991, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the Company's reasonable defense costs for such cases. In June 1992, the Company filed an amended complaint in the United States District Court for the District of New Jersey against Commercial Union seeking to recover costs incurred in defending four additional lead pigment cases which have since been resolved in the Company's favor. In August 1993, the court granted the Company's motion for summary judgment and ordered Commercial Union to pay the reasonable costs of defending those cases. In July 1994, the court entered judgment on the order requiring Commercial Union to pay previously-incurred Company costs in defending those cases. Commercial Union has appealed. Other than a magistrate's recommendation to grant motions for summary judgment brought by two excess insurance carriers, which contended that their policies contained unique pollution exclusion language, and a grant by the court of certain motions regarding policy periods, the court has not made any rulings on defense costs or indemnity coverage with respect to the Company's pending environmental litigation or on indemnity coverage in the lead pigment litigation. No trial dates have been set. Other than rulings to date, the issue of whether insurance coverage for defense costs or indemnity or both will be found to exist depends upon a variety of factors, and there can be no assurance that such insurance coverage will exist in other cases. The Company has not considered any insurance recoveries for lead pigment or environmental litigation in determining related accruals.

Environmental matters and litigation

The Company has been named as a defendant, PRP, or both, pursuant to CERCLA and similar state laws in approximately 80 governmental and private actions associated with waste disposal sites and facilities currently or previously owned, operated or used by the Company, or its subsidiaries, or their predecessors, many of which are on the U.S. Environmental Protection Agency's ("U.S. EPA") Superfund National Priorities List or similar state lists. These proceedings seek cleanup costs, damages for personal injury or property damage, or both. Certain of these proceedings involve claims for substantial amounts. Although the Company may be jointly and severally liable for such costs, in most cases it is only one of a number of PRPs who are also jointly and severally liable. In addition to the matters noted above, certain current and former facilities of the Company, including several divested secondary lead smelter and former mining locations, are the subject of environmental investigations or litigation arising out of industrial waste disposal practices and mining activities.

The extent of CERCLA liability cannot be determined until the Remedial Investigation and Feasibility Study ("RIFS") is complete, the U.S. EPA issues a record of decision and costs are allocated among PRPs. The extent of liability under analogous state cleanup statutes and for common law equivalents are subject to similar uncertainties. The Company believes it has provided adequate accruals for reasonably estimable costs for CERCLA matters and other environmental liabilities. At December 31, 1994, the Company had accrued $87 million in respect of those environmental matters which are reasonably estimable. The Company determines the amount of accrual on a quarterly basis by analyzing and estimating the range of possible costs to the Company. Such costs include, among other things, remedial investigations, monitoring, studies, clean-up, removal and remediation. It is not possible to estimate the range of costs for certain sites. The Company has estimated that the upper end of the range of reasonably possible costs to the Company for sites for which it is possible to estimate costs is approximately $160 million. No assurance can be given that actual costs will not exceed accrued amounts or the upper end of the range for sites for which estimates have been made, and no assurance can be given that costs will not be incurred with respect to sites as to which no estimate presently can be made. The imposition of more stringent standards or requirements under environmental laws or regulations, new developments or changes respecting site cleanup costs or allocation of such costs among PRPs, or a determination that the Company is potentially responsible for the release of hazardous substances at other sites could result in expenditures in excess of amounts currently estimated by the Company to be required for such matters. Further, there can be no assurance that additional environmental matters will not arise in the future. More detailed descriptions of certain legal proceedings relating to environmental matters are set forth below.

The Company has been identified as a PRP by the U.S. EPA because of its former ownership of three secondary lead smelters (battery recycling plants) in Pedricktown, New Jersey; Granite City, Illinois; and Portland, Oregon. In all three matters, the Company voluntarily entered into administrative consent orders with the U.S. EPA requiring the performance of a RIFS, a study with the objective of identifying the nature and extent of the hazards, if any, posed by the sites, and selecting a remedial action, if necessary.

At Pedricktown, the U.S. EPA divided the site into two operable units. Operable unit one covers contaminated ground water, surface water, soils and stream sediments. The Company submitted the final RIFS for operable unit one to the U.S. EPA in May 1993. In July 1994, the U.S. EPA issued the Record of Decision for operable unit one. The U.S. EPA estimates the cost to complete operable unit one is $18.7 million. The U.S. EPA has not yet issued a notice or an order requiring implementation of operable unit one. In addition, the U.S. EPA has completed the fifth phase of a removal action on the soils and sediments of a stream at the site, at an estimated total cost of $2 million. The U.S. EPA issued a Unilateral Administrative Order (Index No. II-CERCLA 20205) with respect to operable unit two in March 1992 to the Company and 30 other PRPs directing immediate removal activities including the cleanup of waste, surface water and building surfaces. The Company has complied with the order, and the work with respect to operable unit two is nearing completion. The Company has paid approximately 50% of operable unit two costs, or $2.5 million.

At Granite City, the RIFS is complete, and in 1990 the U.S. EPA selected a remedy estimated to cost approximately $28 million. In July 1991, the United States filed an action in the U.S. District Court for the Southern District of Illinois against the Company and others (*United States of America v. NL Industries, Inc., et al.*, Civ. No. 91-CV 00578) with respect to the Granite City smelter. The complaint seeks injunctive relief to compel the defendants to comply with an administrative order issued pursuant to CERCLA, and fines and treble damages for the alleged failure to comply with the order. The Company and the other parties did not comply with the order believing that the remedy selected by the U.S. EPA was invalid, arbitrary, capricious and not in accordance with law. The complaint also seeks recovery of past costs of $.3 million and a declaration that the defendants are liable for future costs. Although the action was filed against the Company and ten other defendants, there are 330 other PRPs who have been notified by the U.S. EPA. Some of those notified were also respondents to the administrative order. In February 1992, the court entered a case management order directing that the remedy issues be tried before the liability aspects are presented. In August 1994, when the U.S. EPA reinitiated the residential yard soils remediation in Granite City after an agreed-upon stay of the cleanup pending completion of a health study and reopening of the administrative record, the PRPs and the City of Granite City sought an injunction against the U.S. EPA to prevent further cleanup until after the record was reopened for submittal of additional comments on the selected remedy. In October 1994, the U.S. EPA issued its proposed plan for addressing residential yard soils in Granite City. The U.S. EPA presented no estimate of costs for this work. The administrative record was reopened for public comment. and the Company, along with other PRPs, submitted extensive comments on the proposed residential soils cleanup plan. In February 1995, the U.S. EPA issued its proposed plan for the Main Industrial Area, the remaining remote fill areas and ground water at the site, which is estimated by the U. S. EPA to cost approximately $9.2 million. The administrative record has been reopened for public comments on this phase of the cleanup.

Having completed the RIFS at Portland, the Company conducted predesign studies to explore the viability of the U.S. EPA's selected remedy pursuant to a June 1989 consent decree captioned *U.S. v. NL Industries, Inc.*, Civ. No. 89-408, United States District Court for the District of Oregon. Subsequent to the completion of the predesign studies, the U.S. EPA issued notices of potential liability to approximately 20 PRPs, including the Company, directing them to perform the remedy, which was initially estimated to cost approximately

$17 million, exclusive of administrative and overhead costs and any additional costs, for the disposition of recycled materials from the site. In January 1992, the U.S. EPA issued unilateral administrative orders Docket No. 1091-01-10-106 to the Company and six other PRPs directing the performance of the remedy. The Company and the other PRPs commenced performance of the remedy and, through December 31, 1994, the Company and the other PRPs had spent approximately $18 million. Based upon site operations to date, the remedy is not proceeding in accordance with engineering expectations or cost projections; therefore, the Company and the other PRPs have met with the U.S. EPA to discuss alternative remedies for the site. The U.S. EPA authorized the Company and the other PRPs to cease performing most aspects of the selected remedy. In September 1994, the Company and the other PRPs submitted a focused feasibility study ("FFS") to the U.S. EPA, which proposes alternative remedies for the site. The U.S. EPA is considering the alternatives proposed in the FFS. Pursuant to an interim allocation, the Company's share of remedial costs is approximately 50%. In November 1991, Gould, Inc., the current owner of the site, filed an action, *Gould Inc. v. NL Industries, Inc.*, No. 91-1091, United States District Court for the District of Oregon, against the Company for damages for alleged fraud in the sale of the smelter, rescission of the sale, past CERCLA response costs and a declaratory judgment allocating future response costs and $5 million in punitive damages. The court granted Gould's motion to amend the complaint to add additional defendants (adjoining current and former landowners) and third party defendants (generators). The amended complaint deletes the fraud and punitive damages claims asserted against NL; thus, the pending action is essentially one for reallocation of past and future cleanup costs. In March 1993, the parties agreed to a case management order limiting discovery until 1995. In December 1994, Gould amended its complaint adding approximately 15 additional generator defendants and two additional owner/operator defendants. Discovery is proceeding. A trial date has been tentatively set for September 1996.

There are several actions pending relating to alleged contamination at other properties formerly owned or operated by the Company or its subsidiaries or their predecessors. In one of those cases, suit was filed in November 1992 against the Company asserting claims arising out of the sale of a former business of the Company to Exxon Chemical Company (*Exxon Chemical Company v. NL Industries, Inc.*, United States District Court for the Southern District of Texas, No. H-92-3360). The action sought contractual indemnification, contribution under CERCLA for costs associated with the environmental assessment and cleanup at nine properties included in the sale, a declaration of liability for future environmental cleanup costs, and punitive damages for fraud. Plaintiff asserted that past and future cleanup costs, business interruption, and asset value losses and legal and site assessment costs were approximately $25 million. In December 1994, this matter was settled within previously accrued amounts.

The Company and other PRPs entered into an administrative consent order with the U.S. EPA requiring the performance of a RIFS at two sites in Cherokee County, Kansas, where the Company and others formerly mined lead and zinc. A predecessor of the Company mined at the Baxter Springs subsite, where it is the largest viable PRP. The final RIFS was submitted to the U.S. EPA in May 1993. In August 1994, the U.S. EPA issued its proposed plan for the cleanup of the Baxter Springs and Treece sites in Cherokee County. The proposed remedy is estimated by U.S. EPA to cost $6 million.

In January 1989, the State of Illinois brought an action against the Company and several other subsequent owners and operators of the former lead oxide plant in Chicago, Illinois (*People of the State of Illinois v. NL Industries, et al.*, No. 88-CH-11618, Circuit Court, Cook County). The complaint seeks recovery of $2.3 million of cleanup costs expended by the Illinois Environmental Protection Agency, plus penalties and treble damages. In October 1992, the Supreme Court of Illinois reversed the Appellate Division, which had affirmed the trial court's earlier dismissal of the complaint, and remanded the case for further proceedings. In December 1993, the trial court denied the State's petition to reinstate the complaint, and dismissed the case with prejudice. The State's appeal of this ruling is pending.

In 1980, the State of New York commenced litigation against the Company in connection with the operation of a plant in Colonie, New York formerly owned by the Company. *Flacke v. NL Industries, Inc.*, No. 1842-80 ("Flacke I") and *Flacke v. Federal Insurance Company and NL Industries, Inc.*, No. 3131-92 ("Flacke II"), New York Supreme Court, Albany County. The plant manufactured military and civilian products from depleted uranium and was acquired from the Company by the U.S. Department of Energy ("DOE") in 1984. Flacke I seeks penalties for alleged violations of New York's Environmental Conservation Law, and of a consent order entered into to resolve these alleged violations. Flacke II seeks forfeiture of a $200,000 surety bond posted in connection with the consent order, plus interest from February 1980. The Company denied liability in both actions. The litigation had been inactive from 1984 until July 1993 when the State moved for partial summary judgment for approximately $1.5 million on certain of its claims in Flacke I and for summary judgment in Flacke II. In January 1994, the Company cross-moved for summary judgment in Flacke I and Flacke II. All summary judgment motions have been denied and both parties have appealed.

Residents in the vicinity of the Company's former Philadelphia lead chemicals plant commenced a class action allegedly comprised of over 7,500 individuals seeking medical monitoring and damages allegedly caused by emissions from the plant. *Wagner, et al. v. Anzon, Inc. and NL Industries, Inc.*, No. 87-4420, Court of Common Pleas, Philadelphia County. The complaint sought compensatory and punitive damages from the Company and the current owner of the plant, and alleged causes of action for, among other things, negligence, strict liability, and nuisance. A class was certified to include persons who resided, owned or rented property, or who work or have worked within up to approximately three-quarters of a mile from the plant from 1960 through the present. The Company answered the complaint, denying liability. In November 1994, the jury returned a verdict in favor of the Company. Plaintiffs have filed post-trial motions requesting a new trial. Residents also filed consolidated actions in the United States District Court for the Eastern District of Pennsylvania, *Shinozaki v. Anzon, Inc.* and *Wagner and Antczak v. Anzon and NL Industries, Inc.* Nos. 87-3441 and 87-3502. The consolidated action is a putative class action seeking CERCLA response costs, including cleanup and medical monitoring, declaratory and injunctive relief and civil penalties for alleged violations of the Resource Conservation and Recovery Act ("RCRA"), and also asserting pendent common law claims for strict liability, trespass, nuisance and punitive damages. The court dismissed the common law claims without prejudice, dismissed two of the three RCRA claims as against the Company with prejudice, and stayed the case pending the outcome of the state court litigation.

In July 1991, a complaint was filed in the United States District Court for the Central District of California, *United States of America v. Peter Gull and NL Industries, Inc.*, Civ. No. 91-4098, seeking recovery of $2 million in costs incurred by the United States in response to the alleged release of hazardous substances into the environment from a facility located in Norco, California, treble damages and $1.75 million in penalties for the Company's alleged failure to comply with the U.S. EPA's administrative order No. 88-13. The order, which alleged that the Company arranged for the treatment or disposal of materials at the Norco site, directed the immediate removal of hazardous substances from the site. The Company carried out a portion of the remedy at the Norco site, but did not complete the ordered activities because it believed they were in conflict with California law. The Company answered the complaint denying liability. The government claims it expended in excess of $2.7 million for this matter. Trial was held in March and April 1993. In April 1994, the court entered final judgment in this matter directing the Company to pay $6.3 million plus interest. The court ruled that the Company was liable for approximately $2.7 million in response costs plus approximately $3.6 million in penalties for failure to comply with the administrative order. Both the Company and the government have appealed. In August 1994, this matter was referred to mediation, which is pending.

At a municipal and industrial waste disposal site in Batavia, New York, the Company and six others have been identified as PRPs. The U.S. EPA has divided the site into two operable units. Pursuant to an administrative consent order entered into with the U.S. EPA, the Company is conducting a RIFS for operable unit one, the closure of the industrial waste disposal section of the landfill. The Company's RIFS costs to date are approximately $2 million. In August 1994, the U.S. EPA issued the proposed plan for operable unit one, which is estimated by the U.S. EPA to cost approximately $12.3 million. The Company, along with other PRPs, submitted extensive comments on the proposed plan. With respect to the second operable unit, the extension of the municipal water supply, the U.S. EPA estimated the costs at $1 million plus annual operation and maintenance costs. The Company and the other PRPs are performing the work comprising operable unit two. The U.S. EPA has also demanded approximately $.9 million in past costs from the PRPs.

See Item 1 - "Business - Regulatory and Environmental Matters".

Other litigation

In January 1990, an action was filed in the United States District Court for the Southern District of Ohio against NLO, Inc., a subsidiary of the Company, and the Company on behalf of a putative class of former NLO employees and their families and former frequenters and invitees of the Feed Materials Production Center ("FMPC") in Ohio (*Day, et al. v. NLO, Inc.*, et al, No. C-1-90-067). The FMPC is owned by the DOE and was formerly managed under contract by NLO. The complaint seeks damages for, among other things, emotional distress and damage to personal property allegedly caused by exposure to radioactive and/or hazardous materials at the FMPC and punitive damages. This action was certified as a class action by the court. In July 1994, the parties reached a settlement agreement pursuant to which the DOE would pay all costs of the settlement and the Company and NLO were released.

The Company is also involved in various other environmental, contractual, product liability and other claims and disputes incidental to its present and former businesses, and the disposition of past properties and former businesses.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the quarter ended December 31, 1994.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

NL's common stock is listed and traded on the New York and Pacific Stock Exchanges under the symbol "NL". As of February 28, 1995, there were approximately 10,000 holders of record of NL common stock. The following table sets forth the high and low sales prices for NL common stock on the New York Stock Exchange ("NYSE") Composite Tape. On February 28, 1995, the closing price of NL common stock according to the NYSE Composite Tape was $11-7/8.

	High	Low
Year ended December 31, 1993:		
First quarter	$ 6-1/8	$ 4-1/4
Second quarter	5-5/8	3-3/8
Third quarter	6-1/8	3-7/8
Fourth quarter	6	4-1/2
Year ended December 31, 1994:		
First quarter	$ 9-5/8	$ 4-3/8
Second quarter	9-1/2	6-1/8
Third quarter	11-7/8	8-3/8
Fourth quarter	13-1/4	9

The Company's Senior Notes generally limit the ability of the Company to pay dividends to 50% of consolidated net income, as defined, subsequent to October 1993. At December 31, 1994, no amounts were available for dividends.