

permit. 1987-03. Final-permit

DEC PERMIT NUMBER 70-86-0175
FACILITY/PROGRAM NUMBER(S) EPA ID No. D006977986 086



PERMIT

Under the Environmental Conservation Law

EFFECTIVE DATE March 30, 1987
EXPIRATION DATE(S) March 30, 1992

- | | | |
|---|---|---|
| <input type="checkbox"/> Article 15, Title 5:
Protection of Water _____ | <input type="checkbox"/> Article 17, Titles 7, 8: SPDES _____ | <input type="checkbox"/> Article 27, Title 7:
Solid Waste Management _____ |
| <input type="checkbox"/> Article 15, Title 15:
Water Supply _____ | <input type="checkbox"/> Article 19:
Air Pollution Control _____ | <input checked="" type="checkbox"/> Article 27, Title 9:
Hazardous
Waste Management <u>6NYCRR Part 37</u> |
| <input type="checkbox"/> Article 15, Title 15:
Water Transport _____ | <input type="checkbox"/> Article 23, Title 27:
Mined Land
Reclamation _____ | <input type="checkbox"/> Article 34:
Coastal
Erosion Management _____ |
| <input type="checkbox"/> Article 15, Title 15:
Long Island Wells _____ | <input type="checkbox"/> Article 24:
Freshwater Wetlands _____ | <input type="checkbox"/> Article 36:
Floodplain Management _____ |
| <input type="checkbox"/> Article 15, Title 27:
Wild, Scenic
and Recreational Rivers _____ | <input type="checkbox"/> Article 25:
Tidal Wetlands _____ | <input type="checkbox"/> Articles 1, 3, 37; 6NYCRR 380:
Radiation Control _____ |
| <input type="checkbox"/> 6NYCRR 608:
Water Quality Certification _____ | N—New, R—Renewal, M—Modification
C—Construction, O—Operation. (If Applicable) | |

PERMIT ISSUED TO Roth Brothers Smelting Corporation			
ADDRESS OF PERMITTEE 6223 Thompson Road, P.O. Box 639, East Syracuse, NY 13057			
AGENT FOR PERMITTEE/CONTACT PERSON Neil Schwartz, General Manager			TELEPHONE NUMBER (315) 463-9500
NAME AND ADDRESS OF FACILITY (if different from Permittee) Same as above			
LOCATION OF PROJECT 6223 Thompson Road	COUNTY Onondaga	TOWN/CITY/VILLAGE E. Syracuse	UTM COORDINATES
DESCRIPTION OF PROJECT/FACILITY EPA I.D. No. NYD006977986 086			
Operation of a Hazardous waste storage facility for storage of 290 containers of toxic waste from off-site generators prior to reclamation as well as toxic waste generated as a result of the reclamation processes.			

GENERAL CONDITIONS

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations and the conditions specified herein or attached hereto.

- The permittee shall file in the office of the appropriate regional permit administrator, or other office designated in the special conditions, a notice of intention to commence work at least 48 hours in advance of the time of commencement and shall also notify him/her promptly in writing of the completion of the work.
- The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation which may order the work suspended if the public interest so requires.
- The permittee has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomsoever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
- The Department reserves the right to modify, suspend or revoke this permit at any time after due notice, and, if requested, hold a hearing when:
 - the scope of the project is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations are found; or
 - the permit was obtained by misrepresentation or failure to disclose relevant facts; or
 - newly discovered information or significant physical changes are discovered since the permit was issued.
- The permittee is responsible for keeping the permit active by submitting a renewal application, including any forms, fees or supplemental information which may be required by the Department, no later than 30 days (180 days for SPDES or Solid or Hazardous Waste Management permits) prior to the expiration date.
- This permit shall not be construed as conveying to the applicant any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work or as authorizing the impairment of any rights, title or interest in real or personal property held or vested in a person not a party to the permit.
- The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights of way which may be required for this project.
- Issuance of this permit by the Department does not, unless expressly provided for, modify, supersede or rescind an order on consent or determination by the Commissioner issued heretofore by the Department or any of the terms, conditions, or requirements contained in such order or determination.
- Any modification of this permit granted by the Department must be in writing and attached hereto.

PERMIT ISSUANCE DATE March 20, 1987	PERMIT ADMINISTRATOR Robert A. Torba	ADDRESS Liverpool, NY
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ADDITIONAL GENERAL CONDITIONS FOR ARTICLE 27 (Title 9 - 6NYCRR Part 373 Hazardous Waste Management)

10. All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or his agent as part of the permit application.
Such approved plans were prepared by Roth Brothers Smelting Corporation on (See 12 below)

SPECIAL CONDITIONS

11. The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 6NYCRR Parts 370 through 373-2 and 621 and 624 as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of this permit.
12. This permit is based on the assumption that the information submitted in the Permit application attached to the Permittee's letter dated 4/16/86 modified by subsequent amendments dated 10/22/86 & 11/24/86 thereafter referred to as the application) is complete and accurate and that the facility will be operated as specified in the application. Any inaccuracies or incompleteness found in this information may be grounds for the termination or modification of this permit and potential enforcement action.
13. The Permittee must inform DEC of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.
14. The permittee must operate the facility in strict accordance with the modules and attachments to this permit specified below:

Module I:	Standard Conditions
Module II:	General Facility Conditions
Module III:	Specific Conditions (Facility Assessment)
Module IV:	Storage in Containers
Attachment I:	Waste Analysis Plan
Attachment II:	Inspection Schedule
Attachment III:	Personnel Training
Attachment IV:	Contingency Plan
Attachment V:	Closure Plan
Attachment VI:	Container Management

DEC PERMIT NUMBER
70-86-0175

PROGRAM/FACILITY NUMBER

MODULE I - STANDARD CONDITIONS

A. EFFECT OF PERMIT

The Permittee is allowed to store hazardous waste in accordance with the conditions of this permit. Any storage, treatment, or disposal of hazardous waste not authorized in this permit is prohibited unless exempt from 6NYCRR Part 373. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State or local laws or regulations. Compliance with the terms of this permit does not constitute a defense to any other law providing for protection of public health or the environment.

B. PERMIT ACTIONS

This permit may be modified, revoked or suspended for cause as specified in 6NYCRR 621.13. The filing of a request for a permit modification, revocation and reissuance, or suspension; or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. DUTIES AND REQUIREMENTS

- (1) Duty to Comply. The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ECL Article 27, Title 9 and is grounds for enforcement action, permit suspension, revocation, modification, or denial of a permit renewal application.
- (2) Duty to Reapply. If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new permit at least 180 days before this permit expires and shall obtain a new permit prior to expiration of this permit.
- (3) Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

- (4) Duty to Mitigate. The Permittee shall take all steps to minimize or correct any adverse impact on human health or the environment resulting from noncompliance with this permit.
- (5) Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective performance, adequate funding, adequate operator staffing and training, and adequate process and laboratory controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) Inspection and Entry. The Permittee shall allow the Commissioner, or an authorized representative, including authorized EPA representatives, upon the presentation of credentials and other documents as may be required by law to:
- (a) Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;
 - (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, including any and all confidential data;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - (d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the ECL, any substances or parameters at any location.
- (7) Duty to Provide Information. The Permittee shall furnish to the Commissioner, within a reasonable time, any relevant information which the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or suspending this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this permit.
- (8) Twenty-four Hour Reporting. The Permittee shall report any non-compliance which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:
- (a) Information concerning the release of any hazardous waste which may cause endangerment to public drinking water supplies.

- (b) Any information of a release or discharge of hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health.
- (c) The description of the occurrence and its cause, as reported in Module I, Condition D.(8)(a) or (b) shall include:
 - (i) Name, address, and telephone number of the operator;
 - (ii) Name, address, and telephone number of the facility;
 - (iii) Date, time, and type of incident;
 - (iv) Name and quantity of materials involved;
 - (v) The extent of injuries, if any;
 - (vi) An assessment of actual or potential hazard to the environment and human health inside and outside the facility, where this is applicable; and
 - (vii) Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided to the Commissioner within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance (See I-D(3)). The Permittee need not comply with the five day written notice requirement if the Commissioner waives the requirement and the Permittee submits a written report within 15 days of the time the Permittee becomes aware of the circumstances.

The oral reports required above may be made by contacting the National Response Center 24-hour toll free number at 800/424-8802 and the New York State 24-hour oil and hazardous material spill notification number 800/457-7362 or any designated telephone number which may subsequently replace the ones listed above.

- (9) Unmanifested Waste Report. A report must be submitted to the Commissioner within 2 days of receipt of unmanifested waste and include the information listed in 6NYCRR 372.4(c).
- (10) Manifest Discrepancy Report. If a significant discrepancy [as defined by 6NYCRR Part 372] in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within 15 days, the Permittee must submit a written report to the Commissioner. The report must include a copy of the manifest and must meet the information requirements of 6NYCRR Part 372.

- (11) Additional Noncompliance Reporting. The Permittee shall report all instances of noncompliance (including release of hazardous waste, fire, or explosion) not required to be reported under Module I, Condition D. (8) or (17). Such noncompliance shall be reported at the time monitoring reports are submitted. The reports shall contain the information listed in Module I, Condition D. (8) (c) (i-vii).
- (12) Anticipated Noncompliance. The Permittee shall give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Compliance with condition I-D.(3) is still effective in this situation.
- (13) Other Information. Whenever the Permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Commissioner, the Permittee shall immediately submit such facts or information.
- (14) Compliance Schedules. Not applicable.
- (15) Annual Report. The Permittee shall submit an annual report covering facility activities during the calendar year per 6NYCRR 373-2.5(e).
- (16) Monitoring and Records.
- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - (b) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, certification required by 6NYCRR Part 373-2.5(c)(2)(ix), and records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record. These periods may be extended by request of the Commissioner at any time.
 - (c) Records of monitoring information shall specify:
 - (i) The dates, exact place, and times of sampling or measurements;
 - (ii) The individuals who performed the sampling or measurements;
 - (iii) The dates analyses were performed;
 - (iv) The individual(s) who performed the analyses;
 - (v) The sampling techniques or methods used;
 - (vi) The analytical techniques or methods used; and
 - (vii) The results of such analyses.

- (d) The Permittee shall conduct a quality assurance program to ensure that the monitoring data are technically accurate and statistically valid. The quality assurance program shall be in accordance with Section 10 of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, Second Edition, 1982, as amended by updates I (April 1984) and II (April 1985).
- (17) Monitoring Reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.
- (18) Reporting Planned Changes. The Permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility.
- (19) Certification of Construction or Modification. Not applicable.
- (20) Transfer of Permits. This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 6NYCRR 373-1.6(a)(12)(iii) and 6NYCRR 373-1.7(a). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 6NYCRR 373.
- E. Signatory Requirement. All reports or other information requested by the Commissioner shall be signed and certified as required by 6NYCRR 373-1.4(a)(5).
- F. Confidential Information. The Permittee may claim confidential any information required to be submitted by this permit in accordance with 6NYCRR 370.1(b). All documentation which the Permittee believes justifies its claim of confidentiality must be submitted in accordance with 6NYCRR 616 with any such claim of confidentiality.
- G. Documents to be Submitted Prior to Operation. Not applicable.
- H. Documents to be Maintained at the Facility. The Permittee shall maintain at the facility, until closure is completed and certified by an independent registered professional engineer, a copy of this permit and the following documents, amendments, revisions and modifications to these documents:
- (1) Waste Analysis Plan as required by 6NYCRR 373-2.2(e).
 - (2) Personnel training documents and records are required by 6NYCRR 373-2.2(h)(4).
 - (3) Contingency plan as required by 6NYCRR 373-2.4(d).
 - (4) Closure plan as required by 6NYCRR 373-2.7(c).
 - (5) Cost estimate for facility closure as required by 6NYCRR 373-2.8(c).
 - (6) Operating record as required by 6NYCRR 373-2.5(c).
 - (7) Inspection schedules as required by 6NYCRR 373-2.2(g)(8).

- I. Major/Minor Modifications. The permit may be modified for cause as allowed under 6NYCRR 373-1.7 and 621.13. Major modifications shall be requested in writing as required by 6NYCRR 621.12 and show cause as required by 6NYCRR 621.13. Minor modifications as listed in 6NYCRR 373-1.7(c) shall be submitted to the Regional Permit Administrator for approval and permit modification. The information to be submitted for minor modifications must be received by certified mail a minimum of 15 business days prior to the proposed day of modification.
- J. All Reports and Submittals. All reports and submittals required by this permit to be submitted to the Commissioner shall be sent to the following addressees:

New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-0001

Attention: Chief, Bureau of Hazardous Waste Technology
Division of Solid and Hazardous Waste

New York State Department of Environmental Conservation
Region 7
7481 Henry Clay Boulevard
Liverpool, NY 13088

Attention: Regional Hazardous Waste Engineer

K. Definitions.

Release - any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment.

Facility - all contiguous land, and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments or combination of them).

MODULE II - GENERAL FACILITY CONDITIONS

A. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water.

The Permittee is authorized to store only the hazardous wastes identified in Module IV Condition A. The Permittee is authorized to accept only the following hazardous wastes from off-site:

<u>USEPA No.</u>	<u>Hazardous Waste</u>
K069	Emission control dust/sludge from secondary lead smelting
F006	Wastewater treatment sludges from electroplating operations

B. Required Notice.

(1) The Permittee shall notify the Commissioner in writing at least four weeks in advance of the date the permittee expects to receive hazardous waste from a foreign source. Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required.

(2) When the Permittee is to receive hazardous waste from an off-site source he must inform the generator in writing that he has the appropriate permits for, and will accept, the waste the generator is shipping. The Permittee shall keep a copy of this written notice as part of the operating record.

C. General Waste Analysis. The Permittee shall follow the procedures described in the waste analysis plan, Attachment I, and conduct a quality assurance program as specified in Module I, Condition D.(16) (d).

The Permittee shall verify its waste analysis as part of the quality assurance program. The quality assurance program will be in accordance with current EPA practices (Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Second Edition, 1982, as amended by updates I (April 1984) and II (April 1985.) or equivalent methods approved by the Department, and at a minimum, ensure that the Permittee maintains proper functional instruments, uses approved sampling and analytical methods, as specified in 6NYCRR 371. Appendices 19, 20 and 21, assures the validity of sampling and analytical procedures and performs correct calculations.

D. Security. The Permittee shall comply with the security provisions of 6NYCRR 373-2.2(f)(2)(ii) and 6NYCRR 373-2.2(f)(3).

E. General Inspection Requirements. The Permittee shall follow the inspection schedule, Attachment II. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 6NYCRR 373-2.2(g)(3). Records of inspections shall be kept as required by 6NYCRR 373-2.2(g)(4).

F. Personnel Training. The Permittee shall conduct personnel training as required by 6NYCRR 373-2.2(h)(1), (2), and (3). This training program shall follow the attached outline, Attachment III. The Permittee shall maintain training documents and records as required by 6NYCRR 373-2.2(h)(4) and (5).

G. General Requirements for Ignitable, Reactive, or Incompatible Waste. Not applicable.

H. Location Standards. Not applicable.

I. Preparedness and Prevention

- (1) Required Equipment. At a minimum, the Permittee shall equip the facility with the equipment set forth in the contingency plan, Attachment IV as required by 6NYCRR 373-2.3(c).
- (2) Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment specified in the previous permit condition as necessary to assure its proper operation in time of emergency, as set forth in the Inspection Schedule (Attachment II).
- (3) Access to Communications or Alarm System. The Permittee shall maintain access to the communications or alarm system as required by 6NYCRR 373-2.3(e), in accordance with Attachment IV.
- (4) Required Aisle Space. At a minimum, the Permittee shall, in accordance with Attachment IV, maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility in an emergency as required by 6NYCRR 373-2.3(f) and to provide access for inspections as required by 6NYCRR 373-2.9(e). Aisle space in the container storage area shall be maintained in accordance with Attachment IV and VI.
- (5) Arrangements with Local Authorities. The Permittee shall attempt to make arrangements with State and local authorities as required by 6NYCRR 373-2.3(g). If State or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record, and a copy of all correspondence sent to State and local authorities while attempting to meet this requirement should be included in the operating record.

J. Contingency Plan.

- (1) Implementation of Plan. The Permittee shall immediately carry out the provisions of the contingency plan, Attachment IV, and follow the emergency procedures described by 6NYCRR 373-2.4(g) whenever there is a fire, explosion, or release of hazardous waste or constituents.
- (2) After any event requiring implementation of the contingency plan, the Permittee shall not resume hazardous waste management in the affected area until all equipment used during the contingency has been cleaned, recharged or replaced, as appropriate.
- (3) Copies of Plan. The Permittee shall comply with the requirements of 6NYCRR 373-2.4(d).

- (4) Amendments to Plan. The Permittee shall review and immediately amend, if necessary, the contingency plan as required by 6NYCRR 373-2.4(e).
 - (5) Emergency Coordinator. The Permittee shall comply with the requirements of 6NYCRR 373-2.4(f) concerning the emergency coordinator.
- K. Manifest System. The Permittee shall comply with the manifest requirements of 6NYCRR 372.
- L. Recordkeeping and Reporting.
- (1) Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with the applicable portions of 6NYCRR 373-2.5(c).
 - (2) Availability, Retention, and Disposition of Records. All records, including plans, must be made available to DEC in accordance with 6NYCRR 373-2.5(d)(1). Retention period for all records is extended automatically during any unresolved enforcement action regarding the facility or as requested by the Commissioner. A copy of records of waste disposal locations and quantities under 6NYCRR 373-2.5(c)(2) must be submitted to the Commissioner and local land authority upon closure of the facility as required by 6NYCRR 373-2.5(d)(3).
 - (3) Annual Report. The Permittee shall comply with the annual report requirements of 6NYCRR 373-2.5(e).
- M. Closure.
- (1) Performance Standard. The Permittee shall close the facility as required by 6NYCRR 373-2.7(b) and in accordance with the closure plan, Attachment V.
 - (2) Amendment to Closure Plan. The Permittee shall amend the closure plan whenever necessary in accordance with 6NYCRR 373-2.7(c)(2).
 - (3) Notification of Closure. The Permittee shall notify the Department at least 180 days prior to the date he expects to begin closure.
 - (4) Time Allowed For Closure. After receiving the final volume of hazardous waste, the Permittee shall treat or remove from the site all hazardous waste and shall complete closure activities in accordance with the schedule specified in the closure plan, Attachment V.
 - (5) Disposal or Decontamination of Equipment. The Permittee shall decontaminate or dispose of all facility equipment as required by 6NYCRR 373-2.7(e) and as outlined in the closure plan, Attachment V.
 - (6) Certification of Closure. When closure is completed, the Permittee shall submit to the Commissioner certifications by the Permittee and by an independent NYS registered professional engineer that the facility has been closed in accordance with the specifications in the closure plan as required by 6NYCRR 373-2.7(f).

- N. Cost Estimate for Facility Closure. The Permittee's original closure cost estimate, prepared in accordance with 6NYCRR 373-2.8(c)(1), is specified in Attachment V.
- (1) The Permittee must adjust the closure cost estimate for inflation within 30 days after each anniversary of the date on which the first closure cost estimate was prepared, as required by 6NYCRR 373-2.8(c)(2).
 - (2) The Permittee must revise the closure cost estimate whenever there is a change in the facility's closure plan as required by 6NYCRR 373-2.8(c)(3).
 - (3) The Permittee must keep at the facility the latest closure cost estimate as required by 6NYCRR 373-2.8(c)(4).
- O. Financial Assurance for Facility Closure. The Permittee shall demonstrate continuous compliance with 6NYCRR 373-2.8(d) or, when applicable, with 6NYCRR 373-2.8(f),(g) and (h) by providing documentation of financial assurance, as required by 6NYCRR 373-2.8(j), in at least the amount of the cost estimates required by Module II, Condition N. Changes in financial assurance mechanisms must be approved by the Commissioner pursuant to 6NYCRR 373-2.8(d).
- P. Liability Requirements. The Permittee shall demonstrate continuous compliance with the requirements of 6NYCRR 373-2.8(h) and the documentation requirements of 6NYCRR 373-2.8(j), including requirements to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs.
- Q. Incapacity of Owners or Operators, Guarantors, or Financial Institutions. The Permittee shall comply with 6NYCRR 373-2.8(i) whenever necessary.

MODULE III - SPECIFIC CONDITIONS

- A. NYSDEC has reviewed the information submitted with Roth Brothers' letter dated May 2, 1985 to assess the need to require corrective action at the facility. In addition, DEC reviewed State and EPA permitting and enforcement files, and other data. Based upon this review of all available information, DEC has determined that it is probable that no release of hazardous waste or hazardous waste constituents has occurred and no corrective action is required. A Facility Assessment report is attached which summarizes the review and determination.
- B. Permit Modification - The Commissioner will modify the permit in accordance with 6NYCRR 621.13, in the event any other information available to the Commissioner identifies solid waste management units that require corrective action. Financial Assurance by the applicant is required if corrective action is necessary.
- C. Waste Minimization Program
 1. Effective September 1, 1985, per 6NYCRR 373-2.5(c)(2)(ix), the permittee must certify the following:
 - a. The volume or quantity and toxicity of the waste treated, stored or disposed on-site shall be reduced to the maximum degree economically practicable.
 - b. The method used to treat, store or dispose of hazardous waste shall minimize the present and future threat to human health and the environment to the extent practicable.
 2. The Permittee must submit to the Commissioner, at least annually, a waste minimization certification signed by both the owner or operator and by an independent registered professional engineer. This certification and all accompanying documentation will be submitted on each anniversary date of the effective date of this permit.

FACILITY ASSESSMENT

Roth Brothers Smelting Corporation
6223 Thompson Road
East Syracuse, NY

Onondaga County

EPA I.D. No. NYDU06977986

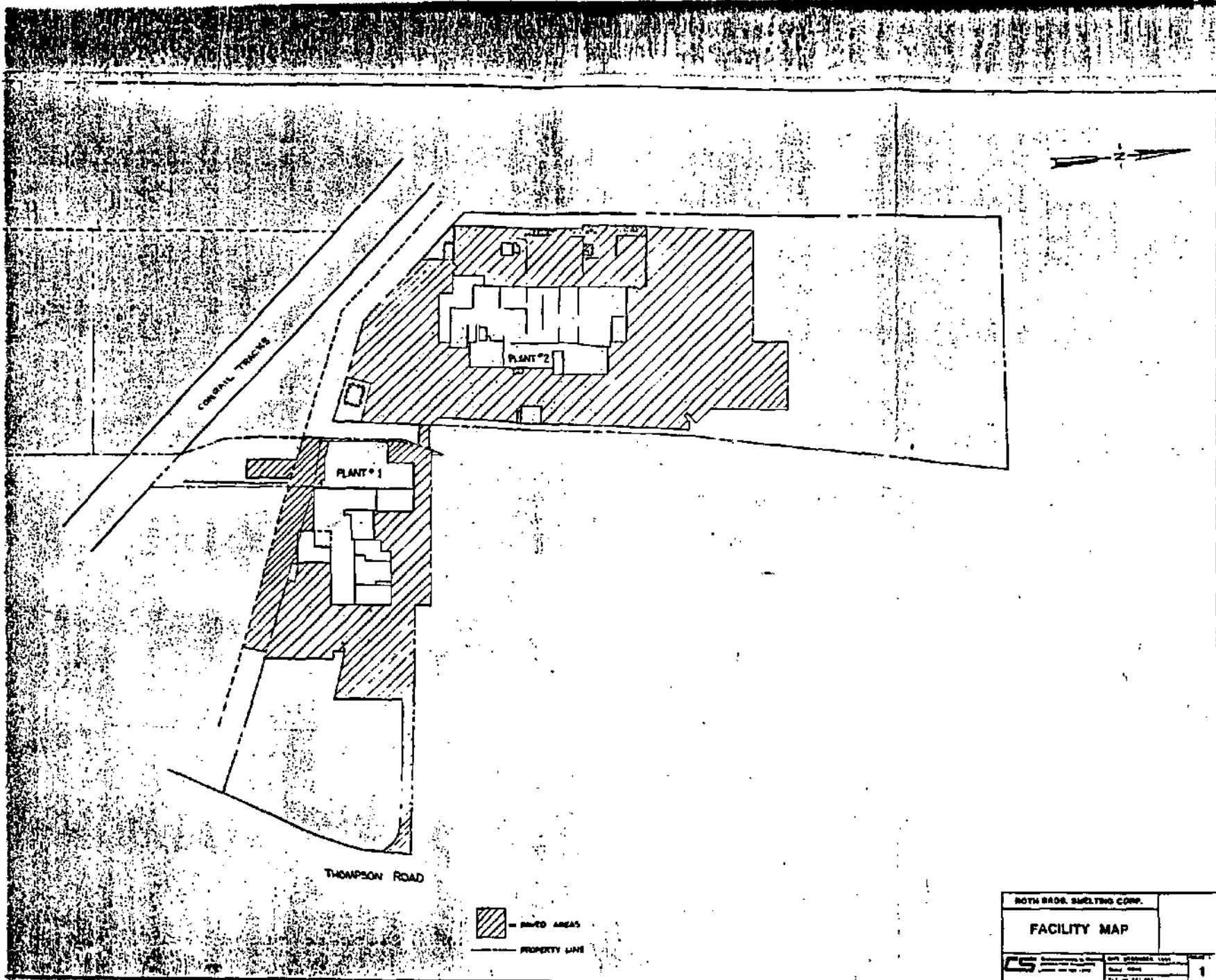
Facility Assessment Summary

Roth Brothers Smelting Corporation
EPA I.D. No. NYD006977986

<u>Solid Waste Management Unit</u>	<u>Location*</u>	<u>Closed</u>	<u>Part 373 Regulated</u>	<u>Releases</u>	<u>SI</u>	<u>Recommendations</u>		
						<u>RI</u>	<u>CA</u>	<u>No Action</u>
Aluminum Dust Storage Area	Plant #1		X					X
Copper Dust Storage Area	Behind Plant #2		X					X
Lead Dust Storage Area	Behind Plant #2		X					X

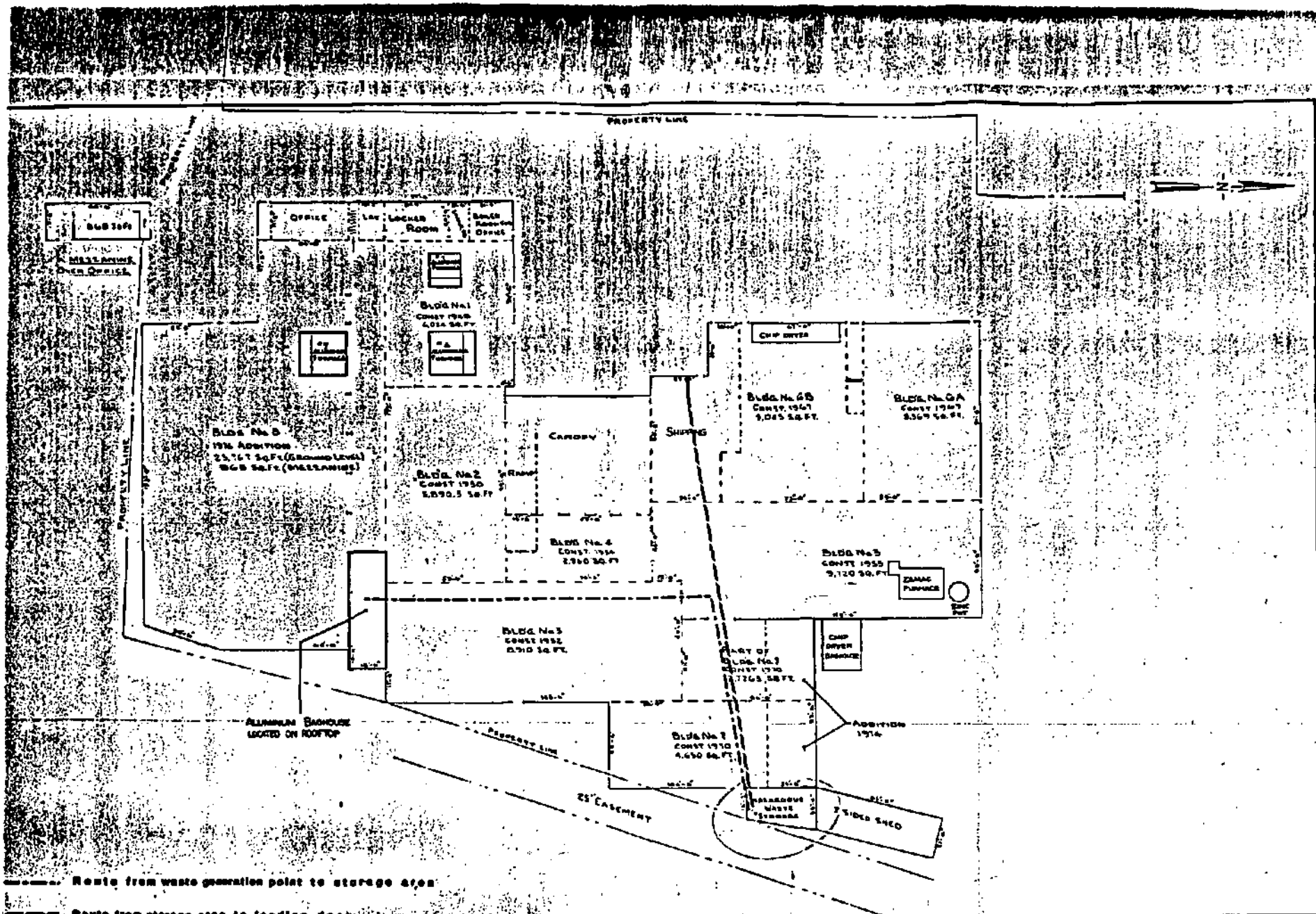
SI = Site Investigation
RI = Remedial Investigation
CA = Corrective Action

*See attached maps.



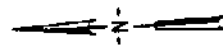
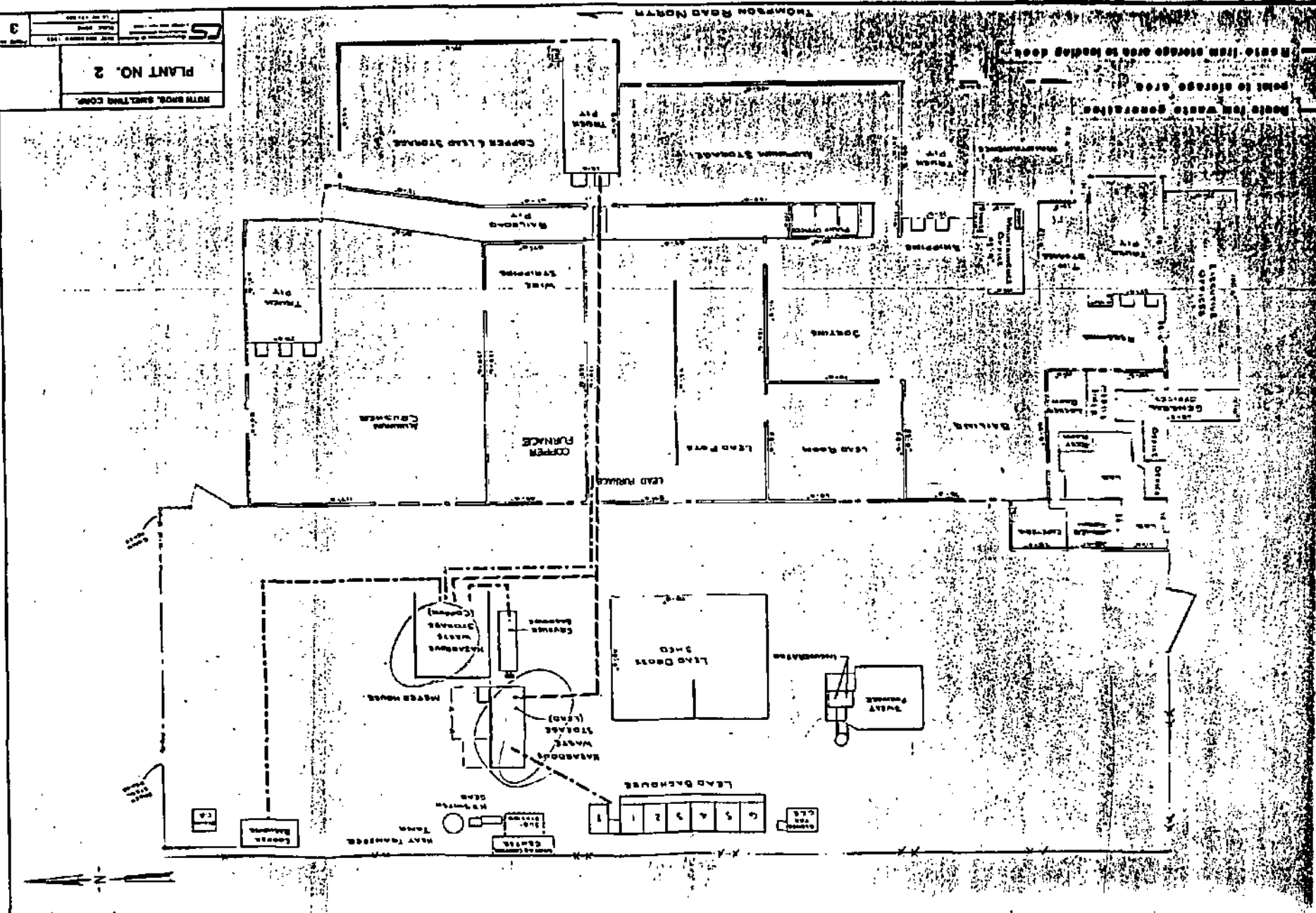
NORTH BROS. SMELTING CORP.	
FACILITY MAP	
	<small>DATE: 10/20/68</small> <small>BY: [illegible]</small> <small>SCALE: 1" = 100'</small>

15A



BOTH BROS. SMELTING CORP.	
PLANT NO. 1	
CS	2

3		PLANT NO. 2
		NORTH STAR SMELTING CORP.



PRELIMINARY REVIEW
Roth Brothers Smelting Corporation
Thompson Road
E. Syracuse, NY 13057

I. Site Conditions

Roth Brothers Smelting Corporation is engaged in the business of reclaiming non-ferrous metals and alloys through secondary smelting and refining of purchased scrap, drosses, and by-products. Their primary materials and products are lead-tin solder, copper, zinc, aluminum, and zamac (zinc aluminum alloy). Sometimes the materials alloyed include small amounts of antimony or silver. Roth Brothers also processes small quantities of brass, bronze, stainless steel, and copper-bearing materials; however, these items are not refined. They are simply sorted, graded, and repackaged for sale. These reclamation processes result in the management of hazardous wastes by Roth Brothers.

Roth Brothers purchases the following hazardous wastes for these reclamation processes: emission control dust/sludge from secondary lead smelting and wastewater treatment sludges from electroplating operations. In addition, Roth Brothers generates certain hazardous wastes. The reclamation furnaces and kilns generate the following flue dusts which are hazardous wastes: aluminum dust, copper dusts and aluminum crusher dusts. Roth Brothers also generates lead slag which is a hazardous waste.

There are three designated storage areas for these hazardous wastes at Roth Brothers. The "aluminum dust" storage area is located inside Plant #1 and is used to store aluminum dusts. The "copper dust" storage area is located behind Plant #2. It is used to store copper dust, aluminum crusher dust, and lead slag. The "lead dust" storage area is used for the lead dust and electroplating sludge. The dusts are stored in lined double walled corrugated cardboard boxes measuring 3.5 feet by 3.5 feet by 3.5 feet or in 55 gallon drums.

II. Solid Waste Management Units (SWMU's):

The following solid waste management units have been identified at the facility:

A. Aluminum Dust Storage Area - This area is included in the Part 373 Permit.

1. Description - This storage area is located inside Plant #1. The area is approximately 19 feet by 35 feet and is used to store aluminum dusts from Baghouse #1. The floor is concrete. This area is used to store 56 containers of aluminum dust from the aluminum furnaces.
2. Waste Description - The aluminum dust is a dry, solid material which is collected in the baghouse from the aluminum furnace. It is designated with the hazardous waste codes D006 (EP Toxicity - Cadmium) and D008 (EP Toxicity - Lead).
3. Releases - There have been no uncorrected releases from this solid

waste management unit.

B. Copper Dust Storage Area - This area is included in the Part 373 Permit.

1. Description - This storage area is located behind Plant #2. The copper dust area is a three sided structure with a roof and an asphalt floor. It measures approximately 34 feet by 50 feet and is used to store copper dust, aluminum crusher dust and lead slag. This storage area can store 144 containers.
2. Waste Description - The copper dust is a dry, solid material which is collected in baghouse #3 when the insulation (paper wrapping) is burned off copper wire as it is heated in either the plants' rotary furnace or incinerator. The associated hazardous waste codes are D006 (EP Toxicity - Cadmium) and D008 (EP Toxicity-Lead).

The aluminum crusher dust is a dry, solid material which is collected in baghouse #5 when an aluminum crusher breaks the aluminum into small chips. The associated hazardous waste codes are D006 (EP Toxicity - Cadmium) and D008 (EP Toxicity - Lead).

The lead slag is a dry, solid material which is produced when electroplating sludge is processed in the furnace. The associated hazardous waste code is F006 and the associated hazardous constituents are cadmium, hexavalent chromium, nickel and cyanide (complexed).

3. Releases - There have been no uncorrected releases from this solid waste management unit.

C. Lead Dust Storage Area - This area is included in the Part 373 Permit.

1. Description - This storage area is located behind Plant #2. It is used for the lead dust generated from baghouse #4 and the electroplating sludge purchased for reclamation. It is enclosed on three sides, measures approximately 22 feet by 57 feet and has a roof. It has asphalt floors and can store 90 containers.
2. Waste Description - The lead dust is a dry, solid material which is collected in baghouse #4 when lead solder, lead drosses and flux materials are melted in a rotary furnace. The associated hazardous waste code is K069 and the associated hazardous constituents are hexavalent chromium, lead and cadmium.

The electroplating sludge is a dry, solid material which is a wastewater treatment sludge from electroplating operations. The associated hazardous waste code is F006 and the associated hazardous constituents are cadmium, hexavalent chromium, nickel and cyanide (complexed).

3. Releases - There have been no uncorrected releases from this solid waste management unit.

III. References

Based upon the following information, it is concluded that there have been no uncorrected releases at the facility:

A. RCRA Compliance Inspection Reports

5/19/86 - No uncorrected releases
6/2/85 - No uncorrected releases
7/12/84 - No uncorrected releases
4/5/83 - No uncorrected releases

B. 6NYCRR Part 373 Permit Application - The solid waste management units described above are included in the 6NYCRR Part 373 Permit Application. No uncorrected releases were reported in the permit application.

C. Reauthorization Statutory Interpretation (RSI#3) - The RSI#3 questionnaire submitted by Roth Brothers Inc. on May 2, 1985 and the subsequent review by Mr. Andrew Huray of the Region 7 office indicate there have been no uncorrected releases at the facility.

D. Registry of Inactive Hazardous Waste Disposal Sites - This facility is not included in the Registry of Inactive Hazardous Waste Disposal Sites.

E. CERCLA Action - This facility is not a CERCLA Site.

F. Onondaga County Health Department Actions - Communication with the Onondaga County Health Department has indicated they have been no uncorrected releases at the facility.

G. Region 7 Air Actions - No uncorrected releases reported.

H. Region 7 Water Actions - No uncorrected releases reported.

IV. Conclusions

No corrective action is required at this time.

VISUAL SITE INSPECTION REPORT

On November 20, 1985, a visual site inspection was conducted at Roth Brothers Smelting Corporation by NYSDEC representatives. During the inspection the following solid waste units were examined:

Aluminum Dust Storage Area
Copper Dust Storage Area
Lead Dust Storage Area

These units were assessed as follows:

Aluminum Dust Storage Area

- .general unit condition - good
- .appearance of waste in unit - good
- .operating practices - good
- .visual evidence of failure - none
- .visual evidence of releases - none

Copper Dust Storage Area

- .general unit condition - good
- .appearance of waste in unit - good
- .operating practices - good
- .visual evidence of failure - none
- .visual evidence of releases - none

Lead Dust Storage Area

- .general unit condition - good
- .appearance of waste in unit - good
- .operating practices - good
- .visual evidence of failure - none
- .visual evidence of releases - none

MODULE IV - STORAGE IN CONTAINERS

A. Authorized Storage Area, Waste Types and Storage Volume.

The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit:

<u>Area</u>	<u>Waste Type</u>	<u>Container Volume</u>	<u>Number of Containers</u>
Aluminum Dust Storage Area	Aluminum Dust (D006, D008)	3.5 ft. x 3.5 ft. x 3.5 ft.	56 (Total)
Copper Dust Storage Area	Copper Dust (D006, D008)	3.5 ft. x 3.5 ft. x 3.5 ft.	144 (Total)
	Aluminum Crusher Dust (D006, D008)	3.5 ft. x 3.5 ft. x 3.5 ft.	
	Lead Slag (F006)	3.5 ft. x 3.5 ft. x 3.5 ft.	
Lead Dust Storage Area	Lead Dust (K069)	3.5 ft. x 3.5 ft. x 3.5 ft.	90 (This number must be reduced by 2 for every 4-55 gallon drums stored)
	Electroplating Sludge (F006)	3.5 ft. x 3.5 ft. x 3.5 ft.	
	Electroplating Sludge (F006)	55 gallon drum	

B. Containment. Not applicable. The Permittee shall only store the solid materials specified above.

C. Condition of Containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects, deterioration of liner) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit. Each such occurrence shall be recorded in the inspection log and maintained as part of the operating record as described in Module I, Condition H.(6). If any leaking container threatens human health or the environment, it must be reported as specified in Module I, Condition D.(8), (i.e., 24-hour reporting).

D. Compatibility of Waste with Containers. The Permittee shall assure that the

ability of the container to contain or store the waste is not impaired as required by 6NYCRR 373-2.9(c) and in accordance with Attachment VI.

- E. Management of Container. The Permittee shall manage containers as required by 6NYCRR 373-2.9(d).
- F. Special Requirements for Ignitable or Reactive Waste. The Permittee shall not store containers holding ignitable or reactive waste.
- G. Special Requirements for Incompatible Waste.
 - (1) The Permittee shall not store incompatible hazardous wastes.

Roth Brothers Smelting Corporation
6223 Thompson Road
East Syracuse, NY

EPA I.D. No. NYD006977986

6NYCRR PART 373 PERMIT
ATTACHMENT I
WASTE ANALYSIS PLAN

2.03 Description of Roth Bros. Wastes

A. Incoming Materials Purchased for Reclamation

During the preparation of this Application, a complete list of materials purchased for reclamation by Roth Bros. was reviewed to determine which materials were hazardous wastes. The majority of these materials were determined not to be hazardous wastes by the new definition, and therefore are not subject to NYSDEC Regulations. However, it should be noted that due to the economic value of these materials and other relevant environmental regulations (such as NPDES/SPDES), these materials are handled in a way consistent with NYSDEC's goal of protecting human health and the environment.

The only hazardous waste currently being purchased by Roth Bros. is a sludge, in the form of a dried filter cake, which is generated from the treatment of electroplating wastewater. Although this waste is identified as listed waste "F006", its characteristics are not similar to F006. According to Appendix 22 of 6 NYCRR Part 371, F006 is hazardous because of cadmium, hexavalent chromium, nickel and cyanide. The process generating the sludge which Roth Bros. receives is tin coating of copper wire. The main components of the sludge are hydroxides of calcium, lead, copper and tin. Results of the EP Toxicity test performed on this sludge are included in Appendix B. The sludge did not exceed any of the EP Toxicity limits.

Since Roth Bros.' business, as a recycler, depends on the market in terms of available scrap, as well as a marketable product; they may purchase hazardous wastes in the future which they aren't purchasing now, or vice versa. Of the hazardous wastes listed in 6 NYCRR 371.4, the only waste which they might purchase in the foreseeable future is lead dust such as that which they generate on-site (K069). Hazardous wastes currently purchased or which may be purchased in the future by Roth Bros. for reclamation are summarized in Table 3 below:

TABLE 3
HAZARDOUS WASTE PURCHASED FOR RECLAMATION

<u>USEPA No.</u>	<u>Hazardous Waste</u>
K069	Emission control dust/sludge from secondary lead smelting
F006	Wastewater treatment sludges from electroplating operations

B. Hazardous Materials Generated On-Site

Some of Roth Bros. reclamation operations generate flue dusts which are hazardous wastes. Roth Bros. also generates some lead slag which is hazardous because it is derived from a listed (F006) waste. Analytical reports for all Roth Bros.' hazardous (and some non-hazardous) wastes are included in Appendix B. Table 4, below, summarizes the hazardous wastes generated on-site at Roth Bros.

TABLE 4
HAZARDOUS WASTE GENERATED ON-SITE

<u>Hazardous Waste</u>	<u>USEPA No(s).</u>	<u>Source of Waste</u>
Aluminum Dust	D006, D008	Baghouse #1 - Aluminum Furnaces
Copper Dust	D006, D008	Baghouse #3 - Copper Furnace, Incinerator, and Sweat Furnace
Lead Dust	K069	Baghouse #4 - Lead Furnace and Pots
Crusher Dust	D006, D008	Baghouse #5 - Aluminum Crusher
Lead Slag	F006	Lead Furnace

1. Aluminum and Zinc/Zamac Production

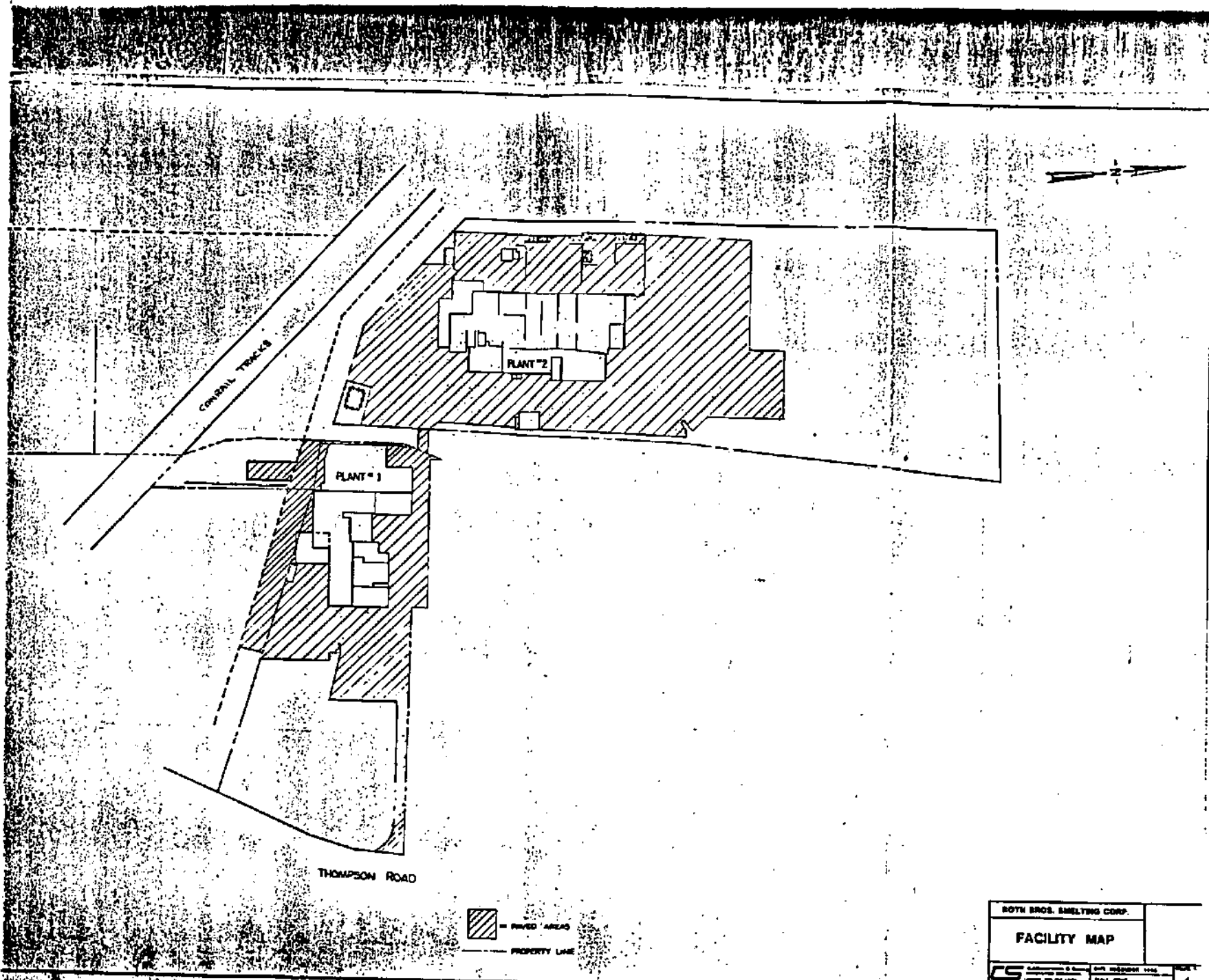
Baghouse #1 and #2 (Figure 2) are associated with the production of aluminum (Figure 4) and zinc/Zamac (Figure 5). Aluminum turnings, when received, are unloaded directly into the chip dryer or are temporarily stored outside of Plant #1. In the first step of the recovery process, they are moved by conveyer to a crusher which breaks the aluminum into small chips. These are moved by conveyer to a chip dryer where oil and grease are burned off and a magnet is used to separate any iron from the aluminum. These steps produce clean, dry aluminum chips which are then melted with other direct charge aluminum in furnaces. Baghouse #1, which has 5 compartments, collects flue dust from the aluminum furnaces. This dust is hazardous due to cadmium (D006) and lead (D008). Dust from the aluminum chip dryer is collected in 6 compartments in Baghouse #2 along with dust from the zinc furnace. This dust is not hazardous (see analytical reports in Appendix B). Aluminum dross, a by-product of the process, is collected and sold to a reclaimer. As such, it is not defined as a hazardous waste (see Table 1 of NYCRR Part 371.1 in Appendix A). Additionally, this dross was tested for EP Toxicity and was found to be non-hazardous (see analytical report in Appendix B). Baghouse #5 (Figure 3), which has one compartment, collects dust from an aluminum crushing operation at Plant #2, similar to the one previously described for Plant #1. The zinc furnace is used to melt zinc slab ingots with aluminum bricks to produce a product called Zamac.

2. Copper Production

The recovery of copper (Figure 6) produces a flue dust when the insulation (paper wrapping) is burned off copper wire as it is heated in either the plants' rotary furnace or incinerator. This flue dust is collected in Baghouse #3 (Figure 3), which has 3 compartments. This dust is hazardous due to cadmium (D006) and lead (D008).

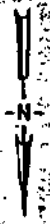
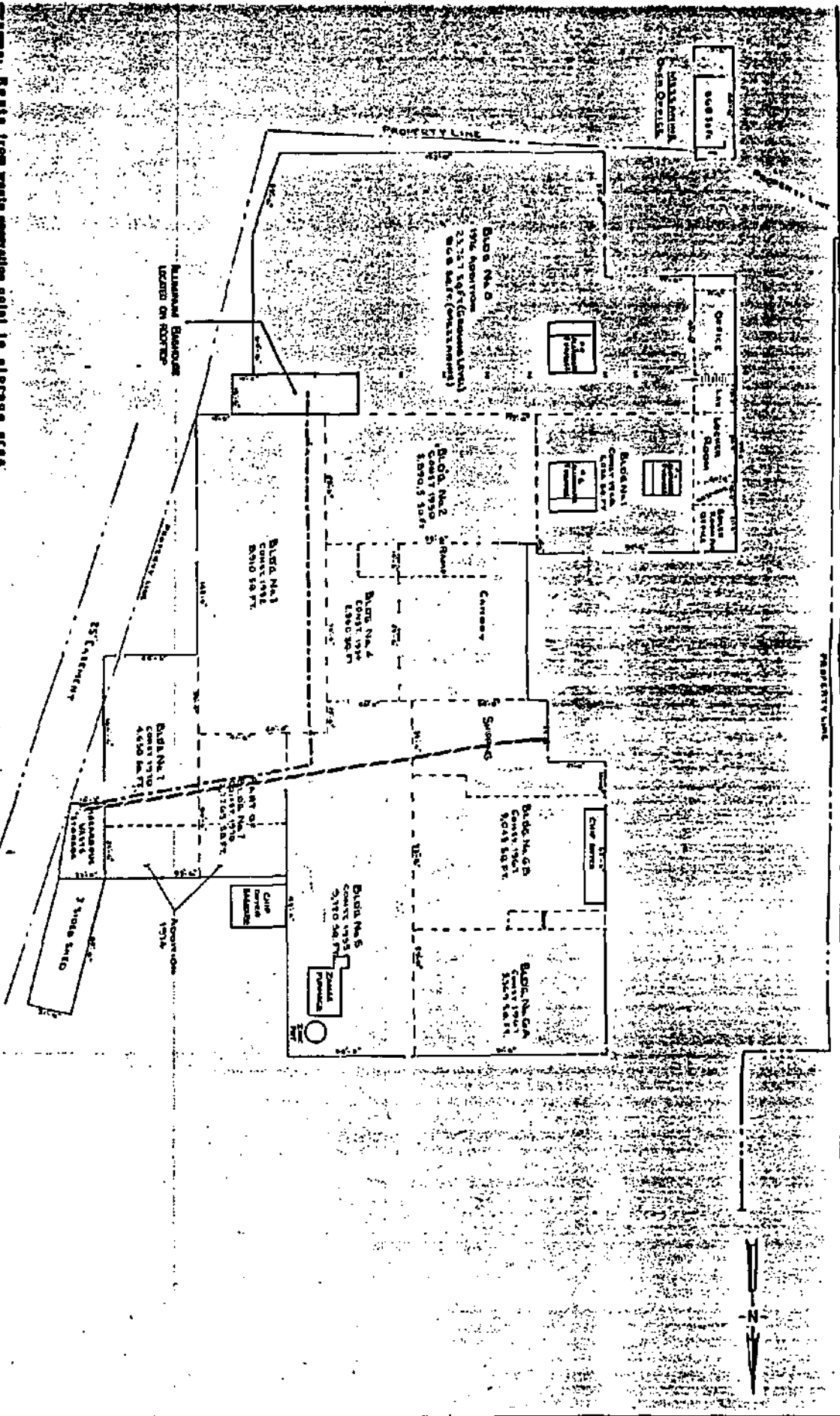
3. Lead Solder Production

In the production of lead solder (Figure 7), lead drosses are melted with flux materials and coal in a rotary furnace. The electroplating sludge (F006) is also processed in the furnace, when it is available. The unrefined solder is drawn off and remelted in large pots. Other lead and alloying materials are also added to the refining pots. These include lead-tin scrap, lead cable, and lead separated from copper by sweating and stripping. Flue dust from the furnace and pots is collected in 7 compartments in Baghouse #4 (Figure 3). This dust is a listed waste (K069). The lead slag generated in the process is recycled to the furnace until there is insufficient lead value left to make it cost-effective. Lead slag which can no longer be recycled is disposed of. The lead slag which is recycled is not a hazardous waste according to 6 NYCRR Part 371.1 (d)(3)(ii). Of the lead slag which is disposed of, only the portion which is derived from the electroplating sludge is hazardous. The proportion of slag which is hazardous is relatively small. This slag is designated F006. The EP Toxicity test performed on Roth Bros.' slag shows it to be non-hazardous (see Appendix B).



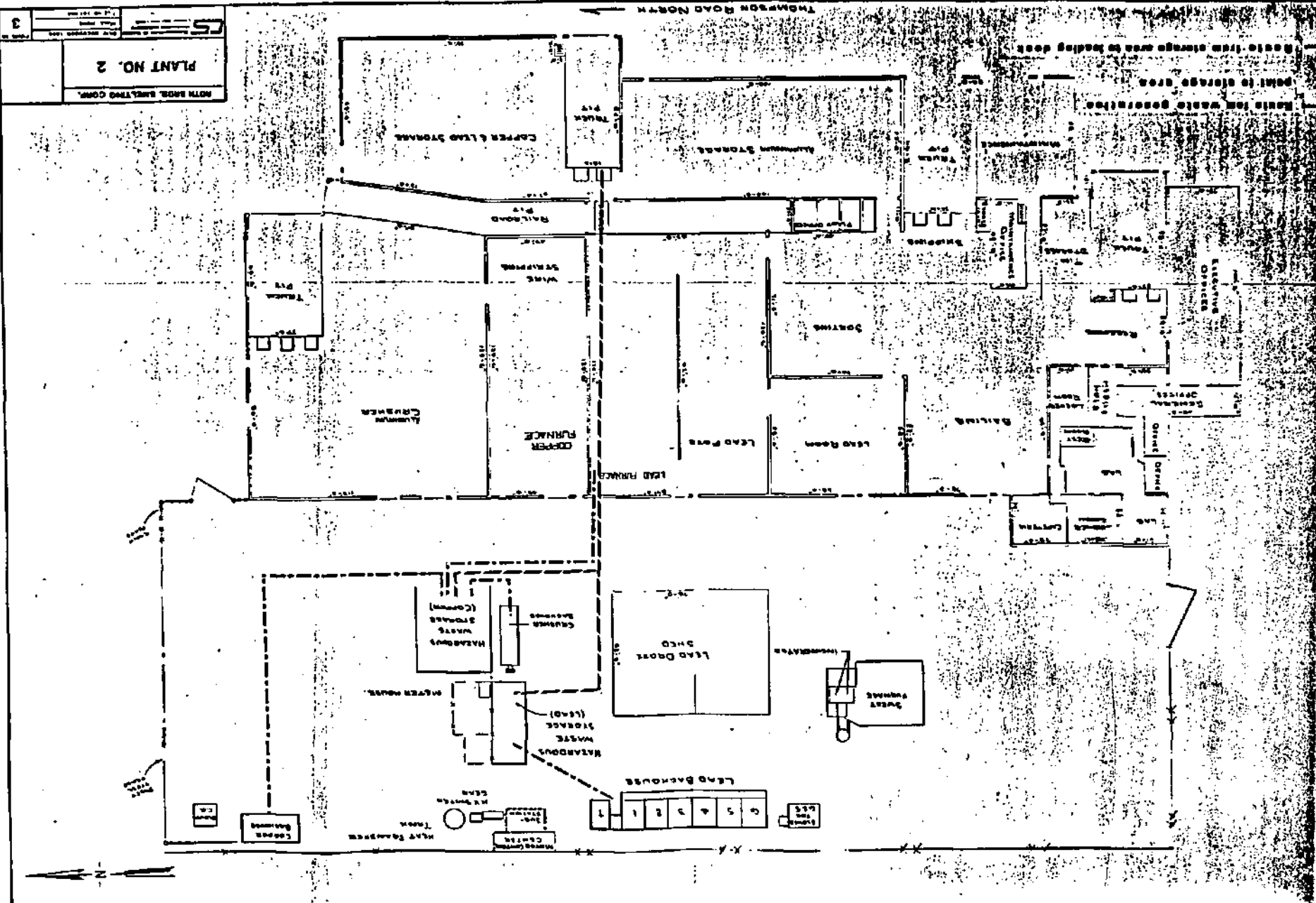
ROTH BROS. SMELTING CORP.	
FACILITY MAP	
	DATE: 10/15/50
SCALE: 1" = 100'	1

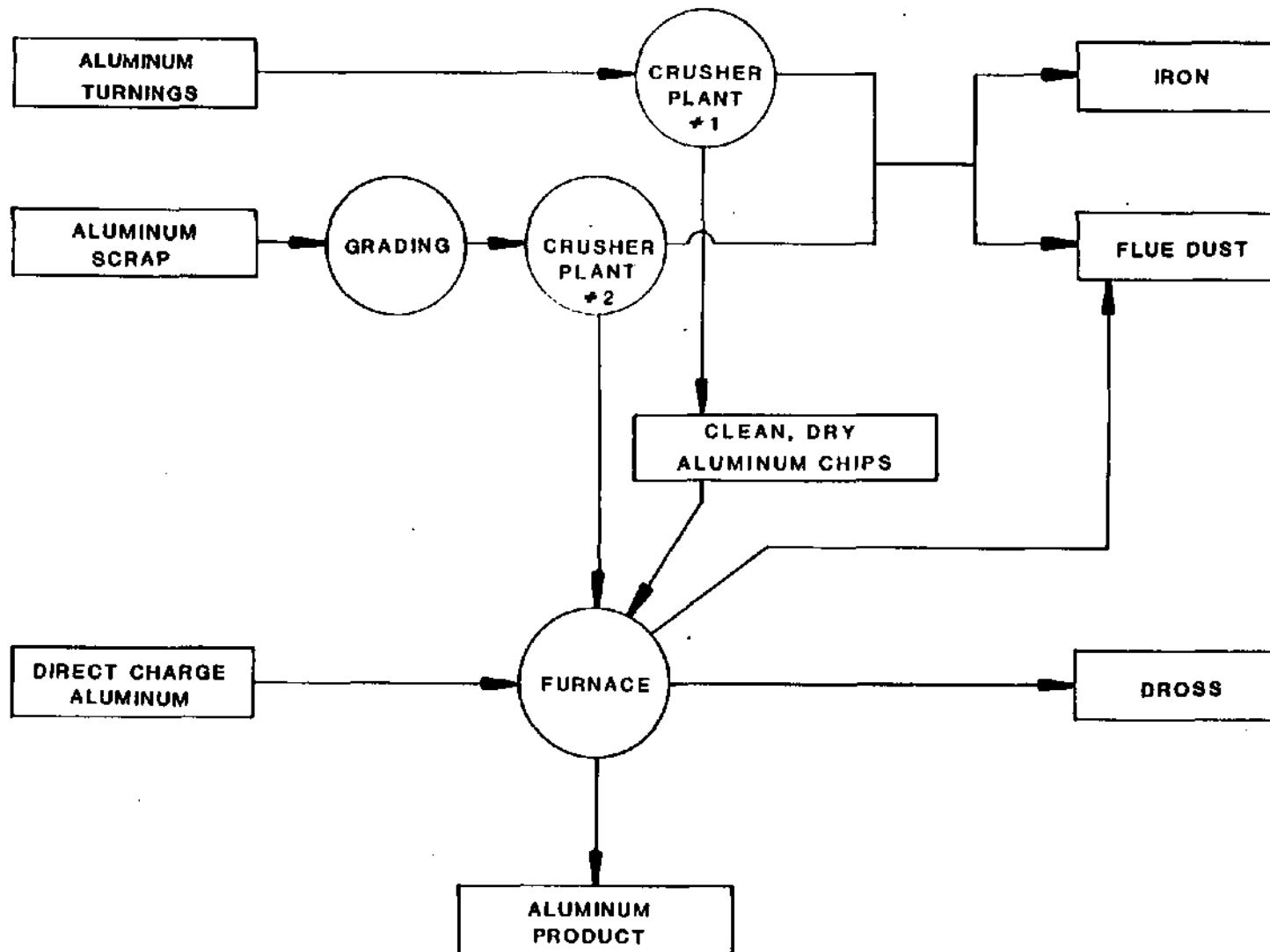
Route from waste generation point to storage area

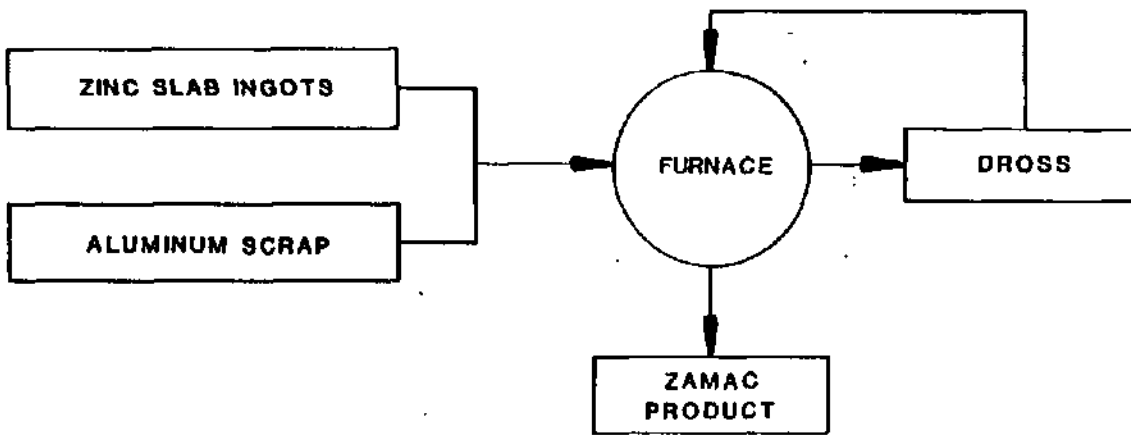
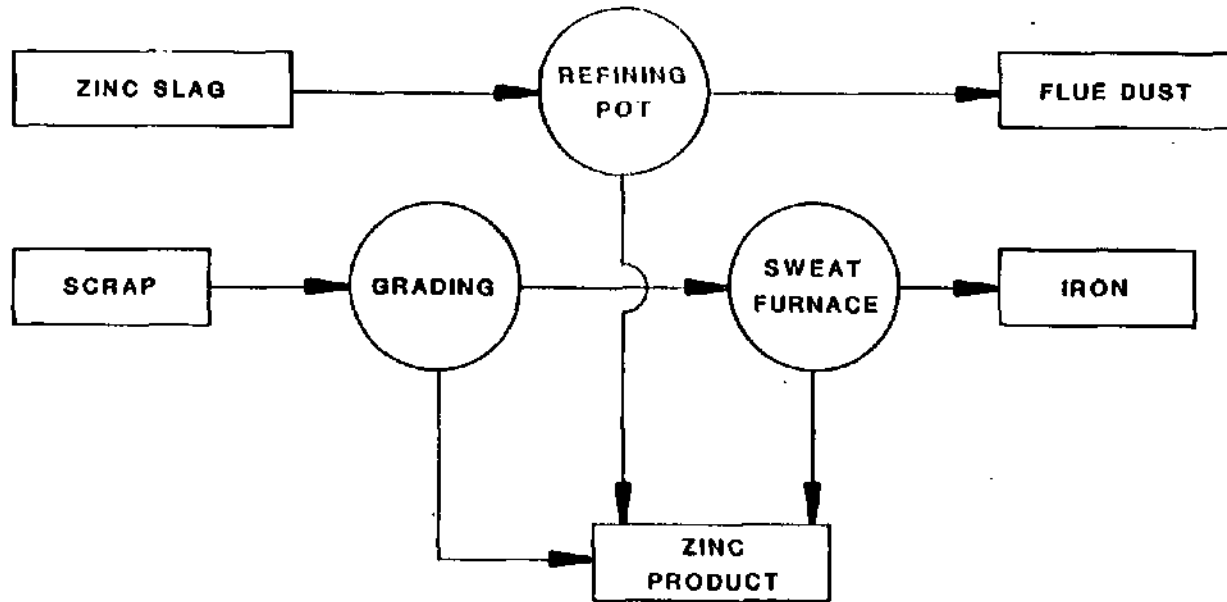


PLANT NO. 1

PLANT NO. 2
 NORTH BAY, SMELTING CO.







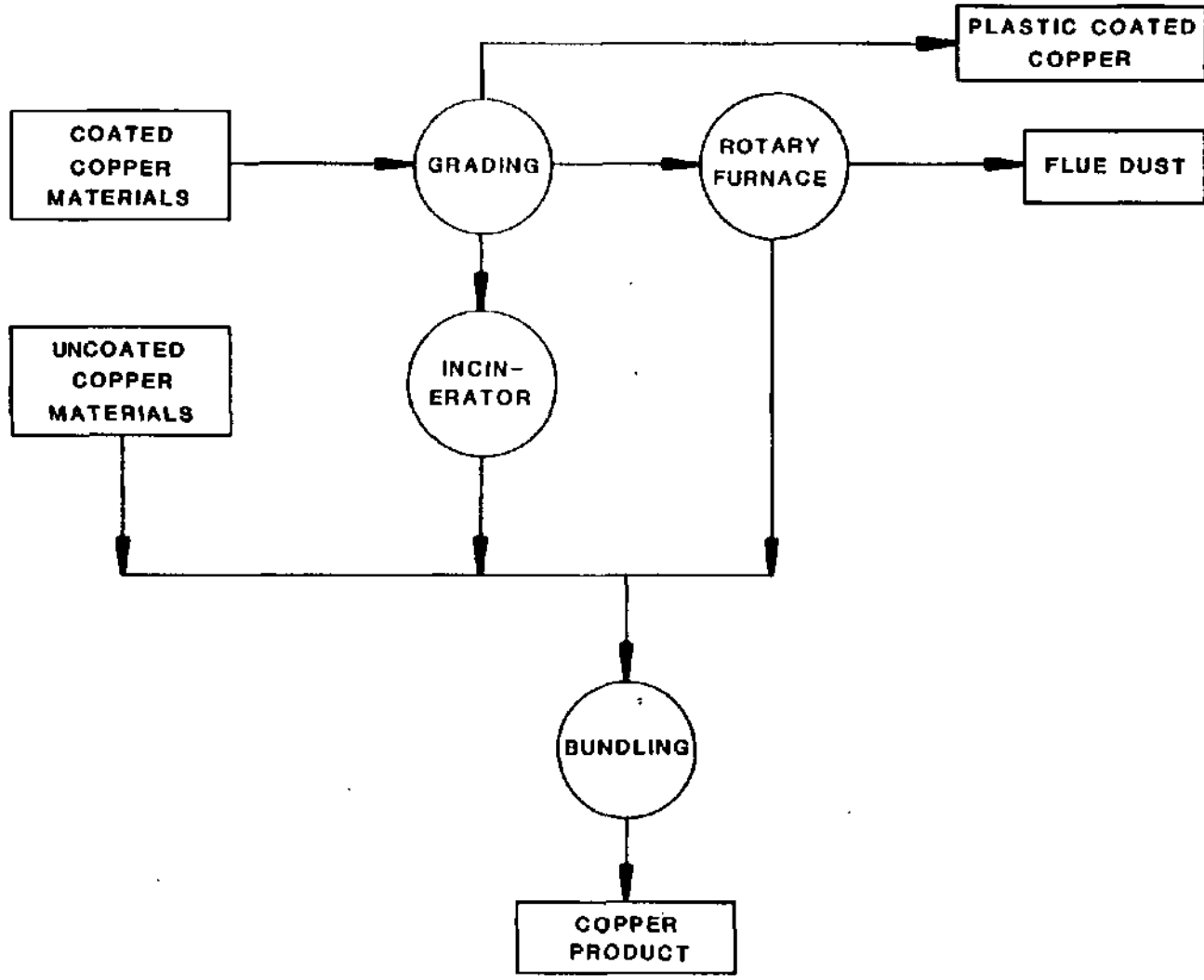


FIGURE 6
ROTH BROS. SMELTING CORP.
COPPER PRODUCTION

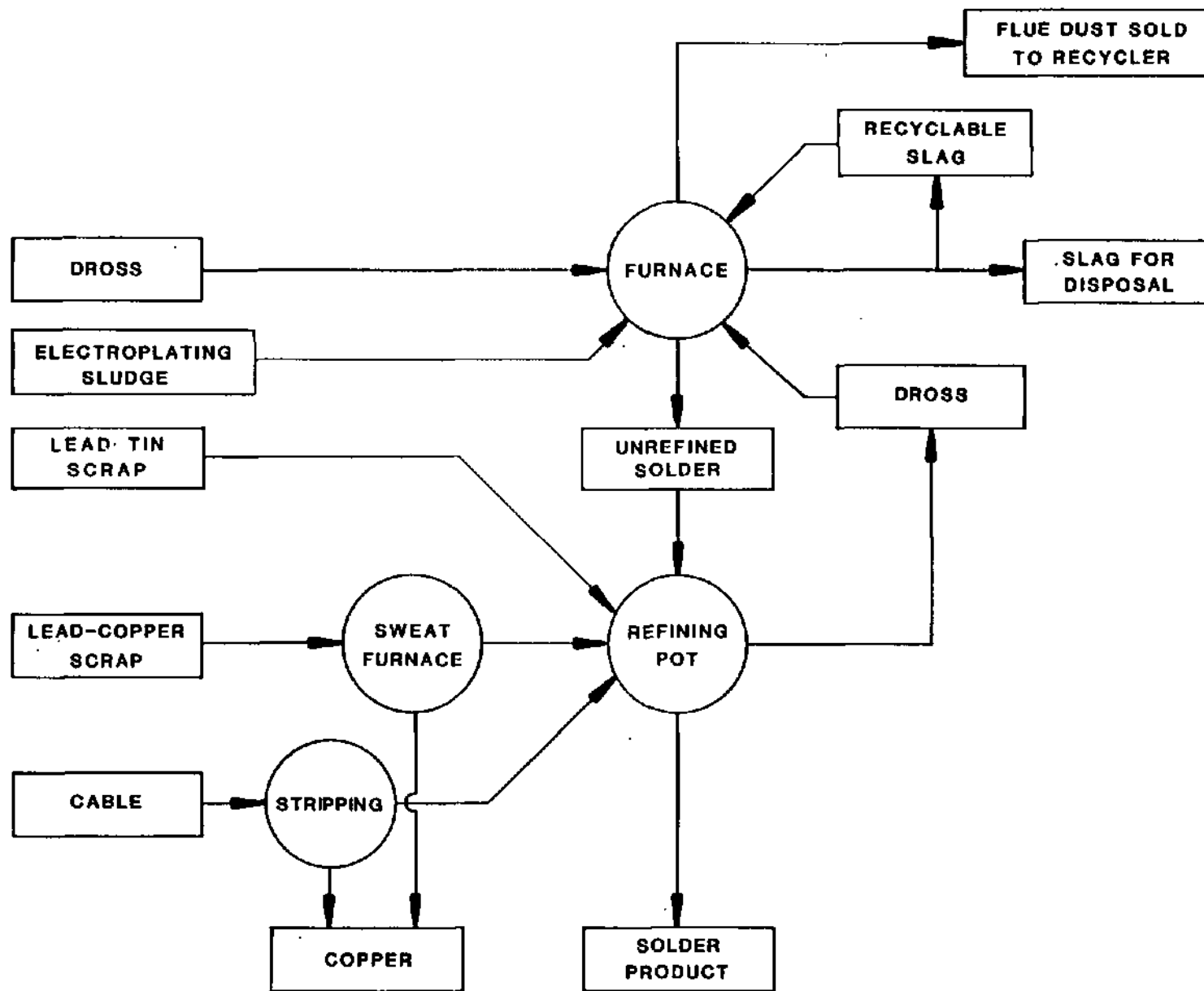


FIGURE 7
ROTH BROS. SMELTING CORP.
LEAD SOLDER PRODUCTION

WASTE ANALYSIS PLAN

FOR

ROTH BROS. SMELTING CORP.

Thompson Road

East Syracuse, New York 13057

USEPA ID NO. NYD006977086

(Revised as of September, 1986)

ROTH BROS. SMELTING CORPORATIONWASTE ANALYSIS PLANIntroduction

This Waste Analysis Plan has been developed and implemented at Roth Bros. Smelting Corporation, 6223 Thompson Road, East Syracuse, New York, in fulfillment of 6 NYCRR 373-2.2(e)(2). This Plan is kept on-site in order to comply with the NYSDEC Standards.

Facility Description

Roth Bros. is engaged in the business of recovering nonferrous metals and alloys through secondary smelting and refining of purchased scrap and drosses. Their primary materials and products are lead-tin solder, copper, zinc, and aluminum. Some of the alloys produced include small amounts of tin, antimony, or silver. Roth Bros. also processes small quantities of brass, bronze, stainless steel, and copper-bearing materials; however, these items are only sorted, graded, and repackaged; not refined. Since Roth Bros.' business depends on the market in terms of available scrap, as well as product needed, the nature of their operations may shift from time to time. Not all process lines are necessarily operating every day.

Roth Bros.' operations are housed in two separate buildings known as "Plant #1" and "Plant #2" (Figure 1). The majority of aluminum and zinc operations are centered in Plant #1, while lead and copper are mainly processed in Plant #2. However, some overlap occurs. Figures 2 through 5 show process schematics for production of lead, copper, aluminum, and zinc, respectively.

Hazardous Wastes

Hazardous wastes generated on-site are listed below:

HAZARDOUS WASTE GENERATED ON-SITE

<u>Hazardous Waste</u>	<u>USEPA No(s).</u>	<u>Source of Waste</u>
Aluminum Dust	D006, D008	Baghouse #1 - Aluminum Furnaces
Copper Dust	D006, D008	Baghouse #3 - Copper Furnace, Incinerator and Sweat Furnace
Lead Dust	K069, D008 D006	Baghouse #4 - Lead Furnace and Pots
Crusher Dust	D008, D006	Baghouse #5 - Aluminum Crusher
Lead Slag	F006	Lead Furnace

Additionally, Roth Bros. may purchase hazardous wastes for reclamation.

These wastes are listed below:

OFF-SITE HAZARDOUS WASTE

<u>Hazardous Waste</u>	<u>USEPA No(s).</u>	<u>Source of Waste</u>
Lead Dust	K069	Lead Industries
Electroplating Sludge	F006	Electroplaters

Sampling Plan

The sampling strategy for the above-described hazardous wastes will be simple random sampling as specified in Section 1 of the USEPA manual "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods" (SW-846). This method is appropriate because each of the wastes is randomly heterogeneous with regard to chemical characteristics and that random heterogeneity remains constant from batch to batch. The appropriate number of samples to be analyzed will be determined using the USEPA procedure shown in Appendix I and historical data on each waste. The sampling methodology, as specified by Appendix 19 of 6 NYCRR Part 371, will be in accordance with ASTM D346-75 for the flue dusts. This method (Appendix II) calls for the regular, systematic

collection of sample increments. A minimum of nine (9) increments of equal size (100 mls) should be collected using a hand shovel or specially designed tool. For each type of waste dust at Roth Bros., each of the nine increments will be taken from a different box. The samples will be placed in plastic or glass containers for shipment to an approved lab.

The lead slag is essentially a solidified molten metal compound. It is a very hard material with the possible exception of some crumbly pockets of fluxing materials. Appendix 19 of 6 NYCRR Part 371 does not specify a sampling method for this type of solid waste. The only way to get a sample of this material is with a hammer and chisel. Roth Bros. will use this method to obtain an incremental sample from each sow of slag which is designated hazardous. The increments will be composited for one analysis.

Sampling QA/QC

Quality assurance/quality control in the sampling program at Roth Bros. covers three basic areas: (1) design of a representative sampling plan; (2) use of proper sample collection and preservation procedures; and (3) chain-of-custody. Roth Bros.' sampling plan, as previously discussed, is designed to generate an accurate estimate of the chemical properties of the waste, through simple random sampling. This strategy conforms to the recommendations of SW-846. Sample collection may be carried out by Roth Bros.' personnel, or by personnel from the laboratory performing the chemical analysis. In either case, Roth Bros.' requires that the person(s) collecting the samples be trained in, and implement the following QA/QC protocols:

1. Use of appropriate sample containers.
2. Use of appropriate sampling device.
3. Decontamination of sampling equipment prior to collection of each sample.
4. Proper labeling of samples.

5. Preservation of samples until delivery to the laboratory.
6. Initiation of chain-of-custody. (A sample chain-of-custody record is included in Appendix III.)

Analysis and Inspection of Wastes

Testing of the hazardous wastes generated on-site (flue dusts and lead slag), except lead dust, will be conducted as specified in 6 NYCRR Part 371 Appendix 20, "EP Toxicity Test Procedure". The specific methods will be from the second edition of SW-846 as given in 6 NYCRR Part 371 Appendix 21, Table 2 "Analysis Methods for Inorganic Chemicals" (see copy in Appendix IV). Since the wastes are generated by metal refining processes, the analysis will include the eight metals identified in the EP toxicity test. These are arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

The lead dust (K069) generated on-site and off-site will not require analysis because it is a "listed" waste of known quality. According to Appendix 22 of 6 NYCRR Part 371, the waste, K069, is listed because of hexavalent chromium, lead and cadmium.

The electroplating sludge (F006) purchased for reclamation will be visually inspected when received, in order to confirm its identity. Since this waste is purchased by contract from a specific facility (as opposed to being randomly received from unknown sources), its quality is known and no additional testing is necessary. According to Appendix 22 of 6 NYCRR Part 371, F006 is listed because of cadmium, hexavalent chromium, nickel and cyanide (complexed). However, for the sludge currently purchased, information provided by the generator shows the main components of the sludge to be hydroxides of calcium, lead, copper and tin. The process generating the sludge is tin coating of copper wire. There is no cadmium, chromium, nickel or cyanide used in the process (see Appendix V); therefore, testing for these

compounds is impertinent and unnecessary. If Roth Bros. receives electroplating sludge from other generators in the future, they will require that the sludge be tested for F006 characteristics unless the generator can provide other information documenting the chemical composition of the sludge. When tested for EP Toxicity, the electroplating sludge received at Roth Bros. did not exceed any standard. The sludge currently purchased is in the form of a very dry filter cake. Any sludge received which does not appear dry will be rejected and returned to the generator, who must have it tested for free liquids using the "Paint Filter Test". An analysis conducted in September, 1986 on the current sludge showed no free liquids were generated using this test.

The frequency of waste analysis will be at a minimum of once per year. However, whenever there is a significant change in operating procedures that could affect waste quality, three samples of the new waste (one per week for three weeks) will be analyzed.

Analytical QA/QC

The contract laboratory performing the analysis of Roth Bros. samples will be responsible for maintaining appropriate analytical QA/QC. At the least, they must implement the following protocols:

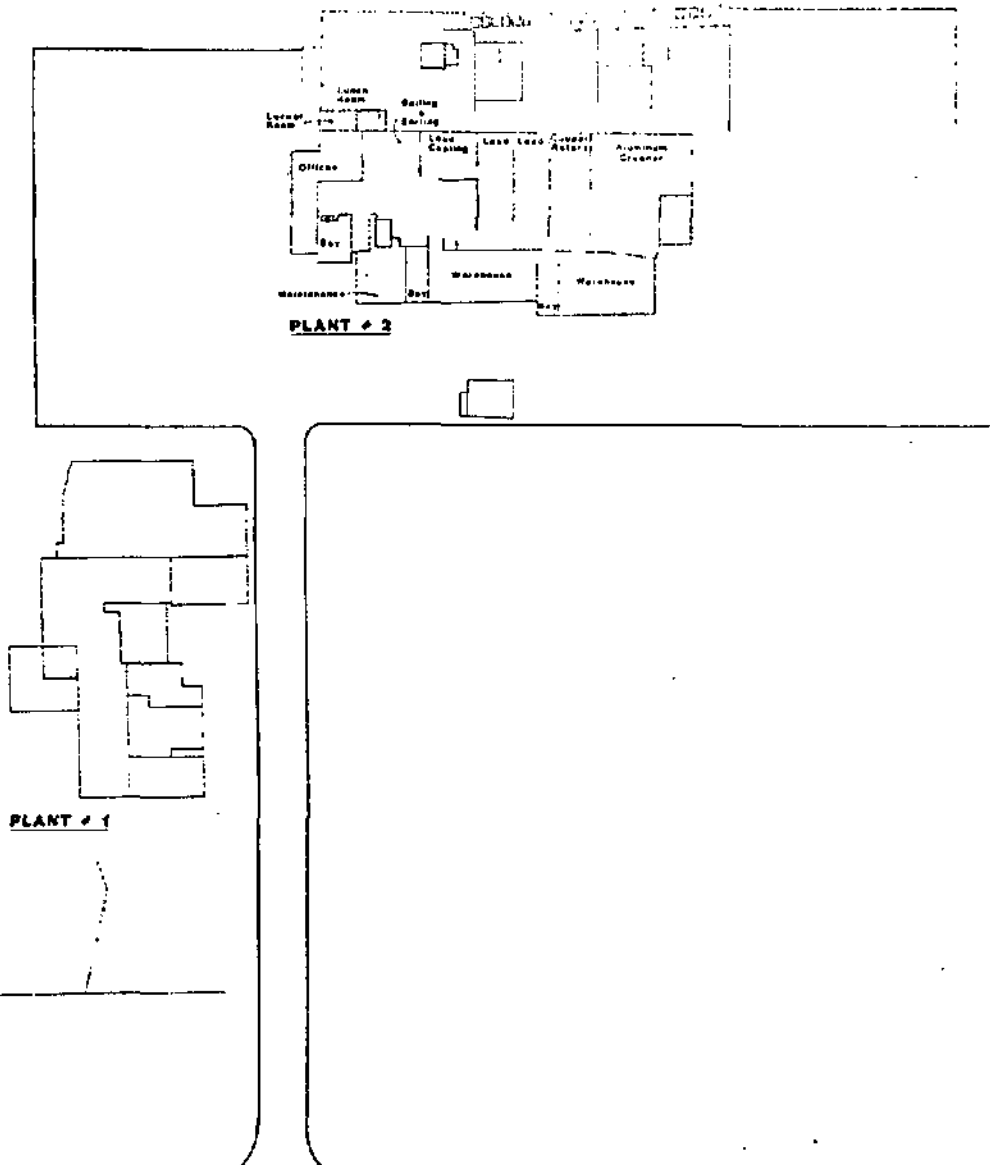
1. Completion of analysis within specified holding time.
2. Use of NYSDEC approved sample preparation and analytical methods.
3. Calibration of instrumentation.
4. Statistical validation of data accuracy and precision through the use of duplicate and spiked samples.
5. Chain-of-custody.
6. Participation in USEPA and NYSDEC check sample programs.

To assure that the contract laboratory is performing the required QA/QC, and that the results are valid, Roth Bros. will institute the following procedures:

1. Require that the lab submit to Roth Bros. a written manual documenting their QA/QC protocol.
2. Review the laboratory's QA/QC manual to assure that the required items (1-6 above) are adequately addressed.
3. Determine if the NYSDEC or the Department of Health has ever audited the laboratory, and whether the results were acceptable.
4. Require the laboratory to submit the results of any analytical QA/QC performed (e.g. duplicate and spike analyses) with the analysis report.

Recordkeeping

As required by 6 NYCRR 373-2.5(c), laboratory reports showing the results of waste analyses performed to meet the requirements detailed above will be kept as part of the Operating Record of the Roth Bros. Facility. These laboratory reports will include both analytical results and documentation of the analytical QA/QC performed. The records will be kept on-site, in the files of the General Manager, until the time of closure.

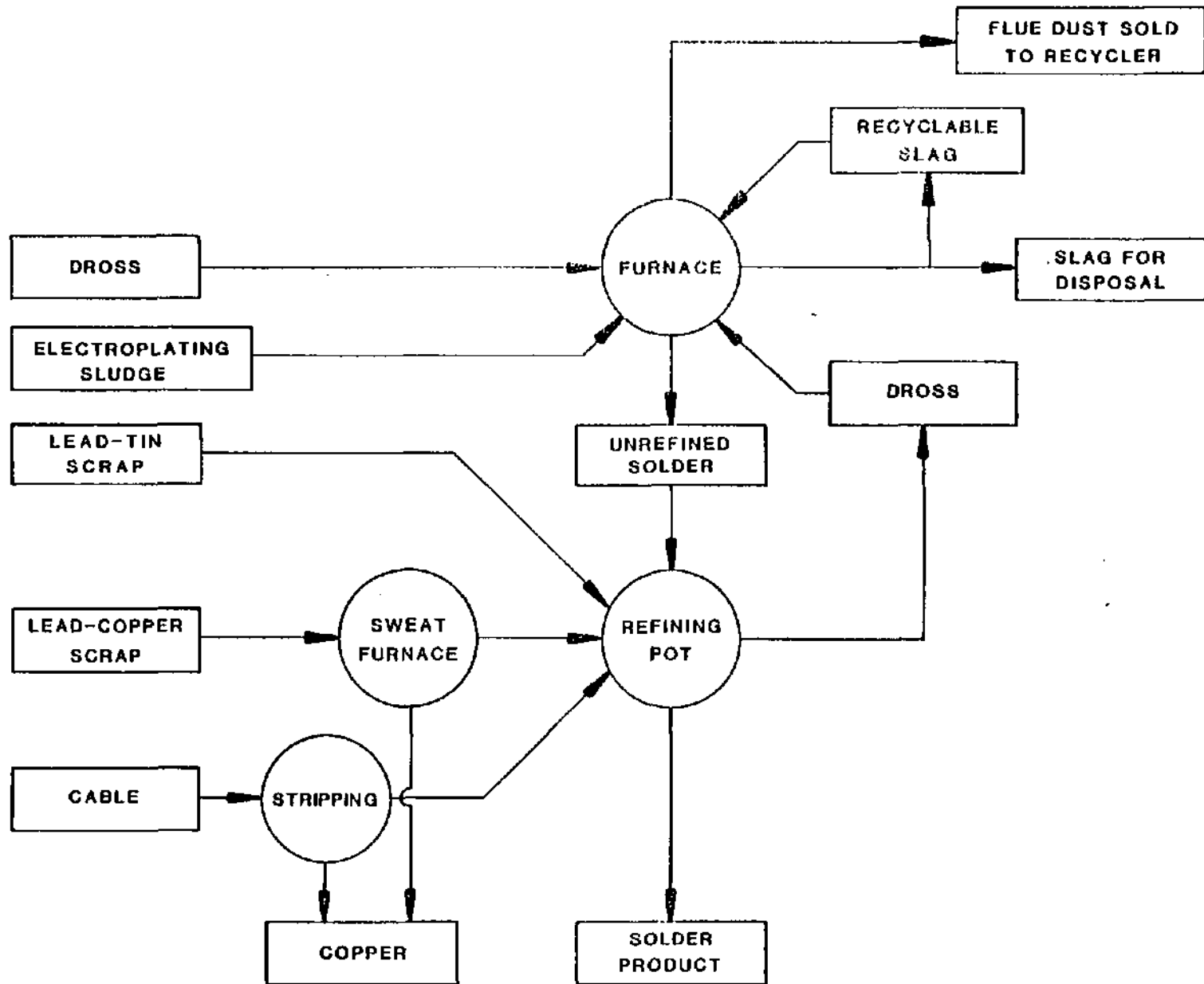


PLANT # 2

PLANT # 1



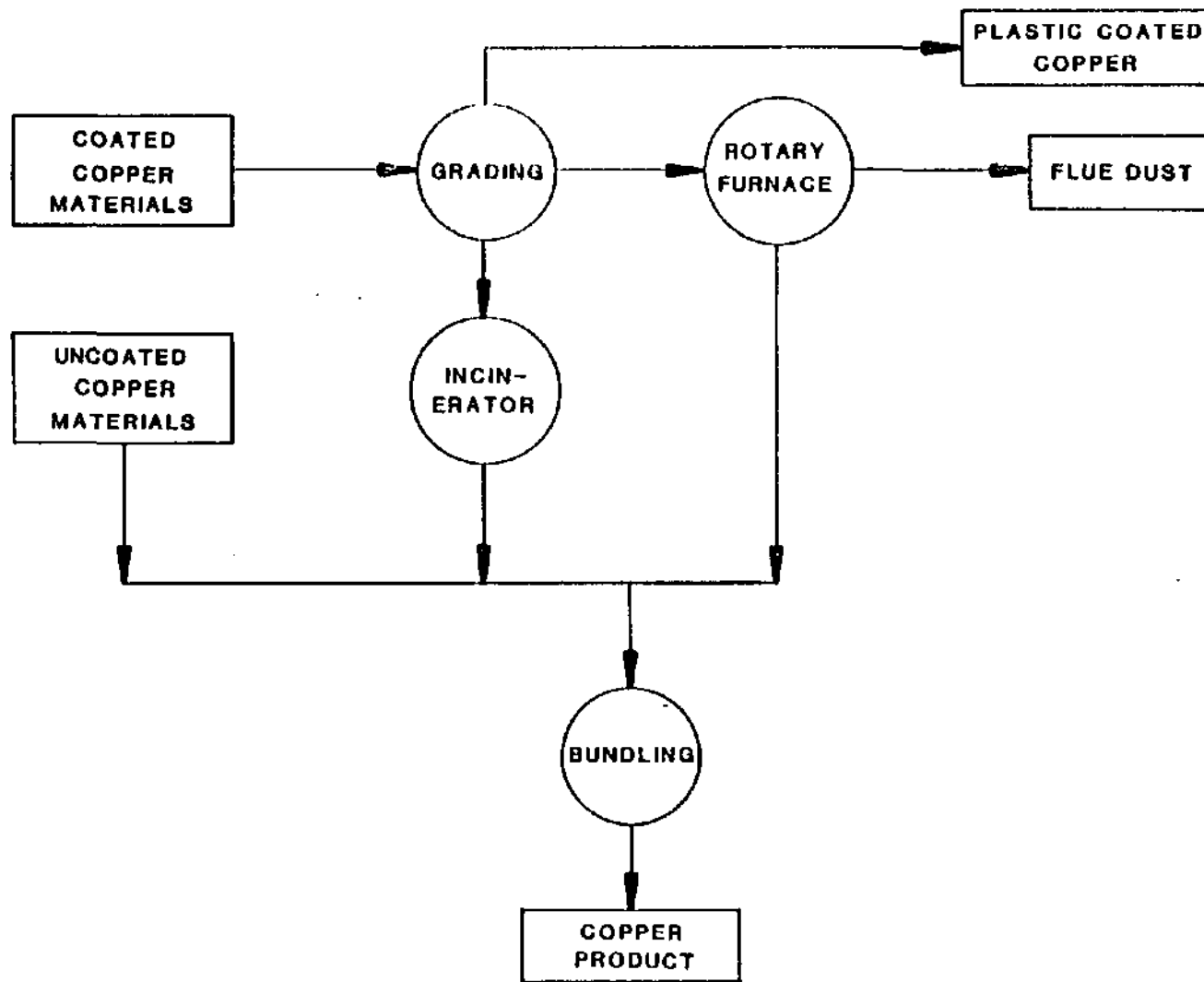
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	Conkey Bros & Sons Engineering Contractors 1000 East 10th Street Syracuse, New York 13202	7-16-11-8784-1184 11-11-87-11-87 11-11-87-11-87

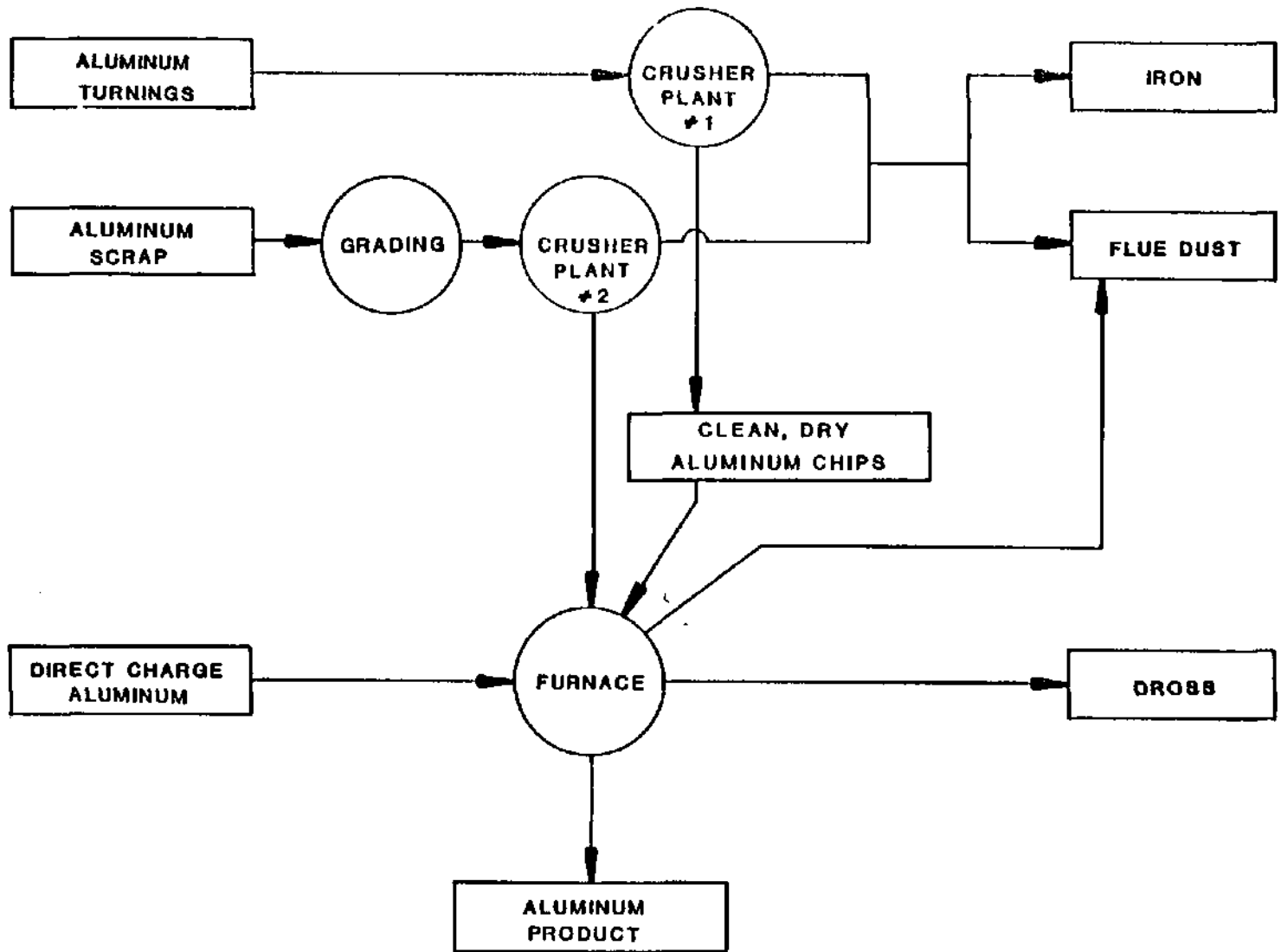


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FIGURE 2
ROTH BROS. SMELTING CORP.
LEAD SOLDER PRODUCTION

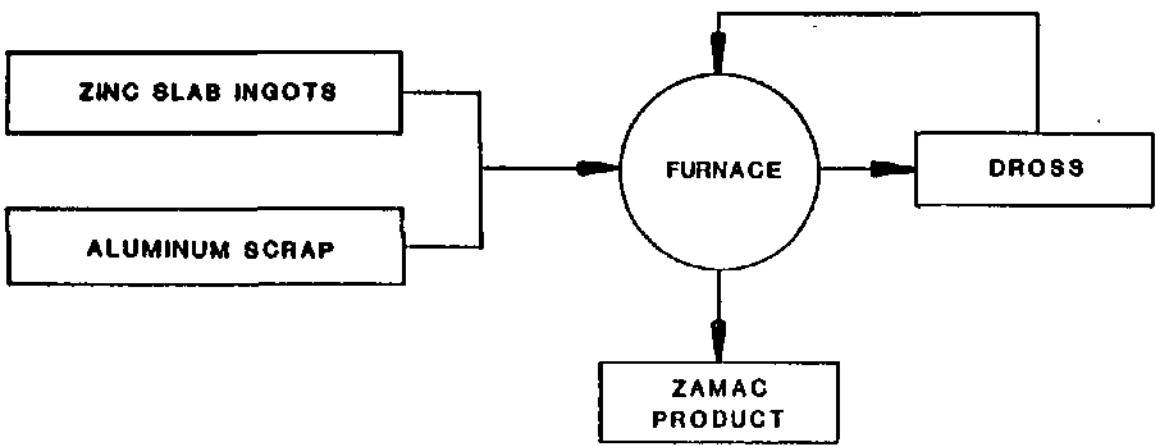
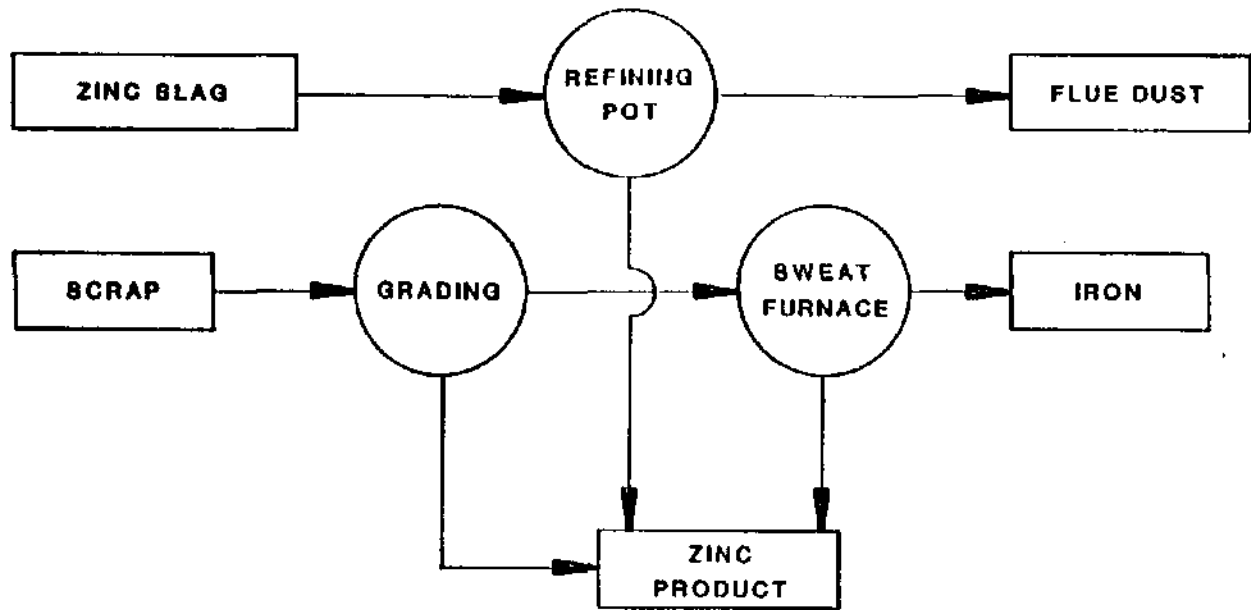
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C-10

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FIGURE 4
ROTH BROS. SMELTING CORP.
ALUMINUM PRODUCTION



2-11

FIGURE 6
ROTH BROS. SMELTING CORP.
ZINC AND ZAMAC PRODUCTION

Appendix A

STRATEGY FOR DETERMINING IF CHEMICAL CONTAMINANTS OF SOLID WASTES
ARE PRESENT AT HAZARDOUS LEVELS - SIMPLE RANDOM SAMPLING OF WASTES

- | <u>Step</u> | <u>General Procedures</u> |
|-------------|--|
| 1. | Obtain preliminary estimates of \bar{x} and s^2 for each chemical contaminant of a solid waste that is of concern. The two above-identified statistics are calculated by, respectively, Equations 2a and 3a (Table 1). |
| 2. | Estimate the appropriate number of samples (n_1) to be collected from the waste through use of Equation 8 (Table 1) and Table 2. Derive individual values of n_1 for each chemical contaminant of concern. The appropriate number of samples to be taken from the waste is the greatest of the individual n_1 values. |
| 3. | Randomly collect at least n_1 samples (or $n_2 - n_1$, $n_3 - n_2$, etc. samples, as will be indicated later in this box) from the waste (collection of a few extra samples will provide protection against poor preliminary estimates of \bar{x} and s^2). Maximize the physical size (weight or volume) of all samples that are collected. |
| 4. | Analyze the n_1 (or $n_2 - n_1$, $n_3 - n_2$; etc.) samples for each chemical contaminant of concern. Superficially (graphically) examine each set of analytical data for obvious departures from normality. |
| 5. | Calculate \bar{x} , s^2 , the standard deviation (s), and $s\bar{x}$ for each set of analytical data by, respectively, Equations 2a, 3a, 4, and 5 (Table 1). |
| 6. | If \bar{x} for a chemical contaminant is equal to or greater than the applicable RT (Equation 7; Table 1) and is believed to be an accurate estimator of μ , the contaminant is considered to be present in the waste at a hazardous concentration and the study is completed. Otherwise, continue the study. In the case of a set of analytical data that does not exhibit obvious abnormality and for which \bar{x} is greater than s^2 , perform the following calculations with nontransformed data. Otherwise, consider transforming the data by the square root transformation (if \bar{x} is about equal to s^2) or the arcsine transformation (if \bar{x} is less than s^2) and performing all subsequent calculations with transformed data. Square root and arcsine transformations are defined by, respectively, Equations 10 and 11 (Table 1). |
| 7. | Determine the CI for each chemical contaminant of concern by Equation 6 (Table 1) and Table 2. If the upper limit of the CI is less than the applicable RT (Equations 6 and 7; Table 1), the chemical contaminant is not considered to be present in the waste at a hazardous concentration and the study is completed. Otherwise, the opposite conclusion is tentatively reached. |

8. If a tentative conclusion of hazard is reached, reestimate the total number of samples (n_2) to be collected from the waste by use of Equation 8 (Table 1) and Table 2. When deriving n_2 , employ the newly calculated (not preliminary) values of \bar{x} and s^2 . If an additional $n_2 - n_1$ samples of waste cannot reasonably be collected, the study is completed and a definitive conclusion of hazard is reached. Otherwise, collect an extra $n_2 - n_1$ samples of waste.
9. Repeat the basic operations described in Steps 3-8 until the waste is judged to be nonhazardous or, if the opposite conclusion continues to be reached, increased sampling effort is impractical.



Designation: D 346 - 78

An American National Standard

Standard Method of COLLECTION AND PREPARATION OF COKE SAMPLES FOR LABORATORY ANALYSIS¹

This standard is issued under the fixed designation D 346; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

INTRODUCTION

Coke, especially run of oven coke, or foundry coke, or both, is a difficult material to sample. It is imperative that every sample be collected and handled carefully and conscientiously and in strict accordance with the standard procedure described herein.

Gross samples of not less than the quantities designated in this method must be taken, whether the coke to be sampled consists of a few tons or several hundred tons.

1. Scope

1.1 This method covers procedures for the collection of samples of coke to be used for physical tests, chemical analyses, and the determination of total moisture.

1.2 Methods for the determination of total moisture of the coke and for the reduction and preparation of samples for chemical analyses are included.

2. Applicable Documents

- 2.1 *ASTM Standards:*
 D 167 Test Method for Specific Gravity and Porosity of Lump Coke²
 D 293 Method of Sieve Analysis of Coke²
 D 2013 Method of Preparing Coal Samples for Analysis²
 D 2234 Method for Collection of a Gross Sample of Coal²
 D 3038 Method of Drop Shatter Test for Coke²
 D 3402 Method of Tumbler Test for Coke²

3. Place of Sampling

3.1 Sample coke while it is being loaded into or unloaded from railroad cars, ships, barges, or trucks, or when discharged from supply bins, grab buckets, belt conveyers, or other coke conveying equipment. Sample as close to the point of interest as possible.

4. Collection of Gross Sample

4.1 Collect increments regularly, systematically, and with such frequency, so that the entire quantity of coke sampled will be represented proportionately in the gross sample, and a gross sample of the required amount will be collected. The standard gross sample should approach the quantities given in Table 1.

4.1.1 The quantity of sample to be taken will depend on the size of the coke being sampled and the amount of information to be obtained from the sample.

4.1.1.1 The size of the sieve analysis sample is governed by the homogeneity of the coke being sampled. The quantities given in Table 1 represent the minimum quantity to be collected. The sieve analysis sample will supply sufficient coke for any subsequent physical tests and laboratory analysis. Total moisture of the coke should not be determined on the sieve analysis sample.

4.1.1.2 For the drop shatter test, a mini-

¹ This method is under the jurisdiction of ASTM Committee D-5 on Coal and Coke and is the direct responsibility of Subcommittee D05.23 on Sampling.

Current edition approved Feb. 24, 1978. Published April 1978. Originally published as D 346 - 32 T. Last previous edition D 346 - 75.

² Annual Book of ASTM Standards, Vol 05.05.

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imum of 165 lb (75 kg) of coke retained on 2-in. (50-mm) square mesh sieve if furnace coke is being processed, or 300 lb (140 kg) of coke retained on 3-in. (75-mm) square mesh sieve if foundry coke is being processed, is required. The quantities given in Table 1 represent the minimum amounts required of sized coke.

4.1.1.3 The tumbler test requires a minimum of 75 lb (35 kg) of coke that will pass a 3-in. (75-mm) square mesh sieve and can be retained on a 2-in. (50-mm) square mesh sieve, or that which will pass a 2 $\frac{1}{2}$ -in. (64-mm) square mesh sieve and can be retained on a 1 $\frac{1}{2}$ -in. (38-mm) square mesh sieve. The quantities given in Table 1 represent the minimum amount of the required sized coke.

4.1.1.4 The apparent specific gravity test required a minimum of 50 lb (23 kg) of representative coke pieces. The quantities given in Table 1 represent the minimum amounts of the required coke pieces.

4.1.1.5 The determination of total moisture of the coke requires approximately 100 lb (45 kg) of coke. The quantities given in Table 1 represent the minimum amount to be collected.

4.1.1.6 The quantities given for samples for chemical analysis represent the minimum amounts to be collected.

NOTE 1—Samples collected from the surface of coke in piles, bins, cars, ships, or barges are, in general, unreliable because of size segregation and should not be used for determining conformance to specifications unless the purchaser and the seller so agree. If necessary to collect a sample of coke from the surface of a loaded railroad car, take nine equal increments about 1 ft (305 mm) below the surface. Locate the nine points as shown in Fig. 1. The diameter of the hole must be at least 3 times that of the largest piece in the shipment.

5. Condition of Increment Collection

5.1 Four conditions of increment collection are recognized:

5.1.1 *Condition A (Stopped-Belt Cut)*, in which a loaded conveyor belt is stopped and a full cross-section cut with parallel sides is removed from the coke stream. The distance between the parallel faces shall not be less than three times the length of the largest piece.

5.1.2 *Condition B (Full-Stream Cut)*, in which a full cross section is removed from a moving stream of coke.

5.1.3 *Condition C (Part-Stream Cut)*, in which a portion, not a full cross section, is removed from a moving stream of coke.

5.1.4 *Condition D (Stationary Sampling)*, in which a portion of coke is collected from a pile, a railroad car, a barge, or a shiphold.

NOTE 2—See Sections 5 and 6 of Method D 2234.

6. Size of Increments

6.1 To collect increments, use a shovel or specially designed tool or mechanical means for taking equal increments. When increments are collected from the surface of a loaded rail car or truck shipment, the gross sample shall consist of nine increments of approximately equal quantity. When increments are taken from piles, conveyor belts, barges, etc., the gross sample shall consist of not less than 25, nor more than 50 increments, of approximately equal quantity.

NOTE 3—When large-size coke, such as foundry coke, is being sampled, it is likely that quantities larger than those given in Table 1 will be collected. However, the minimum number of increments collected should not be decreased unless such is agreed upon between the purchaser and the seller.

NOTE 4—If the sample for chemical analysis is obtained from the sieve analysis sample, a sample not smaller than that shown in Table 1 should be reconstituted from the size fractions obtained when the sieve analysis sample was processed.

7. Quantities Represented

7.1 Take a gross sample for each 500 tons (454 Mg) or fraction thereof, or in case of larger tonnages, for such quantities as may be agreed upon. Sample separately each lot of coke arising from a different source or known to be of different quality or size.

8. Processing of the Test Sample

8.1 Process samples collected for sieve analysis of coke in accordance with the procedure given in Method D 293.

8.2 Process samples collected for the drop shatter test in accordance with the procedure given in Method D 3038.

8.3 Process samples collected for the tumbler test in accordance with the procedure given in Methods D 3402.

8.4 Process samples collected for the determination of apparent specific gravity and porosity in accordance with the procedure given in Method D 167.

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8.5 Process samples taken for the determination of total moisture in accordance with the procedure given in Section 10 of this standard.

8.6 Prepare samples taken for chemical analysis as directed in Section 9.

9. Preparation of Coke Sample for Laboratory Analysis

9.1 Crush, mix, and divide the entire gross sample in quantity to convenient size for transmission to the chemical laboratory. Crush the sample, preferably by means of jaw or roll crushers, or on a chilled iron or hard steel plate by impact of a tamper, hard bar, or sledge, avoiding all rubbing actions as otherwise the ash content may be materially increased by the addition of iron from the sampling apparatus. Do the crushing under such conditions as to prevent loss of coke or accidental mixture of foreign matter.

9.2 Procedure A, Manual Riffing:

9.2.1 Determine the number of passes required in the riffing operation from the total volume of the gross sample and the minimum permissible weight in accordance with Table 2.

9.2.2 Divide the crushed gross sample by using a large riffle. Riffles properly used will reduce sample variability but cannot eliminate it. Pass the crushed coke through the riffle from a feed scoop, feed bucket, or riffle pan having a lip or opening the full length of the riffle. When using any of the above containers to feed the riffle, spread the crushed coke evenly in the container, raise the container, and hold it with its front edge resting on top of the feed chute; then slowly tilt it so that the coke flows in a uniform stream through the hopper straight down over the center of the riffle into all the slots, thence, into the riffle pans, one half of the sample being collected in each pan. Under no circumstances shovel the sample into the riffle, or dribble into the riffle from a small-mouth container. Do not allow the crushed coke to build up in or above the riffle slots. If it does not flow freely through the slots, shake, or vibrate the riffle to facilitate even flow. The opening of the riffle slot should be 2.5 to 3 times the size of the largest particle.

9.2.3 After crushing the gross sample of not less than 30 lb (14 kg), Table 2, for No. 4 (4.75-mm) sieve size, using suitable pulverizing equipment, further reduce this subsample to No. 8 (2.36-mm) sieve size and divide by riffing to not less than the quantity specified in Table 3 for No. 8 (2.36-mm) sieve size.

9.2.4 With suitable pulverizing equipment, preferably a roll crusher or ball mill, reduce the No. 8 (2.36-mm) sieve size subsample to a No. 60 (250- μ m) sieve size.

9.2.5 As an alternative to the procedure of 9.2.4, the No. 8 (2.36-mm) sieve size subsample may be reduced to pass 95 % through a No. 20 (850- μ m) sieve. Divide this subsample by riffing with the small riffle to not less than the quantity specified in Table 3, and then reduce to No. 60 (250- μ m) sieve size as described in 9.2.4.

9.2.6 Thoroughly mix the laboratory analysis sample, weighing not less than 50 g, preferably, by mechanical means, before extracting portions for analysis.

9.3 Procedure B, Hand Division:

9.3.1 The method of dividing by hand the quantity of coke in a gross sample shall be carried out as described even though the initial size of coke and impurities be less than indicated in Table 2.

9.3.2 Do the progressive crushing and division in the weight of the sample to the quantities indicated in Table 2 by the following method, which is described and illustrated in the accompanying Plate 1, until the maximum size of the coke is $\frac{1}{2}$ in. (13 mm), and the quantity is 60 lb (27 kg). Crush the gross sample to a maximum size of pieces of 1 in. (50 mm).

9.3.2.1 Repeat the alternate-shovel method of dividing the gross sample until the sample is divided to approximately 125 lb (57 kg) and take care to observe before each division in quantity that the sample has been crushed to the fineness specified in Table 2. Shovel the crushed coke into a conical pile (Plate 1, (2)) by depositing each shovelful of coke on top of the preceding one, and then form into a long pile in the following manner: Take a shovelful of coke from the conical pile and spread it out in a straight pile (Plate 1, (3A)) having a width equal to the width of the shovel and a length of 5 to 10 ft (1.5 to 3 m).



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Spread the next shovelful directly over the top of the first shovelful, but in the opposite direction, and so on back and forth, pile, occasionally flattening the pile, until all the coke has been formed into one long pile, proceeding as follows: Beginning on one side of the pile, at either end, and shoveling from the bottom of the pile, take one shovelful (Plate 1, (4), shovelful No. 1) and set it aside; advancing along the side of the pile a distance equal to the width of the shovel, take a second shovelful (shovelful No. 2) and discard it; again advancing in the same direction one shovel width, take a third shovelful (shovelful No. 3) and add it to the first. Take the fourth (shovelful No. 4) in a like manner and discard, retain the fifth (shovelful No. 5), and so on, advancing always in the same direction around the pile so that its size will be gradually divided in a uniform manner. When the pile is removed, about half of the original quantity of coke should be contained in the new pile formed by the alternate shovelfuls that have been retained (Plate 1, (5A) shows the retained half and (5B), the rejected half).

9.3.3 After the gross sample has been divided by crushing and by the alternate-shovel method to approximately 60 lb (27 kg) sample of 1/2-in. (13-mm) coke, proceed by the methods in 9.2.3.

9.4 The report of analysis should include a brief description of the method of taking the sample, by such characteristic expressions as "belt sample," "top-of-car," etc. Information should be given as to how the gross sample is crushed and divided in the description that accompanies the sample sent to the laboratory.

DETERMINATION OF TOTAL MOISTURE

10. Sampling

10.1 For determining total moisture, take a special moisture sample weighing approximately 100 lb (46 kg). Take the moisture sample when the coke is being loaded or unloaded as the case may be, and accumulate by placing in a waterproof receptacle with a tight-fitting lid, small equal parts of the freshly taken increments of the standard gross sample described in 6.1 and transported to the chemical laboratory as rapidly as possible.

11. Apparatus

11.1 *Pans for Total Moisture Determination*—Galvanized steel or other suitable pans approximately 24 by 24 by 4 in. (610 by 610 by 102 mm).

11.2 *Balance or Solution Scale*, having a minimum capacity of 10 kg and sensitive to 1 g for weighing the galvanized steel pans with samples.

11.3 *Crushers or Grinders*—Jaw, cone, or rotary crusher, hammer mill, or other suitable crusher to reduce the gross sample to pass the sieve designated in Table 2. Hard-steel or chilled-iron plate with tamper, sledge, or hand bar for preliminary crushing of any large lumps in the gross sample before feeding into the crusher.

11.4 *Oven, Stove, or Hot Plate*, for drying coke samples in the determination of total moisture. If an oven is used, it should have openings provided for natural ventilation and should be capable of being regulated between 104 and 200°C.³ If the coke is dried on a stove or hot plate, a thermometer should be placed in it, and care exercised that the temperature does not exceed 200°C at any point in the pan of coke.

12. Procedure

12.1 Dry the total special moisture sample, without any preliminary crushing, preferably to constant weight at a temperature of not less than 104°C nor more than 200°C. In case it is impracticable to dry the entire sample, proceed as follows:

12.1.1 *For Coke Appearing Dry*—Crush the special moisture sample rapidly to 1/2-in. (13-mm) size and reduce mechanically or by hand to about a 5-lb (2.3-kg) quantity. Place in a container, seal airtight, and forward to the laboratory without delay.

12.1.1.1 *Laboratory Moisture Determination*—Dry the 5-lb (2-kg) sample received at the laboratory to constant weight at not less than 104°C nor more than 200°C.³ Calculate the loss in weight to percentage of moisture,

³ Experiments made at the U. S. Bureau of Mines have shown that results checking within 0.5 % are obtained between these temperature limits. See Fieldner, A. C., and Seivig, W. A., "The Determination of Moisture in Coke," U. S. Bureau of Mines Technical Paper No. 145, 1917.

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which shall constitute the total moisture in the coke as received at the laboratory.

12.1.2 *For Coke Appearing Wet*—Spread the special moisture sample on tared pans, weigh, and air-dry or dry in a warm place or on a warm or heated surface until the coke appears dry, and weigh again. Complete the sample preparation as described for coke appearing dry, 12.1.1. The loss in weight divided by weight of sample, multiplied by 100, is the percentage of air-drying loss. Correct for the moisture found in the sample sent to the laboratory, 12.1.1.1.

13. Calculation

13.1 If the sample was dry before preparation for transmittance to the laboratory for analysis, calculate the total moisture, M , as follows:

$$M = (A/W) \times 100$$

where:

M = total moisture, %.

A = oven loss, and

W = total sample weight.

13.2 If the laboratory sample appeared wet before drying, and was dried before transmission to the laboratory, calculate the total moisture as follows:

$$T = D(100)/G,$$

$$M = T + (A)(100 - T)/W$$

where:

M = total moisture, %.

T = moisture loss from wet coke.

A = oven loss, laboratory sample.

D = air-dried loss, gross sample (see 12.1.2),

W = moisture sample weight, laboratory sample, and

G = sample weight, gross sample (see 12.1.2).

TABLE 1 Minimum Gross Sample Weights of Coke, lb (kg)

Usage	Foundry Coke		Furnace Coke		Coke Breeze ¹
	Run of Oven	Sized	Run of Oven	Sized	
Sieve analysis (Size consist)	800 (364)	500 (227)	500 (227)	400 (182)	100 (45)
Drop shatter test	400 (182)	350 (159)	300 (136)	200 (91)	...
Tumbler test	150 (68)	100 (45)	125 (57)	125 (57)	...
Apparent specific gravity	100 (46)	100 (46)	100 (46)	100 (46)	50 (23)
Coke moisture	100 (46)	100 (46)	100 (46)	100 (46)	50 (23)
Chemical analysis	250 (113)	250 (113)	125 (57)	125 (57)	75 (34)

¹ Coke passing a 1/2-in. (19-mm) square hole sieve, or smaller top size.

TABLE 2 Weights of Coke Samples with Corresponding Crushing Sizes

Weight of Sample to Be Divided		Largest Size of Coke and Impurities Allowable in Sample Before Division	
lb	kg	in.	mm
250 or over	113 or over	1	25
125	57	3/4	19
60	27	1/2	13
30	14	4 mesh	5

TABLE 3 Preparation of Sample for Chemical Analysis

Crush to Pass at Least 95 % Through Sieve	Divide to Minimum Weight, g
No. 4 (4.75 mm)	2000
No. 8 (2.36 mm)	500
No. 20 (850 μm)	250
No. 60 (250 μm) (100 % through)	50

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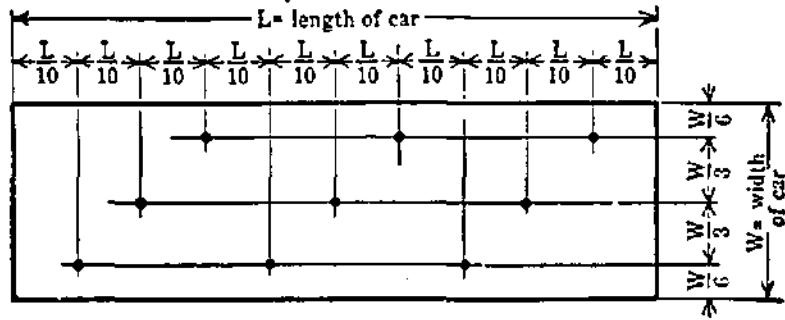


FIG. 1 Location of Sampling Points from Exposed Surface of Car

SAMPLE CHARACTERIZATION
& CHAIN OF CUSTODY SHEET

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LAB SAMPLE LOG No. _____

SOURCE

CLIENT _____ JOB No. _____

SAMPLE I.D. _____ LOCATION DESCRIPTION _____

SAMPLING

SAMPLE TYPE _____ SAMPLING METHOD _____

CONTAINERS: No. _____ TYPE _____

COMPOSITE: DATE SET _____ TIME _____ BY _____

DATE PICKED-UP _____ TIME _____ BY _____

GRAB: DATE _____ TIME _____ BY _____

NOTES: _____

PRESERVATION

DATE _____

FILTERED: YES _____ NO _____ TIME _____ BY _____

PRESERVED: YES _____ NO _____ TIME _____ BY _____

PRESERVATIVE: H₂SO₄ HNO₃ NaOH H₃PO₄ + CuSO₄ Zn(C₂H₃O₂)₂

COOLED TO 4°C OTHER _____

NOTES: _____

CUSTODY

C&S LABORATORY

CUSTODY

LABORATORY SUBCONTRACTOR

DELIVERED BY _____

DATE _____ TIME _____

RECEIVED BY _____

DATE _____ TIME _____

NAME OF LAB _____

ADDRESS _____

DELIVERED BY _____

DATE _____ TIME _____

RECEIVED BY _____

DATE _____ TIME _____

FIELD NOTES

TABLE 2.-ANALYSIS METHODS FOR INORGANIC
CHEMICALS CONTAINED IN SW-846

<u>Compound</u>	<u>First edition Method(s)</u>	<u>Second edition Method(s)</u>
Antimony	8.50	7040,7041
Arsenic.	8.51	7060,7061
Barium	8.52	7080,7081
Cadmium.	8.53	7090,7091
Chromium	8.54	7190,7191
Chromium: Hexavalent.	8.845,8.546, 8.457	7195,7190, 7197
Lead.	8.56	7420,7421
Mercury	8.57	7470,7471
Nickel.	8.58	7520,7421
Silver.	8.60	7760,7761
Cyanides.	8.55	9010
Total Organic Halogen	8.60	9020
Sulfides.	8.67	9030

Wire Fabricators

A Subsidiary of Oneida Ltd



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TELEPHONE CAMDEN 3-3 245-2000
CAMDEN - NEW YORK
1331

November 21, 1986

Mr. Neal Schwartz
Roth Bros. Smelting Corp.
6223 Thompson Rd.
East Syracuse, NY 13057

Dear Mr. Schwartz,

The electroplating rinsewater treatment sludge you receive from Camden Wire Company, Inc. which is listed as an F006 Hazardous Waste does not contain cyanide, nickel or chromium. This is based on all chemicals used in the plating and waste water treatment operations which are listed below.

- Copper Wire
- Caustic Cleaner
- Fluoboric Acid
- Tin Fluoborate
- Lead Fluoborate
- Inorganic grain refiners
- Sulfuric Acid
- Hydrated Lime

The inorganic additive does not contain cyanide because it is mixed in an acid solution and would give off cyanide fumes.

The electroplating process of tin or tin/lead coatings on a copper base metal cannot be accomplished using a cyanide plating bath as there are none developed for tin or tin/lead.

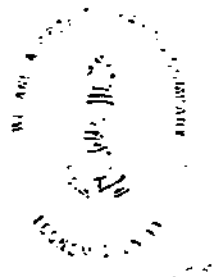
The composition of the electroplating rinsewater treatment sludge will be primarily the following.

- | | | |
|------------------|-------------------|------------------|
| Copper Hydroxide | Lead Hydroxide | Calcium Fluoride |
| Tin Hydroxide | Calcium Hydroxide | |

If you need further information, feel free to contact me.

Very truly yours,

Daniel E. Vollmer
Daniel E. Vollmer
Chemical Engineer



DEV/cp

C-22

Roth Brothers Smelting Corporation
6223 Thompson Road
East Syracuse, NY

EPA I.D. No. NYD006977986

6NYCRR PART 373 PERMIT
ATTACHMENT II
INSPECTION SCHEDULE

ROTH BROS. SMELTING CORP.
INSPECTION SCHEDULE
HAZARDOUS WASTE MANAGEMENT

Objective:

6 NYCRR 373-2.2(g) requires that owners and operators of hazardous management facilities develop and follow a written schedule for conducting inspections of equipment and facilities used in the management of hazardous wastes. This schedule and the attached forms fulfill those requirements.

Schedule:

All areas and items to be inspected are shown on Figures 1 through 4. The frequency of inspection is as follows:

ITEM	INSPECTION SCHEDULE
Aluminum Baghouse	Daily When In Use
Aluminum Dust Storage Area	Weekly
Plant #1 Loading Dock	Daily When In Use
Plant #1 Transportation Routes	Daily When In Use
Aluminum Crusher Baghouse	Daily When In Use
Copper Baghouse	Daily When In Use
Copper Dust Storage Area	Weekly
Lead Baghouse	Daily When In Use
Lead Dust Storage Area	Weekly
Lead Furnace	Daily When In Use
Plant #2 Loading Dock	Daily When In Use
Plant #2 Transportation Routes	Daily When In Use
Fire Extinguishers	Annually (By Contractor)
Sprinkler System	Monthly (By Contractor)
Fire Alarm	Monthly (By Contractor)
Paging System	Used Daily - No Test Required
Telephones	Used Daily - No Test Required
Brooms & Shovels	Weekly
High Efficiency Vacuum Cleaner	Weekly
Catch Basin Cover	Weekly
Lead Respirators	Daily When In Use
Protective Clothing	Weekly

Inspection:

The container storage area is inspected for leaking or deteriorated containers. In addition, it is noted if adequate aisle space is maintained to allow access by personnel and equipment during an emergency. The baghouses, lead furnace, loading docks and in-house transportation routes are also checked for spills. In the event that remedial action is required, it will be performed in accordance with the Contingency Plan. Emergency and safety equipment, alarms and communications devices are inspected by outside contractors in accordance with this schedule. Decontamination equipment, including brooms, shovels, vacuum, catch basin cover and protective clothing, are inspected weekly to assure that they are readily available for use. Respirators are cleaned, disinfected and checked for tears daily. Respirator cartridges are changed every 2 to 3 days, as needed.

Recordkeeping:

The inspections are conducted by environmental inspectors or contractors, and the completed log forms are forwarded to the General Manager for inclusion in the facility Operating Record. These records must be kept for at least three years.

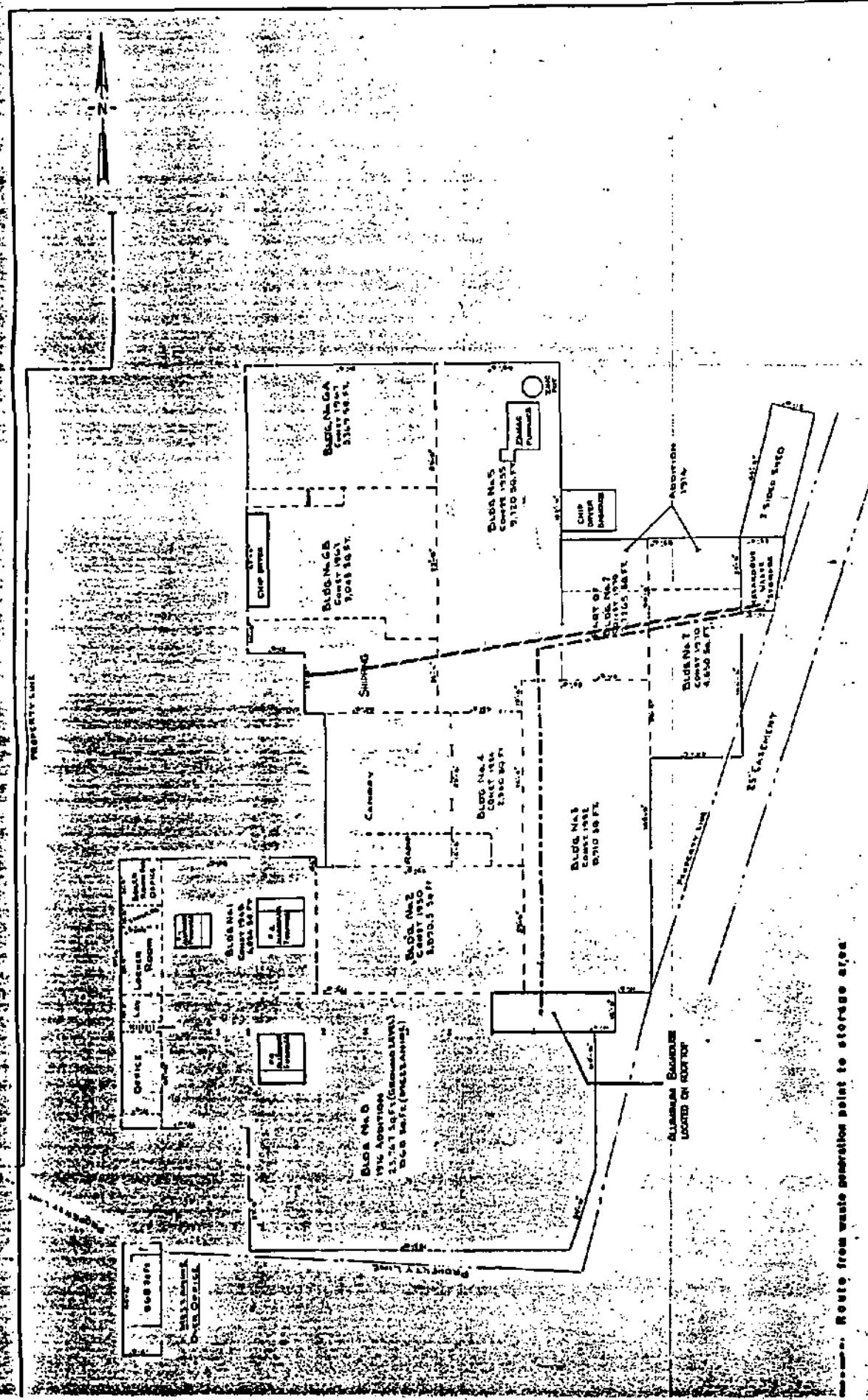
**ROTH BROS. SMELTING CORP. INSPECTION RECORD
FOR HAZADOUS WASTE MANAGEMENT AREAS**

ITEM OR AREA INSPECTED	CHECK FOR :	✓ OK	ACTION NEEDED (IF ANY)	ACTION TAKEN & DATE (IF ANY)
ALUMINUM FURNACE BAGHOUSE	DUST SPILLS			
ALUMINUM DUST STORAGE AREA	LEAKING, DETERIORATED CONTAINERS OR SPILLS			
ALUMINUM DUST STORAGE AREA	AISLE SPACE, FIRE EXTINGUISHER			
PLANT #1 LOADING DOCK AND IN-HOUSE TRANSPORTATION ROUTES	DUST SPILLS			
ALUMINUM CRUSHER BAGHOUSE	DUST SPILLS			
COPPER BAGHOUSE	DUST SPILLS			
COPPER DUST STORAGE AREA	LEAKING, DETERIORATED CONTAINERS OR SPILLS			
COPPER DUST STORAGE AREA	AISLE SPACE, FIRE EXTINGUISHER			
LEAD BAGHOUSE	DUST SPILLS			
LEAD DUST STORAGE AREA	LEAKING, DETERIORATED CONTAINERS OR SPILLS			
LEAD DUST STORAGE AREA	AISLE SPACE, FIRE EXTINGUISHER			
LEAD AREA WHERE CHARGES MADE UP AND FED TO FURNACE	ELECTROPLATING SLUDGE OR SLAG SPILLS			
PLANT # 2 LOADING DOCK AND IN-HOUSE TRANSPORTATION ROUTES	DUST, SLUDGE OR SLAG SPILLS			

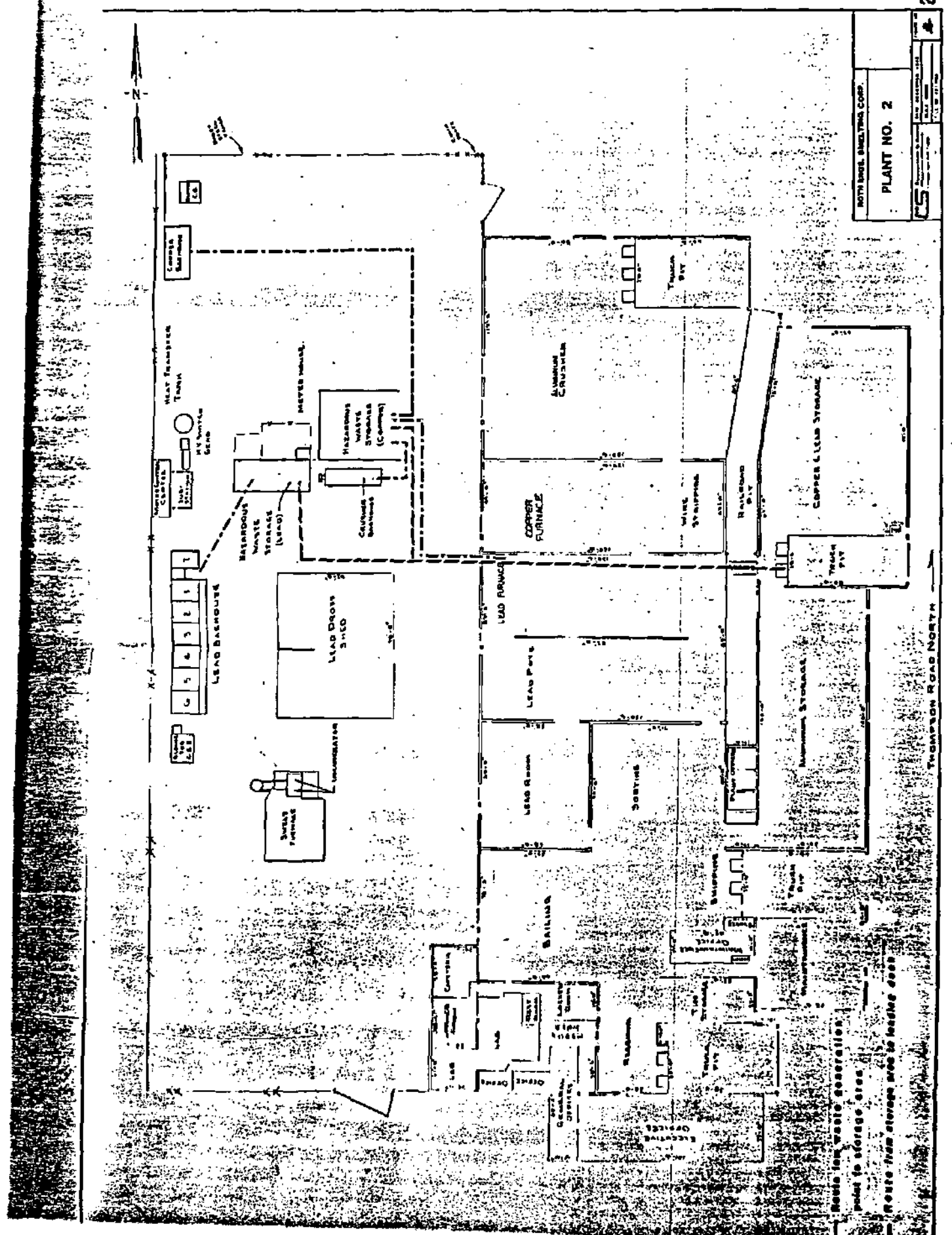
Inspector's Name _____

Date Of Inspection _____

ROTH BRIDGE SMELTING CORP.
PLANT NO. 1



Route from waste generation point to storage area
 Route from storage area to loading dock



NORTH LEAD SMELTING CORP.

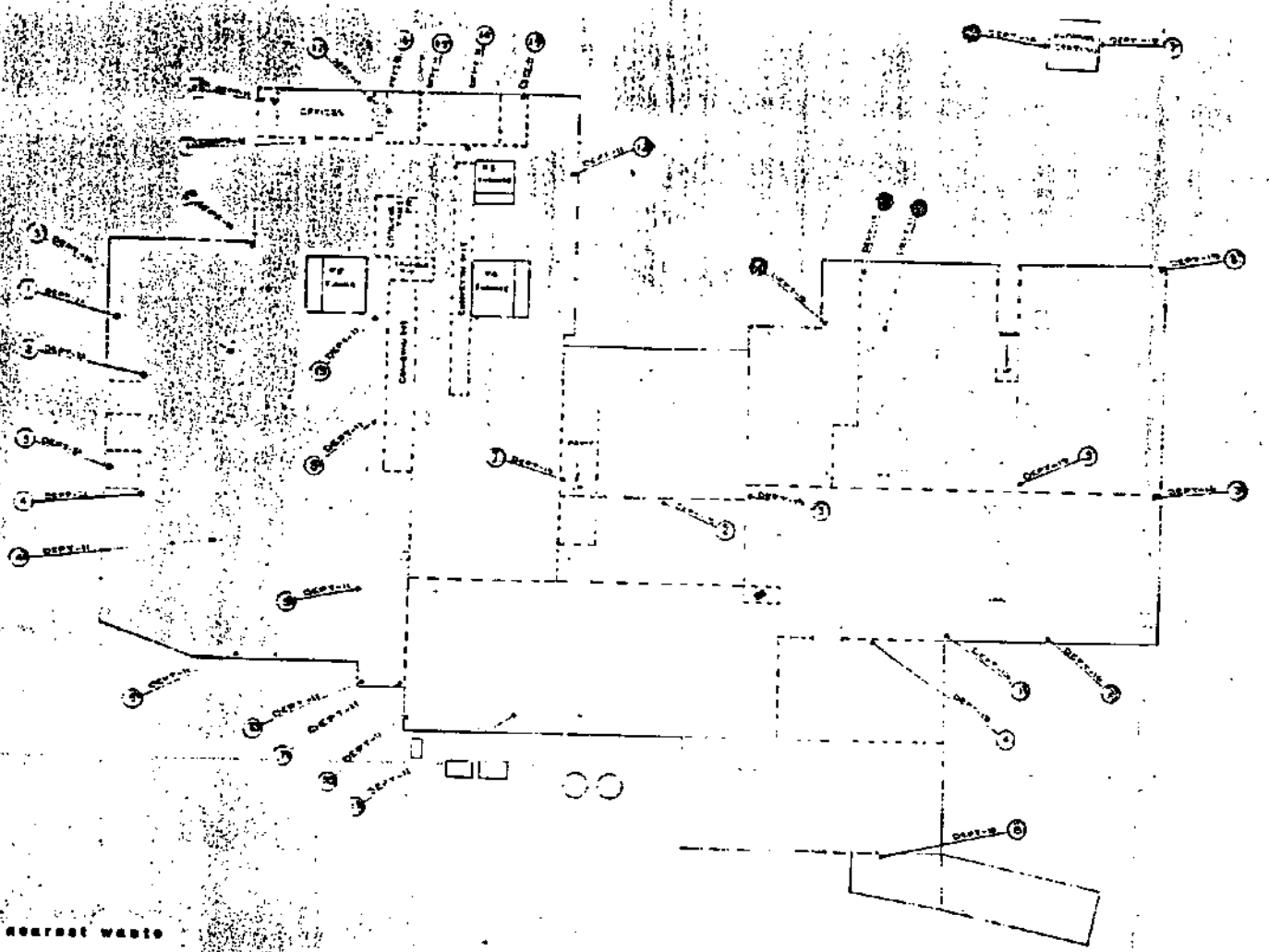
PLANT NO. 2

THOMPSON ROAD NORTH

Route for waste generation point to storage area

Route from storage area to loading area

2L-

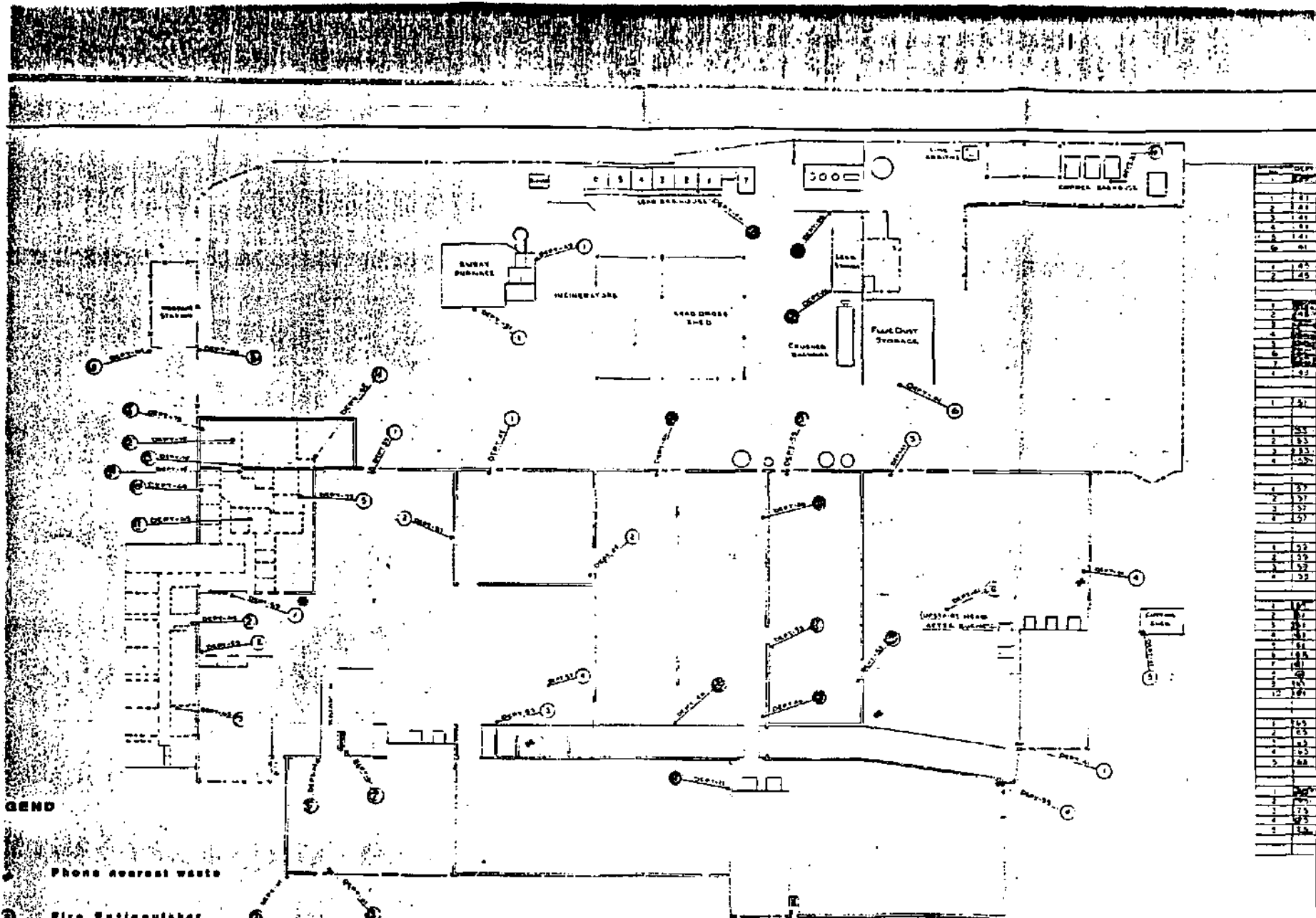


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LEGEND

- Phone circuit waste
- ③ Fire Extinguisher

ROTH BROS. SMELTING CO. INC.
EMERGENCY EQUIPMENT - PLANT 1



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- GEND
- 1 Phone nearest waste
 - 2 Fire Extinguisher
 - 3 Fire Alarm

BOTH BROS. SMELTING CORP.
EMERGENCY EQUIPMENT - PLANT 2

REVISION 1000
 DATE 10/1/50

Roth Brothers Smelting Corporation
6223 Thompson Road
East Syracuse, NY

EPA I.D. No. NYD006977986

6NYCRR PART 373 PERMIT
ATTACHMENT III
PERSONNEL TRAINING

PERSONNEL TRAINING FOR
HAZARDOUS WASTE MANAGEMENT PROCEDURES

ROTH BROS. SMELTING CORPORATION
6223 THOMPSON ROAD
EAST SYRACUSE
COUNTY OF ONONDAGA
STATE OF NEW YORK 13057

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SECTION 1

PURPOSE AND OUTLINE OF TRAINING PROGRAM

The purpose of this training program is to ensure that the employees of Roth Bros. Smelting Corporation complete a program of instruction, classroom or on-the-job training, that teaches them to perform their duties in a way that ensures Roth Bros. compliance with governmental regulations regarding hazardous waste.

Staff management will ensure that this training program will include all the elements as described below.

- a.) That proper classroom facility is maintained and/or on-the-job training is provided to ensure compliance with part 373-2.
- b.) That training be conducted by an individual of staff management, who has himself/herself received formal training in hazardous waste management and is able to deal with physical plant operations relevant to the employee's position.
- c.) The training program itself will be designed to familiarize the employees with:
 - 1.) Emergency procedures, equipment and systems, as described in Roth Bros' Contingency Plan.
 - 2.) Procedures for using, inspecting, repairing and replacing emergency and monitoring equipment.
 - 3.) Key parameters for automatic waste feed cut-off systems.
 - 4.) Communications or alarm systems.
 - 5.) Response to fire or explosions.
 - 6.) Response to ground water contamination, and
 - 7.) Shutdown of operations.
- d.) Roth Bros. personnel will complete this program within six months (180 calendar days) after they are established in qualifying positions.
- e.) New employees will complete this program within six months (180 calendar days) after date of employment; however, they will not work in unsupervised or qualified positions until they have completed the training.
- f.) Staff management will review the effectiveness of this initial training on an annual basis.
- g.) Staff management of Roth Bros. will maintain, update, and organize the following personnel records as applied to the regulation.
 - 1.) Job title and employee for each position relating to hazardous waste management.
 - 2.) Written job description for each qualifying job w/
 - a.) requisite skill
 - b.) education
 - c.) duties as applied to hazardous waste.
 - 3.) Written description of training required.

- 4.) Written description of training given.
 - 5.) Personnel records that document training and job experience by qualifying employees.
- h.) Training records will be kept up-to-date through annual reviews conducted by the Director of Personnel. These records will be kept for three years after employee termination, or until closure for current employees.

SECTION 2

TIME TABLE AND RECORDKEEPING

INITIAL TRAINING

The Director of Personnel will see that training for any position involving hazardous waste shall be completed within six months after employees are established in qualifying positions.

Any new employee shall receive this training either formally or informally as part of their "new employee orientation" which shall commence upon their first day of scheduled work. New employees shall not work in an unsupervised position until training has been completed.

The Plant General Manager shall periodically audit the training activities to ensure compliance with this Policy.

ANNUAL REVIEW

An annual review of Training Procedures, Syllabus & Records, shall be conducted by the Plant General Manager, either formally or informally, depending upon production requirements to determine the effectiveness of the training.

DOCUMENTS AND RECORDS

Required personnel documents and records which will be maintained are as follows:

- a.) Job title.
- b.) Job description
 - 1.) skill
 - 2.) education
 - 3.) qualifications and duties.
- c.) Type of training involved.
- d.) Records that training has been completed.

These records will be kept until closure for current employees. Training records on former employees will be kept for three years from the date the employee last worked at the facility.

SECTION 3
TRAINING METHODS

Hazardous waste training instruction, either formal or informal, shall be under the direction of the Plant General Manager, who is properly certified in such matters.

The Plant General Manager is schooled and has a responsible knowledge of all procedures relevant to any employee, position or physical plant operation.

The actual training shall be the responsibility of the Director of Personnel.

To ensure the technical competency of the Emergency Coordinator, a training budget shall be included in the Fiscal Budget. This budget shall include membership in the following Societies, which commonly disseminate information on regulation changes and DEC findings which could impact the training competence of the Emergency Coordinator.

- Institute Scrap Iron & Steel
- National Association of Recycling Industries
- American Foundrymen's Society
- Society of Die Casting Engineers
- American Society of Safety Engineers
- American Chemical Society

In addition to membership in these societies, attendance at seminars or technical conferences dealing with environmental pollution will be planned on a semi-annual basis. For example, seminars scheduled for 1986 were as follows:

Environmental Pollution -- American Society of Safety Engineers, March 24, 1986

New York State Hazardous Management
Environmental Management, Ltd., Syracuse, New York, May, 1986.

Due to the nature of business at Roth Bros. Smelting Corporation, most training to ensure compliance will be done on-the-job, either in a formal or informal basis, depending on job responsibilities and production requirements in non-hazardous waste maintenance areas, or production areas.

When formal training is deemed necessary by staff management in a classroom setting, the front office conference room will be utilized for such a purpose.

The below listed Federal and State Regulations will be addressed in the training activities at Roth Bros.:

- Chapter 551 of 1980; Labor Law Article 28; Public Health Law Article 48 enacted June 26, 1980 (New York Public Law).
- Subpart H Chapter 72 of New York Code of Regulations.
- 6 NYCRR Subpart 373-2.2(h) Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities.
- 40 CFR 270.14(b)(12)
- 20 CFR 1910.1200(e)

Roth Bros. has purchased slides and published materials to be used for their training program.

As stated in the introduction - purpose of Hazardous Waste Training for employees, employees in relevant positions must be familiar with any emergency procedures, equipment and systems including hazardous waste.

As conducted by the trainer, any procedures for using, inspecting, repairing and replacing any emergency or monitoring equipment that pertains to the production requirements or nature of the company shall be discussed.

Key parameters for any automatic waste feed cut-off systems, as they pertain to production requirements or specific equipment, shall be reviewed.

Communication and alarm systems are pointed out through our safety program.

Response to fire or explosions training is done through our safety program. This includes proper usage of fire fighting equipment, reporting to various fire or safety groups, first aid and evacuation of the plant.

Employees shall be made aware of ground water contamination as it occurs and shall be trained in the various procedures and recognition of such.

All inspection and repair of above items are done during our shutdown periods.

SECTION 4

TRAINING SYLLABUSSession 1
Regulations

- 1.1 Regulation Overview
 - 1.1.1 Hazardous Materials 49CFR DOT
 - 1.1.2 Hazardous Chemicals 29CFR OSHA
 - 1.1.3 Hazardous Substance 40 CFR 300
 - 1.1.4 Hazardous Waste 6 NYCRR 370-373
 - 1.1.5 Others
- 1.2 Relationship of Regulations
- 1.3 Organization and Management
- 1.4 Hazardous Materials DOT 172.504
- 1.5 Hazardous Chemicals MSDS
- 1.6 Hazardous Substances SPCC Response
- 1.7 Hazardous Waste
 - 1.7.1 Definitions
 - 1.7.2 Types of Waste

Session 2
Health and Safety;
Waste Type Identification

- 2.1 Health and Safety
 - 2.1.1 Physical Examination
 - 2.1.2 First Aid
 - 2.1.3 Personal Hygiene
 - 2.1.4 Smoking Regulations and Recommendation
 - 2.1.5 Protective Clothing and Equipment
 - 2.1.6 Use of Chemical Cartridge Respirator
- 2.2 Plant Security and Cleanliness
 - 2.2.1 Security
 - 2.2.2 Safety
 - 2.2.3 Daily Cleanup
- 2.3 Identification of Waste
 - 2.3.1 Hydrocarbon and oxyhydrocarbon solvents
 - 2.3.2 Chlorinated hydrocarbon solvents
 - 2.3.3 Blended Fuel
 - 2.3.4 Acids and Bases
 - 2.3.5 Waste Water
 - 2.3.6 Non-acute Hazardous Solids
- 2.4 Documentation

Session 3
Waste Handling
and Testing

- 3.1 Hazardous Waste Product Survey
- 3.2 Documentation
 - 3.2.1 MSDS
 - 3.2.2 Analysis
- 3.3 Site Survey
- 3.4 Labels and markings and Placards of Hazardous Waste
- 3.5 Manifest

Session 4
 Transportation Requirements
 D.O.T. 173

- 4.1 Manifest
 - 4.1.1 Use and Comparisons
 - 4.1.2 Requirements
- 4.2 Driver Requirements DOT 177
 - 4.2.1 Federal Motor Carrier Safety Regulations
 - 4.2.2 Other Local and State Regulations
- 4.3 Classification and Loading Restriction
- 4.4 Packaging and Drum Requirements
 - 4.4.1 Reuse of Container
 - 4.4.2 Empty Containers
 - 4.4.3 Examples
 - 4.4.4 Leakers
- 4.5 Requirements for Loading and Unloading Hazardous Materials and Waste
- 4.6 Hazardous Materials, Waste and the Driver
 Slide Show

Session 5
 Operation Responsibilities

- 5.1 Employee Identification of Responsibilities
 - 5.1.1 Compare Responsibility to Permit Requirements
 - 5.1.2 Modify Procedures to Conform
- 5.2 Waste Inspection Routine
- 5.3 Each Employee
 - 5.3.1 Perception of Activities
 - 5.3.2 Key Words
 - 5.3.3 Job Description
 - 5.3.4 Permit Requirements
 - 5.3.5 Rewrite Job Description

Session 6
 Process Description
 and Equipment

- 6.1 Waste Characteristics
- 6.2 Process Information
 - 6.2.1 Container Storage
- 6.3 Inspection, Recordkeeping and Reporting

Session 7
 Procedures to
 Prevent Hazards

- 7.1 Security Plans
- 7.2 Inspection Schedule
- 7.3 Preventive Procedures
- 7.4 Emergency Equipment
- 7.5 Coordinator Agreements
- 7.6 Prevent Reaction of Ignitable, Reactive, and Incompatible

Session 8
Contingency Plan

- 8.1 Emergency Coordinator
- 8.2 Implementation of Contingency Plan
- 8.3 Emergency Response Procedure
 - 8.3.1 Fire and/or Explosion
 - 8.3.2 Spills or Material Release
 - 8.3.3 Ground-Water Contamination
 - 8.3.4 Waste feed Cutoff
 - 8.3.5 Emergency Shutdown Response
- 8.4 Emergency Equipment
- 8.5 Emergency Communication - Use and Maintenance

SECTION 5
SPECIFIC TRAINING BY JOB TITLE

JOB TITLE	SYLLABUS SESSION							
	1	2	3	4	5	6	7	8
Secretary of Corporation	X	X	X	X	X	X	X	X
Weigh Master	X	X	X	X	X	X	X	X
Assistant Weigh Master	X	X	X	X				X
Truck Driver	X	X	X	X				X
Shop Truck Operator "C"	X	X	X	X	X	X	X	X
Receiving Supervisor	X	X	X	X	X	X	X	X
Baghouse Operator	X	X						X
Baghouse Mechanic	X	X						X
Shipping Supervisor	X	X	X	X	X	X	X	X
Stacker Operator "A"	X	X						X
Furnace Operator "B"	X	X						X
Melt Foreman	X	X				X	X	X
Emergency Coordinator	X	X	X	X	X	X	X	X
Environmental Inspector	X	X			X	X	X	X

SECTION 6
JOB DESCRIPTIONS

The following pages provide written job descriptions for all positions where hazardous waste may be encountered.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
 TELEPHONE: 315/463-9500

JOB DESCRIPTION

TITLE: SECRETARY OF CORPORATION

SPECIFIC DUTIES: Direct Traffic engaged in maintaining customer schedule and shipping items from stock or production in accordance with customer requirements. Interpret customers' orders as to packaging requirements and requisition of purchase of packing material in quantities and in special design to meet government standards or customer specification. Responsible for dispatching company trucks. Maintain files of vendors, material certification covering all raw material received and parts purchased, and verify certification as to accuracy. Maintain record of company material located at outside vendors and furnish monthly record to Cost Department. Furnish monthly estimated production and shipping schedule to management. Assist in filling out various government reports. Furnish Sales Department with transportation charges for quotation.

Oversees all necessary papers and manifests and customs documents for all shipping loads, checks billing, freight bills and approves for payment. Performs minor payroll functions bank deposits and expense checks.

REPORTS TO: PRESIDENT

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
 TELEPHONE: 315/463-9500

JOB DESCRIPTION

TITLE: WEIGH MASTER

SPECIFIC DUTIES: Oversees the weight of incoming and outgoing raw material and scrap merchandise and keeps records of weight pertaining thereto. Directs other receiving department workers during incoming and outgoing loading, directs asst. weighmaster on basic responsibilities. Responsible for monitoring and all weigh processes, information, shipping manifest, bill of lading, or purchase orders. Makes up trucking delivering schedules. Schedules for drivers, does expediting of material. Scrap processing and statistical analysis of pricing, shipment and costing of various delivery modalities.

Oversees duties of drivers and asst. weighmaster, observes applicable safety standards.

REPORTS TO: PRESIDENT OF COMPANY

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

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TELEPHONE: 315/463-9500

JOB DESCRIPTION

TITLE: ASST. WEIGH MASTER

SPECIFIC DUTIES: Oversees the weight of incoming raw material and scrap merchandise and keeps records of weight pertaining thereto. May direct others receiving department workers during incoming or outgoing loading. Responsible for motoring and weighing material and comparing that information to the information on shipping paper, bills of lading, or purchase orders. Notifies the Weigh Master of any discrepancies in quantity or quality of material.

Records information on material weight, storage etc... as to material received. Passes on all required reports to Weigh Master and receives notices of expected deliveries from him. Performs duties with minimal supervision. Observes all applicable safety standards.

REPORTS TO: WEIGH MASTER

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE 315 463 9500

Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE Truck Driver

GENERAL RESPONSIBILITIES: To drive intercity truck or combination unit on streets, highways, and within the company yard in order to pick up or deliver scrap metals, raw materials, or finished ingot material.

SPECIFIC DUTIES:

To inspect vehicle and required parts and accessories to determine safe operating condition prior to departure on trip. Fuel the unit. Check shipping papers to determine the nature of the load and any special hazards, and, when feasible, to check load itself, and methods of securing it.

Operate vehicle in compliance with company rules and all applicable laws and regulations and in accordance with accepted principles of safe driving.

Deliver freight to consignees and/or pick up freight from shippers.

Load and unload freight as required. Perform other work as assigned by the Shipping and Receiving Supervisor.

Report all accidents involving himself or company equipment. Maintain trip records as required. Maintain records required for compliance with State and federal regulations including drivers' logs, record of fuel purchases, mileage records, etc.

Properly use and care for all equipment assigned to him for the performance of his job. Report conditions that are in need of repair.

Report promptly any delays due to breakdown, weather or traffic conditions, or other emergency, or in the event of irregularities relating to pick-up or delivery of freight.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE: 315-463-9500

Mailing Address: P. O. BOX 639

EAST SYRACUSE NY 13057

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Is the representative of the company when loads are delivered or picked up and, therefore, must be courteous, available, and obliging to customers and their employees. At all times, observes all applicable safety rules and precautions.

REPORTS TO:

Receiving Supervisor of Plant #2

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE 315-463-9500

Mailing Address, P. O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: SHOP TRUCK OPERATOR "C"

SPECIFIC DUTIES: Learns to operate a forklift truck or front end loader in order to collect or deliver raw materials, parts, or finished products in or between departments or buildings. Assists in the unloading and weighing of incoming scrap or production material and, under supervision, moves the material to the appropriate storage locations; learns to differentiate among the various grades of scrap material in stock in order to move them to the melting furnaces or processing areas as required.

Assists in the loading of outgoing finished products under the direct supervisions of a Grade "A" Forklift Operator or the Shipping Supervisor. Is taught the proper loading procedures in order to prevent accidental shifting of loads while in transit.

Responsible for reporting any problems with his assigned machine to the Supervisor of Mechanics. Does no repair work. Acquires fundamental expertise in operating a powered unit under various conditions, ie; on inclines or declines, inside boxcars and trailers and under all types of weather conditions.

The trainee operator learns the appropriate precautions to be followed in order to insure a safe operation.

REPORTS TO: Melt Foreman, Shipping or Receiving Supervisor or the Plant Superintendent (whichever is customary in a particular department).

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE: 315-463-9500

Mailing Address: P. O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: RECEIVING SUPERVISOR

SPECIFIC DUTIES: Oversees the receipt of incoming raw materials and scrap merchandise and keeps records pertaining thereto. Supervises other receiving department workers (shop truck operators) during unloading. Responsible for checking or weighing incoming materials and comparing that information to the information on shipping papers, bills of lading, or purchase orders. Notifies the General Plant Foreman of any discrepancies in quantities or quality of the material received before signing truck driver's receiving papers.

Records the date, time, quantity, source, and storage destination of materials received. Makes certain that forklift operators move the materials to the appropriate storage area or department. Insures that materials are stored in a safe and proper manner for ease of retrieval.

Passes on all required reports to the General Plant Manager and receives notices of expected deliveries from him. Performs duties without supervision. Observes all applicable safety standards.

REPORTS TO: Plant Superintendent

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 633 • EAST SYRACUSE, NY 13057
TELEPHONE: 315/463-9500

JOB DESCRIPTION

TITLE: BAGHOUSE OPERATOR

SPECIFIC DUTIES: Performs daily routine maintenance checks on all moving parts of baghouse(s); removal and replacement of filled dust boxes, maintains chemical lever in additive system; visual inspection of bags and interior of modules; advises CHF mechanic of any and all repairs required and in consent with CHF makes repairs as capable with helper changes bags as required; maintains records required in an orderly and clean manner. Keeps baghouse area well policed and swept.

REPORTS TO: MILLWRIGHT FOREMAN

The above description covers most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE 315 463 9500

Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: BAGHOUSE MECHANIC

SPECIFIC DUTIES: Performs a wide variety of maintenance procedures on the equipment, responsible for containing air-borne particulate matter and neutralizing certain by-products of the smelting or burning operation. Duties include visual inspection of the "bags" - checking for holes, maintenance on the rotating screws, shaker mechanisms, discharge hoppers, drive motors timing cycles, and the physical structures of the baghouse. Observing temperatures and infusing required additives into system. Experience with welding, blower repair and changing bearings with some electrical knowledge and a Grade "B" mechanical background. Uses logs and checklists to insure that all parts of the system are properly maintained on a regular basis.

Responsible for observing the pressure readings within each baghouse, the sequential shaking of the bags, and the positioning of the damper controls. Removes baghouse dust to appropriate holding areas and processes it, if necessary, by use of a chemical blending machine.

Reports to the Supervisor of Mechanics any unusual problems. Conversant with the precautionary measures which insure a safe working environment for himself/herself and all other people they come in contact with.

REPORTS TO: Supervisor of Mechanics



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE: 315/463-9500

Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

CONTINUOUS CHECKS ON BAGHOUSE

1. Δ P across each compartment. - Record in log book
(Do not change bags unless Δ P is more than 3 inches.)
2. Static pressure at Baghouse inlet - Record in log book
(Do not allow to go beyond 4 inches.)
3. Baghouse inlet temperature Record in log book
4. Discharge from fans - no smoke or smoke Record in log book
5. AMP readings of fans - Record in log book

REAGENT (LIME OR) ADDITIVE

1. Add after every shake cycle when shake cycles are controlled manually.
2. Add continuously when shake cycles are automatically controlled.
3. Time of shake cycle. Record in log book
4. How many bags or pounds of new Reagent were added and what time of day. Record in log book



ROTH BROS. SMELTING CORP.

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EAST SYRACUSE NY 13057

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Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

- 2 -

DAILY MAINTENANCE CHECKS

SHAKERS

CHECK TO SEE:

- | | |
|---|--------------------|
| 1. Nothing binding | RECORD IN LOG BOOK |
| 2. No loose bolts or nuts | " " " " |
| 3. Bushings not worn or have excessive play | " " " " |
| 4. Belts and sheaves are ok | " " " " |
| 5. Bearings are ok | " " " " |
| 6. Proper lubrication is done | " " " " |

DAMPERS

CHECK TO SEE:

- | | |
|--|--------------------|
| 1. Nothing binding | RECORD IN LOG BOOK |
| 2. No loose nuts or bolts | " " " " |
| 3. Signs of wear in bearings and connecting pins | " " " " |
| 4. Proper lubrication | " " " " |

SCREWS

CHECK TO SEE:

- | | |
|--|--------------------|
| 1. Nothing binding | RECORD IN LOG BOOK |
| 2. No loose nuts and bolts | " " " " |
| 3. Covers are all on | " " " " |
| 4. Drives - all belts and chains are ok | " " " " |
| 5. Bearings - are free and properly lubricated | " " " " |

MANOMETERS

(CHECKING CONDITION OF BAGS)

- | | |
|---|--------------------|
| 1. Δ P before shaking | RECORD IN LOG BOOK |
| 2. Manometer reads zero when isolation damper is closed | " " " " |
| 3. Δ P after shaking | " " " " |
| 4. Rate at which P increases | " " " " |

FANS

CHECK TO SEE:

- | | |
|------------------------|--------------------|
| 1. Vibration | RECORD IN LOG BOOK |
| 2. Loose bolts or nuts | " " " " |
| 3. Belts | " " " " |



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE 315-463 9500

Mailing Address: P. O. BOX 639

EAST SYRACUSE NY 13057

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Weekly Maintenance Checks

Record in Log Book

1. Physically watch operation of isolation dampers and shaker mechanisms, of each compartment, while baghouse is in shake cycles, operate manual isolation dampers to assure they are operable.
2. Inspect baghouse housing for loose bolts, cracks, broken welds, etc. Check doors for leaks.
3. Check duct work for leaks, loosen clean out covers, signs of corrosion, etc.
4. Remove some covers on screw conveyors to be able to inspect build up on screws and trough.

Monthly Maintenance Checks

Record in Log Book

1. If there has been no reason to enter the baghouse for the past month, open it and check bags to see if any are down, too loose or too tight, see how the bags feel, stiff, full of dust or ok. If there is considerable dust on the floor check for a torn bag.
2. Anytime you have to enter the baghouse to replace or repair a bag make these same checks, that should suffice for that month's inspection.
3. On this once per month in-baghouse inspection, someone must accompany you for safety reasons.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE 315-463-9500

Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: SHIPPING SUPERVISOR

SPECIFIC DUTIES: Oversees the preparation of finished ingot or prepared scrap materials for shipment and keeps records pertaining thereto. Maintains a perpetual inventory on the various items in the finished product storage area. Total responsibility for correctly assembling orders after receiving notice of shipment and truck pick-up schedule from the Plant Superintendent. When assembling an order, takes note of the particular alloy or scrap item and total weight requested. When shipping ingot, keep track of the heat numbers being shipped on a tally sheet, the weight of each bundle, and the number of pallets. Also, make certain that the material is properly color coded. After the shipment is completed, departmental perpetual inventory books are altered to reflect the shipment made.

Supervises other shipping department workers (shop truck operators or utility men) in the proper loading procedures in order to assure that loads do not accidentally shift during transit to customers. Observes, and relates to others, all applicable safety standards.

Performs duties without supervision. Reports to the Plant Superintendent for daily shipping schedules and perpetual inventory update.

REPORTS TO: Plant Superintendent

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE: 315-463-9500

Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: STACKER OPERATOR "A"

SPECIFIC DUTIES: Proficient with the operation of the automatic ingot stacker and related conveyor systems in order to produce pallets of ingots of proper weight and appearance.

Inspects ingots as they emerge from the casting molds for any imperfections which might cause an ingot to be rejected. Responsible for trimming excess from each ingot. Arranges ingots in a set pattern so that the automatic machinery will produce pallets that are properly stacked. Regulates the pace of the stacking operation.

Operates forklift truck, if necessary, to move pallets of ingot from the stacking area to the weighing and storage areas. Can operate a banding machine to secure each pallet of ingot. Keeps stacking and banding area neat and clean in order to insure a safe working environment for all employees in that area.

Observes and relates to others, the safety precautions to be followed in this operation. Reports to the Melt Foreman for production instructions. Supervises the "B" and "C" stacker operators.

REPORTS TO: Melt Foreman

The above description covers the most significant duties performed but does not exclude other work assignments not mentioned.



ROTH BROS. SMELTING CORP.

5223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE 315-463 9500

Mailing Address: P. O. BOX 539

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: FURNACE OPERATOR "B"

SPECIFIC DUTIES: Performs all operations necessary to charge, dress, and pour off the furnace into ingot or sow molds. Operates forklift trucks and front end loaders as necessary.

Becomes proficient with locating and identifying the materials which make up a heat of metal. Basic familiarity with heat sheets and weight recording procedures. Learns the operation of the automatic burner controls and the furnace valves for melt control. Can operate the metal pump on the furnace, removing and replacing it as needed. Helps assemble new pumps or repair used pumps by making minor adjustments daily, keeps pump oilers in air lines filled with lubricating oil. Keeps pouring equipment clean and coated daily.

During pouring of ingots or sows, employee controls and regulates the pouring operation to produce good ingots. Aids in removing sows or ingots from the molds.

Assists in cleaning out the furnace. Periodically, cleans out the ingot pouring pit as well. Performs other miscellaneous duties as required throughout the plant. Generally, learns to become proficient in all duties of the Furnace operator "A" with the purpose of eventually qualifying for the position. Works under the supervision of the "Melt Room Foreman" and the Furnace Operator "A".

Works in a safe and careful manner; particularly observing the safety precautions applicable to the handling of molten metal.

REPORTS TO: Melt Foreman



ROTH BROS. SMELTING CORP.

8223 THOMPSON ROAD

EAST SYRACUSE NY 13057

TELEPHONE: 315 463 9500

Mailing Address: P.O. BOX 639

EAST SYRACUSE NY 13057

JOB DESCRIPTION

TITLE: MELT FOREMAN

SPECIFIC DUTIES: Receives prepared heat sheets from the Assistant Plant Manager, Plant Manager or the Department Supervisor (Solder Dept. only) in order to direct the accumulation of required raw materials for each individual heat. Directs the movement of these materials to the furnace or pot as required.

Performs quality control functions during the melting process. Responsible for drawing sample "buttons" from each melt for laboratory analysis of composition. Advises the Assistant Plant Manager, Plant Manager or the Department Supervisor (Solder Dept. only) when the furnace or pot is ready to be poured off. Supervises and directs all furnace operators, stacker operators, and shop truck operators during the entire operation procedure. Is familiar with the operation of all panel controls, baghouse dampers, and the Wabash system (Aluminum Department only).

Performs all functions with a minimum of supervision. Observes and instructs other employees on all applicable safety standards; particularly those pertaining to the handling of molten metal.

REPORTS TO: Assistant Plant Manager, Plant Manager, Department Supervisor (Solder Dept. only) or the Night Superintendent (Aluminum Department - Second Shift only).

HAZARDOUS WASTE EXPOSURE WITHIN JOB DESCRIPTION LIMITS

SECRETARY OF COMPANY	in lieu of hazardous waste management handles and reviews any manifest involving the transportation process of waste.
WEIGHMASTER and ASST. WEIGHMASTER	responsibility for proper weight identification and storage direction of incoming or outgoing waste products. Double checking proper paper work and labeling as such.
TRUCK DRIVERS	responsible for transportation of hazardous waste material. Aware of safety precautions and making sure proper paper work is in order upon pick-up or delivery.
FORKLIFT OPERATORS	transport hazardous waste from loading areas to storage or staging areas, or visa/versa - may check to see if material is identified correctly.
SHIPPING SUPERVISOR	keeps records as to shipments and maintain a perpetual inventory as to status of hazardous waste material.
BAGHOUSE MACHANIC	performs wide variety of maintenance procedures to comply with inspecting, repairing and replacing emergency monitoring equipment which produce hazardous waste -for further specific detail see J.D.
STACKER OPERATOR (lead operation)	sorts and stacks ingot for shipment -handles lead-see J.D.
FURNACE OPERATOR (lead operation)	feeds and changes lead material -see J.D.
MELT FOREMAN (lead operation)	oversees melt operation to maintain quality responsible for proper in-house handling of hazardous waste products.

Certificate Of Achievement



This certificate has been awarded to

Mr. Neal Schwartz

at

PHILADELPHIA, PA

For successfully completing the Lion Technology Inc.
Compliance Management Course on the applicable regulations
of the United States Environmental Protection Agency and the
United States Department of Transportation regarding the safe
disposal of wastes designated as hazardous,

as of 26th May 1983

W. Maggart
INSTRUCTOR

LION TECHNOLOGY INC.
60
83

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G-29



NEIL SCHWARTZ

has completed Five hours of
 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) training and instruction
 offered by SCA Chemical Services, Inc., Model City, New York

at SCA's Hazardous and Solid
Waste Management Seminar
Sheraton - Syracuse, N.Y.

Program Coordinator Paul M. Bigio

Date June 19, 1984

Vice President and General Manager [Signature]

Date June 19, 1984

G-30



NEIL SCHWARTZ

has completed five hours of
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) training and instruction
 offered by SCA Chemical Services, Inc., Model City, New York
 at SCA's Hazardous and Solid
Waste Management Seminar
Sheraton - Syracuse, N.Y.

Program Coordinator _____

Date June 19, 1984

Vice President and General Manager _____

Date June 19, 1984

ENVIRONMENTAL MANAGEMENT COMPLIANCE

CERTIFICATE OF COMPLETION

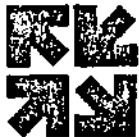
TRAINING PROGRAM: HAZARDOUS WASTE MANAGEMENT IN NYS - 1986

AWARDED TO: DAVID B. TALLO

To all persons to whom this writing may come, be it known that we have caused this certificate to be signed by the duly authorized instructor of ENVIRONMENTAL MANAGEMENT LTD.

Diana W. Christ

PRESIDENT, EML



Ronald J. Wancore

INSTRUCTOR

MAY 2, 1986

DATE

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ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
 TELEPHONE: 315/463-9500 EASY LINK: 910 380-6093

NOVEMBER 17, 1986

RESPONSE TO N.Y.S.D.E.C COMMENTS DATED NOVEMBER 14, 1986,
 SPECIFICALLY SECTION 5.0 TRAINING.

THE EDUCATIONAL BACKGROUND AND HAZARDOUS WASTE MANAGEMENT
 TRAINING FOR THE TRAINING DIRECTORS OF ROTH BROTHERS
 SMELTING CORPORATION IS AS FOLLOWS:

NEAL SCHWARTZ: GENERAL MANAGER

B.S. MARKETING PENNSYLVANIA STATE UNIVERSITY 1962

POST GRADUATE ENGINEERING CURRICULUM , PENNSYLVANIA STATE
 UNIVERSITY 1963

SPECIFIC TRAINING(SEMINARS):

MAY 1983	LION TECHNOLOGIES, INC. HAZARDOUS WASTE DISPOSAL
JUNE 1984	SCA CHEMICAL SERVICES, INC. HAZARDOUS AND SOLID WASTE MANAGEMENT
OCTOBER 1985	ENVIRONMENTAL MANAGEMENT, LTD. HAZARDOUS WASTE MANAGEMENT PERTAINING TO THE MANDATES OF NEW YORK STATE

DAVID B. TALLO: DIRECTOR OF PERSONNEL

B.S. BUSINESS/ECONOMICS UNIVERSITY OF SCRANTON 1976

SPECIFIC TRAINING(SEMINARS):

MAY 1986	ENVIRONMENTAL MANAGEMENT, LTD. HAZARDOUS WASTE MANAGEMENT PERTAINING TO THE MANDATES OF NEW YORK STATE
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SPECIFIC TRAINING SYLLABUS:

THE MATERIAL CONTAINED IN THE SPECIFIC TRAINING SEMINARS ATTENDED INCLUDED, BUT WAS NOT LIMITED TO THE FOLLOWING AREAS OF CONCENTRATION:

UNDERSTANDING OF THE FOLLOWING LEGISLATION:

1972 CLEAN WATER ACT
 1974 HAZARDOUS MATERIALS TRANSPORTATION ACT
 1976 RESOURCE CONSERVATION & RECOVERY ACT
 1980 COMPREHENSIVE ENVIRONMENTAL RESOURCE LIABILITY ACT
 1984 RESOURCE CONSERVATION & RECOVERY ACT AMMENDMENT

6 NYCRR PART 370	HAZARDOUS WASTE MANAGEMENT SYSTEM
6 NYCRR PART 371	IDENTIFICATION AND LISTING OF HAZARDOUS WASTES
6 NYCRR PART 372	HAZARDOUS WASTE MANIFEST SYSTEM & RELATED STANDARDS FOR GENERATORS, TRANSPORTERS AND FACILITIES
6 NYCRR PART 373	HAZARDOUS WASTE TREATMENT, STORAGE DISPOSAL FACILITY PERMITTING REQUIREMENTS
6 NYCRR PART 374	MANAGEMENT OF SPECIFIC HAZARDOUS WASTES

CODE OF FEDERAL REGULATIONS- 29 (LABOR)
 CODE OF FEDERAL REGULATIONS- 49 (TRANSPORTATION)

THE PHILOSOPHY OF ROTH BROTHERS SMELTING CORPORATION HAS BEEN TO EDUCATE ITS MANAGEMENT TEAM AND KEEP THEM ABREAST OF THE LATEST TECHNOLOGICAL AND LEGISLATIVE CHANGES IN THE INDUSTRY.

TO ACHIEVE THIS END THE AFORENAMED TRAINING HAS BEEN SUCCESSFULLY COMPLETED AND YEARLY COURSES ATTENDED TO MAINTAIN TECHNICAL COMPENTENCY IN THE FIELDS MENTIONED.

IN ADDITION TO THE ATTENDANCE OF SEMINARS AND SCHOOLING, SUBSCRIPTIONS TO THE FOLLOWING SERVICES IS MAINTAINED AND PROVIDED TO ALL MEMBERS OF THE MANAGEMENT TEAM:

FEDERAL REGISTER
 ENVIRONMENTAL REPORTER, BUREAU OF NATIONAL AFFAIRS, INC.

Roth Brothers Smelting Corporation
6223 Thompson Road
East Syracuse, NY

EPA I.D. No. NYD006977986

6NYCRR PART 373 PERMIT
ATTACHMENT IV
PREPAREDNESS AND PREVENTION
CONTINGENCY PLAN

3.03 Emergency Preparedness

Roth Bros. has taken appropriate measures to prepare for an emergency. In the way of communications devices, they have telephones and a plant-wide paging system capable of signaling personnel indoors and outdoors. Firefighting equipment is available on site including several fire extinguishers and automatic sprinklers in Plant #1. If the automatic sprinkler system is activated, an alarm goes off at a private security firm. This firm also tests the sprinklers and alarm on a monthly basis. The fire extinguishers are weighed, tested, and tagged annually. The locations of all equipment used for emergencies, communications, spill control and decontamination are given in the Contingency Plan. The local fire department has been to the site and is familiar with the facility layout and hazardous properties of wastes stored on site. Aisle space will be maintained per Figure 16, 17, 18
in Attachment VI

3.04 Contingency Plan

Roth Bros.' Contingency Plan is included in Appendix F. This Plan describes procedures to be followed in the event of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. The Plan will be activated immediately should any of these events occur. This Plan has been distributed to each of the primary and alternate emergency coordinators and to the local fire department. A copy is kept at the facility in the office of the General Manager. Based on the nature of Roth Bros.' waste, the Contingency Plan was not distributed to local hospitals, and it does not include evacuation procedures. The main hazard associated with Roth Bros. waste is lead. According to "Dangerous Properties of Industrial Materials", by Sax, lead is a cumulative poison. Its toxic effects are the result of chronic (long-term or repeated) exposure rather than acute (single high dose) exposure. As such, the release of this material would not cause a medical emergency. Evacuation is most appropriate to facilities which handle solvents or acids which could produce toxic vapor clouds. The wastes stored at Roth Bros. are not liable to travel at high concentrations for any appreciable distance. As such, evacuation would not be required. Roth Bros.' Emergency Action Plan for other types of emergencies and a letter documenting Roth Bros. contact with the local fire department are also included in Appendix F.

3.05 Specific Hazard Prevention Activities

Roth Bros. Smelting Corp. has procedures, structures, and equipment available as necessary to prevent the specific hazards listed in 6 NYCRR 373-1.5(a)(2)(viii). These items are discussed below.

A. Hazards in Unloading Operations

Dusting, leaks and spillage of hazardous waste are prevented during loading, unloading, and internal transport operations at Roth Bros. For the flue dusts and slag, this is accomplished by covering the boxes of dust with plastic bags, banding them to wooden pallets with metal straps, and transporting the pallets with forklifts. The electroplating sludge is contained in steel drums which are also transported on pallets with forklifts. Boxes of aluminum dust and chip dryer/zinc dust are loaded onto trailers from the docks at Plant #1 (Figure 2). The lead dust, copper dust, crusher dust and slag are loaded from the docks at Plant #2, and electroplating sludge is unloaded from there (Figure 3). At both Plants, the loading docks are raised above ground level such that they are flush with the trailers. This eliminates the need for ramps or lifting of waste containers, thus reducing hazards in unloading operations.

At Plant #1, there's a storm sewer in the road in front of the loading dock. The procedures described above will minimize or eliminate the likelihood of a hazardous waste spill during unloading operations at that dock. However, if a release were to occur, wastes would be kept out of the sewer by timely clean-up of the released material, according to the procedures in the Contingency Plan. This can be easily accomplished since the docks are inspected daily during loading/unloading operations (see Inspection Schedule in Appendix E). Because the wastes are solid, they are not likely to travel any appreciable distance prior to being cleaned up. The distance between the dock and the sewer is approximately 65 feet.

B. Run-off or Flooding of Hazardous Waste Areas

Each hazardous waste storage area is protected by side walls and a roof. These structures protect the storage containers from rain and snow, and they prevent run-off. The aluminum dust storage area is protected from run-on because it is located inside of Plant #1. The lead and copper dust storage areas are each protected from run-on by virtue of sloped flooring which slants from the back wall towards the open side of the shed. Additionally, the waste containers are stored on pallets which would elevate them above any minimal amount of water that might accumulate.

C. Contamination of Water Supplies

Maps included in the "Oswego River Basin Planning Report" show no potable groundwater or other water supplies in proximity to Roth Bros.

D. Equipment Failure and Power Outages

There is no electrical equipment associated with the storage of hazardous wastes at Roth Bros. Smelting Corp.

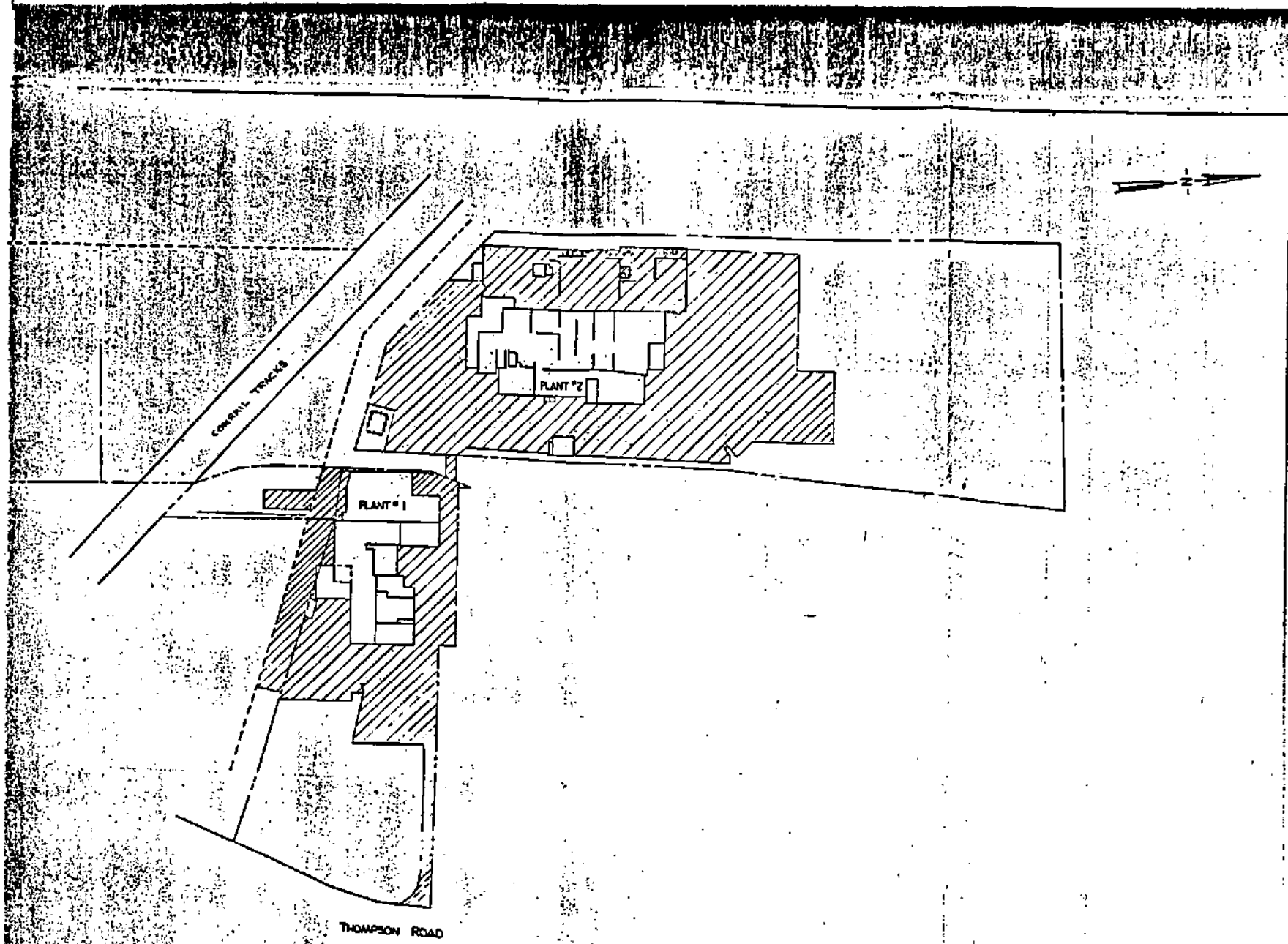
E. Undue Exposure of Personnel to Hazardous Waste



The only opportunity for exposure to the flue dusts occurs when the boxes are being filled. Once the boxes are full, they are covered with plastic bags and banded shut, such that no dusting could occur. The drums of electroplating sludge are open only when the sludge is being introduced to the lead furnace.


Personnel involved in baghouse operations and lead production at Roth Bros. Smelting Corp. are provided with respirators and protective clothing. Additionally, there are shower facilities in the Plant where personnel can clean up before lunch and before leaving the workplace.

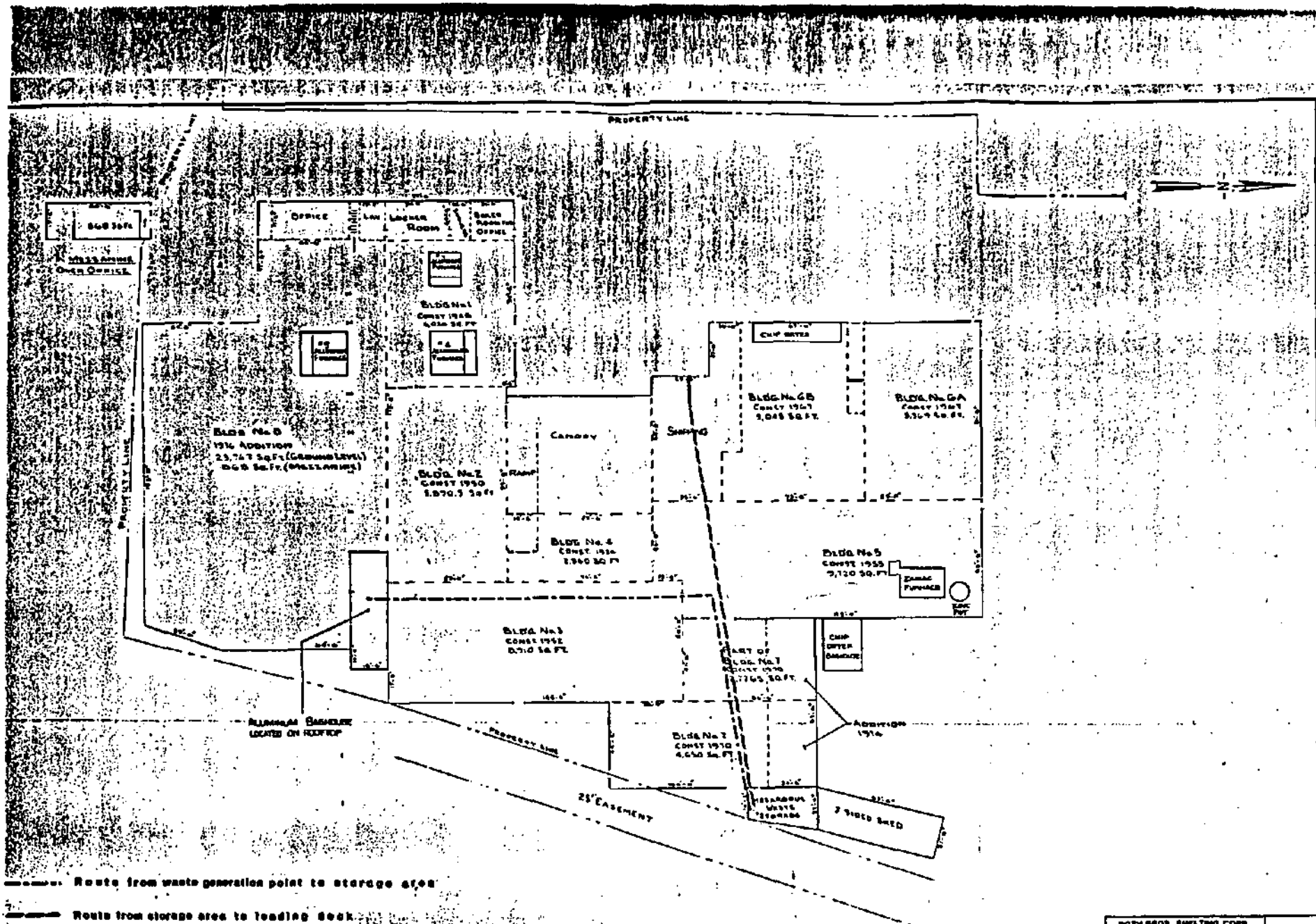
3.06 Accidental Ignition or Reaction

The hazardous wastes managed at Roth Bros. Smelting Corp. are not ignitable, reactive, or incompatible with other materials handled on site. Therefore there are no special precautions which need to be taken to protect these wastes from sources of ignition or reaction.



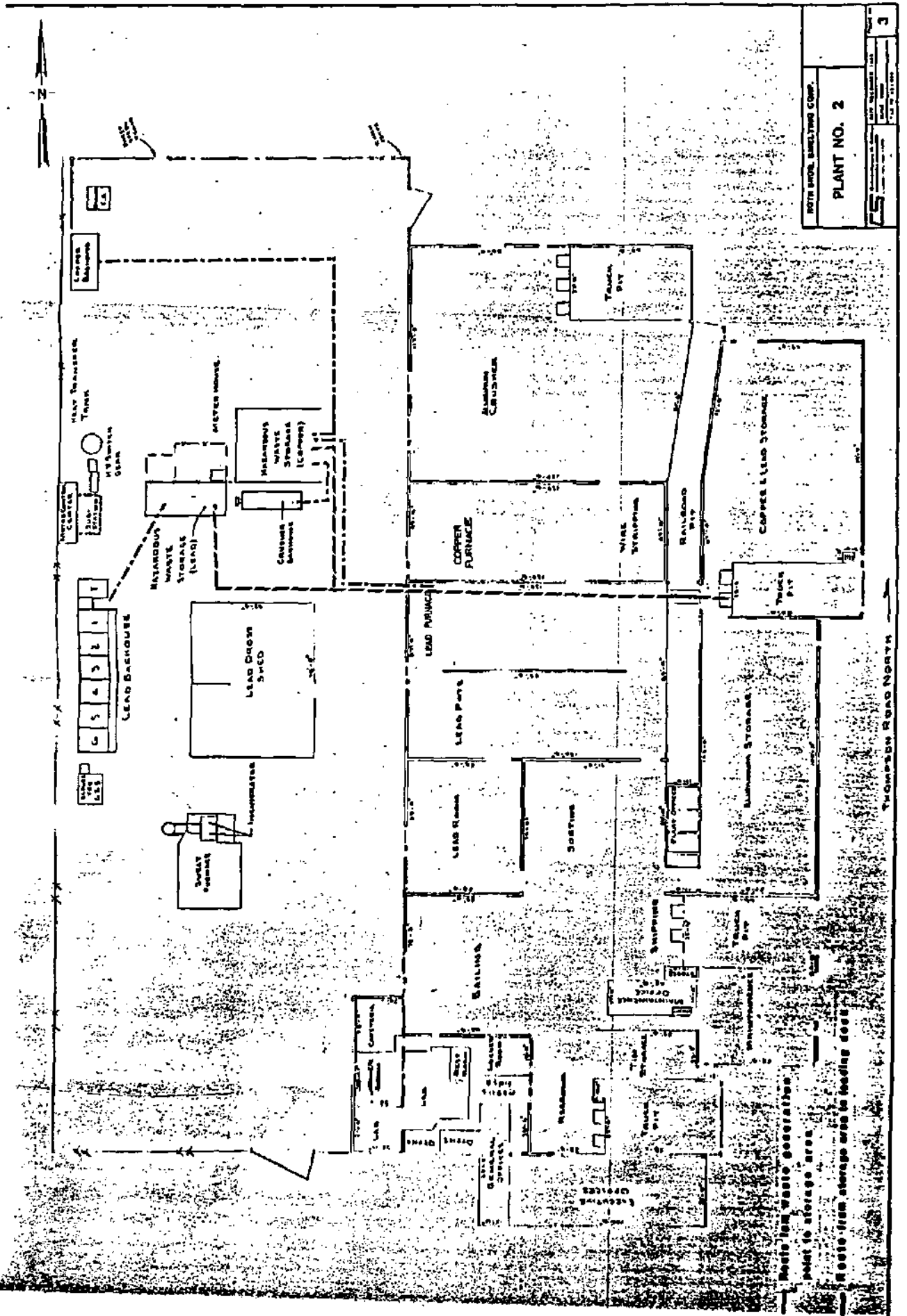
 PLANT AREAS
 PROPERTY LINE

ROTH SHOB. SMELTING CORP.	
FACILITY MAP	
	SHEET NO. 1 DATE: 1974



NORTH BRONX SMELTING CORP.	
PLANT NO. 1	
CS	9

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PLANT NO. 2

WITH THE BATTERY COOP.

THOMPSON ROAD NORTH

Basic lead waste generation point to storage area

Waste from storage area to feeding dock

CONTINGENCY PLAN
FOR
HAZARDOUS WASTE EMERGENCIES

AT

ROTH BROS. SMELTING CORP.
Thompson Road
East Syracuse, New York 13057

USEPA ID NO. NYD006977086

(Revised as of September, 1986)

ROTH BROS. CONTINGENCY PLANINTRODUCTION

Pursuant to the regulations promulgated under the authority of the Environmental Conservation Law of New York State in 6 NYCRR 373-2.4, Roth Bros. Smelting Corp. (Roth Bros.), as a storage facility for hazardous wastes, is required to follow a Contingency Plan in the event of an emergency, fire, explosion, or unplanned release of hazardous wastes to the air, soil, or surface waters.

The hazardous wastes stored at Roth Bros. are solid, non-explosive, non-flammable, non-reactive air pollution dusts, lead slag and electroplating sludge. They are containerized in plastic-lined, plastic-covered boxes, or drums, and stored in designated areas. The storage areas are paved and have roofs and side-walls. As such, the potential for an emergency involving the release of a hazardous waste is rather small. However, should such an emergency occur, the Emergency Coordinator will immediately execute the procedures detailed in this Plan. The primary and alternate Emergency Coordinators are entirely familiar with the nature and handling procedures appropriate to the hazardous wastes stored at Roth Bros., and they have the authority to commit the resources needed to carry out the Contingency Plan.

A copy of this Plan has been distributed to the local (East Syracuse) fire department. Based on the nature of Roth Bros.' waste, the Contingency Plan was not distributed to local hospitals, and it does not include evacuation procedures. The main hazard associated with Roth Bros. waste is lead. According to "Dangerous Properties of Industrial Materials", by Sax, lead is a cumulative poison. Its toxic effects are the result of chronic (long-term or repeated), exposure rather than acute (single high dose) exposure. As such, the release of this material would not cause a medical emergency. Evacuation is most appropriate to facilities which handle solvents or acids which could

produce toxic vapor clouds. The wastes stored at Roth Bros. are not liable to travel at high concentrations for any appreciable distance. As such, evacuation would not be required.

PROCEDURES

1. Any employee encountering an emergency situation should immediately contact an Emergency Coordinator. The following list of Coordinators is in order of preference, if the top name cannot be reached, proceed down the list until contact is made.

Primary Coordinator: Mr. Neal Schwartz

Home: 446-8274 210 Kittel Road, Fayetteville

Work: Extension 25 (463-9500)

First Alternate: Mr. Frank Meier

Home: 458-0847 7390 Jessica Drive, N. Syracuse

Work: Extension 34 (463-9500)

Second Alternate: Mr. Martin Roth

Home: 446-5374 103 Hamilton Parkway, DeWitt

Work: Extension 66 (463-9500)

2. The Emergency Coordinator should alert all personnel who could potentially be affected by the incident. This will be done using the facility's plant-wide paging system.
3. The Emergency Coordinator should identify the hazardous materials involved, and the quantity and areal extent of release. He should obtain information as follows:
 - a. Characteristics of the waste:
The hazardous wastes at Roth Bros are solid, non-flammable, non-reactive dusts, slag or sludge. The hazardous nature of

the wastes is due to their lead and cadmium content.

Analytical laboratory reports defining the nature of the wastes are on file at Roth Bros.

b. Exact source of emergency or release:

Possible sources of hazardous waste releases at Roth Bros. are the three (3) storage areas, the loading docks at Plant #1 and Plant #2, and the lead furnace.

c. Amount:

The amount of hazardous waste released can be determined by counting (or estimating) the number of damaged containers. The "Master Inventory" of wastes in storage may also be used. This Inventory is kept by the Company Secretary. Each box holds approximately 1.5 cubic yards of waste.

d. Areal extent:

The areal extent of release can be determined visually. The waste appears as a gray or black dust, slag or sludge. Where timing is not critical, analytical determinations can be made based on lead and cadmium content of sample materials.

4. The Emergency Coordinator should assess the possible hazards to human health and the environment. This assessment can be made based on the following considerations:

- a. There are no immediate or acute hazards associated with the types of wastes stored at Roth Bros.
- b. Long-term hazards can be negated by timely clean-up of the released material.

5. The Emergency Coordinator should determine the need for evacuation and notification of authorities.
- a. There are no hazards associated with the waste materials at Roth Bros. which are likely to call for an evacuation of any area outside the immediate bounds of the facility.
 - b. If necessary, the following Authorities should be contacted:

425-3333	East Syracuse Fire Department
425-2111	Onondaga County Sheriff
457-2600	New York State Police
428-4497	NYSDEC Region VII
518-457-7362	NYS 24-Hour Hazardous Material Spill Notification
1-800-424-8802	National Response Center
 - c. The Emergency Coordinator will supply the following information:
 - Name and telephone number of Emergency Coordinator
 - Name and address of facility
 - Type of incident and the time that it occurred
 - Name and quantity of the material involved
 - Extent of any injuries incurred
 - Possible hazards to human health or the environment outside of the facility
6. The Emergency Coordinator should use the following equipment and procedures to bring hazardous waste emergencies under control:

a. Equipment List

Fire Extinguisher - doorway of aluminum dust storage area

Fire Extinguisher - doorway of copper dust storage area

Fire Extinguisher - doorway of lead dust storage area

Additional Fire Extinguishers - see Figures 1 and 2

Plant-wide Paging System - Plant #2 Reception Area

Phones - See Figures 1 and 2

Lead Respirators - Plant #2 Plant Offices by Sorting Area

Empty Hazardous Waste Storage Boxes - Baghouses

Empty Drums - Plant #1 and Plant #2 Scrap Yards

Brooms, Shovels - Maintenance Office, Plant #1 and #2 Loading
Docks

High Efficiency Vacuum Cleaner - Lead Room

Catch Basin Cover - Plant #1 Loading Dock

b. Outside Contractor to be contacted if necessary:

Allwash of Syracuse, Inc.

6679 Moore Rd. 454-4473

c. Procedures

Fire

(1) Call the East Syracuse Fire Department.

425-3333

(2) Put out the fire with nearest fire extinguisher, if possible.

Explosion

(1) An explosion of hazardous materials is not likely to occur at Roth Bros. due to the nature of wastes stored there.

Release (Spill)(1) Aluminum Dust Baghouse and Storage Area

Conduct clean-up so as to minimize dust. Use proper personal protection equipment if required by OSHA or NIOSH. Obtain an empty storage box from the aluminum baghouse area. Shovel released material into the new box. Hand Sweep then power sweep area with high efficiency vacuum cleaner and put this material into the new box. Cover the box with plastic and place it in the aluminum dust storage area.

(2) Plant #1 Loading Dock and In-House Transportation Routes

Same procedure as (1) above. Also, if a spill occurs during a rainstorm, block the storm sewer outside the loading dock with the catch basin cover. This cover is made of sheet metal and has a rubber gasket.

(3) Copper Dust Baghouse and Storage Area

Conduct clean-up so as to minimize dust. Use proper personal protection if required by OSHA or NIOSH. Obtain an empty storage box from the copper baghouse area. Shovel released material into the new box. Hand sweep then power sweep the area and put this material into the new box. Cover the box with plastic and return it to the copper dust storage area.

(4) Lead Dust Baghouse and Storage Area

(a) Lead Dust: Obtain a lead respirator from the Plant Offices in the sorting area and wear it. Use additional personal protection equipment if required

by OSHA or NIOSH. Conduct clean-up so as to minimize dust. Obtain a new storage box from the lead baghouse area. Shovel the released material into the new box. Hand sweep and then power sweep the area with high efficiency vacuum cleaner and put this material into the new box. Cover the box with plastic and return it to the lead dust storage area.

(b) Electroplating Sludge: Use proper personal protection equipment if required by OSHA or NIOSH. Obtain a new drum from behind Plant #2. Shovel the sludge into the new drum. Close the drum and return it to the lead storage area.

(5) Plant #2 Loading Dock and In-House Transportation Routes

Same procedure as (3) or (4) above depending on which material it is.

(6) Lead Furnace

(a) Electroplating Sludge: Shovel the sludge back into the charging bucket so that it may be re-introduced into the furnace.

(b) Lead Slag: Shovel the slag back into the sow bucket. Sweep the area and put the sweepings in the sow bucket also.

7. The Emergency Coordinator should take any steps necessary to ensure that fires, explosions, and releases do not occur, recur, or spread. At Roth Bros. this will be accomplished by immediate clean-up of the hazardous materials, as discussed in item 6 above.

8. Immediately after the emergency, the Emergency Coordinator should provide for treating, storing or disposing of the recovered waste or other contaminated materials. The wastes will be containerized and shipped to a hazardous waste disposal facility. Roth Bros.' hazardous wastes are currently sent to Fondessy Enterprises, Inc. in Oregon, Ohio (EPA No. OHDO45243706).
9. Prior to resuming normal operations, the following tasks must be accomplished:
 - a. In consideration that Roth Bros.' hazardous wastes are not incompatible with other types of materials, this will not be a concern for the Emergency Coordinator.
 - b. The Emergency Coordinator will ensure that all emergency equipment listed in this Plan is cleaned and fit for use.
 - c. The Owner or Operator will notify the Commissioner of the NYSDEC Region VII that the facility is in compliance with paragraph (8) of NYCRR 373-2.4(g).
10. The Owner or Operator will note in the Facility Operating Record the time, date, and details of any incident that requires implementing the Contingency Plan. Within 15 days, he will submit a written report to the Commissioner that will include the following:
 - Name, address, and phone number of owner or operator
 - Name, address, and phone number of facility
 - Date, time, and type of incident
 - The extent of injuries, if any
 - Assessment of actual or potential hazards to human health or the environment
 - Estimated quantity and disposition of the recovered material from the incident.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
TELEPHONE: 315/463-9500

EMERGENCY ACTION PLAN
FOR
ROTH BROS. SMELTING CORPORATION



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
TELEPHONE: 315/463-9500

- 2 -

- A. EMPLOYEE EXIT ROUTES
- I. Plant 1 - In case of an emergency all employees in Plant 1 will leave by the nearest exit to their department and gather in the main parking lot when the plant page system instructs you to do so. (See exit areas circled in red on Plant Floor Plan).
 - II. Plant 2 - In case of an emergency all employees in Plant 2 will leave by the nearest exit to their department or by way of the truck docks, and gather in the main parking lot when the plant page system instructs you to do so. (See exit areas circled in red on Plant Floor Plan).
 - III. Office employees in Plant #2 will leave by either the front lobby door, weigh station truck dock doors, or the exit door in the laboratory and will gather in the main parking lot when the plant page system instructs you to do so. (See exit areas circled in red on Plant Floor Plan).



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
TELEPHONE: 315/463-9500

- 3 -

B. INTER PLANT RESPONSIBILITY

- I. Plant 1 - all machinery, pumps, rolling equipment will be shut off by operating employees. The chlorine car Millwright, Operations Manager or Assistant Operations Manager will shut off the chlorine tank car, The Production Maintenance Foreman will turn off all gas lines, lastly, the Assistant Electrical Foreman shall turn off all electricity via the cut off switch and will then leave by the nearest exit and meet in the main parking lot.

- II. Plant 2 - all machinery, pumps, rolling equipment-will be shut off by operating employees. The Maintenance Foreman or Lead Room Production Foreman will close all gas lines, the Electrical Foreman shall turn off all electricity via the cut off switch and will then leave by the nearest exit and meet in the main parking lot.

- III. The Plant Receptionist(s) will call the local fire, police or rescue unit, depending upon the type of emergency.



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 TELEPHONE: 315/463-9500

- 4 -

C. FOREMANS RESPONSIBILITY

- I. All Production Foreman with the exception of the Department 19 Production Foreman, Assistant Operations Manager and Shipping and Receiving Foreman will take a head count at the main parking lot and report "all accounted for" or number missing to:

- a. The first arriving fire official
- b. The Personnel Manager

The Department 19 Production Foreman shall proceed to the Thompson Road plant entrance to direct fire or emergency vehicles.

The Assistant Operations Manager shall proceed to the central gate again to direct emergency vehicles and personnel to their appropriate locations.

The Shipping and Receiving Foreman shall direct emergency personnel to location in Plant 2 emergency only.

The Crusher Room Foreman shall be responsible for the head count of the above personnel; employees.

- II. Should a foreman find an injured or trapped employee he/she will:
- a. See if employee is seriously injured or able to move.
 1. If able to move - help employee to parking area.
 2. If unable to move - note where employee is and seek help from first arriving fire official.



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TELEPHONE: 315/463-9500

- 5 -

D. RESCUE ACTIVITIES

- I. Rescue activities will be executed and/or organized by Rescue Personnel only, meaning all fire and rescue activities will be executed by professional/or organizational personnel trained to do so such as East Syracuse Fire Dept., EAVES, etc. However, common sense and employee reaction will be taken into consideration.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 839 • EAST SYRACUSE, NY 13057
TELEPHONE: 315/463-9500

- 6 -

E. FIRE REPORTING

- I. An employee discovering a fire must immediately notify his supervisor, who will then notify the fire department by phone and then notify the plant receptionist or use the page system to clear the area.
- II. Employees discovering a fire may also alert other employees by using the public address page and then notifying his supervisor
- III. Any employee with proper training is authorized to handle fire extinguishers:
 - At six month intervals the company who provides our fire extinguishers shall discuss the various types of fire extinguishers and provide "hands-on" training.
- IV. Sprinkler systems are inspected bi-annually by Factory Mutual fire inspector.
- V. It will also be the responsibility of the sprinkler control system person to inspect and record all sprinkler and fire/water control valves monthly.

Secondly, in case of fire he will get key, open valve and stay with the valve to make sure it stays open - then close per the fire chief's instructions. In case of reflash he will reopen valve.

It is responsibility to make sure sprinkler heads get replaced.



ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
TELEPHONE: 315/463-9500

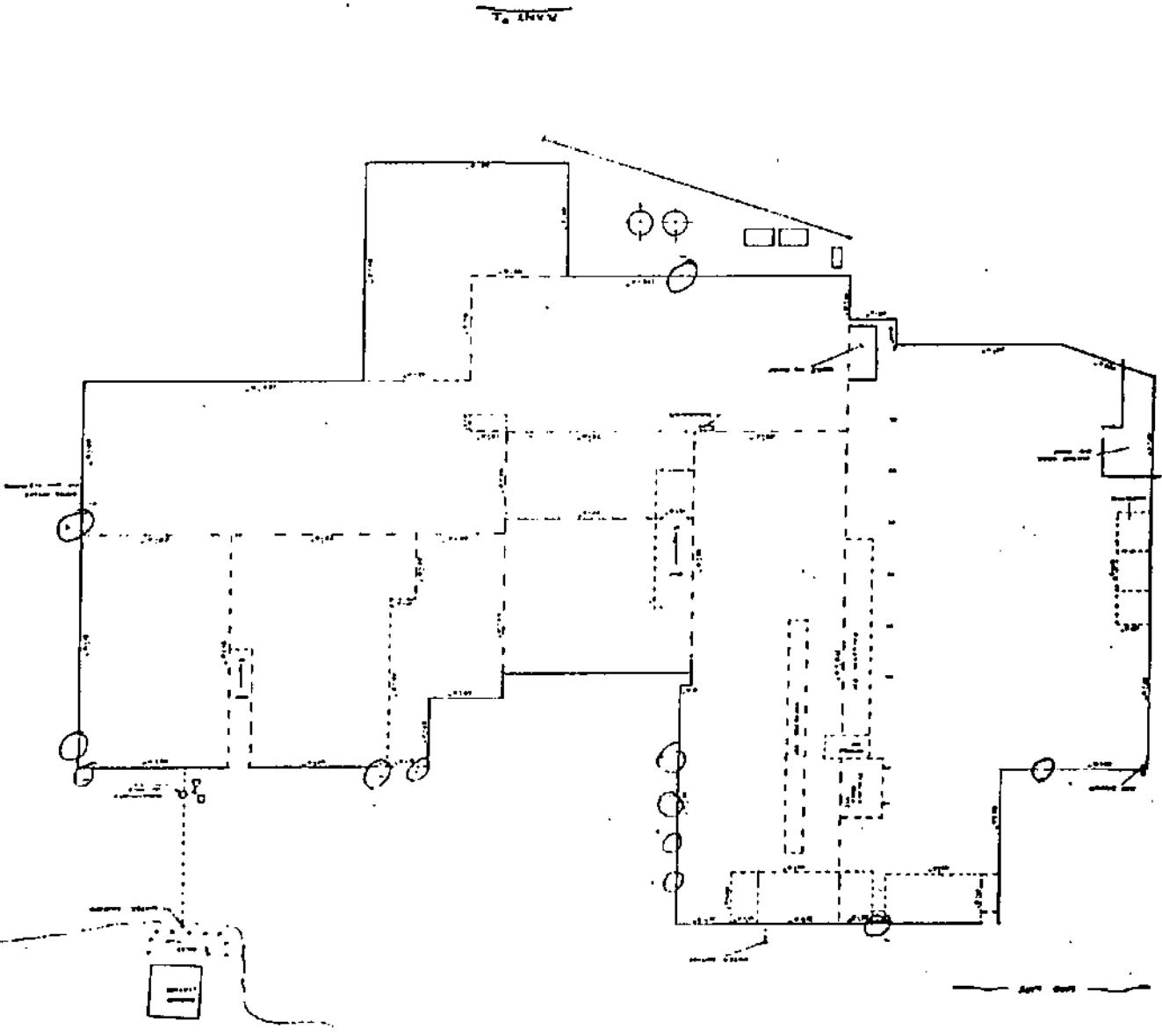
- 7 -

F. OVERALL RESPONSIBILITY

Director of Personnel is responsible for this Emergency Action Plan and may be contacted at extension #59 for further clarification on this plan.

129

PLANT #1	PLANT #1
DATE	DATE
SCALE	SCALE
ROTH BAOS SHELTING CO. 1000 S. 10TH ST. ST. LOUIS, MO. 63104	

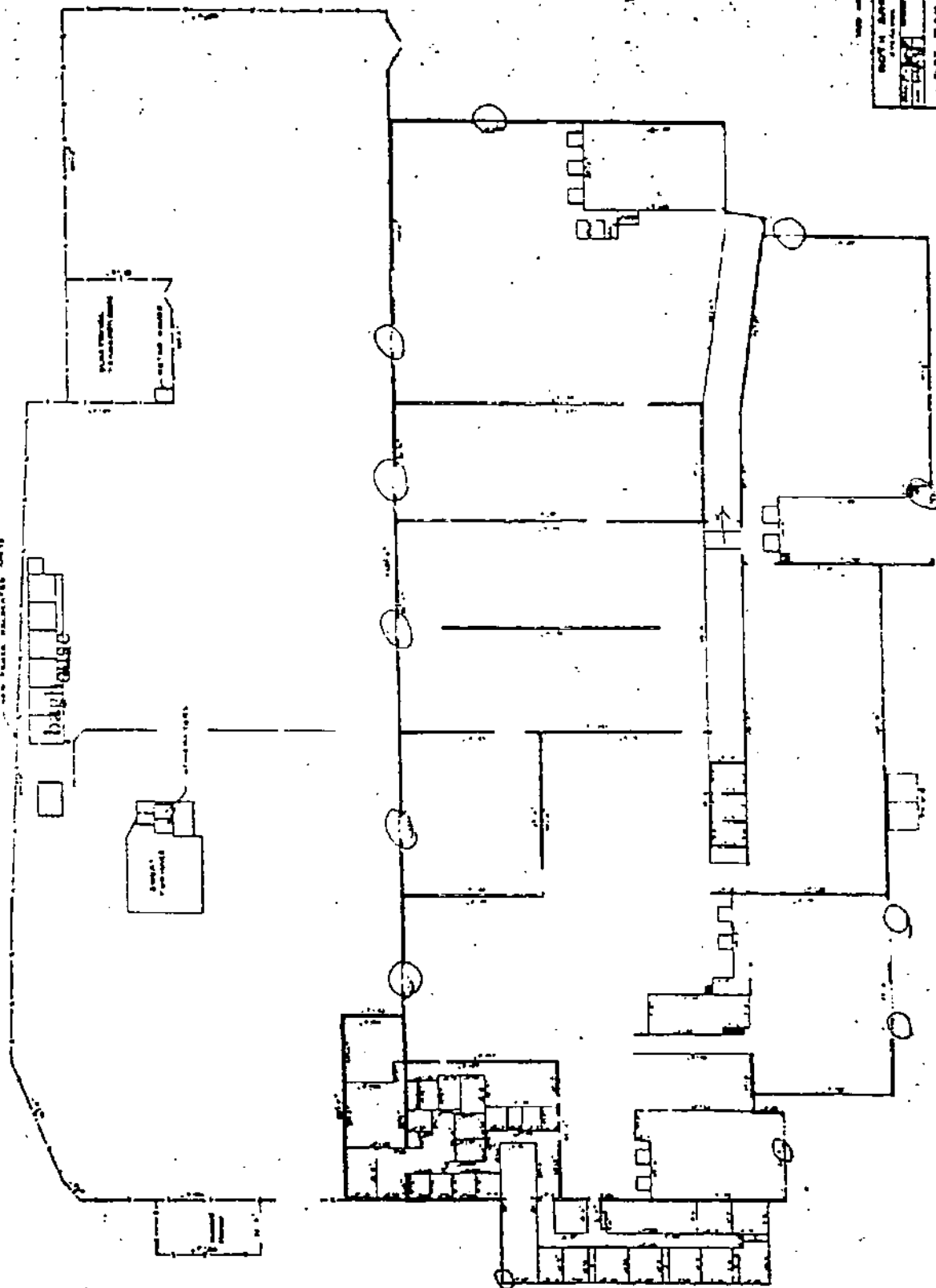


PLANT #1

F-18

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5

DATE: 11/11/50
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 TITLE: FLOOR PLAN
 PROJECT: [Illegible]





ROTH BROS. SMELTING CORP.

6223 THOMPSON ROAD • P.O. BOX 639 • EAST SYRACUSE, NY 13057
 TELEPHONE: 315/463-9500 EASY LINK: 910 380-6093

March 25, 1986

Mr. Ronald Russell III
 Fire Chief
 East Syracuse Fire Dept.
 PO Box 637
 East Syracuse NY 13057

Dear Chief Russell:

As part of our efforts to comply with the Hazard Communication Rule, and Hazardous Chemical Right-To-Know Regulations, we are inviting you to meet with representatives of our Company to discuss appropriate fire safety steps for our facility.

During this meeting, we will be prepared to provide you with a list of Hazardous Substances which are used and stored at Roth Bros. Smelting Corp. In addition, a Material Safety Data Sheet (MSDS) is available for each substance.

We are eager to learn the identity of the fire station and crew who will be assigned as our primary emergency authority.

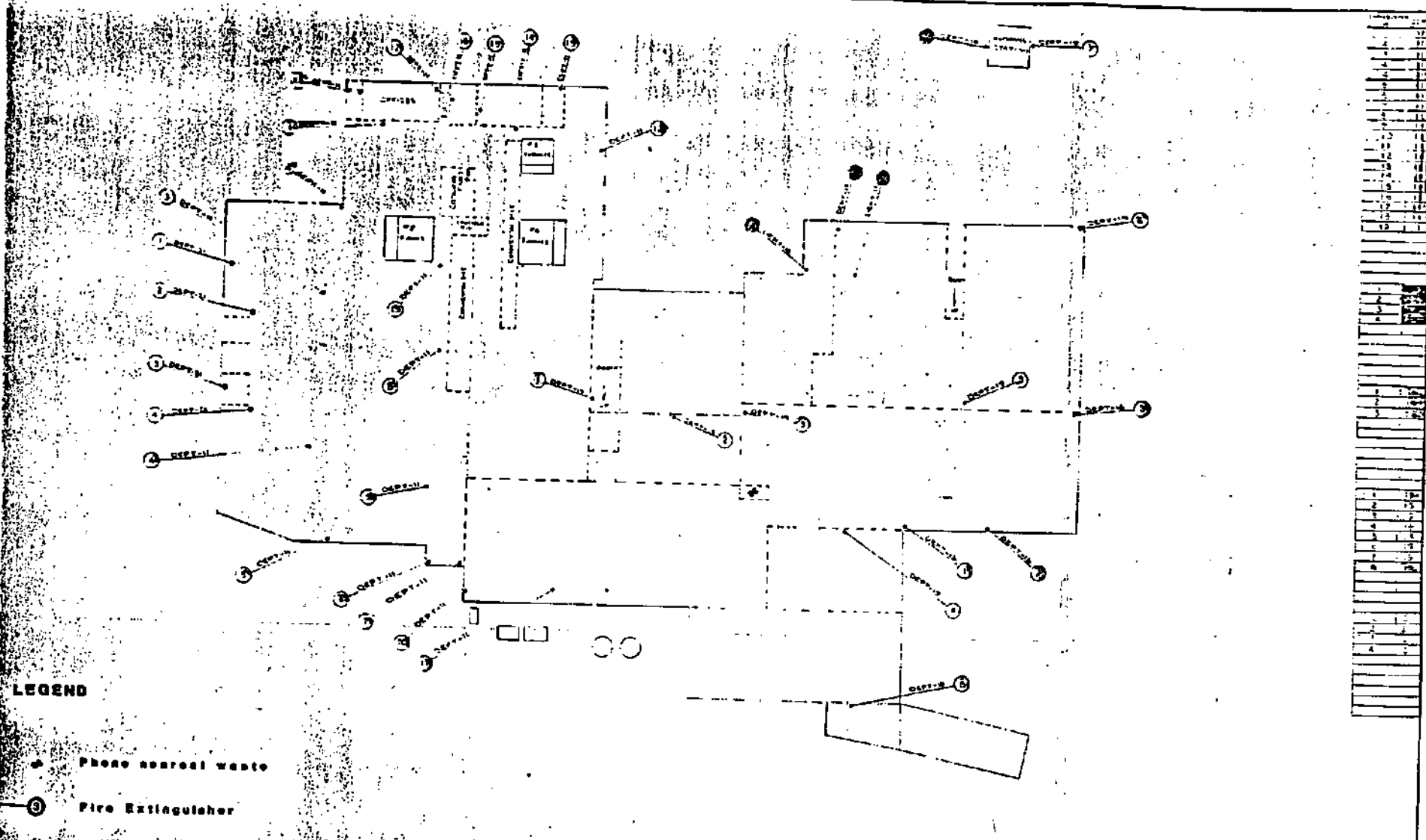
Please contact me at your earliest convenience to schedule an appointment for your visit.

Very truly yours,

ROTH BROS. SMELTING CORP.

David B. Tallo
 David B. Tallo
 Director of Personnel

dp



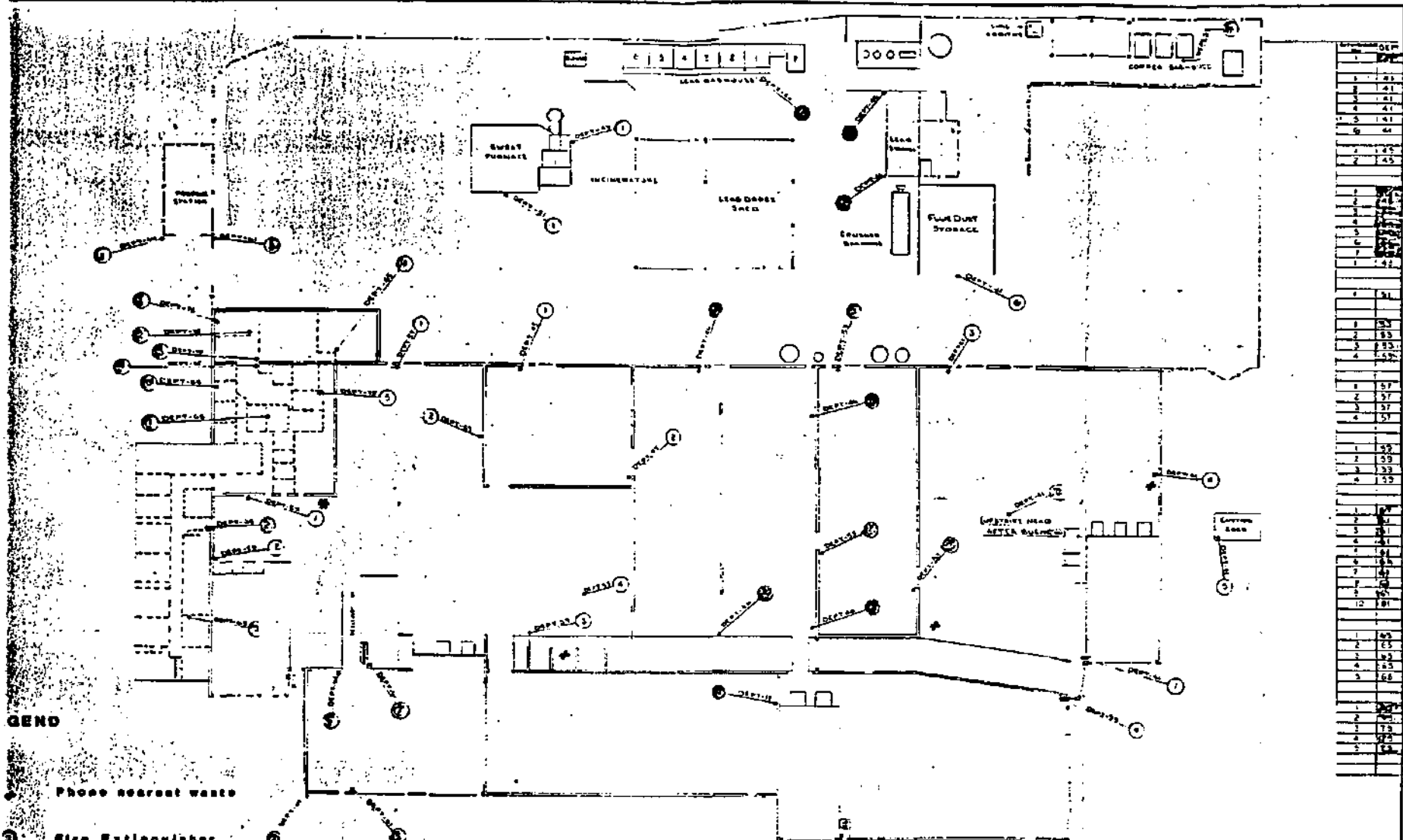
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LEGEND

▲ Phone aerial waste

① Fire Extinguisher

ROTH BROS. SMELTING CORP.
EMERGENCY EQUIPMENT - PLANT 1



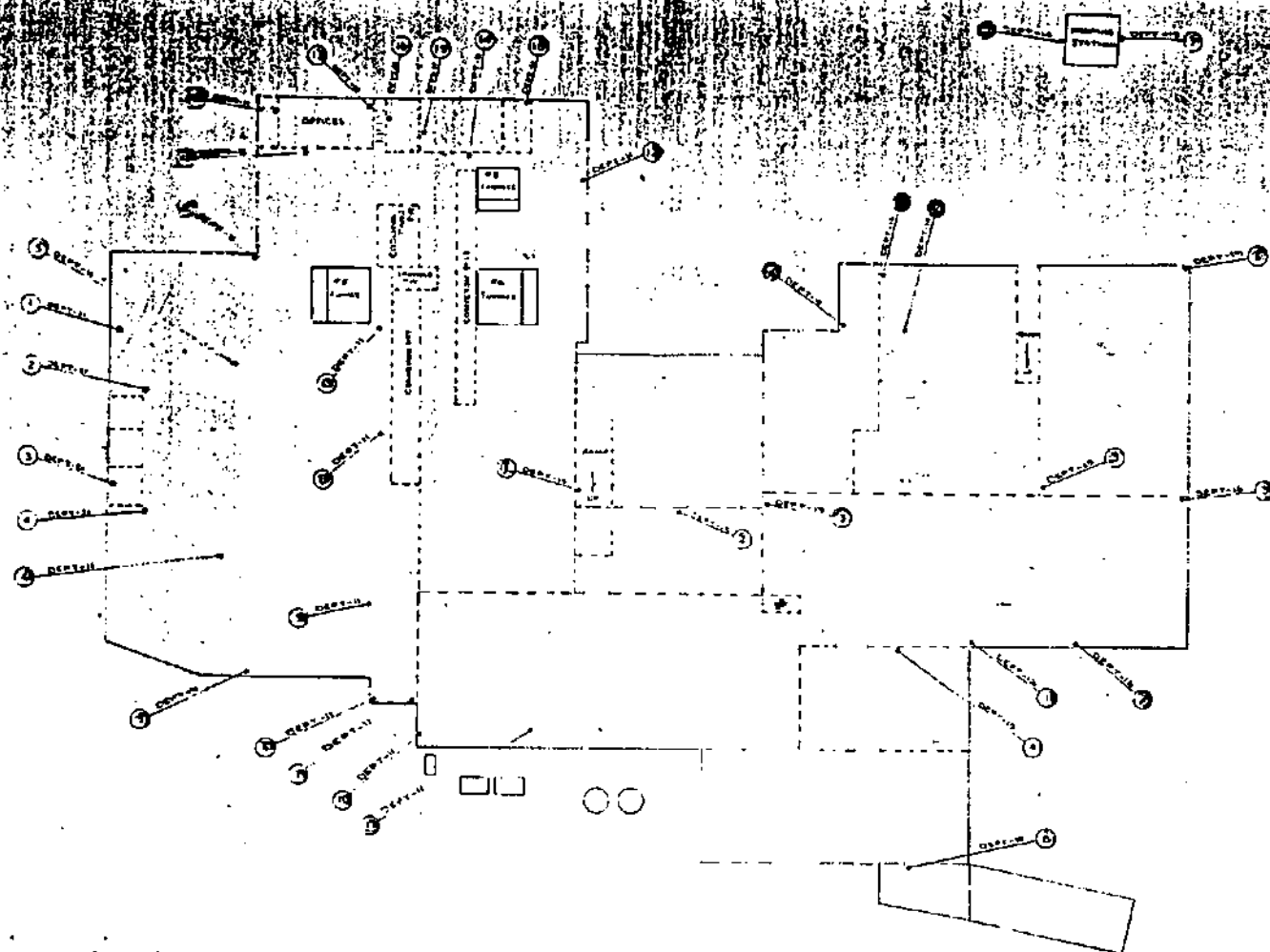
NO.	DESCRIPTION	QUANTITY	DATE
1	PHONE	1	85
2	EXTINGUISHER	1	41
3	ALARM	1	41
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- 1 Phone nearest waste
- 2 Fire Extinguisher
- 3 Fire Alarm

BOTH BROS. SMELTING CORP.
 EMERGENCY EQUIP - PLANT 2
 1-1-45

1-1-45
 2

SL-d



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LEGEND

- Phone nearest waste
- ⊙ Fire Extinguisher

ROTH BROS. SMELTING CORP.	
EMERGENCY EQUIPMENT - PLANT 1	
DATE: 11/10/54	BY: J. W. BROWN
SCALE: AS SHOWN	NO. 18

Roth Brothers Smelting Corporation
6223 Thompson
East Syracuse, NY

EPA I.D. No. NYD006977986

6NYCRR PART 373 PERMIT
ATTACHMENT V
CLOSURE PLAN

SECTION 4CLOSURE4.01 Closure Plan and Cost Estimate

Closure of Roth Bros.' hazardous waste storage facility will consist of removal of all hazardous wastes and waste residues, and decontamination of equipment. A detailed Closure Plan including the required closure cost estimate is provided in Appendix H. In the event that Roth Bros. undertake partial closure (e.g. close one or two of the three hazardous waste storage areas), it would be conducted in accordance with the procedures described in the full Closure Plan. The cost would be an appropriate fraction of the total cost.

4.02 Financial Assurance Mechanism

Roth Bros. Smelting Corp. has established financial assurance for closure of the facility in accordance with option (3) of 6 NYCRR 373-2.8(d); they have obtained an irrevocable standby letter of credit. This letter is included in Appendix I.

4.03 Liability Coverage

Documentation of Roth Bros.' liability coverage in accordance with 6 NYCRR 373-2.8(h) is included in Appendix J.

PLAN AND COST ESTIMATE
FOR CLOSURE OF
HAZARDOUS WASTE STORAGE AREAS

AT

ROTH BROS. SMELTING CORP.
Thompson Road
East Syracuse, New York 13057

USEPA ID NO. NYD006977086

(Revised as of September, 1986)

I. INTRODUCTION

Pursuant to regulations promulgated under authority of the Environmental Conservation Law of New York State in 6 NYCRR 373-2.7, Roth Bros. Smelting Corp. (Roth Bros.), as a Hazardous Waste Storage Facility, is required to maintain a Closure Plan and cost estimate for closure of the facility. The following sections describe the Closure Plan for this facility (USEPA ID No. NYD006977086). Partial closure of Roth Bros. facility, if conducted, would also follow the procedures in this plan.

II. FACILITY DESCRIPTION

Roth Bros. Smelting Corp. is engaged in the business of reclaiming non-ferrous metals and alloys through secondary smelting and refining of purchased scrap, drosses, and by-products. Their primary materials and products are lead-tin solder, copper, zinc, aluminum, and Zamac (zinc-aluminum alloy).

Roth Bros. facility occupies about 35 acres in Onondaga County, New York, (Figure 1). Within the facility there are three designated hazardous waste storage areas. Areas where hazardous waste is generated, handled or stored are shown on Figures 2 and 3.

Currently, the following hazardous wastes are stored at Roth Bros.;

1. Aluminum Dust - an air pollution dust from aluminum furnaces -USEPA Codes D006, D008.
2. Copper Dust - an air pollution dust from the copper rotary furnace - USEPA Codes D006, D008.
3. Lead Dust - an air pollution dust from secondary lead smelting - USEPA Codes K069.
4. Crusher Dust - an air pollution dust from aluminum crushing operation - USEPA Codes D006, D008.
5. Electroplating Sludge - a sludge generated from the treatment of electroplating wastewater - USEPA Code F006.
6. Lead Slag - slag generated from recycling of the electroplating sludge - USEPA Code F006.

Except electroplating sludge, which is stored in 55 gallon steel drums, all hazardous wastes are stored in 43 cu. ft. triple corrugated boxes (Gaylord boxes) lined with 4 mil polyethylene bags. When the bags are filled, they are closed and tied off with wire, and another 4 mil poly bag is placed over the top of the box as a secure cover. The boxes are strapped to wooden pallets and moved to the designated storage area with a forklift. This procedure minimizes or eliminates threats to human health and the environment.

All of the storage areas are asphalt paved and protected from the elements by side walls and a metal deck roof. Also, the outdoor storage areas are sloped from back to front to prevent run-on. Sufficient aisle space is available for inspection by personnel.

A daily inventory of all hazardous wastes that are generated on the site is recorded and maintained on a master inventory kept by the Company Secretary. A 3 part numbering system is used on each box to document shipments to an approved Hazardous Waste Disposal Facility. Currently, lead dust (K069) is being shipped to England for reclamation. Electroplating sludge is being reclaimed on-site in the lead furnace. All other hazardous wastes are being shipped to Fondessy Enterprises, Inc. in Oregon, Ohio (EPA No. OHD045243706).

The maximum inventory of hazardous wastes which can be stored on site is 290 boxes.

III. REMOVAL OF INVENTORY AND FACILITY DECONTAMINATION

At this time, closure of the Facility is not anticipated, but an estimated closure date of June 30, 2036 has been chosen. All hazardous materials stored in Gaylord boxes at the time of closure (maximum 290 boxes) will be shipped to an authorized hazardous waste management facility.

A schedule for completion of closure is provided as Table 1. Since all of the storage areas are paved, the first stage of decontamination will be to clean the area with a power sweeper. The storage areas will then be covered with a sweeping/cleaning compound and again cleared with the power sweeper.

Residues of hazardous materials on all equipment will be eliminated by brushing down the equipment and vacuuming the dusts. This will be done using a high powered vacuum designed for small particle suction and retention. All of the above material (an estimated 15 Gaylord boxes) that is collected will be shipped to an authorized hazardous waste management facility. Since all areas of the facility in proximity to the storage areas are paved (Figure 1), there will not be any contaminated soil to dispose of. Depending on the condition of the facility at closure, wipe or smear tests may be necessary to determine the efficiency of the cleaning activities.

IV. EQUIPMENT REQUIRED

All equipment required for closure is owned by Roth Bros. and will be operated by Roth Bros.' employees. Table 2 lists the auxiliary equipment to be used. Any equipment used in the closure of the facility will be decontaminated by brushing and vacuuming. Wastes accumulated during this process will also be sent to an authorized hazardous waste management facility.

V. CLOSURE CERTIFICATION

A licensed professional engineer will monitor and inspect the waste storage areas and, following the completion of closure activities, certify that closure is complete. Certification will be made to the Commissioner by Roth Bros. and the Registered Professional Engineer that the facility has been closed in accordance with the specifications in this Closure Plan.

VI. COST ESTIMATE

A closure cost estimate, as required by 6 NYCRR 373-2.8, is shown in Table 3.

TABLE 1
MILESTONE CHART

December 30, 2035

- Notify NYSDEC of Planned Closure Date.

March 30, 2036

- Stop processing materials that generate hazardous wastes.
- Begin shipping stored hazardous wastes to an authorized hazardous waste management facility.
- Proceed until "0" inventory is accomplished.

May 15, 2036

- "0" Inventory accomplished.
- Cleanup storage areas and decontaminate equipment. Ship residual wastes to an authorized hazardous waste management facility. All work must be supervised by Professional Engineer.

June 30, 2036

- Submit certification of Closure to the Commissioner.

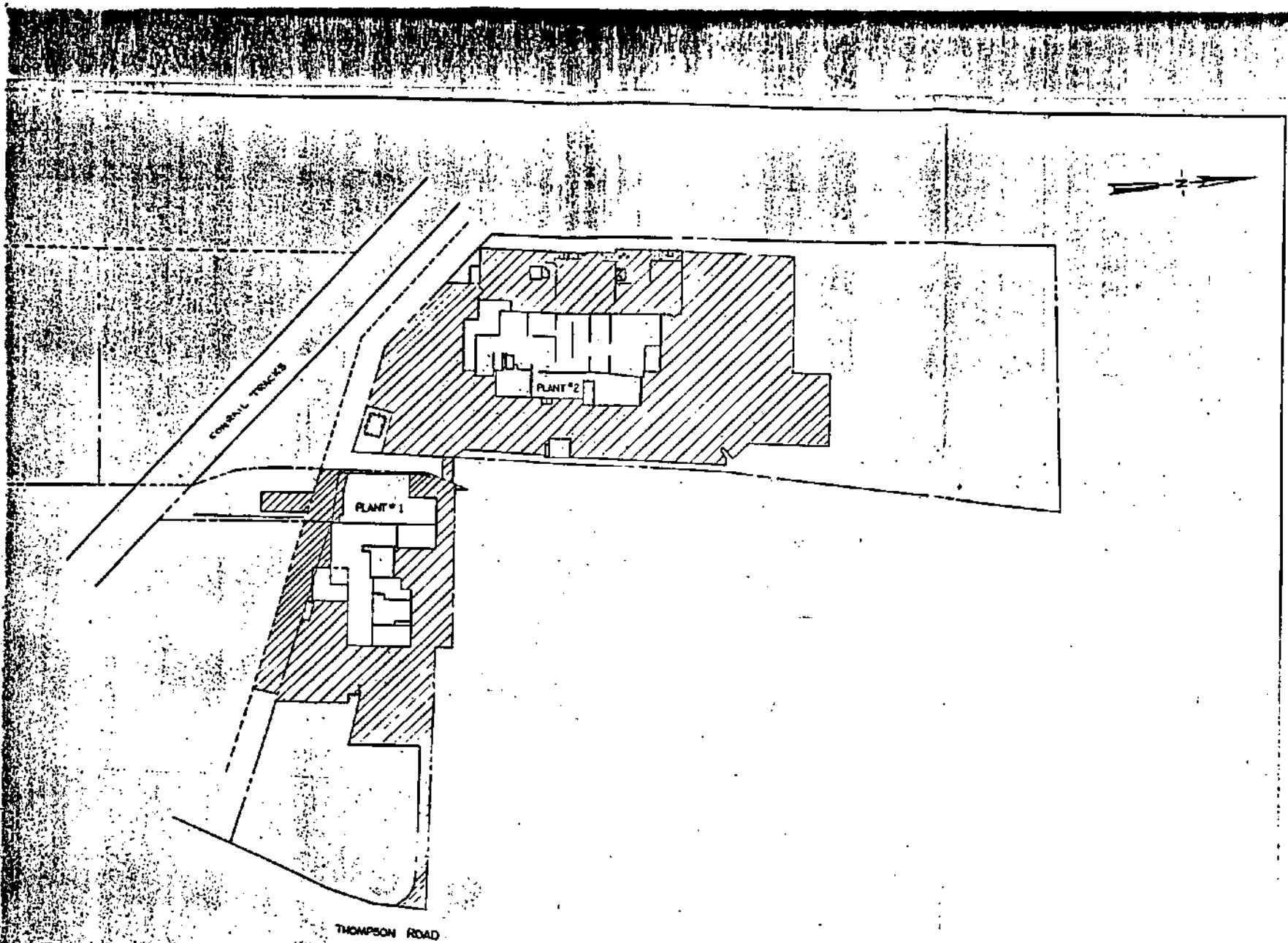
TABLE 2
INVENTORY OF AUXILIARY EQUIPMENT



15	Gaylord Boxes with plastic liners and covers
100	50 lb. bags of sweeping compound
1	High Powered Vacuum Cleaner
2	Brooms
2	Shovels
1	5,000 lb. capacity forklift, 1974 Clark Serial # 89228133
1	5,000 lb. capacity forklift, 1982 Hyster 550 E Serial # D2D10629C
1	Waldon Payloader 1978 Serial # 012492
1	Allis Chalmers Payloader - Model 640, 1983 Serial # 1651
1	Advance Sweeper Serial # 614643 - closed hopper 1978
	Appropriate protective equipment for personnel


* Note: All equipment is owned by Roth Bros. Smelting Corp.

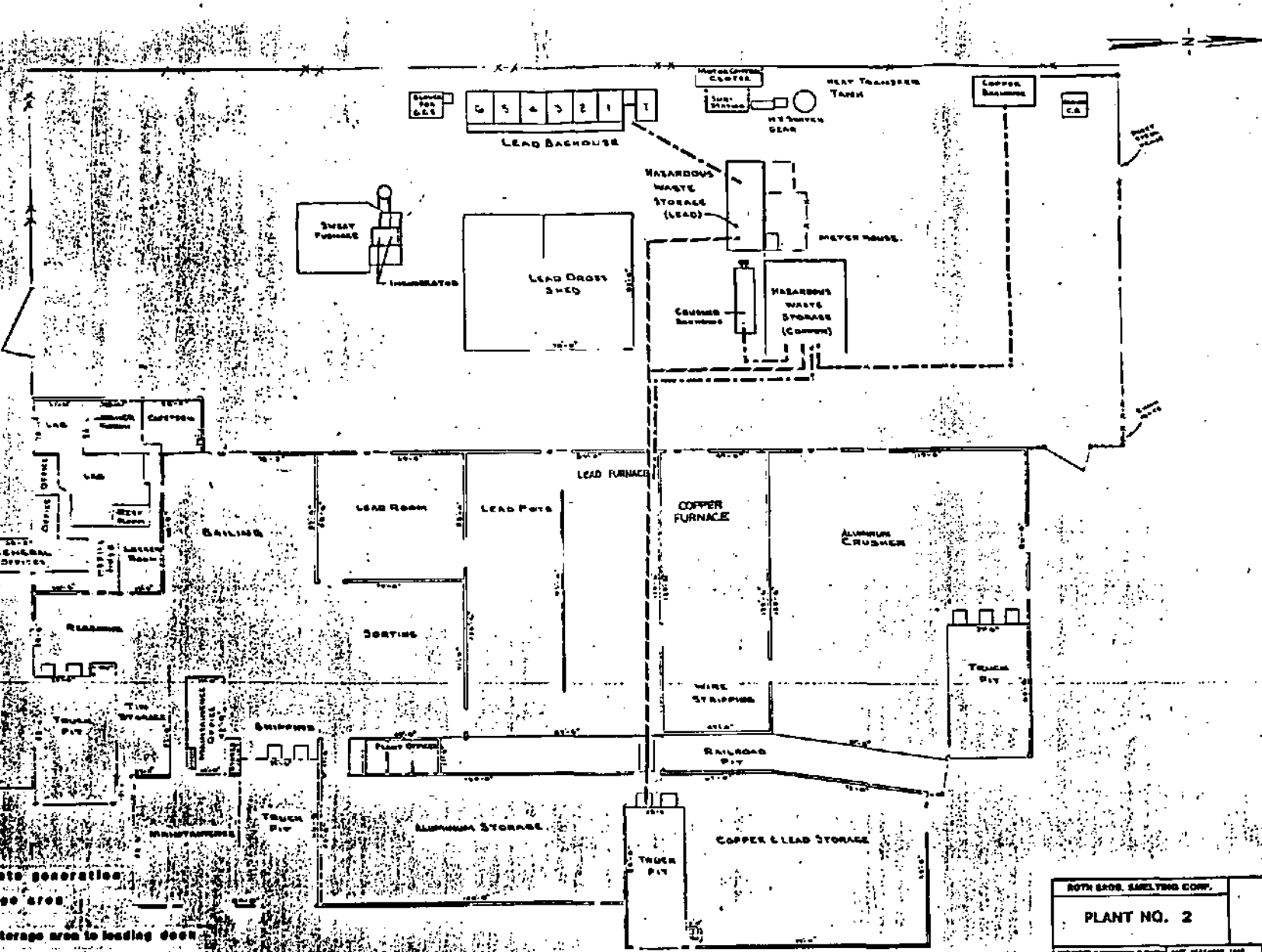
TABLE 3
FINAL COST ESTIMATE

1.	Ship stored boxes of waste to an authorized hazardous waste facility estimate	290 boxes \$175/box	\$50,750
2.	Power sweep 3 storage areas (all tarvia covered) estimate	1 man/2 days	120
3.	Cover 3 areas with sweeping compound estimate	100 50-lb. bags \$7.60/ea.	760
4.	Handsweep compound/brush and vacuum equipment estimate	1 man/2 days	120
5.	Gaylord boxes with plastic liners and covers estimate	15 boxes \$7.00/ea	105
6.	Hand shovel residual wastes into Gaylord boxes estimate	2 men/1 day	120
7.	Clean power sweeper, brooms and shovels, load residual into Gaylord boxes estimate	1 man/1 day	60
8.	Ship waste from decontamination procedures to hazardous waste facility estimate	15 boxes \$175/box	2,625
9.	Sampling and analysis of wipe of smear tests		120
10.	Certification by Licensed P.E.		350
11.	Administrative Costs (15% - Includes Supervision by General Manager)		8,270
12.	Contingency (15%)		<u>8,270</u>
	TOTAL		\$71,670



 - PAVED AREAS
 - PROPERTY LINE

ROTH BROS. SMELTING CORP.	
FACILITY MAP	
	DATE: 11/15/50 SCALE: 1" = 100' SHEET NO. 1



Route for waste generation point to storage area
 Route from storage area to loading dock

ROTH BROS. SMELTING CORP.	
PLANT NO. 2	
DATE: _____ DRAWN BY: _____ CHECKED BY: _____	3



Merchants
Bank

148

The Merchants National
Bank & Trust Company
of Syracuse
216-220 South Warren Street
PO Box 4950
Syracuse, NY 13221
315 472 5561

April 1, 1986

Commissioner
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

Re: Letter of Credit No. 860401

Dear Sir or Madam:

We hereby establish and open our Irrevocable Standby Letter of Credit No. 860401 in your favor, at the request and for the account of Roth Brothers Smelting Corp., 6223 Thompson Road, East Syracuse, New York, 13057, up to the aggregate amount of seventy-one thousand six hundred seventy and no/100 U.S. dollars (\$71,670.00), available upon presentation of

- (1) your sight draft, bearing reference to this letter of credit No. 860401, and
- (2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the New York State Environmental Conservation Law."

This letter of credit is effective as of 4/1/86 and shall expire on 4/1/87, but such expiration date shall be automatically extended for a period of one year on 4/1/87 and on each successive expiration date thereafter, unless; at least 120 days before the current expiration date, we notify both you and Roth Bros. Smelting Corp. by certified mail, return receipt requested, that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft and the above-referred-to signed statement for 120 days after the date of receipt by both you and Roth Bros. Smelting Corp., as shown on the signed return receipts.

This is a notation credit. Each draft hereunder must be endorsed on the reverse of this letter of credit and each draft or attached writing must indicate that such notation has been made. This letter of credit must be attached to the last draft when the credit established by this letter of credit is exhausted.

The sum or sums of all drafts under this letter of credit must not exceed the aggregate amount of seventy-one thousand six hundred seventy and no/100 dollars (\$71,670.00). The purpose of this letter of credit is to ensure that funds will be available and drafts may be drawn hereunder for the account of the Commissioner of the New York State Department of Environmental Conservation, for the benefit of the Department of Environmental Conservation, for purposes pursuant to Article 27 of the New York State Environmental Conservation Law.



Letter of Credit No. 860401

Page -2-

The Merchants National Bank & Trust Company of Syracuse agrees that whenever this letter of credit is drawn on, under and in compliance with the terms of this letter of credit, that The Merchants National Bank & Trust Company of Syracuse shall duly honor such draft upon presentation to The Merchants National Bank & Trust Company of Syracuse and The Merchants National Bank & Trust Company of Syracuse shall pay the amount of the draft to the Commissioner of the New York State Department of Environmental Conservation or into standby trust in accordance with the Commissioner's instructions.

We certify that the wording of this letter of credit is identical to the wording specified in New York Codes, Rules and Regulations, Title 6, Part 370 et seq., as such regulations were constituted on the date shown immediately below.

Except as otherwise stated herein, this letter of credit is to be governed by the Uniform Customs and Practice for Documenting Credits (1983 Revision), published by the International Chamber of Commerce, Brochure No. 400.

Very truly yours,
THE MERCHANTS NATIONAL BANK & TRUST
COMPANY OF SYRACUSE

By: Patrick J. Chambers
Patrick J. Chambers, Vice President

Endorsements of Drafts Drawn:

Date	Negotiated By	AMOUNT	
		In Words	In Figures

This Letter of Credit shall be cancelled and attached to the last draft.

ACORD CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY) 4/8/86

PRODUCER
 Miller Agency of New York, Inc.
 7000 E. Genesee Street
 P. O. Box 129
 Fayetteville, New York 13066

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

COMPANY LETTER A	United States Fire Insurance Company
COMPANY LETTER B	
COMPANY LETTER C	
COMPANY LETTER D	
COMPANY LETTER E	

INSURED
 Roth Brothers Smelting Corp.
 6223 Thompson Raod
 P. O. Box 638
 E. Syracuse, New York 13057

COVERAGES
 THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES.

POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIABILITY LIMITS IN THOUSANDS				
			EACH OCCURRENCE	AGGREGATE			
<input type="checkbox"/> GENERAL LIABILITY <input type="checkbox"/> COMPREHENSIVE FORM <input type="checkbox"/> PREMISES/OPERATIONS <input type="checkbox"/> UNDERGROUND <input type="checkbox"/> EXPLOSION & COLLAPSE HAZARD <input type="checkbox"/> PRODUCTS-COMPLETED OPERATIONS <input type="checkbox"/> CONTRACTUAL <input type="checkbox"/> INDEPENDENT CONTRACTORS <input type="checkbox"/> BROAD FORM PROPERTY DAMAGE <input type="checkbox"/> PERSONAL INJURY			BODILY INJURY	\$			
			PROPERTY DAMAGE	\$			
			BI & PD COMBINED	\$			
			PERSONAL INJURY	\$			
			AUTOMOBILE LIABILITY			BODILY INJURY PER PERSON	\$
			<input type="checkbox"/> ALL OWNED AUTOS (PRIV. PASS) <input type="checkbox"/> ALL OWNED AUTOS (OTHER THAN PRIV. PASS) <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY			BODILY INJURY PER ACCIDENT	\$
			EXCESS LIABILITY			PROPERTY DAMAGE	\$
<input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM		BI & PD COMBINED	\$				
WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY		BI & PD COMBINED	\$				
OTHER		STATUTORY	\$				
A	5250009492	4/1/86	4/1/87	\$2,000,000 each pollution incident. \$4,000,000 aggregate			

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS
 * See endorsement attached.

GENERAL AGENT'S ADDRESS
 New York State Dept. of Environmental Conservation
 Att: Robert C. Kiddle
 50 Wolf Road
 Albany, New York 12233-0001

CANCELLATION
 SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY ~~WILL SEND YOU~~ TO MAIL 60 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT. ~~YOU MAY NOT CANCEL THIS POLICY WITHOUT THE WRITTEN CONSENT OF THE ISSUING COMPANY.~~
 AUTHORIZED REPRESENTATIVE
[Signature]

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insurer's obligation to demonstrate financial responsibility under 6 NYCRR 370 et seq. The coverage applies at EPA ID# 006977086, Roth Bros. Smelting Corp., 6223 Thompson Road, P.O. Box 638, East Syracuse, N.Y. 13057 for sudden and non-sudden accidental occurrences. The limits of liability are \$2,000,000 each pollution incident; \$4,000,000 aggregate, exclusive of defense costs.

2. The insurance afforded with respect to such occurrences is subject to all the terms and conditions of the policy; provided, however, that any provision of the policy inconsistent with subsections (a) through (f) of this Paragraph 2 are hereby amended to conform with such subsections (a) through (f):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with the right of reimbursement from the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated by virtue of the insured satisfying the financial test for liability coverage as established by the New York State Department of Environmental Conservation (hereinafter "NYSDEC") or by the Commission of NYSDEC (hereinafter referred to as the "Commissioner"), and as specified in 6 NYCRR 370 et seq.

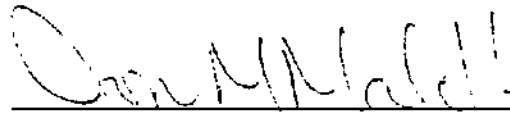
(c) Whenever requested by the Commissioner, the Insurer agrees to furnish to the Commissioner a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer or the Insured, will be effective only upon written notice, certified mail, return receipt requested, and only after the expiration of sixty (60) days after a copy of such written notice is received by the Commissioner.

(e) Any other termination of this endorsement will be effective only upon written notice, certified mail, return receipt requested, and only after the expiration of thirty (30) days after a copy of such written notice is received by the Commissioner.

(f) This endorsement shall be attached to and form a part of Policy No. 5250009492 issued by United States Fire Insurance Company, herein called the Insurer, of P O Box 4865, Syracuse, New York to Roth Bros. Smelting Corp. of P O Box 639, East Syracuse, New York 13057 this 8th day of April 1986. The effective date of the policy is the 1st day of April, 1986.


I hereby certify that the wording of this endorsement is identical to the wording specified in 6 NYCRR 370 et seq., as such regulation was constituted on the date first above written, and that the Insurer is authorized by the Superintendent of the New York State Department of Insurance to conduct the business of insurance within the State of New York or is eligible to provide insurance, where applicable, as an excess or surplus lines insurer within the State of New York.



(Signature of Authorized Rep. of Insurer)
Jon M. Maloff
Producer, Authorized Representative of:
United States Fire Insurance Company
P.O. Box 4865
Syracuse, New York

DATE: 04/08/86

Policy issued to Roth Bros. Smelting Corp.; Endorsement takes effect on April 1, 1986; Policy No. 5250009492; Endorsement number: 1-



(Signature of Authorized Rep. of Insurer)
Jon M. Maloff
Producer, Authorized Representative of:
United States Fire Insurance Company
P O Box 4865
Syracuse, New York

DATE: 04/08/86

Roth Brothers Smelting Corporation
6223 Thompson Road
East Syracuse, NY

EPA I.D. No. NYD006977986

6NYCRR PART 373 PERMIT
ATTACHMENT VI
CONTAINERS

2.04 Hazardous Wastes Handling and Recordkeeping

A. Air Pollution Dusts

Air pollution dust generated on-site is currently packaged, stored, and shipped in "Gaylord" boxes. These cardboard boxes are double or triple wall corrugated, measure 3.5 feet by 3.5 feet by 3.5 feet and have a bursting strength of 400 pounds per square inch. According to Chesapeake Box Company, the stacking strength of the double wall box is 2,000 lbs., and it is 3,500 lbs. for the triple wall boxes. At these strengths, Roth Bros. could stack the boxes 3 to 5 high (each box weights about 1,000 lbs.; see Appendix D), however, they only stack them two high. The pallets which the boxes are stacked on have been rated by the manufacturer as sufficiently strong to hold at least two boxes of dust.

Each box is lined with a 4 mil plastic bag. Compatibility of the plastic liners with the materials stored is confirmed by the 1982 EPA document titled, "Facilities Storing Hazardous Waste in Containers, A Technical Resource Document for Permit Writers". According to this document, plastic is highly resistant to everything except organic acids. The waste is handled according to the following procedure:

1. The box is lined with a 4 mil plastic bag and rests on a 3.5 foot by 3.5 foot disposable wooden pallet. The box and pallet stay together as a unit.

2. When an empty unit is placed under a baghouse hopper, a hazardous waste label (Figure 8) is prepared and affixed to the box. The date accumulation begins is marked on the label.
3. Dust is loaded directly from baghouse hoppers, via starwheels, into a Gaylord box.
4. When a Gaylord box is filled, it is removed from under the hopper. The plastic liner is closed and wire-tied, and the gross, tare, and net weights are marked on the box. A plastic bag (4 mil) is placed over the top of the box and the box is strapped to the pallet with metal bands. At the same time, a three part number is written on the Gaylord box. The first part represents the month. The second part specifies the baghouse number. The third part is the next sequential number for that month.
5. The Gaylord unit is moved to a designated hazardous waste storage area using a forklift.
6. Each day that a filled Gaylord box is moved to a storage area, a "Daily Baghouse Dust" slip (Figure 9) is filled out. The data from this slip is transferred by the Secretary of the Company to a "Master Inventory" (Figure 10). As shipments of dust are made, the shipping date is recorded on the Master Inventory.
7. Containers are kept closed except when adding or removing waste.

B. Electroplating Sludge

The hazardous waste purchased for reclamation (electroplating sludge) is received at the loading/unloading docks located in Plant #2 (Figure 3). These docks are raised above ground level such that when a trailer containing the drums is backed up to the dock, two surfaces are flush. The waste is received and stored in 55-gallon drums which meet

the Department of Transportation (DOT) 17H specification. The DOT standards for these drums are as follows:

Inside Diameter	22 1/2	Steel Gauge, Body	8
Inside Height	32 11/16	Steel Gauge, Cover	16
Outside Diameter	23 27/32	Steel Gauge, Bottom	18
Overall Height	34 13/16	Steel Gauge, Ring	12

According to EPA document, "Facilities Storing Hazardous Waste in Containers, A Technical Resource Document for Permit Writers", steel drums are well-suited for wastes such as these, which are not highly corrosive. The drums are moved by forklift from the trailer, through the plant, to the lead dust storage area and placed on wooden pallets (four per pallet). The drums are kept closed except when removing waste. For processing, the drums are lifted and rotated by forklift, emptying the sludge into a large charging tub. Other materials are added to the tub, then it is covered with plastic and tied securely. The tub is moved to the furnace area by a forklift which then lifts and rotates the tub to introduce the contents to the furnace.

When a shipment arrives, the waste materials are immediately identified by a "Receiving Report Number" (Figure 11). This number can be used to track the waste from its initial weigh-in (Figure 12 and 13), until it is introduced to the lead furnace (Figure 14) for reclamation.

C. Hazardous Lead Slag

Roth Bros. introduces materials into the lead smelting furnace on a batch basis. When smelting is completed, the molten metal is poured off. The remaining slag is poured into containers ("sow buckets") and allowed to cool and harden. Each slag pour is tested for lead and tin content. If the lead or tin value is above a specified percentage, the slag is recycled; if not, it is disposed of.

As discussed in Section 2.03B(3) of this report, the only slag which is hazardous is the slag which is generated from a batch containing electroplating sludge, and which is disposed of rather than recycled. This slag can be identified from the smelting operation record as shown in Figure 14. These records include the source of the slag and the tub number for each slag sow generated. In order to make it even easier to segregate the hazardous and non-hazardous slag, Roth Bros. plans to accumulate enough electroplating sludge (15,000 - 20,000 lbs.) to run as a batch by itself. At this rate, they will run about one batch per year. All the slag poured off from this one batch would be hazardous, and all other slag generated at Roth Bros. would be non-hazardous (as long as it is not EP Toxic).

The hazardous slag will be kept in the area where its generated for approximately one day to allow it to cool. During this time, the slag will be handled in accordance with 6 NYCRR 372.2(a)(8). The slag tubs will be labelled "Hazardous Waste". These tubs will be in good condition and will be properly handled to prevent leaks. The tubs, which are iron, are compatible with the inert slag.

After cooling, the slag tubs will be moved by forklift to the copper dust storage area. The arms of the forklift fit snugly into sleeves on the sides of the slag buckets. This feature keeps the slag tub secure during transportation, minimizing the chances for ruptures or leaks. Each tub of slab will be emptied into a Gaylord Box by rotating the forklift. One batch of sludge will yield about five boxes of slag. The boxes will be lined with 4 mil. plastic bags and will rest on pallets. When filled, the plastic liner will be closed and tied, and another plastic bag will be put over the top of the box. The box will be strapped to the pallet with metal bands. Each box weighs about 1,000 lbs. The strength of the boxes and pallets, and the compatibility of the materials are adequate, having the same properties as discussed in Section 2.04A.

2.05 Hazardous Waste Storage Areas

There are three designated hazardous waste storage areas at Roth Bros. The "aluminum dust" storage area is located inside Plant #1 (Figure 2). The area is approximately 19 ft. by 35 ft. (Figure 15) and is used to store aluminum dusts from Baghouse #1. The floor is concrete. The "copper dust" storage area and "lead dust" storage area are located outside of the main buildings, behind Plant #2 (Figure 3). The copper dust area is a three-sided structure with a roof. It measures approximately 34 ft. by 50 ft. (Figure 16) and is used to store copper dust and aluminum crusher dust, and lead slag which has been designated hazardous. The "lead dust" storage area is used for the lead dust generated from Baghouse #4 and the electroplating sludge purchased for reclamation. It is enclosed on three sides, measures approximately 22 ft. by 57 ft. (Figure 17) and has a roof. Both the copper and lead dust storage areas have asphalt floors which slope from the back wall to the open front. The slope of the copper area is 1% and the slope of the lead area is 2.4%.

2.06 Hazardous Waste Contaminant Requirements

Hazardous wastes stored at Roth Bros. are dry, solid material. The dusts and slag are generated from furnaces which operate at approximately 2200°F, so these materials are obviously very dry. The electroplating sludge was determined to be dry based on the Paint Filter Test (see lab report in Appendix B). Therefore, the requirements of the containment area are limited to those in 6 NYCRR 373-2.9(f)(2). The storage areas are all protected from precipitation by a roof and sidewalls, so there should be very little accumulated liquid in the containment area. Additionally, the containers are protected from contact with accumulated liquid by being stored on pallets.

2.07 Waste Quantities and Storage Capacity

Currently, the quantities of hazardous wastes purchased for reclamation are very small. Electroplating sludge is received approximately four times per year and accumulated for one batch process. The annual quantity is estimated at 15,000 pounds, or about 20 drums. The quantity of lead slag derived from the electroplating sludge is estimated at about 5,000 lbs. or about five boxes. No lead dust (K069) is currently being purchased.

Appendix D provides tables of typical quantities of flue dust generated on-site for eight months during 1985. The average monthly quantities are given in Table 5. The annual quantity is estimated at 1000 boxes or about 500 tons.

TABLE 5
AVERAGE FLUE DUST QUANTITIES GENERATED PER MONTH

<u>Hazardous Waste</u>	<u>Boxes</u>	<u>Pounds</u>	<u>Cubic Feet</u>
Aluminum Dust	14	12,167	358
Copper Dust	25	21,014	584
Lead Dust	42	53,846	841
Crusher Dust	<u>7</u>	<u>7,176</u>	<u>287</u>
TOTAL	88	94,203	2,070

Boxes in storage are double-decked with plywood placed between the boxes. Each box takes up 16 square feet of floor space, including space for plywood overhang. There are 2 foot wide aisles between rows of boxes (see Figures 15, 16 and 17). These aisles are for inspection purposes only, since the forklift loads the areas from back to front. The aluminum dust storage area in Plant #1 measures 662 square feet and can hold 56 double-decked Gaylord boxes. The copper dust storage area measures 1,700 square feet and can hold approximately 144 double-decked boxes. The lead dust storage area, at 1225 square feet, can hold approximately 90 double-decked Boxes or 80 boxes of dust plus 20 drums (5

pallets) of sludge. The total storage capacity at Roth Bros. is 290 boxes. However, Roth Bros. generally tries to maintain zero inventory by shipping wastes each time a truckload (26 boxes) is accumulated.

2.08 Waste Disposal

Aluminum dust, copper dust, crusher dust and lead slag are disposed of at a permitted hazardous waste disposal facility. Currently, it is being shipped to Fondessy Enterprises, Inc. in Oregon, Ohio (EPA ID No. OHDO45243706). In the past it was shipped to SCA in Model City, New York. All shipments are accompanied by Hazardous Waste Manifest documents.

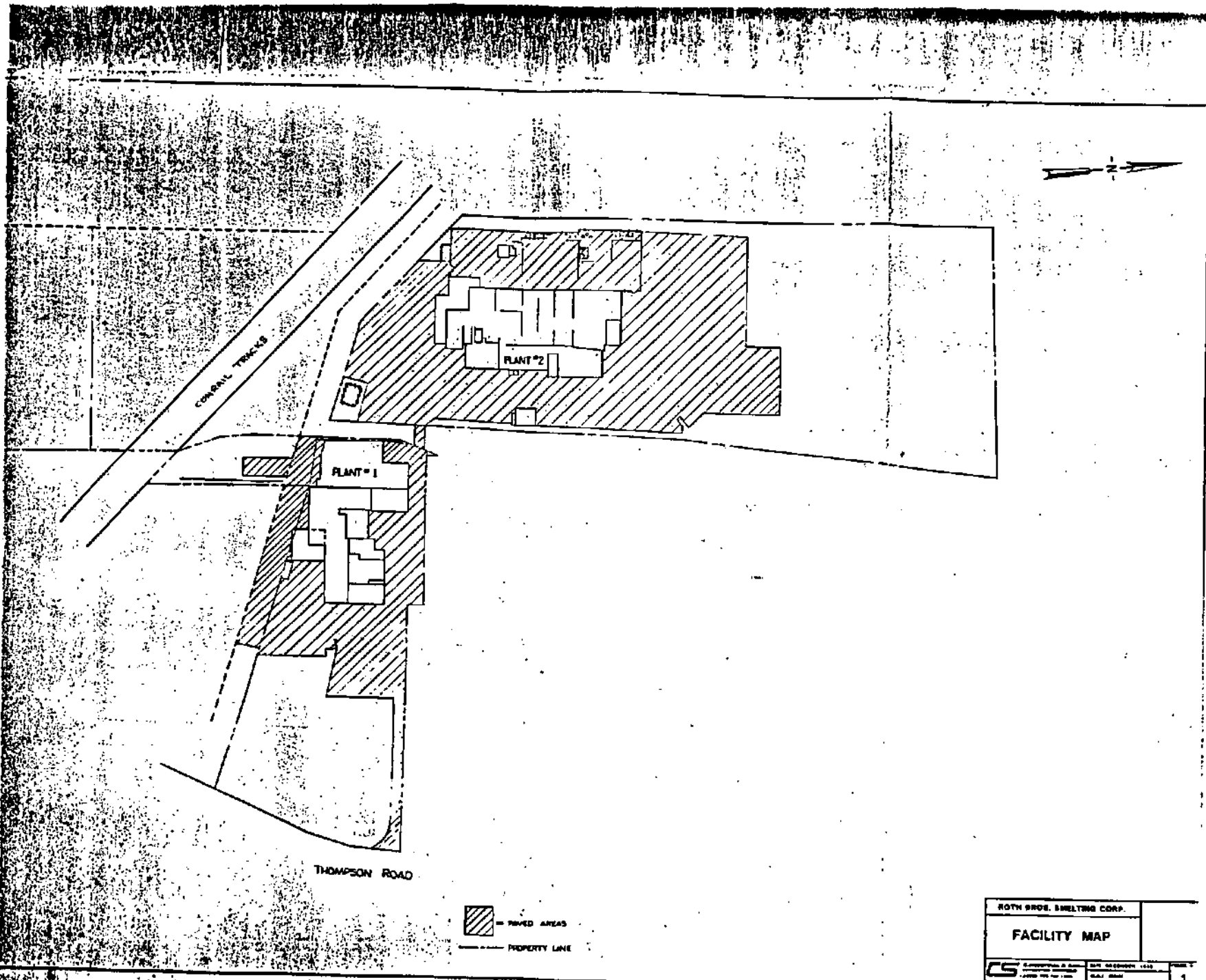
The wastes are transported to the disposal facility in tractor trailers. Generally, Roth Bros. ships 26 boxes of waste at a time, which is one truckload. The boxes are moved from the storage area to the loading docks and onto the trucks with a forklift.



The lead dust and electroplating sludge are not disposed of; they are reclaimed for their lead content. Currently, the lead dust is being sent to England for reclamation; however, in the past, it was reclaimed at Roth Bros. Market conditions and other pertinent circumstances could cause Roth Bros. to recycle the lead at their own facility in the future. The electroplating sludge is reclaimed in the lead furnaces on-site.


2.09 Waste Movement Traffic Patterns and Controls

Trucks loaded with containers of hazardous wastes enter and exit Roth Bros. from Thompson Road (see Topographic Map, Sheet 1 of Drawings). Thompson Road is a four-lane, asphalt paved roadway with a traffic count averaging approximately 85 vehicles per hour. There is a traffic signal at the corner of Thompson Road and Roth Bros.' private drive.

Within Roth Bros. facility, there is a private drive which leads to the loading/unloading docks. The road is two lanes wide and paved with asphalt. Trucks containing hazardous wastes use this road at an average rate of one truck per week. The in-house transportation routes from the loading/unloading docks to the storage areas and from the baghouses to the storage areas are shown on Figures 2 and 3.

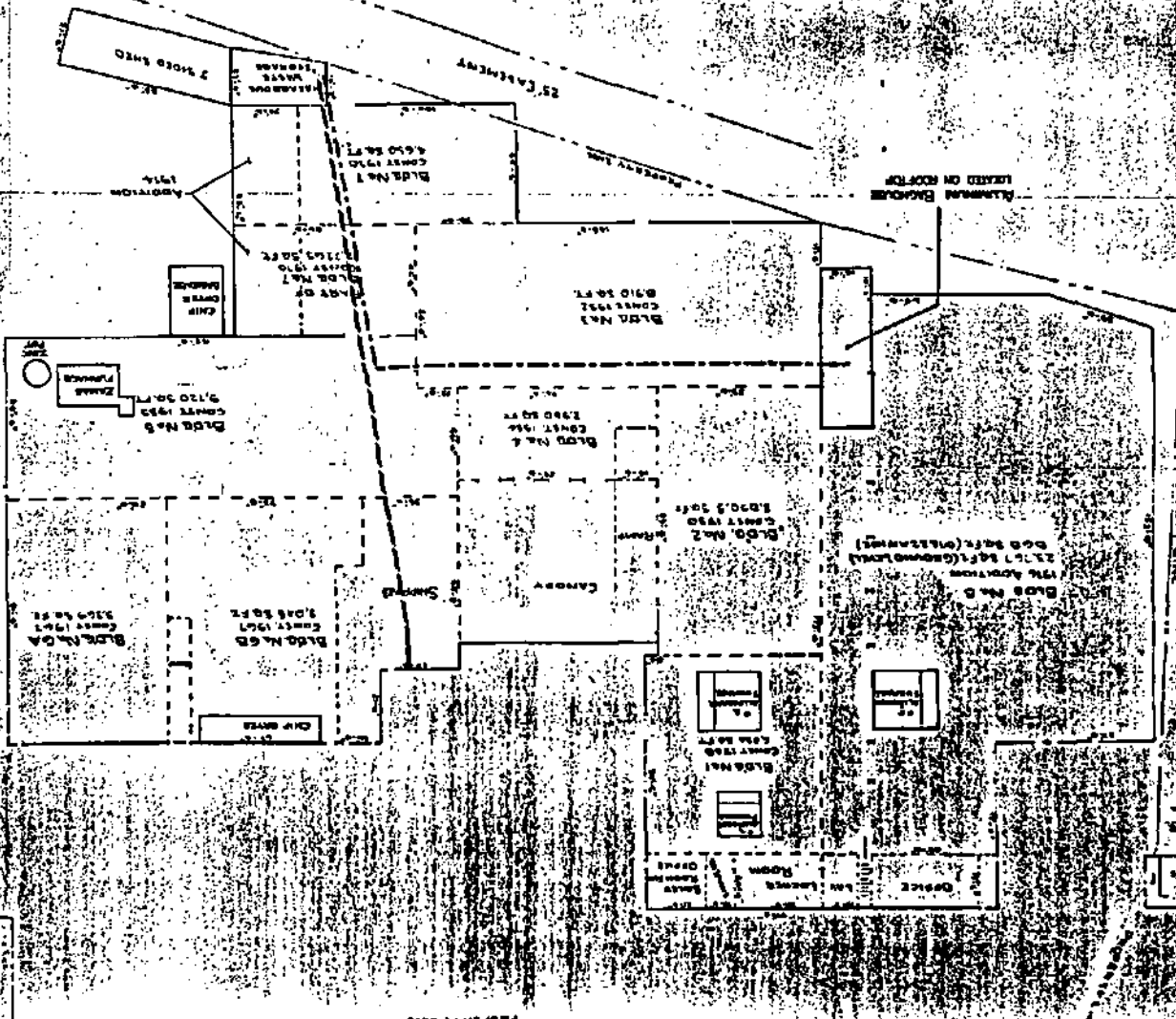


 PAVED AREAS
 PROPERTY LINE

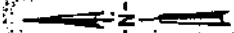
ROTH SHOE SMELTING CORP.	
FACILITY MAP	
	SHEET NO. 1 DATE: 1968

PLANT NO. 1

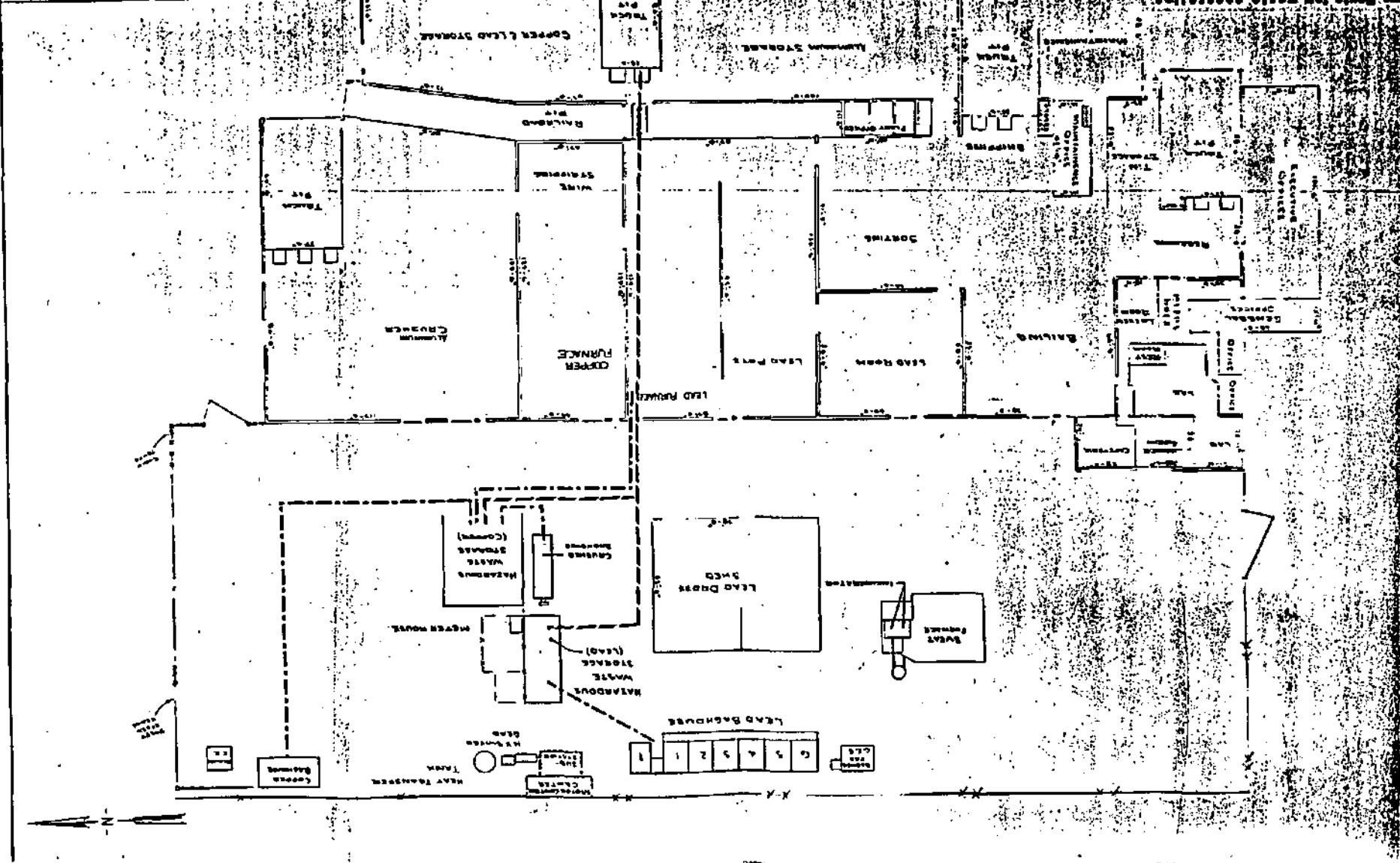
WORTH BRIDGE BRISTLING CORP.



Route from waste generation point to storage area
 Route from storage area to loading dock



3	DATE: 11/10/50
	BY: [Signature]
PLANT NO. 2	
NORTH BRASS SMELTING CO.	

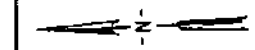


THOMPSON ROAD NORTH

ROADS FOR WASTE COLLECTION

POINT TO STORAGE AREA

ROADS FROM STORAGE AREA TO LEADING DECK



If found, contact the nearest police or public
safety authority or the U.S. Environmental
Protection Agency.

ORM-E

Proper D.O.T. Hazardous Waste
Shipping Name Solid N.O.S. UN or NA No. 9189

Generator Roth Bros. Smelting CorpAddress 6223 THOMPSON RDCity EAST SYRACUSE (ZIP 13057) State NY

Manifest Document No. _____ Accumulation Start Date _____

E.P.A. I.D. No. NYD006977086 E.P.A. H.W. No. 0008

© J. J. KELLER & ASSOCIATES, INC. • NEENAH, WISCONSIN 54956 NO. 28-HML

DAILY BAGHOUSE DUST

FROM LEAD (4) 12/12 - 12/13 BAGHOUSE
 TO STORAGE AREA # _____ ON _____
 (DATE)

START DATE	FILLED DATE	BOX #	GROSS WT.
11-18-85	12-10-85	12-4-5	1536
11-28-85	12-11-85	12-4-6	1710
12-2-85	12-11-85	12-4-7	1567
12-4-85	12-11-85	12-4-8	1772
12-10-85	12-12-85	12-4-9	1534
12-2-85	12-12-85	12-4-10	1676
12-2-85	12-13-85	12-4-11	1516
12-2-85	12-13-85	12-4-12	1308

ALL BOXES HAVE PLASTIC WIRE-TIED; GROSS-TARE-NET WEIGHTS ARE MARKED ON EACH BOX; BOXES ARE NUMBERED; COMPLETED TAG ARE ATTACHED TO EACH BOX

Donald P.
 BY

START DATE	FILLED DATE	BOX #	GROSS WEIGHT	SHIPPED DATE	TO
11-19-85	11-21-85	11-4-42	900		
11-19-85	11-21-85	11-4-43	960		
11-19-85	11-21-85	11-4-44	928		
11-19-85	11-22-85	11-4-45	756		
11-20-85	11-22-85	11-4-46	912		
11-20-85	11-25-85	11-4-47	1526		
11-20-85	11-25-85	11-4-48	1096		
11-20-85	11-25-85	11-4-49	1078		
11-22-85	11-26-85	11-4-50	894		
11-22-85	11-26-85	11-4-51	1246		
11-25-85	12-2-85	12-4-1	1096		
11-25-85	12-2-85	12-4-2	1140		
11-25-85	12-2-85	12-4-3	1448		
11-25-85	12-2-85	12-4-4	1270		
11-18-85	12-10-85	12-4-5	1536		
11-22-85	12-11-85	12-4-6	1710		
12-2-85	12-11-85	12-4-7	1568		
12-4-85	12-11-85	12-4-8	1712		
12-10-85	12-12-85	12-4-9	1534		
12-2-85	12-12-85	12-4-10	1676		
12-2-85	12-13-85	12-4-11	1516		
12-2-85	12-13-85	12-4-12	1308		

FIGURE 10

WEIGHT RECORDED BY

Number *Z+T*
10 + 18 PM



Date *9-20-85*

IDENTIFICATION

WEIGHT
73860
 lbs. GROSS

Rec # 48377

Date - Weighed Back

OK in Seal
 lbs. TARE

lbs. NET

Commodity *Wheat* @ _____ per lb.

Remarks: _____ Driver On [] Off []

Load No. _____

Weigher *ER*

Shipper *Cemden*

Buyer *Roth Ben*

Address _____

WHEAT BOARD

FIGURE 12

Trailer Carrier RB
 or Car Number 14-10 T/L

Date 9-20-85 Our Gross Wt. _____

R. R. Gross 170

Trk Scale _____ Tare Stencil _____

Rec 48377

Small Scale _____ Actual _____

Net _____

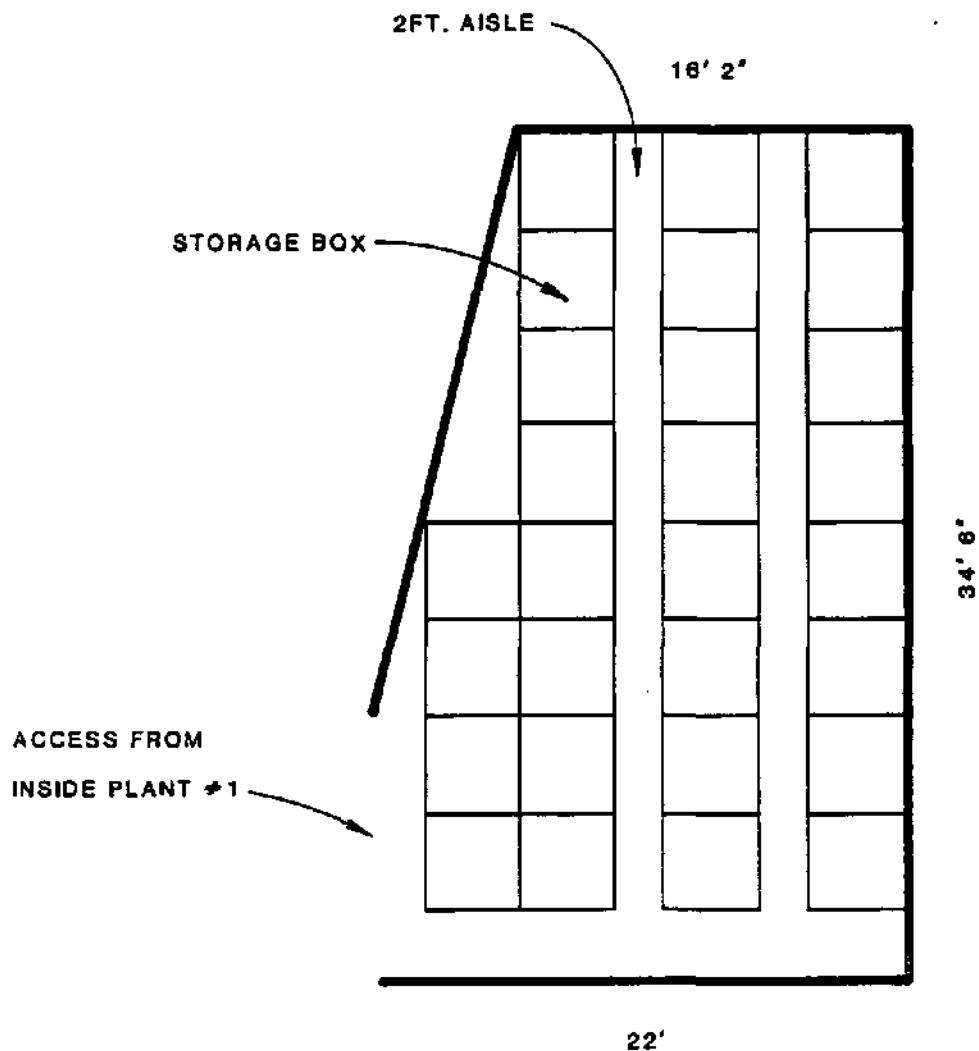
Shipped To: _____ A/C of Anderson INVOICE NO. _____

DATE _____

	GROSS	TARE	*	NET		GROSS	TARE	*	NET		GROSS	TARE	*	NET	
	<u>Slurry</u>						<u>Tim D road</u>								
1	360	39	0	321		#39	1154	32	1122						
2	390	39		351		40	1126	44	1082						
3	328	37		291		41	1036	30	1006						
4	364	38		326		42	1152	30	1122						
5	352	41		311		43	1304	40	1264						
6	350	37		313		44	1190	44	1146						
7	578	38		540		45	960	35	925						
8	526	38		488		46	1170	38	1132						
9	600	39		561		47	1162	32	1130						
10	498	39		459		48	1268	31	1237						
11	406	38		368		49	1254	30	1224						
12	424	39		385		50	1144	30	1114						
13	308	37		271		51	1192	27	1165						
14	310	38		272		52	1298	42	1256						
15	5704	537	4D	5257	✓	53	1354	41	1313						
						54	1258	42	1216						
						55	1334	32	1302						
	<u>Zonolite</u>					-18	20356	600	19756						
	2540	140	4D	2400											
	2690	140	4D	2550											
	2132	138	4D	1994											
	2068	136	4D	1932											
	2076	136	4D	1940											
	1858	136	4D	1722											
	1764	105	3D	1659											
	1472	105	3D	1367											
	1558	102	3D	1456											
	18158	1138	3D	17020											

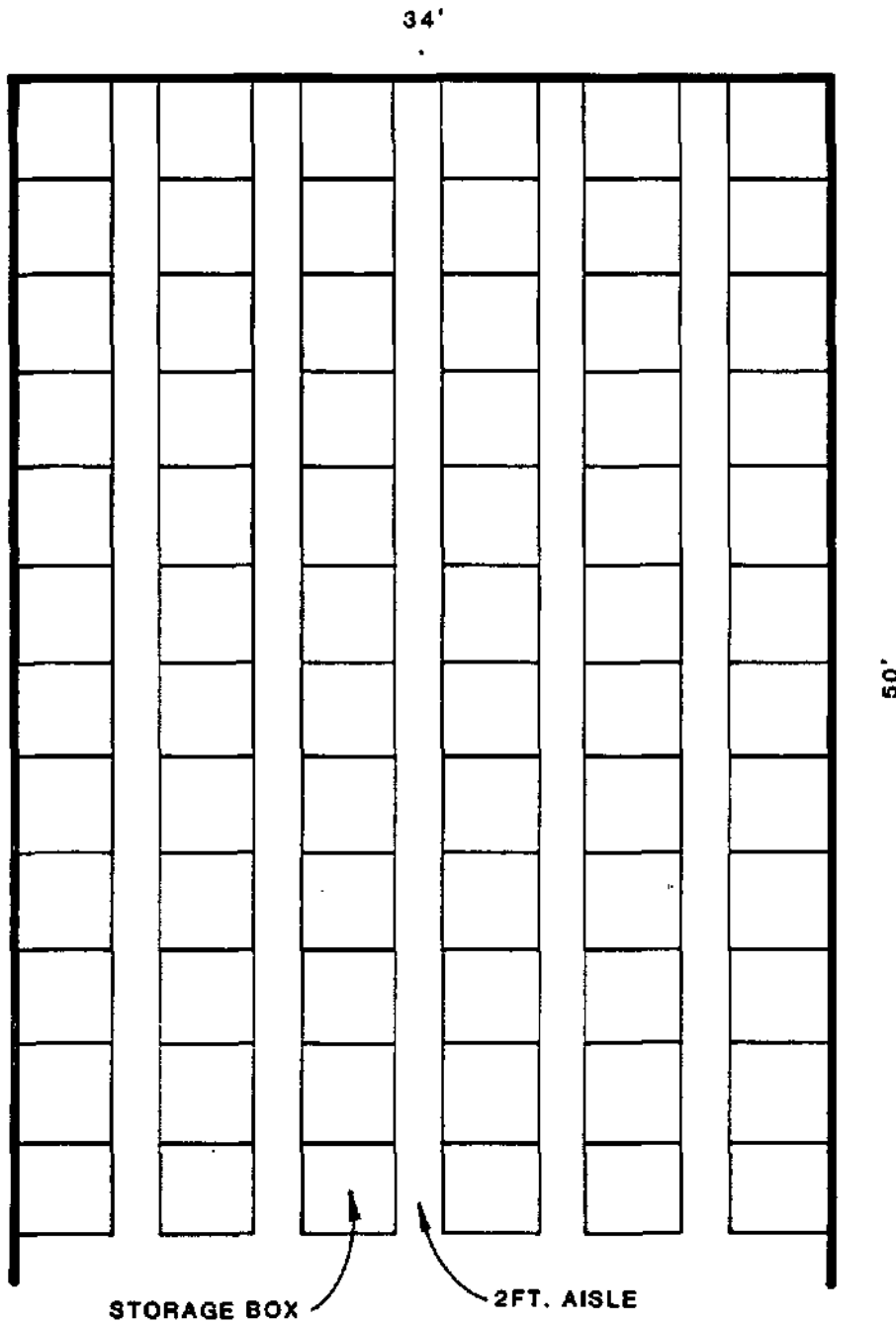
FIGURE 13

9-20-85
 130

**NOTES:**

1. Boxes are double-decked with plywood between them.
2. Boxes measure 3.5'x3.5'.
Drawing shows them as 4'x4' to account for plywood overhang.
3. This area is used to store dust from the aluminum furnaces.

Scale: 1" = 8'



NOTES:

1. Boxes are double-decked with plywood between them.
2. Boxes measure 3.5'x3.5'.
Drawing shows them as 4'x4' to account for plywood overhang.
3. This area is used to store dust from the copper furnace and the aluminum crusher, and F006 slag from the lead furnace.

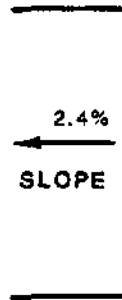
21' 6"

L74

STORAGE BOX

2 FT. AISLE

57'



NOTES:

1. Boxes are double-decked with plywood between them.
2. Boxes measure 3.5'x3.5'.
Drawing shows them as 4'x4' to account for plywood overhang.
3. This area is used to store dust from the lead furnace and electroplating sludge.