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International Specialists in the Environment

April 7, 1992

U.S. Environmental Protection Agency
75 Hawthorne Ave.
San Francisco, CA 94105

Ref No.: T190492-001
TDD No.: T099201-013
PAN No.: ECA1877-SAA

Attention: William E. Lewis, Deputy Project Officer

Subject: **King Neptune Manufacturers Site Assessment, Bell Gardens, California; Interim Report No. 1**

On January 31, 1992, U.S. Environmental Protection Agency (USEPA) On-Scene Coordinator (OSC) D. Shane tasked the Technical Assistance Team (TAT) to conduct a preliminary assessment at an illegal lead smelter. The smelter is operated by King Neptune Manufacturers (KNM), a company that produces lead scuba diving weights. The smelter is operated on a residential property located at 6612 Clara Street, Bell Gardens, California (See Attachment A, Figure 1). The property is owned by F. Teurman, and consists of a residential dwelling, a storage building and a smelter building. The smelter was historically operated by Mr. Teurman and is currently operated by Mr. Teurman's son, F. Teurman, Junior. KNM does not have a buisness license from the City of Bell Gardens to operate within the city's jurisdiction. KNM is not a registered California Corporation.

The facility is located in a mixed residential and light commercial area (See Attachment A, Figure 2). On either side of KNM are residential dwellings. Approximately 25 meters west of KNM is a potato processing plant. One block west of the facility there is an adult education school with day care facilities and a park.

According to long-time residents of the area, the smelter has operated at this location since approximately 1955. Operation of the smelter is characterized by the release of a dark black smoke. This smoke is caused by the sources of lead that are used to make the diving weights. These sources included plastic coated lead pigs and plastic coated lead weights.

Regulatory involvement at KNM started in early 1984 with an inspection by Los Angeles County Department of Health Services Hazardous Materials Control Program (HMCP) Inspections and Enforcement Section (Enforcement). This inspection took place in January of 1984 and samples collected indicated the presence of lead in the soil in excess of the California Total Threshold Limit Concentration (TTLC) hazardous waste determining level of 1000 mg/kg. Attachment B, Table 1 lists all HMCP sampling results.

One source of lead that KNM used was from "pigs", lead encasements

coated with plastic, used to store nuclear medicines and radioactive tracers. KNM received the pigs from numerous medical facilities in California, Nevada and Arizona under a California Radioactive Materials License. KNM held the California Radioactive Materials License until September 2, 1984, at which time the license expired and was not renewed. On February 14, 1985, the California Department of Health Service, Radiologic Health Branch (DOHS) ordered KNM to divest of all radioactive materials (lead pigs) to a licensed facility. KNM did not respond to the order issued by DOHS and continued to obtain the lead pigs.

On April 5, 1985, HMCP Enforcement conducted a joint inspection with Los Angeles County Department of Health Services Radiation Management Branch (RMB) at the KNM facility. The inspection resulted in the issuance of a Notice of Violation (NOV) from HMCP which ordered the firm to cease all illegal hazardous waste operations, including the illegal transport and disposal of hazardous waste (dumping of waste into trash bins). Samples collected during that inspection indicated the presence of lead in excess of TTLC. On July 11, 1985, HMCP issued a directive to KNM ordering the business to discontinue all practices that contribute to further contamination of the property. This directive specified the following:

- removal of all lead contamination throughout the smelter building,
- implementation of a ventilation system that was in compliance with South Coast Air Quality Management District requirements,
- implementation of an approved cleanup plan to remove and legally dispose of all lead contaminated soils,
- transportation under manifest of all lead dusts and soils contaminated with lead to a permitted facility or Class I facility, and
- proper storage and labeling of all lead wastes.

KNM did not comply with the HMCP directive. Based on the results of the April 5, 1985 inspection and the presence of children residing at the KNM property, the site was referred to Los Angeles County Department of Health Services Toxics and Epidemiology section, Child and Adolescent Health Unit (TES). In March 1988, a letter was sent to R. Teurman (F. Teurman son) requesting that the

residents of the property at 6612 Clara Ave., especially the children, be tested for lead (the County's historical file information did not document what actions took place between April 1985 and March 1988). Although Mr. Teurman initially indicated that he would cooperate, he refused to bring his family in for testing. On June 28, 1988, a second letter was sent by registered mail to Mr. Teurman. The letter was returned unopened. The eventually removed the children from the residence by family members.

The County's historical file does not document the actions taken in relation to this site from June 1988 until December 1991. In December 1991, the City of Bell Gardens served an inspection warrant at KNM to obtain evidence of city building code violations. During the inspection, several lead pigs were gathered as evidence by the Bell Gardens Police Department (BGPD). Upon noticing the radioactive symbols on the pigs, BGPD notified HMCP, who in turn notified RMB. These agencies in cooperation with the City of Bell Gardens, conducted an inspection under the same warrant previously used. During this inspection, an extensive radiation survey was conducted. The radiation survey did not detect levels in excess of regulatory limits. Samples were collected from inside the yard around the smelter and within the smelter building itself. The sample analysis documented lead levels in excess of TTLC in the soil as well as inside the building.

In response to the findings of the December inspection, HMCP issued a NOV and Order to Comply (NOV/OTC) to F. Teurman Jr. which ordered him to discontinue all operations resulting in the generation of hazardous waste and to remove and legally dispose of all lead contaminated materials. Mr. Teurman did not respond to the NOV/OTC.

Due to the uncooperative attitude of the responsible party (RP), the magnitude of the contamination on-site and close residential proximity, HMCP contacted the USEPA for assistance in late January 1992. On February 10, 1992, TAT member R. Wise met with members of HMCP to review the historical data.

On February 12, TAT members R. Wise and D. Tomlinson, in conjunction with personnel from HMCP and M. Martinet, Bell Gardens Property Rehabilitation Section Manager, conducted a site assessment at KNM. At the time of the assessment, C. Teurman, the wife of F. Teurman, Sr., admitted the assessment team to the property, but was unable to open the smelter building for inspection. During this assessment, TAT conducted photographic and video documentation of the property outside the smelter building

and the surrounding neighborhood.

After completion of the assessment at the Clara Street property, TAT and HMCP personnel conducted a site assessment at 7856 Salt Lake Ave, Huntington Park, California This facility is located in a light industrial area of Huntington Park and is situated within a commercial building. This address was in HMCP's file as a second possible smelter location operated by the RP. At this location, contact was made with F. Teurman, Jr. Mr. Teurman admitted both TAT and HMCP personnel to the facility. He stated that smelting operations had never been conducted at the Salt Lake Ave. facility. Mr. Teurman stated that the Salt Lake facility conducted hydro-testing of scuba tanks. During the visit to this location, both TAT and HMCP personnel noticed crates of new diving weights, lead ingots and castings for diving weights. Information collected from a former client of KNM (a dive shop owner) indicates that smelting has been extensively conducted at the Salt Lake Ave. facility.

He also stated that the smelter at the Clara St. property had not operated in three to four months. Although he admitted that there was a considerable amount of lead dust on the floor inside the smelter, he denied that any contamination had migrated off-site. When asked if he could open the smelter at 6612 Clara Street, Mr. Teurman was initially evasive, but finally agreed to meet TAT on the morning of February 18, to open the facility for an assessment.

After completion of the February 12 assessment, Mr. Wise contacted OSC Shane and provided him with a synopsis of the day's events. OSC Shane tasked TAT to prepare a sampling plan for implementation during the February 18, 1992 assessment. The sampling plan is in Attachment C.

On the morning of February 18, 1992, TAT members R. Wise, A. Talamantez and N. Parson accompanied by Mr. Martinet, conducted the site assessment at the KNM site. Although TAT had made arrangements with Mr. Teurman, Jr., to obtain access to the facility, he did not show up for the site assessment. Due to questions concerning property ownership and legal access, TAT did not conduct sampling on the 6612 Clara Street property that day. TAT conducted soil sampling as per the sampling plan of the off-site residences surrounding KNM with respective property owner permission. Conversations with the residents surrounding the site indicated that the smelter had been operating on a regular basis recently and that the information that Mr. Teurman had provided concerning discontinuance of the smelter operation was incorrect.

A total of 14 samples were collected including QA/QC samples. The samples were custody sealed and logged on a chain of custody form

for storage prior to analysis. The samples were stored under custody at the Los Angeles TAT office until March 6, 1992, when the samples collected both on-site and off-site were delivered to the laboratory.

Between February 18 and March 5, 1992, OSC Shane pursued various avenues to gain access to the 6612 Clara Street property. Initially, Mr. Martinet of the City of Bell Gardens agreed to obtain an inspection warrant under which the site assessment could be conducted. But due to problems with city management, he was unable to obtain the warrant. The property access issue was then shifted over to USEPA Office of Regional Counsel (ORC). The ORC worked closely with the U.S. Attorney General's Office (USAG) to obtain permission to enter the property and the smelter to obtain samples. The USAG was able to secure permission for a site access from Mr. Teurman for a March 5 site assessment.

On March 5, TAT members R. Wise and C. Jones accompanied by OSC Shane and two members of the U.S. Marshall's Service met at the site to complete the assessment. On-site, they were met by Mr. Martinet. Information provided by local residents to TAT indicated that Mr. Teurman had operated the smelter that morning at approximately 0400 hours.

The site assessment team was granted access to the property and smelter by Mr. Teurman, Jr. During the site assessment, TAT and OSC Shane conducted extensive photographic documentation of the smelter. A total of 12 samples were collected on the property. Ten soil samples were collected outside the smelter building in the yard at 6612 Clara Street, including QA/QC samples. Two samples were collected in the smelter building. The samples were custody sealed and logged on a chain of custody. All samples were delivered to the laboratory on March 6, 1992 for total lead analysis per SW-846 method 6010.

Sample analyses documented several samples with lead concentrations above TTLC. Results from samples collected off-site document the presence of elevated lead concentrations in the public right of way directly in front of 6612 Clara Street (sample #3) and in the drainage pathway directly adjacent to the site in the alley (sample #4). Off-site sample concentrations range from 3.42 mg/kg up to 11,100 mg/kg. Sample locations and concentrations are listed in Attachment B, Table 2. On-site soil sample concentrations range from 118 mg/kg up to 5,900 mg/kg. Samples collected in the smelter had concentrations of 455,000 mg/kg and 547,000 mg/kg respectively.

The site is currently under surveillance by Los Angeles County Fire Department (LACoFD) and the City of Bell Gardens. In case of

smelter operation, LACoFD will contact the USEPA Region IX Spill Phone.

TAT is currently preparing to conduct an expanded site assessment to further characterize on- and off-site contamination and investigate the best method of site mitigation and abatement. This assessment will include preparation of a site specific XRF model for real-time assessment of soil contamination, sampling of nearby residences and businesses to attempt to determine the exposure to those residences, a preliminary demographic analysis and research into treatment options.

If there are any questions concerning this report, please do not hesitate to contact this office.

Sincerely,

Robert L. Wise

Robert L. Wise
Technical Assistance Team Member

attachments

cc: D. Shane, On-Scene Coordinator
M. Martinet, City of Bell Gardens
G. Munos, Los Angeles County Fire Department
file

ATTACHMENT A

FIGURES

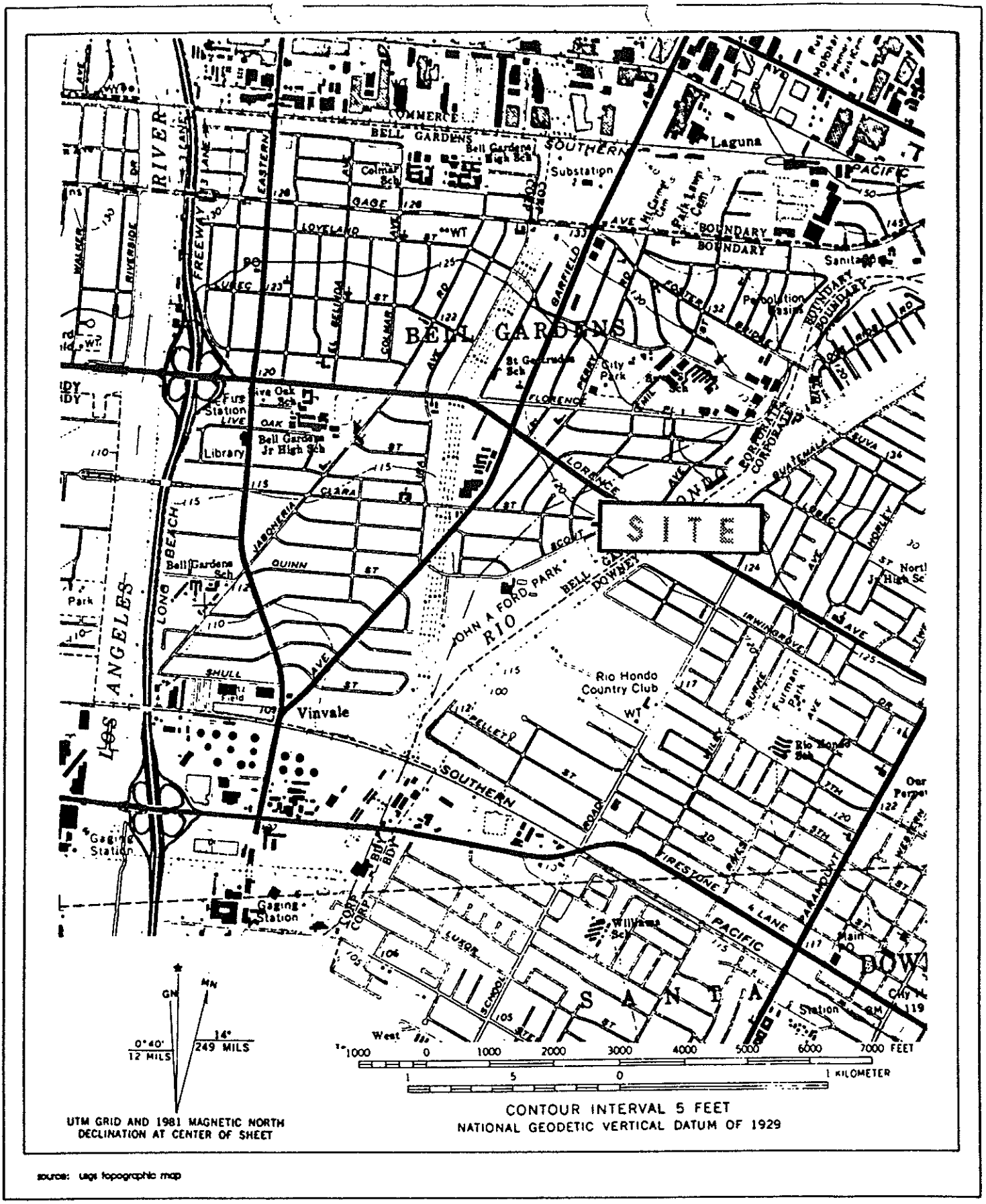
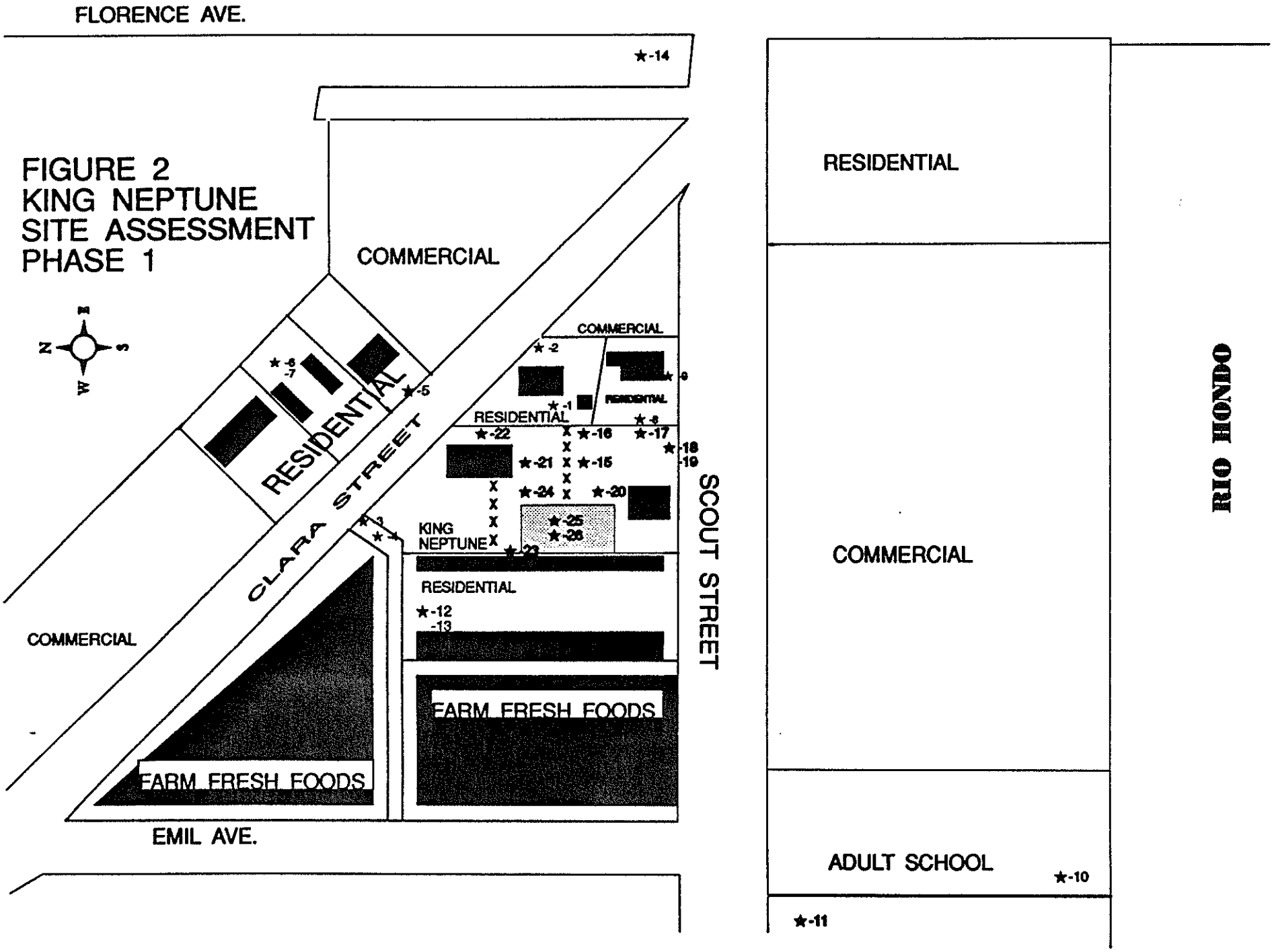


FIGURE 1
SITE LOCATION
KING NEPTUNE MANUFACTURERS

FIGURE 2
KING NEPTUNE SITE ASSESSMENT PHASE 1



ATTACHMENT B

TABLES

TABLE 1
LOS ANGELES COUNTY SAMPLING RESULTS

DATE	LOCATION/SAMPLE#	TOTAL LEAD CONCENTRATION
01-23-84	Soil outside property line fence / #1-MG	38,020.80 mg/kg
01-23-84	Soil in backyard / #2-MG	1,249.99 mg/kg
01-30-84	Northeast corner of alleyway on Emil St. / 1-30-84MG #1	213.50 mg/kg
01-30-84	1759 Scout Ave., near alleyway, one inch sample / 1-30-84MG #2	140.60 mg/kg
04-05-85	Rear of SFD / #4-5-85-1	11,800.00 mg/kg
04-05-85	Center yard adjacent to wash board / #4-5-85-2	1,300.00 mg/kg
04-05-85	Cement walk, north side of the facility / #4-5-85-3	48,000.00 mg/kg
04-05-85	Front of 7745 Scout Ave. / #4-5-85-4	7,790.00 mg/kg
04-05-85	Two feet from apartment complex / #4-5-85-5	Non-Detect
04-05-85	Lead waste in container, next to smelter	45,200.00 mg/kg
12-19-91	Top of smelting pot / #251*	23,430.00 ug
12-19-91	Top of work table / #252*	9,750.00 ug
12-19-91	Top of lead ingot storage table / #228*	9,540.00 ug
12-19-91	Top of cutting saw / #227*	9,930.00 ug
12-19-91	Floor below smelting pot / #12-19-91FD-1	120,000.00 mg/kg
12-19-91	Floor below cutting saw / #12-19-91FD-2	128,000.00 mg/kg
12-19-91	Soil outside garage, 25 feet from pot /#12-19-91FD-5	2,330.00 mg/kg
12-19-91	Soil outside garage, 10 feet from pot / #12-19-91FD-6	324.00 mg/kg

TABLE 2
TECHNICAL ASSISTANCE TEAM SAMPLING RESULTS

SAMPLE#	LOCATION	TOTAL LEAD CONCENTRATION
1	6622 Clara St., in front of the garage	471.00 mg/kg
2	6622 Clara St., northwest corner of lot	25.80 mg/kg
3	Public right of way in front of 6612 Clara St. at intersection with alley	6,120.00 mg/kg
4	Drainage pathway in alley bordering 6612 Clara St.	11,100.00 mg/kg
5	Right of way in front of fenced house 6625 Clara St.	147.00 mg/kg
6	Backyard of 6615 Clara St.	78.30 mg/kg
7	Duplicate of Sample #6	74.90 mg/kg
8	7743 Scout St., along fence line bordering 6612 Clara St.	272.00 mg/kg
9	7743 Scout St., along fence line bordering Scout St.	59.00 mg/kg
10	Adult school playground	3.42 mg/kg
11	John Anson Ford Park	18.10 mg/kg
12	Garden at 7751 Scout St.	100.00 mg/kg
13	Garden at 7751 Scout St.	135.00 mg/kg
14	Intersection of Scout St. and Florence Ave.	35.40 mg/kg
15	6612 Clara St., along north fence line where old house was located	1,910.00 mg/kg
16	6612 Clara St., along northeast fence line where old house was located	234.00 mg/kg
17	6612 Clara St., along southeast fence line where old house was located	118.00 mg/kg
18	6612 Clara St., fence line an Scout St.	2,010.00 mg/kg
19	Duplicate of Sample #18	1,370.00 mg/kg

TABLE 2
(continued)

SAMPLE#	LOCATION	TOTAL LEAD CONCENTRATION
20	6612 Clara St., southwest side of yard along walkway	3,540.00mg/kg
21	6612 Clara St., northeast side of yard	507.00 mg/kg
22	6612 Clara St., backyard next to house	4,460.00mg/kg
23	6612 Clara St., corner next to electrical room	3,040.00 mg/kg
24	6612 Clara St., west side of backyard next to smelter building	5,900.00 mg/kg
25	6612 Clara St., inside of smelter building, floor dust	547,000.00mg/kg
26	6612 Clara St., inside of smelter building, smelter slag	455,000.00mg/kg

ATTACHMENT C

SAMPLING PLAN

Sampling QA/QC Work Plan

King Neptune Manufacturers

TDD No.: T099201-013
PAN No.: ECA1877-SAA

Prepared for:

U.S. Environmental Protection Agency
Emergency Response Section
Region 9

Prepared by:

Technical Assistance Team
Los Angeles, California

Approvals

Ecology And Environment, Inc.		EPA	
Robert Wise Project Manager	Date	Dan Shane On-Scene Coordinator	Date

1.0 BACKGROUND

King Neptune Manufacturers has been operated by F. Teurman, the responsible party (RP), as a lead smelter for 20 plus years. The source of the lead which was smelted was lead pigs used to store nuclear medicines and possibly car batteries.

The site is located at 6612 Clara Street, Bell Gardens in the county of Los Angeles in the state of California. The site is located in a mixed residential and commercial district. Immediately adjacent to the site are residences and a food processing plant (see Figure 1).

The King Neptune Manufacturers site is a referral from the Los Angeles County Fire Department Health and Hazard Unit. Site regulatory history dates back to 1983 with an inspection by the Los Angeles County Health Services (LACoHS) Hazardous Materials Control Program. Since 1983 the site has been investigated by the above two agencies, the LACoHS Toxics and Epidemiology Branch, LACoHS Radiation Management Branch, Bell Gardens Building Code Enforcement Section, Bell Gardens Police Department, and the Los Angeles County District Attorneys Office.

Several sampling rounds have been conducted on-site that have documented the presence of lead contamination above regulatory limits in the soil on-site. Based on past business practices there is sufficient evidence to believe that contamination may have migrated off-site onto surrounding residential and commercial properties.

2.0 DATA USE OBJECTIVES

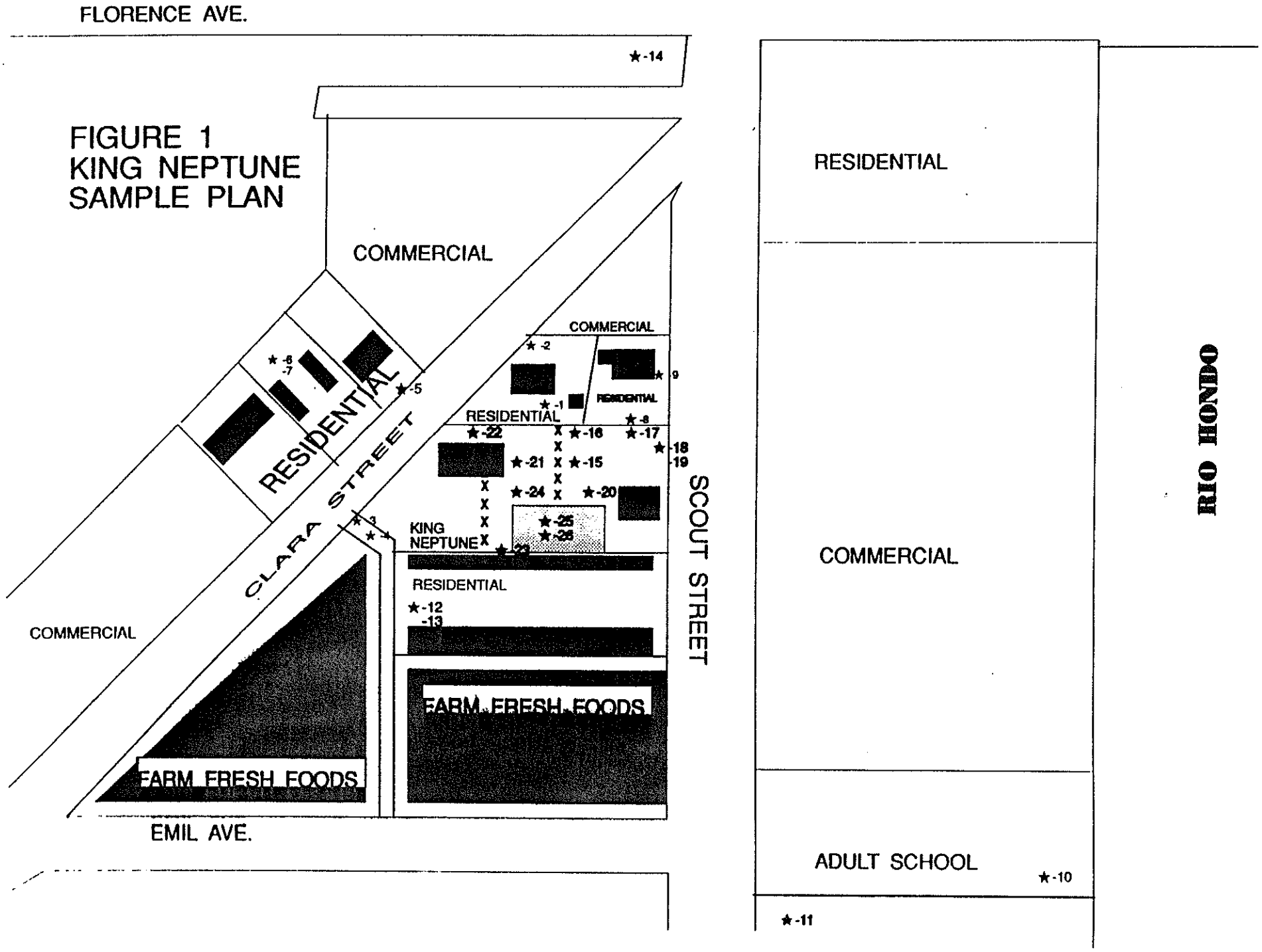
The objective of this project / sampling event is to characterize the extent and severity of contamination. Sampling will be conducted to verify previous on-site data and to determine if contamination has migrated. Data gathered during this assessment will be used to determine if the criteria for a CERCLA removal action as defined under the NCP has been met and for support data in a CERCLA 106 Administrative Enforcement Order.

Sample data will be evaluated against California TTLC levels. Samples may be reanalyzed for California STLC at a later date.

3.0 QUALITY ASSURANCE OBJECTIVES

Quality assurance level 2 (QA 2) protocol will be followed for this sampling event. QA 2 is a verification objective used to verify analytical (field or lab) results. This objective for data quality is available for data collection activities that require qualitative and/or quantitative verification of a "select portion of sample findings. This quality objective is intended to allow the OSC to focus on specific pollutants and specific levels of concentration quickly, by using field screening methods

FIGURE 1
KING NEPTUNE
SAMPLE PLAN



and verifying at least 10 % by more rigorous analytical methods.

4.0 APPROACH AND SAMPLING METHODOLOGIES

4.1 Sampling Equipment

The following equipment will be utilized to obtain environmental samples from the respective media/matrix:

Parameter/Matrix	Sampling Equipment	Dedicated	Container Type
Metals in Surface Soil	Trowel	Yes	8 oz glass
Metals in Soil at 1 Foot	Hand Auger	No	8 oz glass

A complete equipment list is included in the Site Safety plan in Attachment A.

4.2 Sampling Design

Prior to the collection of samples, an XRF survey will be conducted to determine areas of possible lead contamination. A generic model will be used initially to identify sample locations. Samples will be collected in areas of varying concentration (low to high) to allow for preparation of a site specific XRF model if necessary for future use on-site.

Once the sample location has been identified, a sample will be collected at that location and the sample location mapped in reference to the smelter building. A total of 30 samples will be collected.

Ten samples will be collected on the King Neptune facility property. Two samples will be collected at each of the two residences north of the facility. Five samples will be collected at the residence directly south of the facility. One sample will collected from a facility drainage sediment collection point. Three background samples will be collected at the residence near the intersection of Florence Ave. and Scout Street, the school at the intersection of Scout Street and Emil Street and the park southeast of the site on Scout Street, respectively. Quality assurance samples will be collected including, two MS/MSD sample sets (four samples total), rinsate blank and two field duplicates.

All samples will be collected into a paper paint bucket and thoroughly homoginized. Samples will then be packaged to allow for RP splits.

Samples will be submitted to a California certified analytical laboratory for determination of total lead. Analysis will be performed per U.S. EPA SW - 846 Method 7431.

All investigative derived sampling material will be double bagged in plastic garbage bags and left on-site.

4.3 Soil Sampling Methodologies

Biased samples based on a preliminary XRF survey will be collected. Samples will be collected from the smelter facility property and from adjacent residential properties. In addition, background samples will be collected from the surrounding area.

If the XRF survey indicates areas of lead concentration that are greatly elevated, a sample will be collected at a depth of one foot. Initially subsurface samples will be collected on the King Neptune facility property. The rationale for this sample collection procedure is that because of the lengthy period of operation at this facility, a potential for contamination below the surface exists.

Collection of samples from near-surface soil will be accomplished using plastic trowels, Surface samples will be collected at a depth of 0 - 2 inches. A dedicated sampling trowel will be used for each sample.

Subsurface samples will be collected using a hand auger. The hand auger will be decontaminated between each sample. The decontamination procedure will consist a gross decontamination of the auger in an aqueous TSP solution wash and tap water rinse. This will be followed by a dilute nitric acid rinse applied as a fine mist and then a tap water and deionized water rinse. A rinsate blank will be collected from the last deionized water rinse.

4.4 Sample Documentation

All sample documents must be completed legibly, in ink. Any corrections or revisions must be made by lining through the incorrect entry and by initialing the error.

4.4.1 Field Log Book

The field log book is essentially a descriptive notebook detailing site activities and observations so that an accurate account of field procedures can be reconstructed in the writer's absence. All entries will be dated and signed by the individuals making the entries, and should include (at a minimum) the following:

1. Site name and project number.
2. Name(s) of personnel on-site.
3. Dates and times of all entries (military time preferred).
4. Descriptions of all site activities, including site entry and exit times.
5. Noteworthy events and discussions.
6. Weather conditions.

7. Site observations.
8. Identification and description of samples and locations.
9. Subcontractor information and names of on-site personnel.
10. Date and time of sample collections, along with chain-of-custody information.
11. Record of photographs.
12. Site sketches.

4.4.2 Sample Labels

Sample labels must clearly identify the particular sample, and should include the following:

1. Site name
2. Time sample was taken.
3. Sample preservation.
4. Initial of sampler(s).
5. Analysis requested.
6. Sample identification number

Sample labels will be securely affixed to the sample container.

4.4.3 Chain of Custody Record

A Chain of Custody record will be maintained from the time the sample is taken to its final deposition. Every transfer of custody will be noted and signed for, and a copy of this record kept by each individual who has signed. When samples (or groups of samples) are not under direct control of the individual responsible for them, they must be stored in a locked container sealed with a Chain of Custody seal.

The Chain of Custody record will include (at minimum) the following:

1. Sample identification number.
2. Sample information.
3. Sample location.
4. Sample date.
5. Name(s) and signature(s) of sampler(s).
6. Signature(s) off any individual(s) with control over the samples.

4.4.4 Chain of Custody Seals

Chain of Custody Seals demonstrate that a sample container has not been tampered with, or opened. The individual in possession of the sample(s) will sign and date the seal, affixing it in such a manner that the container cannot be opened without breaking the seal. The name of this individual, along with a description of the sample packaging, must be noted in the Field Logbook.

4.5 Sample Handling and Shipment

Each of the sample bottles will be sealed and labeled according to the following protocol. Caps will be secured with custody seals. Bottle labels will contain all required information. Sealed bottles will be placed in large metal or plastic coolers, and padded with an absorbent material such as vermiculite.

4.6 Schedule of Activities

Table 1: Proposed Schedule of Work

Activity	Start Date	End Date
Initial Site Recon	02/12/92	02/12/92
Site Characterization	02/18/92	02/18/92

5.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

The Technical Assistance Team Project Manager (TATPM), Robert Wise, is the primary point of contact with the EPA On-Scene Coordinator (OSC). The TATPM is responsible for the development and completion of the Sampling QA/QC Plan, project team organization, and supervision of all project tasks, including reporting and deliverables.

The TAT Site QC Coordinator, Anthony Talamantez, is responsible for ensuring field adherence to the Sampling QA/QC Plan and recording any deviations. The Site QC Coordinator is also the primary project team contact with the lab.

The following sampling personnel will work on this project:

Personnel	Responsibility
Robert Wise	Project Manager
Anthony Talamantez	QA/QC Coordinator
Nancy Parson	Site Safety Officer

6.0 LABORATORY QUALITY ASSURANCE REQUIREMENTS

The following requirements apply to the respective QA Objectives and parameters identified in Section 3.0. The following QA Protocols for QA-2 data are applicable to all sample matrices and include:

1. Provide sample documentation in the form of field logbooks, the appropriate field data sheets and chain of custody forms. Chain of custody sheets are optional for field screening locations.

2. Document sample holding times; this includes documentation of sample collection and analysis dates.

3. Provide QC Summary sheets: referenced forms found in SW-846, Chapter 1.

a. Initial and continuing laboratory instrument calibration verification (Form 2).

b. Initial and continuing calibration blanks and preparation blank summary (Form 3)

c. A MS/MSD will be performed for at least 10% of the samples collected at a MS/MSD spiking level of 500 ppm. Spike sample recoveries and duplicate results for MS/MSD analysis (Form 5a and 6).

d. Laboratory control sample (Form 7).

e. Sample Holding times and analytical sequence (Form 10).

4. Provide copies of all raw data including instrument printouts and preparation and analytical laboratory notebook pages for all samples, standrds, blanks and MS/MSD.

5. For soil and sediment samples, one rinsate blank will be collected.

6. Provide Chain of Custody forms.

7.0 DELIVERABLES

The TATPM Robert Wise, will maintain contact with the OSC Dan Shane, to keep him informed about the technical and financial progress of this project. This communication will commence with the issuance of the work assignment and project scoping meeting. Activities under this project will be reported in status and trip reports and other deliverables (e.g., analytical reports, final reports) described herein.

This sampling event requires analytical services. Documentation of lab selection, raw data, or results will be provided in the final report. A review of the data generated under this plan will be undertaken. The assessment of data acceptability or usability will be documented under the data validation report.

A final report will be prepared to correlate available background information with data generated under this sampling event and identify supportable conclusions and recommendations which satisfy the objectives of this QA/QC Sampling Plan.

8.0 DATA VALIDATION

QA LEVEL 2

Data generated under this QA/QC Sampling Plan will be evaluated accordingly with appropriate criteria contained in the Removal Program Data Validation Procedures which accompany OSWER Directive #9360.4-1. Specific data review activities for QA 2 should be performed by the following approach:

1. Of the soil samples evaluated in the field by using the XRF, at least 10% will be confirmed for identification, precision, accuracy, and error determination.

2. The results of 10% of the samples in the analytical data packages should be evaluated for holding times, blank contamination, spike (surrogate/matrix) recovery, and detection capability.

3. The holding times, blank contamination, and detection capability will be reviewed for the remaining samples.

AMENDMENTS TO SAMPLING PLAN

Section 4.2: Sampling Design

The original sampling plan called for the collection of five samples at the residence directly south of the facility. Due to a mistake in perceived wind direction, only two samples will be collected at that location.

The three remaining samples will be collected on the public right of way in front of 6612 Clara St, the public right of way in front of 6625 Clara St. and the backyard at 6615 Clara St., respectively.

After reviewing the analytical method it was determined that a nitric acid rinse for non-dedicated sampling tools was not necessary.

The samples will be submitted to Calscience Environmental Laboratories for analysis per SW-846 method 6010.

Due to access problems, on-site and off-site samples will be collected approximately 16 days apart. Due to the six month holding time on lead samples, this will not affect data quality.

Section 4.5: Sampling Handling and Shipment

Due to the time period between sample collection, the samples will be stored in the TAT office. Samples collected on February 18, 1992 were custody sealed and logged onto a chain of custody form prior to storage. The boxes with the samples will be custody sealed.

Section 4.6: Schedule of Activities

Off-site characterization will occur on February 18, 1992. On-site characterization will occur on March 5, 1992.

Section 5.0: Project Organization and responsibilities

Personnel for the March 5, 1992 sampling activity will include: R. Wise,TAT; C. Jones, TAT; and D. Shane, FOSC.

ATTACHMENT A

SITE SAFETY PLAN

ecology and environment, inc.

SITE SAFETY PLAN

Version 988

A. GENERAL INFORMATION

Project Title: King Neptune Lead Site

TDD/PAN/Proj No: ECA1877-SAA

Proj. Manager: R. Wise Proj. Dir: D. Shane

Location: 6612 Clara St., Bell Gardens, California

Prepared by: R. Wise Date Prepared: Feb. 10, 1992

Approval by: [signature] Date Approved: 2/10/92

Site Safety Officer Review: " Date Reviewed: 2/10/92

Scope/Objective of Work: Site assessment

Proposed Date of Field Activities: Febuary 18, 1992, March 5, 1992

Background Info Complete: X Preliminary*: ____

*No Analytical Data Available

Documentation/Summary

Overall Chemical Hazard Serious: ____ Moderate: X

Low: ____ Unknown: ____

Overall Physical Hazard Serious: ____ Moderate: ____

Low: X Unknown: ____

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B. SITE/WASTE CHARACTERISTICS

Waste Type(s)

Liquid: ____ Solid: X Sludge: ____ Gas/Vapor: ____

Characteristic(s)

Flam/Ignit	____	Volatile	____	Corrosive	____	Acutely Toxic	____
Explosive	____	Reactive	____	Carcinogen	X	Radioactive*	____

Other: Site history involves handling of radioactive substances. Local regulatory conducted recently did not detect radiation levels above background.

*Requires completion of additional form and special approval from the Corporate Health/Safety Group. Contact RSC or HQ.

Physical Hazards

Overhead	____	Noise	____	Burn	____
Puncture	____	Trip/Fall	____	Splash	____
Confined* Space	____	Other:	Site is an operational lead smelter.		

*Requires completion of additional form and special approval from the Corporate Health/Safety Group. Contact RSC or HQ.

Site History/Description and Unusual Features (see Sampling Plan for detailed description:

Site is a lead smelter. Lead pigs from hospitals and lead form batteries is recovered and smelted to make diving weights and fishing sinkers. The regulatory history for this site goes back to at least 1983. Highest concentration detected on-site is 128,000 ppm.

Locations of Chemicals/Wastes:

Smelter is located inside the garage. Lead dust and particulates may have migrated off-site.

Estimated Volume of Chemicals/Wastes:

Unknown

Site Currently in Operation Yes: X No: ____

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C. HAZARD EVALUATION

List Hazards by Task (i.e., drum sampling, drilling, etc.) and number them. (Task numbers are cross-referneced in Section D)

Physical Hazard Evaluation:

Task 1. Site Walk Through

Task 2. Smelter Walk Through

Task 3. Soil Sampling On-site

Task 4. Soil Sampling Off-site

Task 5.

Chemical Hazard Evaluation

Compound: Lead

PEL/TWA: 0.050 mg/m3 (based on OSHA PEL)

Route of Exposure: Inhalation, Ingestion, Contact

Acute Symptoms: Weak, lass, insom; facial pallor; pal eye, anor, low-wgt, malnut; constip, abdom pain, colic; anemia; gingival lead line; tremor; para wrist, ankles; encephalopthy; nephropathy; irrit eyes; hypertension

Odor Threshold/Description: Not Applicable

Compound:

PEL/TWA:

Route of Exposure:

Acute Symptoms:

Odor Threshold/Description:

Compound:

PEL/TWA:

Route of Exposure:

Acute Symptoms:

Odor Threshold/Description:

Compound: _____

PEL/TWA: _____

Route of Exposure: _____

Acute Symptoms: _____

Odor Threshold/Description: _____

Compound: _____

PEL/TWA: _____

Route of Exposure: _____

Acute Symptoms: _____

Odor Threshold/Description: _____

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D. SITE SAFETY WORK PLAN

Site Control: Attach map, use back of this page, or sketch site showing hot zone, contamination reduction zone, etc.

Perimeter Identified? No Work Areas Designated? Y

Site Secured? Y Zone(s) of Contamination Identified? No

Personnel Protection (TLD badges required for all field personnel): Y

Anticipated Level of Protection, Cross-reference task numbers to Section C

	A	B	C	D
Task 1				X
Task 2			X	
Task 3			X	
Task 4				X
Task 5				

Modifications: Tyvec outer coveralls, nitrile outer gloves, steel toed boots with booties.

Action Levels for Evacuation of Work Zone Pending Reassessment of Conditions:

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Action Levels for Evacuation of Work Zone Pending Reassessment of Conditions:

- o Level D: O2 <19.5% or >25%, explosive atmosphere >10% LEL, organic vapors above background levels, particulates > mg/M3, other:
- o Level C: O2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors (in breathing zone) >5 ppm, particulates >26.04 mg/M3, other: Particulates based on a maximum concentration of 45,000 ppm lead found on-site x the 50 fold protection factor for level C.
- o Level B: O2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors (in breathing zone) >500 ppm, particulates > mg/M3, other
- o Level A: O2 <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors >500 ppm, particulates > mg/M3, other

If radiation levels are detected above background, the site will be evacuated and the situation reevaluated.

Air Monitoring (daily calibration unless otherwise noted)			
Contaminant of Interest	Type of Sample (area,personal)	Monitoring Equipment	Frequency of Sampling
Radiation	Area	Gieger Counter	Continuous
Particulates	Area	Mini-Ram	Continuous

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.:

Hand auger will decontaminated using am aqueous TSP solution and tap water rinse, followed by a DI water rinse.

Personnel Decon Protocol:

Dry decon will be used

Decon Solution Monitoring Procedures, if Applicable:

Equipment decon will be collected and left on-site for future disposal.

Special Site Equipment, Facilities, or Procedures (Sanitary Facilities and Lighting Must Meet 29 CFR 1910.120):

Site Entry Procedures and Special Considerations:

Responsible party may be hostile.

Work Limitations (time of day, weather conditions, etc.) and Heat/Cold Stress Requirements:

General Spill Control, if Applicable:

Investigation-Derived Material Disposal (i.e., expendables, decon waste, cuttings):

All I-D waste will be double bagged and left on-site.

Sample Handling Procedures Including Protective Wear:

All sampling done on-site will be conducted in Level C. Sample containers will be decontaminated using an aquesous TSP solution and DI water rinse. Personnel conducting the decon will wear Tyvec and gloves.

Team Member*	Responsibility
Robert Wise	Team Leader
Cindy Jones °	Site Safety Officer
Dan Shane °	USEPA OSC
Mike Martinet	City of Bell Gardens
Anthony Talamantez*	
Nancy Parson *	

° March 5, 1992 assessment
* Febuary 18, 1992 assessment

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E. EMERGENCY INFORMATION

(Use supplemental sheets, if necessary)

LOCAL RESOURCES

(Obtain a local telephone book from your hotel, if possible)

Ambulance 911

Hospital Emergency Room Rio Hondo Memorial: (213) 806-1821

Poison Control Center See attached sheet

Police (include local, county sheriff, state) 911

Fire Department 911

Airport Not Applicable

Agency Contact (EPA, State, Local USCG, etc.)
Gerry Munoz (213) 744-5304

Local Laboratory Not Applicable

UPS/Fed Ex Not Applicable

Client/EPA Contact Dan Shane (415) 744-2000

Site Contact Gerry Munoz

SITE RESOURCES

Site Emergency Evacuation Alarm Method: _____

Water Supply Source _____

Telephone Location, Number _____

Cellular Phone, if available _____

Radio _____

Other _____

EMERGENCY CONTACTS

1. Dr. Raymond Harbison: (501) 221-0465 or (904) 462-3277, 3281 (Univ. of Florida, Alachua, Fl) (501) 370-8263 (24 hours)
2. Ecology and Environment, Inc., Safety Director
   Paul Jonmaire ..... (716) 684-8060 office
   (716) 655-1260 home
3. Regional Office Contact, John Roosen .. (415) 777-2811 office
   (415) 898-5060 home
4. Los Angeles ATATL Craig Benson ..... (213) 481-3870 office
   (818) 989-0698 home

MEDTOX HOTLINE

1. Twenty-four hour answering service: (501) 370-8263

What to report:

- State: "This is an emergency."
- Your name, region, and site.
- Telephone number to reach you.
- Your location.
- Name of person injured or exposed.
- Nature of emergency.
- Action taken.

2. toxicologist, (Drs. Raymond Harbison or associate) will contact you. Repeat the information given to the answering service.

3. If a toxicologist does not return your call within 15 minutes, call the following persons in order until contact is made:

a. 24 hour hotline - (706) 684-8940

b. Corporate Safety Director P. Jonmaire home# (716) 655-1260

c. Asst Corp. Safety Officer S. Sherman - home# (716) 688-0084

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EMERGENCY ROUTES

(NOTE: Field Team must Know Route(s) Prior to Start of Work)

Directions to hospital (include map)

Go south on Clara to Scout. Turn left onto Scout. Take Scout to Florence. Make a right turn onto Florence. Take Florence to Paramont. Make a left onto Paramount. Take Paramount to Telegraph. Make a right onto Telegraph. Rio Hondo Memorial Hospital is located at 8300 E. Telegraph Rd. Downey.

Emeregency Egress Routes to Get Off-Site

Site can be exited either through the front or back yards.

F. EQUIPMENT CHECKLIST

Level A	No
SCBA	
Spare Air Tanks	
Encapsulating Suit Type:	
Surgical Gloves	
Neoprene Safety Boots	
Booties	
Gloves, Type:	
Outer Work Gloves	
Hard Hat	
Cascade System	
5-Minute Escape Mask	

Level B	No
SCBA	
Spare Air Tanks	
Protective Coverall Type:	
Rain Suit	
Butyl Apron	
Surgical Gloves	
Gloves, Type:	
Outer Work Gloves	
Neoprene Safety Boots	
Booties	
Hard Hat w/Face Shield	
Cascade System	
Manifold System	

Level C	No
Ultra-Twin Respirator	X
Power Air Purifying Resp.	
Cartridges, Type: GMC-H	X
Protective Coverall Type: Tyvec	X
5-Minute Escape Mask	
Rain Suit	
Butyl Apron	
Surgical Gloves	X
Gloves, Type: Nitrile	X
Outer Work Gloves	
Neoprene Safety Boots	X
Hard Hat with Face Shield	X
Booties	X

Level D	No
Ultra-Twin Respirator	
Cartridges, Type:	
5-Minute Esc Mask (Avail)	
Protective Coverall Type:	
Rain Suit	
Neoprene Safety Boots	
Booties	
Work Gloves	
Hard Hat with Face Shield	
Safety Glasses	

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INSTRUMENTATION	No.
OVA	
Thermal Desorber	
O2/Explosimeter & Cal Kit	
Photovac Tip	
HNu	
Magnetometer	
Pipe Locator	
Weather Station	
Draeger Pump and Tubes	
Brunton Compass	
HCN Monotox	
H2S Monotox	
Heat Stress Monitor	
Noise Equipment	
Air Sampling Pumps	
Mini-Ram	X

DECON EQUIPMENT	No.
Wash Tubs	
Buckets	X
Scrub Brushes	X
Pressurized Sprayer	X
Detergent - Type: TSP	X
Solvent - Type: Nitric Acid (dilute)	X
Plastic Sheeting	X
Tarps and Poles	
Trash Bags	X
Trash Cans	
Masking Tape	
Duct Tape	X
Paper Towels	X
Face Mask Sanitizer	
Folding Chairs	
Step Ladders	
Distilled Water	X

RADIATION EQUIPMENT	No.
Documentation Forms	
Portable Ratemeter	
Scaler/Ratemeter NaI Probe ZnS Probe GM Pancake Probe GM Side Window Probe	
Micro R Meter	X
Ion Chamber	
Alert Dosimeter	
Pocket Dosimeter	

SAMPLING EQUIPMENT	No.
Sample Jars	X
VOA Vials	
Air Sampling Pump Supplies and Collection Media Type:	
String	
Hand Bailers	
Thieving Rods	
Scoops/Trowels	X
Knives	

FIRST AID EQUIPMENT	No.
First Aid Kit	X
Oxygen Administrator	
Stretcher	
Portable Eye Wash	
Blood Pressure Monitor	
Fire Extinguisher	X

SHIPPING EQUIPMENT	No.
Coolers	X
Paint Cans w/ Lids	
Vermiculite	
Shipping Labels	X
DOT Labels	X
Strapping Tape	X
Sample Container Labels	X
Zip-Lock Baggies	X
Custody Seals	X
Chain-of-Custody Forms	X
Federal Express Forms	
Clear Packing Tape	

VEHICLE EQUIPMENT	No.
Tool Kit	
Hydraulic Jack	
Lug Wrench	
Tow Chain	
Vehicle Check-Out: Gas, Oil, Antifreeze, Battery, Tire Pressure	

MISCELLANEOUS	No.
Pitcher Pump	
Surveyor's Tape	X
100' Fiberglass Tape	
300' Nylon Rope	
Nylon String	
Surveying Flags	X
Slide Film	X
Wheel Barrow	
Bung Wrench	
Soil Auger	X
Pick	
Shovel	X
Catalytic Heater	
Propane Gas	
Banner Tape	X
Surveying Meter Stick	
Chaining Pins and Ring	
Tables	
Weather Radio	
Binoculars	
Megaphone	

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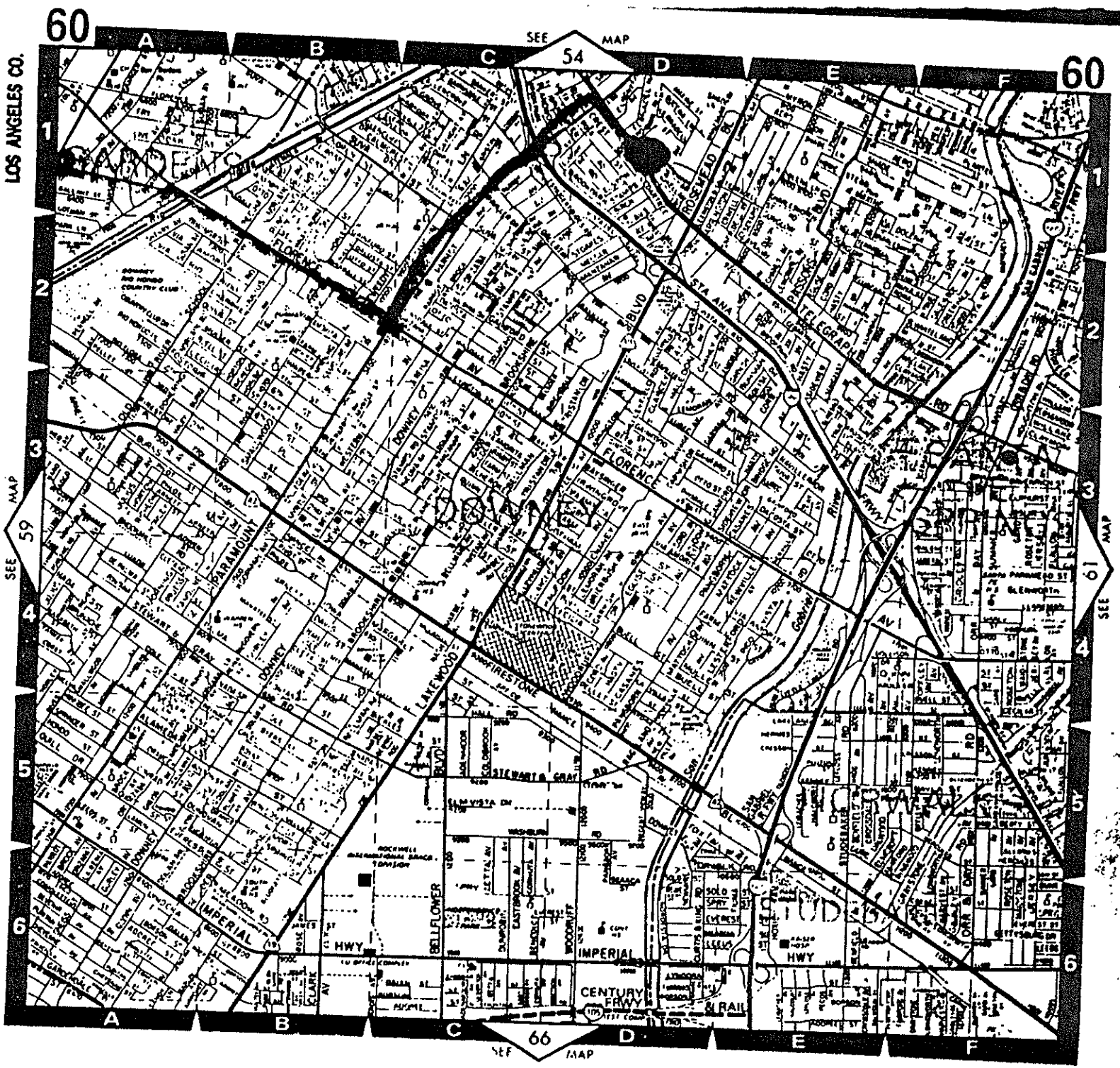

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TECHNICAL PURE (DOT) * DODECA
DE * DYP-97 F * LAUROX *
DE, TECHNICALLY PURE (DOT) * LA
LYP 97 * PEROXYDE de LAUROYL
(I)

ENSUS REPORTS: IARC C
GROUP 3 IMEMDT 7,56,87
ate Evidence IMEMDT 36,315
in EPA TSCA Inventory.

AK: Mild skin effects.
lassification: Organic Peroxide
ic Peroxide.

PROFILE: Questionable carc
erimental tumorigenic data. A po
agent. It is a corrosive irritant
mucous membranes and can
dangerous fire hazard. When
position it emits acrid smoke

CAS: 93-23-2
ISOQUINOLINIUM BROMIDE
N • Br mw: 378.45

ep amber, water-sol liquid; plea
ic odor.

DECYLISOQUINOLINIUM BROMIDE
LQ75 * ISOTHAN

US REPORTS: Reported in E
tory.

ROFILE: Poison by ingestion. A
itant. Combustible when expo
ame. Incompatible with oxidiz
An FDA over-the-counter dr
d to decomposition emits to
and NO_x.

CAS: 112-55-0 HR:
ERCAPTAN
mw: 202.44

white to pale yellow liquid. Mp
77°, flash p: 262°F (OC), d: 0.8

ANETHIOL * DODECYL MERCAP
CYL MERCAPTAN * 1-DODECYL
m-LAURYL MERCAPTAN * 1-MER
* NCI-C60935 * PENNFLOAT

REPORTS: Reported in EPA

H REL: (n-Alkane Mono Thiols) CL 0.5
15M

ETY PROFILE: Mutation data reported.
mbustible when exposed to heat or flame.
fight fire, use alcohol foam. When heated
composition it emits toxic fumes of SO_x.

CAS: 8022-15-9 HR: 1
LAVANDIN OIL

OP: Main constituent is Linalool. Prepared
steam distillation of the flowering stalks of
the plants *Lavanoula hybrida reverchon*, Lavan-
dula abrialis (Fam. *Labiatae*), *Lavandula offici-
nalis*, or *Lavandula latifolia*. Yellow liquid;
camphoraceous odor of lavender. D: 0.885, refr
index: 1.460 @ 20°. Sol in fixed oils, propylene
glycol, mineral oil; insol in glycerin.

SYN: OIL of LAVANDIN, ABRIAL TYPE

CONSENSUS REPORTS: Reported in EPA
TSCA Inventory.

SAFETY PROFILE: A skin irritant. When
heated to decomposition it emits acrid smoke
and irritating fumes.

LC0000 CAS: 8000-28-0 HR: 1
LAVENDER OIL

PROP: Found in the flowers of *Lavandula offici-
nalis* Chaix et Villars (*Lavabdula vera* De Can-
dolle (Fam. *Labiatae*). The main constituent
is linalyl acetate. A colorless to yellow liquid;
characteristic odor and taste of lavender flowers.
D: 0.875, refr index: 1.459-1.470 @ 20°.

SYNS: LAVENDEL OEL (GERMAN) * OIL of LAVEN-
DER

CONSENSUS REPORTS: Reported in EPA
TSCA Inventory.

SAFETY PROFILE: Mildly toxic by ingestion.
A skin irritant. When heated to decomposition
it emits acrid smoke and irritating fumes.

[redacted] CAS: 7439-92-1 HR: 3
af: Pb aw: 207.19

PROP: Bluish-gray, soft metal. Mp: 327.43°,
bp: 1740°, d: 11.34 @ 20°/4°. vap press: 1
mm @ 973°.

SYNS: C.I. 77575 * C I PIGMENT METAL 4
* GLOVER * LEAD FLAKE * LEAD S2
* OLOW (POLISH) * OMAHA * OMAHA & GRANT
* SI * SO

CONSENSUS REPORTS: IARC Cancer Review: GROUP 2B IMEMDT 7,230,87; Animal Inadequate Evidence IMEMDT 23,325,80. Lead and its compounds are on the Community Right-To-Know List. Reported in EPA TSCA Inventory. EPA Genetic Toxicology Program.

OSHA PEL: TWA 0.05 mg(Pb)/m^3
ACGIH TLV: TWA 0.15 mg(Pb)/m^3; BEI: 50 µg(lead)/L in blood; 150 µg(lead)/g creatinine in urine.
DFG MAK: 0.1 mg/m^3; BAT: 70 µg(lead)/L in blood, 30 µg(lead)/L in blood of women less than 45 years old.
NIOSH REL: TWA (Inorganic Lead) 0.10 mg(Pb)/m^3

SAFETY PROFILE: Suspected carcinogen. Poison by ingestion. Moderately toxic by intraperitoneal route. Human systemic effects by ingestion and inhalation: loss of appetite, anemia, malaise, insomnia, headache, irritability, muscle and joint pains, tremors, flaccid paralysis without anesthesia, hallucinations and distorted perceptions, muscle weakness, gastritis and liver changes. The major organ systems affected are the nervous system, blood system, and kidneys. Lead encephalopathy is accompanied by severe cerebral edema, increase in cerebral spinal fluid pressure, proliferation and swelling of endothelial cells in capillaries and arterioles, proliferation of glial cells, neuronal degeneration and areas of focal cortical necrosis in fatal cases. Experimental evidence now suggests that blood levels of lead below 10 µg/dl can have the effect of diminishing the IQ scores of children. Low levels of lead impair neurotransmission and immune system function and may increase systolic blood pressure. Reversible kidney damage can occur from acute exposure. Chronic exposure can lead to irreversible vascular schlerosis, tubular cell atrophy, interstitial fibrosis, and glomerular sclerosis. Severe toxicity can cause sterility, abortion and neonatal mortality and morbidity. Experimental teratogenic and reproductive effects. Human mutation data reported. Very heavy intoxication can sometimes be detected by formation of a dark line on the gum margins, the so-called "lead line."

When lead is ingested, much of it passes through the body unabsorbed, and is eliminated in the feces. The greater portion of the lead that is absorbed is caught by the liver and excreted, in part, in the bile. For this reason,

larger amounts of lead are necessary to cause toxic effects by this route, and a longer period of exposure is usually necessary to produce symptoms. On the other hand, upon inhalation, absorption takes place easily from the respiratory tract and symptoms tend to develop more quickly. For industry, inhalation is much more important than is ingestion. For the general population, exposure to lead occurs from inhaled air, dust of various types, and food and water with an approximate 50/50 division between inhalation and ingestion routes. Lead occurs in water in either dissolved or particulate form. At low pH, lead is more easily dissolved. Chemical treatment to soften water increases the solubility of lead. Adults absorb about 5-15% of ingested lead and retain less than 5%. Children absorb about 50% and retain about 30%.

Lead produces a brittleness of the red blood cells so that they hemolyze with but slight trauma; the hemoglobin is not affected. Due to their increased fragility, the red cells are destroyed more rapidly in the body than is normal, producing an anemia which is rarely severe. The loss of circulating red cells stimulates the production of new young cells which, on entering the blood stream, are acted upon by the circulating lead, with resultant coagulation of their basophilic material. These cells after suitable staining, are recognized as "stippled cells." There is no uniformity of opinion regarding the effect of lead on the white blood cells.

In addition to its effect on the red blood cells, lead produces a damaging effect on the organs or tissues with which it comes in contact. No specific or characteristic lesion is produced. Autopsies in deaths attributed to lead poisoning and experimental work on animals have shown pathological lesions of the kidneys, liver, male gonads, nervous system, blood vessels and other tissues. None of these changes, however, has been found consistently. In cases of severe lead poisoning, the amount of lead found in the blood is frequently in excess of 0.07 mg per 100 cc of whole blood. The urinary lead excretion generally exceeds 0.1 mg per liter of urine.

Flammable in the form of dust when exposed to heat or flame. Moderately explosive in the form of dust when exposed to heat or flame. Mixtures of hydrogen peroxide + trioxane explode on contact with lead. Rubber gloves containing lead may ignite in nitric acid. Violent reaction on ignition with chlorine trifluoride; concentrated hydrogen peroxide; ammonium nitrate (below 200° with powdered lead); a[illegible] acetylide (with powdered lead). Incom[illegible] with NaN_3; Zr; disodium acetylide; [illegible] Can react vigorously with oxidizing [illegible] A common air contaminant. When hea[illegible] decomposition it emits highly toxic fu[illegible] Pb.

LCG000 CAS: 301-04-2
LEAD ACETATE

DOT: UN 1616
mf: $C_4H_6O_4 \cdot Pb$ mw: 325.29

PROP: Trihydrate: colorless crystals or [illegible] granules or powder. Sltly acetic odor, sl[illegible] effloresces. D: 2.55, mp: 75° (when ra[illegible] heated), decomp above 200°. Very sol in [illegible] cerol.

SYNS: ACETATE de PLOMB (FRENCH) * ACETIC ACID LEAD (2+) SALT * BLEIACETAT (GERMAN) * DIBASIC LEAD ACETATE * LEAD (2+) ACETA[illegible] * LEAD(II) ACETATE * LEAD DIACETATE * LEAD DIBASIC ACETATE * NORMAL LEAD A[illegible] TATE * PLUMBOUS ACETATE * RCRA WASTE NUMBER U144 * SALT of SATURN * SUGAR of LEAD

CONSENSUS REPORTS: IARC Cancer [illegible] view: GROUP 3 IMEMDT 7,230,87; An[illegible] Sufficient Evidence IMEMDT 23,325; IMEMDT 1,40,72; Human Limited Evid[illegible] IMEMDT 23,325,80. NTP Fourth Annual [illegible] port On Carcinogens, 1984. Lead and its c[illegible] pounds are on the Community Right-To-K[illegible] List. Reported in EPA TSCA Inventory. E[illegible] Genetic Toxicology Program.

OSHA PEL: TWA 0.05 mg(Pb)/m^3
ACGIH TLV: TWA 0.15 mg(Pb)/m^3
NIOSH REL: (Inorganic Lead) TWA 0.[illegible] mg(Pb)/m^3
DOT Classification: ORM-E; Label: No[illegible] Poison B; Label: St. Andrews Cross.

SAFETY PROFILE: Confirmed carcinogen w[illegible] experimental neoplastigenic and tumorig[illegible] data. Poison by ingestion, intraperitoneal, s[illegible] cutaneous, and intravenous routes. Experim[illegible] tal teratogenic and reproductive effects. Hum[illegible] mutation data reported. Used as color addi[illegible] in hair dyes, an insecticide, an astringent, [illegible] sedative. Incompatible with $KBrO_3$, acids, s[illegible] ble sulfates, citrates, tartrates, chlorides, [illegible] bonates, alkalies, tannin phosphates, resorc[illegible] salicylic acid, phenol, chloral hydrate, sulf[illegible]