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Phase I Environmental Site Assessment
Fred C. Nelles Youth Correctional Facility
Whittier, California

FINAL

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Executive Summary

CH2M HILL was retained by Brookfield Homes Southland, Inc. (Brookfield Homes) to conduct a Phase I Environmental Site Assessment (ESA) for the former Fred C. Nelles Youth Correctional Facility (Site). The Site is located Whittier, California.

The 75-acre Site consists of 62 buildings and is being proposed for redevelopment. The State of California has owned this property since 1910.

This Phase I ESA has been completed in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-00. The primary focus of the Phase I ESA is to identify recognized environmental conditions (RECs), as defined by the ASTM standard. This report presents the results of the Phase I ESA, and conclusions regarding the environmental conditions at the Site.

In addition to RECs, CH2M HILL has identified "areas of potential concern" (AOPCs) in this Phase I ESA to address those environmental issues that do not specifically meet the definition of a REC but do warrant further evaluation, possibly including investigation.

Based on a review of available records, regulatory agency documents, historical aerial photographs, a site visit, and personnel interviews, the following RECs and AOPCs have been identified at the Site: 2 RECs, 5 historical RECs and 6 AOPCs were identified as listed below. Adjacent to the Site, two RECs and one AOPC have been identified. Recommendations for further evaluation are provided in Section 5, Findings and Conclusions.

Fred C. Nelles Property (Site):

- Building 15, Waste Oil Leaking Underground Storage Tank (LUST) (Tank 3G). A waste oil underground storage tank (UST) was located on the west side of the former Maintenance Garage. Based on soil investigations at this UST, low concentrations of Total Recoverable Petroleum Hydrocarbons (TRPH) and Benzene, Toluene, Xylenes, and Ethylbenzene (BTXE) were identified at shallow soil depths. This UST was closed by the Regional Water Quality Control Board (RWQCB). Based on this information, this UST is considered a historical REC.
- Building 15, Diesel UST (Tank 4G). A diesel UST was located on the south side of the former Maintenance Garage. Based on soil investigations at this UST, low concentrations of TRPH and BTXE were identified at shallow soil depths. This UST was closed by the RWQCB. Based on this information, this UST is considered a historical REC.
- Building 15, Gasoline USTs (Tanks 1 and 2). Two gasoline USTs were located on the south side of Building 15. These USTs stored leaded and unleaded gasoline. The USTs were reportedly installed in 1979 and had a capacity of 2,000 gallons each. These USTs have since been removed. Based on soil investigations at these USTs, low concentrations of TRPH were identified at shallow soil depths. These USTs were closed by the Regional Water Quality Control Board (RWQCB). Based on this information, these USTs are considered a historical REC.

- Building 15, Hydraulic Lift. A hydraulic lift is located on the interior of the former Maintenance Garage. The building was reportedly constructed in 1931 and it presumed that the hydraulic lift was installed at about the same time. The integrity of the hydraulic lines and hydraulic operational tank that are below ground is unknown. Because of the length of time the lift has been in service and the unknown integrity of this hydraulic system, it is considered an AOPC.
- Building 15, Drain Pit. A drain pit for vehicle fluids is located on the interior of the former Maintenance Garage. The building was reportedly constructed in 1931 and it is presumed that the drain pit was installed at about the same time. The integrity of the drain pit is unknown. Because of the length of time the drain pit was in service and the integrity of this drain pit is unknown, it is considered an AOPC.
- Building 27, Boiler Room UST (Tank 3P). A 30,000-gallon diesel tank has been reportedly abandoned in-place and filled with slurry on the east side of Building 27. Quarterly groundwater monitoring events performed in 2003 at this UST indicated that TPH-D, TPH-G, BTEX, oxygenates, 1,2-DCA, and EDB were not detected, with the exception of one detection of MTBE (27 $\mu g/L$ at MW-2). This UST was closed by the Regional Water Quality Control Board (RWQCB). Based on this information, this UST is considered a historical REC.
- Lead Based Paint (LBP). Because a comprehensive LBP survey has not been performed at the Site, it assumed that all buildings constructed prior to 1978, have LBP. There are 34 buildings located at the Site that were constructed prior to 1978. Because of the potential for lead in the soil surrounding these buildings, the soil surrounding these buildings is considered an AOPC.
- Former Agricultural Areas. Agricultural areas were present on the western and southwest portions of the Site according to historical aerial photographs dated: 1928, 1938, 1949, and 1956. Because of the probable application of pesticides in these areas, there is the potential for residual pesticides remaining in the soil. Therefore, these former agricultural areas on the Site are considered AOPCs.
- Polychlorinated Biphenyls (PCBs). Information provided by Fred C. Nelles maintenance personnel indicated that all electrical transformers have been replaced with or retro-filled with non-PCB containing oil or have concentrations of less than 50 parts per million (ppm). Detailed information on the former and current locations of the electrical transformers, capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems was not available from the California Youth Authority Environmental Compliance Bureau. The potential for PCBs to be present the former and current locations of the transformers or in the capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems is an AOPC.

Adjacent Property:

Two properties that border the Site on the east have been identified as environmentally significant because of documented groundwater contamination. The Leggett & Platt property was reported by the EDR database as a LUST that is undergoing post remediation monitoring; and the Modine Manufacturing Company that has documented groundwater contamination associated with manufacturing of automobile radiators. Because of the groundwater contamination that exists at these two sites and because of the proximity to the Site, these two sites are considered RECs.

A former railway line that was operated by Southern Pacific bordered the Site on the east. This railway line is no longer present; however, a portion of the old railway grade and right-of-way (ROW) is still present. Because of the potential for arsenic associated with the creosote from the railway ties and herbicides associated with track maintenance, the area along the ROW is an AOPC.

Introduction

CH2M HILL conducted a Phase I Environmental Site Assessment (ESA) for the former Fred C. Nelles Youth Correctional Facility (referred to herein as "Site"), located in Whittier, California (see Figure 1-1). The site was opened on February 12, 1890 as a Reform School for Juvenile Offenders. The site was renamed the Whittier State School in 1891 and renamed again in 1941 to Fred C. Nelles Youth Correctional Facility.

CH2M HILL conducted a site reconnaissance visit to the Site on January 5 and 6, 2005. Photographs of the Site taken during the site visit are included in Appendix A.

1.1 Purpose

The primary purpose of the Phase I ESA process is to identify recognized environmental conditions (RECs) or historical RECs located at the Site. As defined by American Society for Testing and Materials (ASTM) E 1527-00, the term REC means:

> *"the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."*

As defined by ASTM, the term historical REC means:

> *"environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently."*

1.2 Scope-of-Services

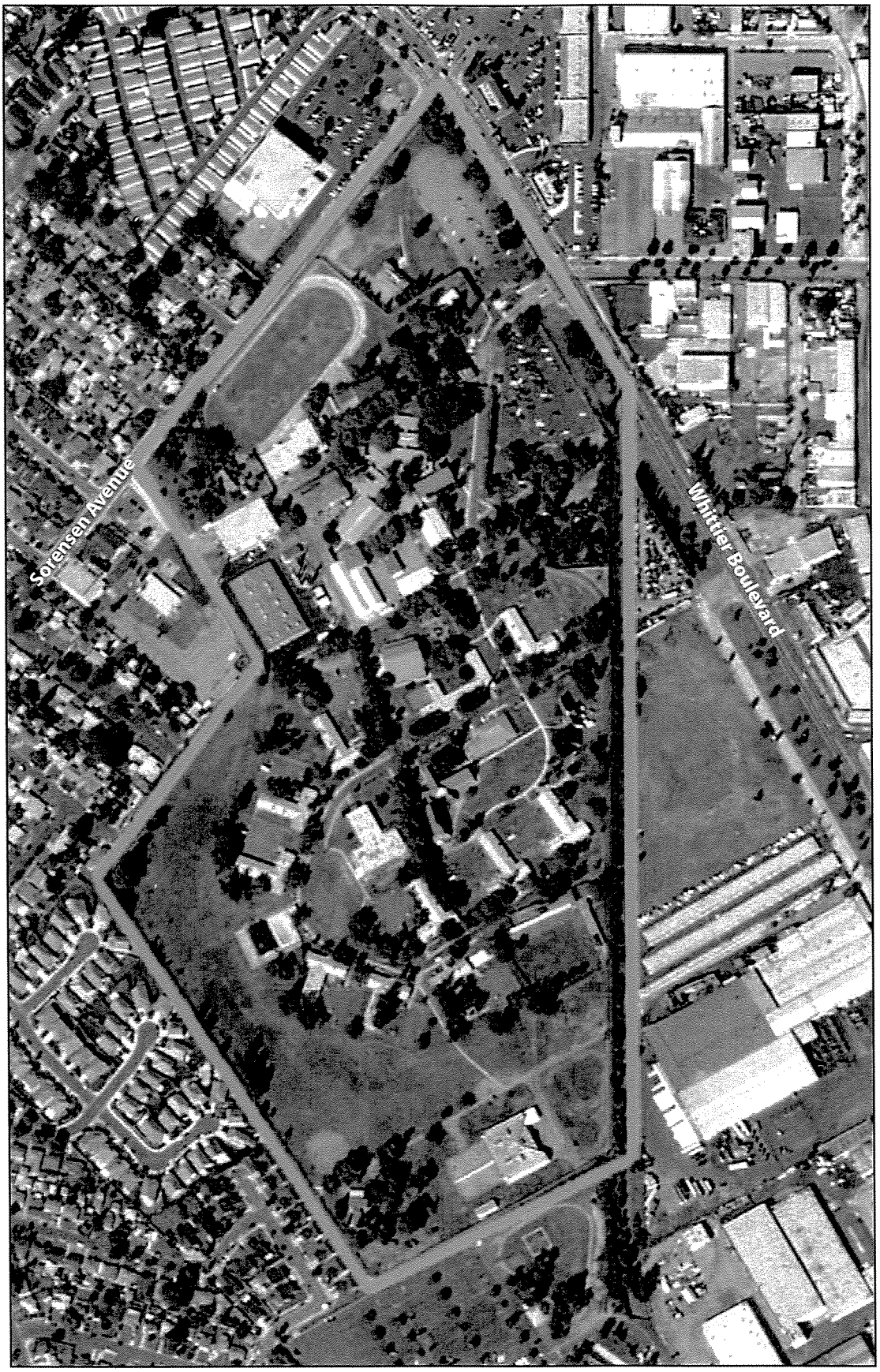
This Phase I ESA consists of the following elements:

- Records Review
- Historic Resources Review
- Site Reconnaissance
- Interviews
- Chain-of-Title
- Preparation of this Phase I ESA

This Phase I ESA does not include an assessment of the ASTM Standard "non-scope considerations" for asbestos containing materials, radon, lead-based paint, lead in drinking water, regulatory compliance, industrial hygiene, health and safety, ecological resources, indoor air quality, or high voltage powerlines.

1.3 Significant Assumptions

No significant assumptions were identified during the preparation of this Phase I ESA.



North

LEGEND

Site Boundary

FIGURE 1-1
Vicinity Map
Fred C. Nelles Site
Phase I Environmental Site Assessment

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2.0 Site Description

This section provides general environmental setting information for the Site.

2.1 Site Location and Legal Description

The Site is located south of the intersection of Whittier Boulevard and Sorensen Avenue in Whittier, California (see Figure 2-1). There are 62 buildings located on this 75-acres site which is surrounded by security fencing. Areas surrounding the Site are characterized as residential, commercial, and industrial. The Site is comprised of 1 parcel with a Los Angeles County Assessor Map Number of 8170-013-904. A chain-of-title report for this site determined that the site has been owned by the State of California, since July 1, 1910. A summary of the transfers of title recorded in the search is provided in Table 2-1. A copy of the chain-of-title is provided in Appendix B.

TABLE 2-1
Property Title History

Date Executed	Grantor(s) (Seller)	Grantee(s) (Buyer)
APN: 8170-013-904		
July 1, 1910	TRS Whittier School	State of California
July 6, 1909	Hadley Ranch	TRS Whittier School
June 17, 1903	Naomi Hadley, et. al.	Hadley Ranch
April 22, 1898	A. H. Dunlap	Naomi Hadley, et. al.
June 16, 1897	A. J. Stevens	A. H. Dunlap
June 10, 1896	William J. Kennedy	Naomi Hadley
January 16, 1895	A. H. Dunlap	A. J. Stevens
April 3, 1893	Washington W. Hadley	William J. Kennedy
June 11, 1891	Mae A. English	Washington W. Hadley
June 10, 1891	Mrs. Mary Dunlap	Mae A. English
April 7, 1891	Jennie Tyler, et. al.	Mae A. English
November 5, 1898	M. F. Tyler	Jennie Tyler, et. al.

There were no environmental liens identified by the chain-of-title Search for this parcel.

2.2 Reported Environmental Liens

Prior to completion of the site reconnaissance, CH2M HILL requested the following information from the State representatives:

- Any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the site
- Any pending, threatened, or past litigation relevant to past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the site

- Any notices from any governmental entity regarding any possible violation of environmental law or possible liability relating to hazardous substances or petroleum products

The State reported that there are no environmental liens against the Site and that there are no pending, threatened, or past litigation or administrative proceedings relating to the release of hazardous materials or petroleum products.

2.3 Hydrology

The Site is located within the Los Angeles Coastal Plain on the La Habra Peidmont Slope at the base of the Puente Hills. Surface waters near the Site include the southward flowing San Gabriel River located approximately 1.5 miles to the west of the Site.

2.4 Geology

Information for the Site was obtained from a soils investigation performed by Western Laboratories in January 1988. The report was necessitated by the structural damage that occurred to a couple of the buildings at the Site as a result of the 5.9 magnitude Whittier Narrows earthquake that occurred on October 1, 1987. Exploratory test borings were advanced around Building 1 (Personnel Residence) to characterize the subsurface conditions. This historic building, which was constructed in 1915, has since been demolished. Building 1 was formerly located on the northern portion of the site and outside of the fenced area and near the corner of Sorensen Avenue and Whittier Boulevard (Western Laboratories, 1988).

The investigation by Western Laboratories identified fill soils that were approximately 2.0 to 6.5 feet deep below ground surface (bgs). The fill soil was classified as sand, fine to medium sand, and slightly clayey. Beneath the fill soil, alluvial soils were encountered to depths of 25 feet bgs (maximum depth of soil borings). The alluvial soil was classified as clay, sandy (Western Laboratories, 1988).

Additional information for the Site was obtained by a recent geotechnical investigation performed in January of 2005, by Lawson and Associates, Geotechnical Consulting, Inc. Their limited subsurface evaluation consisted of 12 test pits excavated with a backhoe to depths of 11 feet bgs, 7 Cone Pentrometer Test (CPT) soundings, and 14 hollow-stem auger borings to depths of approximately 30 to 50 feet bgs. The results of the investigation indicated that the Site is underlain by relatively young (Holocene-age) alluvial sediments consisting predominantly clay with minor amounts of silt and clay (Lawson and Associates, Geotechnical Consulting, Inc., 2005).

2.5 Hydrogeology

Historic high groundwater levels in the vicinity of the Site have been reported at depths of approximately 30 to 50 feet bgs (shallowest along the southwestern portion of the Site). However, groundwater was not encountered during the 1988 and 2005 investigations by Western Laboratories, or by Lawson and Associates, Geotechnical Consulting, Inc.

Information from a groundwater investigation conducted at the Modine Manufacturing Company, which is adjacent to the Site on the east, determined that groundwater was present at depths from 77 to 80 feet bgs based on monitoring well observations. Additionally, groundwater flow beneath the Modine site was observed to be toward the

south-southwest (Earth Tech, 1989). It is likely that the groundwater flow direction at the Fred C. Nelles Site closely resembles the hydrogeology at the Modine site.

2.6 Current and Past Uses of the Property

Formerly, the Site was used as a youth correctional facility. Because the Site was closed in June of 2004, the majority of the buildings at the Site were not in use at the time of the site visit that was performed in January of 2005; with the exception of Building 3 (Visiting and Control), Building 14 (Carpenter and Paint Shop), Building 18 (Warehouse), and Building 28 (Administration). These buildings were being used in only a limited capacity. Prior to the closure in June of 2004, the Site had been in operation since 1891.

The historical aerial photographs of this Site (dated 1928, 1938, 1949, 1956, 1968, 1976, 1989, 1994, and 2002) and historical USGS topographic maps (dated 1902, 1925, 1947, 1953, 1965, 1972, and 1981) confirm that the Site has been used as a Youth Correctional Facility since at least 1925. The 1902 topographic map only shows buildings in this area, which do not appear to match the existing road network and building location. In the 1928 historical aerial photograph, agricultural orchards surround the Site on the northwest and west sides. Therefore, without additional documentation, it is likely, that the Site was used for agricultural purposes prior to 1891.

2.7 Description of Structures, Roads, and Other Improvements on the Site

The 62 buildings at the Site provided living quarters, dining room, church, library, infirmary, gymnasium, swimming pool, auditorium, and schooling facilities. Other structures at the Site included administration buildings, visiting hall, staff housing, security buildings, maintenance garage, carpenter and paint shop, boiler plant, emergency generator, and warehouse. Heating at the Site was provided by the boiler plant via a network of underground pipes. A security fence and perimeter road surrounds the Site.

The Site is connected to City of Whittier for water and sewer. Southern California Edison provides electricity to the Site. The Southern California Gas Company provides natural gas to the Site. No information was available on the types or locations of previous sewer systems that may have been formerly used by the buildings at the Site.

2.8 Current and Past Uses of Adjoining Property

Existing land use immediately adjoining the Site is characterized as residential and educational to the west, commercial to the north/northeast, industrial to the east, and health care (hospital) located to the south. According to historical aerial photographs of this Site (dated 1928, 1938, 1949, 1956, 1968, 1976, 1989, 1994, and 2002) and historical USGS topographic maps (dated 1902, 1925, 1947, 1953, 1965, 1972, and 1981) properties adjoining the Site appear to have been similar to above back until approximately 1968. Prior to 1968, land use was agricultural to the north, industrial to the east, and agricultural to the south. In 1949, the land use was agricultural on the west and southeast.

3.0 Records Review

3.1 Standard Environmental Record Sources

The purpose of the records review was to obtain and review records that would help identify RECs at the Site and adjacent properties. CH2M HILL used Environmental Data Resources, Inc., (EDR) to prepare an electronic database report to efficiently perform a records search of reasonably ascertainable environmental databases, including the standard state and federal sources in accordance with ASTM Standard Practice. The ASTM list of records and the resulting number of sites found within the ASTM search distance, measured from the center of the Site are shown below in Table 3-1. Descriptions of the databases searched below are provided in Appendix C.

For this EDR, a radial search was performed that extended 1.5 miles from the center of the site. The search radius was extended 0.5 miles beyond the standard 1 mile ASTM search radius to account for the size of the 75-acre parcel.

TABLE 3-1

Environmental Database Report Results

Record Source	Number of Sites Identified
Federal:	
NPL (National Priority List).	1
Proposed NPL.	0
CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System).	1
CERCLIS/NFRAP (No Further Remedial Action Planned). Sites currently or formerly under review by US EPA.	5
CORRACTS. (RCRA Corrective Action Report).	4
RCRIS (Resource Conservation and Recovery Information System) -TSD.	1
RCRIS Large Quantity Generator	7
RCRIS Small Quantity Generator	60
ERNS - (Emergency Response Notification System) Notification of spills	4
State:	
AWP - Annual Workplan Sites	3
Cal-Sites - DTSC Calsites Database	4
CHMIRS - California Hazardous Material Incident Report System	1
Cortese - "Cortese" Hazardous Waste & Substance Sites List	33
Notify 65 - Proposition 65 Records	0
Toxic Pits - Toxic Pits Cleanup Sites	0
State Landfills	0
WMUDS/SWAT - Waste Management Unit Database System	0
LUST - Leaking Underground Storage Tank System	36
CA Bond Exp. Plan	0
UST - Active UST Facilities	7

Record Source	Number of Sites Identified
VCP - Voluntary Cleanup Program Properties	1
INDIAN LUST – Leaking Underground Storage Tanks on Indian Land	0
INDIAN UST - Underground Storage Tanks on Indian Land	0
CA FID UST - Facility Inventory Database	10
HIST UST - Hazardous Substance Storage Container Database	37
Federal Supplemental:	
CONSENT - Superfund (CERCLA) Consent Decrees	0
ROD - Records of Decision	0
Delisted NPL - National Priority List Deletions	0
FINDS - Facility Index System/Facility Identification Initiative Program Summary Report	27
HMIRS - Hazardous Materials Information Reporting System	0
MLTS - Material Licensing Tracking System	0
MINES - Mines Master Index File	0
NPL Liens - Federal Superfund Liens	0
PADS - PCB Activity Database System	0
DOD - Department of Defense Sites	0
US Brownfields	0
FUDS	0
RAATS - RCRA Administrative Action Tracking System	0
TRIS - Toxic Chemical Release Inventory System	1
TSCA - Toxic Substances Control Act	0
SSTS - Section 7 Tracking Systems	0
FTTS - FIFRA/TSCA Tracking System	1
State or Local Supplemental	
AST - Aboveground Storage Tank	0
CLEANERS - Cleaner Facilities	1
CA WDS - Waste Discharge System	6
DEEDS - List of Deed Restrictions	0
NFA - No Further Action Determination	1
EMI	5
REF - Unconfirmed Properties Referred to another company	1
SCH - School Property Evaluation Program	1
NFE - Properties Needing Further Evaluation	1
Site Mitigation Control Log	4
HMS - Los Angeles County Industrial Waste and Underground Storage Tank Locations	15
CA SLIC - Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	20
HAZNET - Hazardous Waste Information System	58
Total Sites	**357**

Note: Additional information describing these databases is provided in Appendix B.

For the above-referenced ASTM search parameters, the database report identified 357 known sites of environmental significance within the ASTM search distance. Of these sites,

14 sites were identified within proximity of the Site boundaries and 1 of the sites was identified as the Fred C. Nelles Youth Correctional Facility. These 15 sites were assessed in more detail (see below). The remaining sites were determined to have a low potential to impact the Site based on the following criteria: 1) no reported impacts to groundwater, 2) closure approval received from the lead regulatory agency, 3) the relative distance away from the Site, or 4) were identified as being downgradient with respect to the local groundwater flow direction relative to the Site. The 15 sites with known environmental significance are alphanumerically listed below:

- **76 Products Station, 12823 E. Hadley.** A Leaking Underground Storage Tank (LUST) was identified at this location.
  - This site is located approximately 4,442 feet to the northeast (upgradient)
  - Map ID: 230
  - Case Number: S102590662
  - Status: Pollution Characterization
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Based on the distance from the Site, this location is considered to have a low potential to impact the Site.

- **American Medical Enterprise, 12508 Lambert Road.** A LUST was identified at this location.
  - This site is located approximately 3,774 feet to the south-southeast (cross-gradient)
  - Map ID: AQ205
  - Case Number: S101298450
  - Status: Pollution Characterization
  - Media affected: Groundwater

  The underground tank was identified as leaking waste oil. Because this location is 3,774 feet to the south-southeast and cross-gradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **American Site Sears, 8230 Sorensen.** A LUST was identified at this location.
  - This site is located approximately 4,242 feet to the southwest (downgradient)
  - Map ID: AU226
  - Case Number: S103891272
  - Status: Pollution Characterization
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Because this location is downgradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Chevron Station, 11403 East Whittier Boulevard.** A LUST was identified at this location.
  - This site is located approximately 4,117 feet to the northwest (downgradient)
  - Map ID: AT215
  - Case Number: I-09556
  - Status: Pollution Characterization

- Media affected: Groundwater

The underground tank was identified as leaking gasoline. Because this location is downgradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Department of Youth Authority (Fred C. Nelles Youth Correctional Facility), 11850 East Whittier Boulevard.** A waste oil LUST was identified within the Site boundaries.
  - This LUST is located at the Site (Fred C. Nelles Youth Correction Facility)
  - Map ID: G47
  - Case Number: S102428748
  - Status: Case closed
  - Media affected: Soil

  The underground tank was identified as leaking waste oil. The LUST has received closure by the Regional Water Quality Control Board on July 22, 1996. Based on this information, the waste oil LUST is considered a historical REC.

- **G & M Oil Company #66, 11770 Washington Boulevard, 12559 Lambert Road.** A LUST was identified at this location.
  - This site is located approximately 3,587 feet to the southwest (downgradient)
  - Map ID: AO197
  - Case Number: I-04980
  - Status: Pollution Characterization
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Because this location is downgradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **G & M Oil Company #16, 12559 Lambert Road, and 12911 E. Whittier Boulevard.** A LUST was identified at this location.
  - This site is located approximately 4,131 feet to the south-southeast (cross-gradient)
  - Map ID: 216
  - Case Number: S102430516
  - Status: Remediation Plan
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Because this location is approximately 4,131 feet to the south-southeast and cross-gradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **G & M Oil Company #23, 12911 E. Whittier Boulevard.** A LUST was identified at this location.
  - This site is located approximately 5,123 feet to the southeast (cross-gradient)
  - Map ID: 241
  - Case Number: S102430520
  - Status: Remediation Plan
  - Media affected: Groundwater

The underground tank was identified as leaking gasoline. Because this location is approximately 5,123 feet to the southeast and cross-gradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Hodd Corporation Yard, 8201 Sorensen Avenue.** A LUST was identified at this location.

  - This site is located approximately 4,138 feet to the southwest (downgradient)
  - Map ID: AU219
  - Case Number: S104891055
  - Status: Pollution Characterization
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Because this location is downgradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Leggett & Platt, Inc., 12352 E. Whittier Boulevard.** A LUST was identified at this location.

  - This site is located approximately 1,546 feet to the east-southeast (upgradient)
  - Map ID: D20
  - Case Number: CAD981376379
  - Status: Post Remedial Action Monitoring
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Because Leggett & Platt borders the Site on the east, this location is considered a REC.

- **1 X Mission Uniform Service (formerly Mission Linen), 11920 Washington.** This location reported a release of perchloroethylene (PCE), trichloroethylene (TCE), and volatile organic carbon (VOC). The quantity was not reported in the EDR database report.

  - This site is located approximately 3,111 feet southwest (downgradient)
  - Map ID: AC160
  - Case Number: SL2041B1503
  - Type of waste: PCE, TCE, and VOC
  - Facility Status: Not reported
  - Media affected: Not reported

  Because this location is downgradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Modine Manufacturing Company, 12252 E. Whittier Boulevard.** The location is identified in the California Regional Water Quality Control Board (RWQCB) SLIC Records, Region 4. Information in the EDR database report indicates that this location potentially has groundwater contamination. Lead agency is the RWQCB.

  - This site is located approximately 1,147 feet east-northeast (upgradient)
  - Map ID: A5
  - Case Number: N/A
  - Type of waste: Not Reported

- Facility Status: Not reported
- Media affected: Not reported

Because Modine Manufacturing bordered the Site on the east and due to the documented soil and groundwater contamination, this location is considered a REC.

- **Omega Chemical, 12504 E. Whittier.** The location is identified as a Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) site; National Priorities List (NPL) site; Resource Conservation and Recovery Act (RCRA)-Treatment, Storage, and Disposal, Facility (TSDF) site; and CAL SLIC site.
  - This site is located approximately 3,325 feet south-southeast (cross-gradient)
  - Map ID: AJ178
  - Case Number: CAD042245001 (NPL ID)
  - Type of waste: Not Reported
  - Facility Status: NPL Consent Decree
  - Media affected: Soil and Groundwater

  Information from the EDR database report indicates that the Omega Chemical Corporation is a former hazardous waste treatment and storage facility that operated from 1976 to 1991. The Omega Corporation conducted solvent recovery using an onsite fractionation and distillation process and operated as a storage and transfer facility for various hazardous wastes classifications. Hazardous wastes stored onsite included chlorinated and aromatic solvents.

  Investigations at the site in 1995 indicated that subsurface soil samples were mainly contaminated with tetrachloroethylene (PCE), lesser amounts of trichloroethene, dichloroethene and other chlorinated hydrocarbons, freons, and metals. PCE contamination was detected in soil at concentrations ranging from 1.9 milligrams per kilogram (mg/kg) to 510 mg/kg. Groundwater samples collected at the site contained PCE up to 86,000 micrograms per liter as well as significant concentrations of other chlorinated hydrocarbons and freons. Based on the information proved by EDR, it was determined that a plume extends southwest almost 1 mile downgradient of Omega (EDR, 2004). This plume is not migrating in a direction that is toward the Fred C. Nelles Site based on information obtained from the RWQCB. The plume is migrating crossgradient to Fred C. Nelles. Because this location is approximately 3,325 feet to the southeast and cross-gradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Southern California Gas Company/Whittier Manufactured Gas Plant, 11815 Hadley Street.** A Voluntary Cleanup Program (VCP) was identified at this location. A PEA was reportedly performed at this location that indicated levels of contamination above regulatory threshold limits. Benzene has reportedly been detected in the groundwater. This location formerly operated as a Manufactured Gas Plant (MGP) site from about 1903 to 1915. The site is currently owned and operated by Russell Bassett Company. Investigations at this location are continuing.
  - This site is located approximately 2,755 feet north (cross-gradient)
  - Map ID: T120
  - Case Number: S102564455 (VCP No.)
  - Type of waste: Not Reported

- Facility Status: Voluntary Cleanup Program
- Media affected: Groundwater

Because this location is approximately 2,755 feet to the southeast and cross-gradient in relation to the Site, it is considered to have a low potential to impact the Site.

- **Tune Tech, 12612 East Lambert Road.** A LUST was identified at this location.
  - This site is located approximately 4,524 feet to the south-southeast (cross-gradient)
  - Map ID: AW232
  - Case Number: S105033700
  - Status: Pollution Characterization
  - Media affected: Groundwater

  The underground tank was identified as leaking gasoline. Because this location is approximately 4,524 feet to the southeast and cross-gradient in relation to the Site, it is considered to have a low potential to impact the Site.

The EDR also includes a category of "orphan" sites. Sites are included in the orphan category when the database information is not accurate enough to positively identify the site locations. The database report for the Site identified 69 orphan sites. Using available street maps of the area, these sites were determined to be greater than 1 mile from the Site. Therefore, these 69 sites are considered to have a low potential to impact the Site.

3.2 Additional Environmental Record Sources

In addition to the environmental databases review, records from other local, county, and state agencies were reviewed to obtain information on the Site and adjoining properties. Relevant documentation from the California Youth Authority Environmental Compliance Bureau and the Regulatory Agency File Review is included in Appendix D.

The majority of requested information from the State was provided and incorporated into the Phase I ESA. However, some of the requested information with respect to USTs and electrical equipment containing PCBs was unavailable. Because the environmental documentation from these sources may provide new information about the Site, there is the potential that additional RECs or AOPCs could be identified as part of the Phase II ESA.

3.2.1 Fred C. Nelles State Records Review

Records for the Site were obtained from the State Archives, located in Sacramento, California; and the California Youth Authority Environmental Compliance Bureau. A summary of the information provided is discussed below.

California Youth Authority Environmental Compliance Bureau.

A lead based paint (LBP) survey or polychlorinated biphenyl (PCB) survey have not been performed for the Site (Larabee, 2005).

Lead in Soil. Although an assessment of LBP is excluded from the scope of this Phase I ESA, there is a potential for lead in the soil that surrounds the buildings due to the age of some buildings located at the Site. Use of lead based paint was generally discontinued in 1978. The routine application of LBP in the past, and the associated peeling or degradation of

paint over time, have the potential to cause localized lead contamination in soils in areas around buildings that were constructed prior to 1978.

Because a comprehensive LBP survey has not been performed at the Site, it assumed that all buildings constructed in or prior to 1978, when the federal ban on the production of LBP was instituted, have LBP. There are 34 buildings located at the Site that were constructed prior to 1978 (see Table 3-2) (State of California, 2005). Because of the potential for lead in the soil surrounding these buildings, the soil surrounding these buildings is considered an AOPC.

Table 3-2

Buildings Constructed Prior to 1978 - Fred C. Nelles Youth Correctional Facility (Site)

Building	Description	Year Constructed
3	Visiting and Control Center	1962
5	Gymnasium	1934
6	Classrooms 1 - 8	1958
8	Auditorium	1923
9	Classrooms 20 - 27	1962
10	Classrooms 12 - 19	1962
12	Library	1962
13	School Offices	1962
14	Trades Building	1960
15	Garage and Machine Shop	1931
16	Arts, Crafts, and Music Bldg.	1962
17	Residence 2	1926
18	Warehouse	1963
19	Lock Shop and TAC Team	1947
21	Electrical Service Bldg.	1930
26	Laundry Bldg.	1960
28	Administration Bldg.	1929
29	Residence 1	1920
35	Program Center	1961
38	Chapel, Barber, & Treatment Lab	1933
41	Taft Adjustment Center	1957
43	Food Services Blg.	1962
44	Roosevelt Cottage	1966
45	Cleveland Cottage	1961
46	Jackson Cottage	1961
47	Field House & Pool	1962
49	Washington Cottage	1962
50	Hayes Cottage	1962
51	Kennedy Cottage	1962
52	Madison Cottage	1962
53	Tyler Cottage	1965
55	Adams Cottage	1965
56	Monroe Cottage	1962
59	Horticulture Classroom	1966

Polychlorinated Biphenyls. Electrical transformers, capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems are potential sources of PCB-containing oil. Information provided by Fred C. Nelles maintenance personnel indicated that all electrical transformers have been replaced with or retro-filled with non-PCB containing oil or have concentrations of less than 50 parts per million (ppm) (CH2M HILL, 2005). Detailed information on the former and current locations of the electrical transformers, capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems was not available from the California Youth Authority Environmental Compliance Bureau. The potential for PCBs to be present in the capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems is an AOPC.

California State Archives

Incinerator. According to a historical as-built diagram, dated July 9, 1952 (see Appendix C), a natural gas fired incinerator was formerly located in approximately the same location as Building 59 (Facilities Planning Complex). Aerial photographs of this area, show that it may have been present from approximately 1952 to 1968. No information is available regarding what types of wastes were burned at this incinerator. However, the diagram from July 9, 1952 shows that the incinerator was located adjacent to poultry sheds. Thus, it is likely, that the incinerator was used to burn pathological wastes. This is a common practice at poultry farms. The potential for the location of the former incinerator to be an AOPC is considered low.

3.2.2 Regulatory Agency File Review

CH2M HILL contacted various local and state agencies in January 2005 for file information associated with the Site. The specific agencies contacted and results of the file reviews are described in Table 3-3.

Table 3-3

Regulatory Agency File Review Summary

Agency	Information Reviewed	Summary of Findings
Los Angeles Regional Water Quality Control Board	Environmental investigations, assessments, violations, etc.	• Closure Report for Two Underground Storage Tanks at 11850 East Whittier Blvd., April 15, 1991. • Leak Detection Investigation at Fred C. Nelles, April 26, 1991. • Underground Storage Tank Supplemental Leak Detection Investigation, April, 1991. • Workplan for Site Assessment for Two Underground Storage Tank Locations at Fred C. Nelles School, February 1995. • Preliminary Environmental Site Assessment at the Department of the Youth Authority, Fred C. Nelles School, October 1, 1995. • Additional Site Assessment and First

Table 3-3

Regulatory Agency File Review Summary

Agency	Information Reviewed	Summary of Findings
		Quarter 2003 Groundwater Sampling Report, Diesel Bunker (Tank 3P), February 2003. • Quarterly Groundwater Monitoring Reports 1993, Fred C. Nelles, Tank 3P. • Subsurface Assessment Diesel Vault, Fred C. Nelles, May 31, 2001. • Assessment of Diesel Fuel Bunker, Fred C. Nelles, January 12, 1999. • Quarterly Groundwater Monitoring Reports 1992 through 1995, Modine Manufacturing Facility, 12252 East Whittier Boulevard. • Remedial Action Plan, Groundwater Treatment System, Modine Manufacturing Facility, March 1993. • Request for Closure, Tetrachloroethene in Soil Remediation, Modine Manufacturing Facility, June 1994. • Soil and Groundwater Investigation Workplan, Modine Manufacturing Facility. • Groundwater Monitoring Report, 4th Quarter 2003, American Medical Enterprises, 12508 East Lambert Road. • Site Quarterly Report, 76 Station, 12823 East Hadley Street.
Department of Toxic Substances Control - Cypress	Environmental investigations, assessments, violations, etc.	• Omega Chemical Superfund Site, Final Sampling and Analysis Plan, April 1999. • Omega Chemical Site, Phase II Close out Report, October, 1996. • Final Remedial Investigation Workplan for the Former Whittier Manufactured Gas Plant Site, December 2001. • Phase I ESA of the 12511 East Putnam Street, Whittier, September , 1991.
Los Angeles County, Department of Health Services Public Health Investigation	History of hazardous material, site inspections, environmental investigations, violations, business plans, etc.	• Fred C. Nelles, Consolidated Contingency Plan 2003; Business Plan 2003; and Hazardous Materials Inventory Statement 2003. • Modine Manufacturing Company. Soil and Groundwater Investigation, 1989. Identified; Confirmation of RWQCB as the Lead on the Groundwater Investigation and Cleanup at Modine; Memorandum from DHS, Abandoned Site Program Information System Action Status Update. • Omega Chemical Corporation. Initial Study for the Modified Draft Closure Plan; Draft Closure Plan, April 1993;

Table 3-3

Regulatory Agency File Review Summary

Agency	Information Reviewed	Summary of Findings
		Draft Negative Declaration, Hazardous Waste Facility Closure

3.2.2.1 Fred C. Nelles Youth Correctional Facility (Site)

Information collected from the Los Angeles County, Department of Health Investigation included:

<u>Consolidated Contingency Plan.</u> This document contains the Business Plan and Contingency Plan for the Site. This document describes the standard operating procedures that the Site followed in the event of a release or threat of a release of hazardous materials and a list of the hazardous materials present at the Site. Provided below in Table 3-4 is a summary of the hazardous materials located at the Site in 2003 based on information from the Hazardous Material Inventory Statement.

Table 3-4

Hazardous Materials Inventory - Fred C. Nelles Youth Correctional Facility (Site) (Year 2003)

Location	Common Name/Chemical Name	Quantity/Storage Type
Pest Control Shed	Surflan/Oryzalin	2.5 gallons
Pest Control Shed	Catalyst/Propetamphos	1 gallon
Pest Control Shed	Round Up/glyphosphate n	2.5 gallons
Pest Control Shed	Prentox/Malathion	2.5 gallons
Building 27 (Powerhouse)	Boiler Treatment	55 gallons
Building 27 (Powerhouse)	Condensate Treatment	55 gallons
Building 26 (Laundry)	Solid Stain Away	2 pounds
Building 26 (Laundry)	Solid Surge Plus/Sodium Hydroxide, Nonylphenol ethoxylate	2 pounds
Building 14 (Maintenance Garage)	Lube Oil	55 gallons
Building 14 (Maintenance Garage)	Waste Oil	55 gallons
Building 18 (Warehouse)	Sodium Metasilicate	1,500 Boxes
Building 18 (Warehouse)	Detergent	900 Boxes
Building 18 (Warehouse)	Freon 12	Cylinders
Building 18 (Warehouse)	Freon 22	Cylinders
Building 18 (Warehouse)	Disinfectant/Akyl Dimethylbenzyl Ammonium Chloride	Drums
Building 18 (Warehouse)	Potassium Hydroxide/n-butoxyethanol	90 gallons/AST
Building 18 (Warehouse)	Bowl Cleaner	360 gallon jugs
Building 18 (Warehouse)	Freon 502	Cylinders

Table 3-4

Hazardous Materials Inventory - Fred C. Nelles Youth Correctional Facility (Site) (Year 2003)

Location	Common Name/Chemical Name	Quantity/Storage Type
Building 18 (Warehouse)	Coolinatrt	90 gallons
Building 14 (Maintenance Garage), next to emergency generator	Unleaded Gasoline	4,000 gallons/AST
Building 14 (Maintenance Garage), next to emergency generator	Diesel #2	1,200 gallons/AST

3.2.2.2 Modine Manufacturing Company

Information collected from the Los Angeles County, Department of Health Investigation included a 1989 Soil and Groundwater Investigation. The Modine Manufacturing Company (Modine) was located at 12252 E. Whittier Boulevard. Modine was located east of the Fred C. Nelles site, and on the east side of the former Southern Pacific Railway right-of-way (ROW). The 6.4-acre plant operated from 1950 to 1987 manufacturing automobile radiators. The plant was decommissioned between 1987 and 1990 and is no longer present. The site has since been developed into an industrial complex. Prior to Modine owning the property in 1949, the site was owned by Reardon Tanks for manufacturing of boiler tanks. Prior to Reardon Tanks owning the property, it was used for agricultural purposes.

The fabrication process at Modine involved the cutting of metals, frame soldering, and paint stripping. The processes also included dipping the radiators in fluxes, caustic cleaners, and brighteners.

As part of the closure process for the Modine property, soil and groundwater investigations were initiated at the site beginning in 1989. On May 2, 1991, the Los Angeles County Department of Health Services (DHS) indicated the soil cleanup was completed (Earth Tech, 1989a, 1989b).

Based on the groundwater contamination at the Modine property, the lead agency was transferred from the Los Angeles Department of Health Services to the RWQCB. Since the initial groundwater monitoring that occurred, there have been detected levels of PCE and TCE in the groundwater. During 1992, investigations included quarterly groundwater monitoring, installation of an offsite downgradient monitoring well (located in the Southern Pacific Railway right-of-way), and the installation of vapor extraction wells.

Information provided in the Quarterly Groundwater Monitoring Reports (BBL, 1992 through 1995), and the Remedial Action Plan Groundwater Treatment System, Former Modine Manufacturing Facility (BBL, 1993), indicates that concentrations of PCE have been as high as 200 $\mu g/L$, and TCE has been as high as 100 $\mu g/L$ (This exceeds the California maximum contaminant level (MCL) of 5 $\mu g/L$ for PCE and TCE). Provided in Appendix D is documentation showing the maximum extent of dissolved concentrations of PCE and TCE in the groundwater at the Modine property, the Southern Pacific Railway Line, and the Fred C. Nelles Site.

Based on the soil and groundwater investigations, it was concluded that the TCE identified in the groundwater is not from Modine, but rather from an "off-site" source that is

upgradient (northeast) of the Modine property. The RWQCB has agreed with this conclusion.

The October 1995 Quarterly Groundwater Report suggests the PCE concentrations are decreasing and that TCE continues to migrate on to the former Modine property from an upgradient (northeast) source. However, the bulk of the PCE impacted groundwater has been remediated. The concentrations on the down-gradient side of the plume declined to below the MCL. It was reported that Modine discontinued the groundwater treatment based on these conditions (BBL, 1995).

Because of the existing groundwater contamination at the Modine property, and the proximity to the Site, the Modine property is considered an REC.

3.3 Historic Use Records

3.3.1 Aerial Photographs

Historic aerial photographs from dates 1928, 1938, 1949, 1956, 1968, 1976, 1989, 1994, and 2002 were reviewed. These photographs were obtained from EDR, and are provided in Appendix C. According to historical aerial photographs of this Site, properties adjoining the Site appear to have been similar to above until approximately 1968. Prior to 1968, land use was agricultural to the north, industrial to the east, and agricultural to the south. In 1949, the land use was agricultural on the west and southeast. Provided below in Table 3-5 is a description of the features observed for each year.

Table 3-5
Historical Use Information - Aerial Photographs

Map Date	Findings
1928	Within the Site boundary, there are approximately 20 buildings located in the north-central portion of the property that comprise the Fred C. Nelles facility. The western and southern portions of the site were primarily agricultural (orchards). There appears to have been an agricultural yard in the south-central area of the Site. A shed that was potentially used to support agricultural activities was located in the southwestern portion of the property. An area that appears to have been for soil piles or a refuse area was located along the dirt road leading to the agricultural areas in the southern portion of the Site. The soil pile area was located approximately 100 feet south of the Building 43 (Building 43 was not present when this area was being used for soil piles or refuse). Adjacent to the Site are the streets of Whittier Boulevard and Sorenson Avenue on the northeast and northwest side, respectively. The Whittier Branch of the Southern Pacific Railroad borders a portion of the eastern side of the Site. Industrial buildings are located on the northeast side of Whittier Boulevard. The areas to the north, west, and south of the Site are agricultural. A residential neighborhood is present on the northwest border of the Site. An area located to the east of the Southern Pacific Railroad appears to have been graded.

1938	Within the Site boundary, the agricultural yard in the south-central area of the Site is no longer present. The area that appears to have been for soil piles or a refuse area is no longer present. Six additional buildings that appear to have been agriculturally related are present in the southern portion of the Site. Adjacent to the Site, there are no significant changes from the previous historical aerial photograph.
1949	Within the Site boundary, there are no significant changes from the previous historical aerial photograph. Adjacent to the Site, an industrial building was in the process of being constructed on the east.
1956	Within the Site boundary, no significant changes from the previous historical aerial photograph. An area located to the west of Building 18 appears to be used for agricultural purposes. Some areas of soil mounds or other refuse are also present in this area. Adjacent to the Site, additional industrial buildings have been constructed on the east.
1968	Within the Site boundary, the building layout and road network was changed significantly since the last historical aerial photograph. It appears that numerous buildings have been demolished and new buildings have been added. There are approximately 50+ buildings located at the Site. No agricultural activities appear to have been present at the Site. Adjacent to the Site, additional industrial buildings have been constructed on the east. Additional residential areas and two schools have been constructed to the west. An auto-wrecking yard has been constructed on the western boundary of the Site.
1976	Within the Site boundary, there are no significant changes from the previous historical aerial photograph. Adjacent to the Site, additional industrial buildings have been constructed on the east. Commercial land uses have been added on the northern perimeter of the Site, on the north side of Sorenson Avenue.
1989	Within the Site boundary, there are no significant changes from the previous historical aerial photograph. Adjacent to the Site, additional residential areas have been added adjacent to the southwestern border of the Site. A parking lot and Heli-port for the Presbyterian Intercommunity Hospital has been expanded northward and is adjacent to the southern Site boundary. Some of the industrial buildings that bordered the Site on the east have been demolished. A disturbed area of dirt remains where these buildings were.
1994	Within the Site boundary, there are no significant changes from the previous historical aerial photograph. Adjacent to the Site, there are no significant changes from the previous historical aerial photograph.
2002	Within the Site boundary, there are no significant changes from the previous historical aerial photograph. Adjacent to the Site, there are additional residential areas have been constructed on the west.

Former Agricultural Areas. Agricultural areas were present on the western and southwest portions of the Site according to historical aerial photographs dated: 1928, 1938, 1949, and 1956 (see Appendix E). Because of the probable application of pesticides in these areas,

there is the potential for residual pesticides remaining in the soil. Therefore, these former agricultural areas on the Site are considered AOPCs.

3.3.2 Historic Maps

Historic USGS topographical maps were obtained from EDR. A review of USGS maps dated 1902, 1925, 1947, 1953, 1965, 1972, and 1981 indicate that small buildings existed at the Site as early as 1902. In the 1925 topographical map, the buildings and road network currently at the site were present. The historical topographic maps were obtained from EDR, and are provided in Appendix E. Provided below in Table 3-6 is a description of the features observed for each year.

TABLE 3-6

Historical Use Information - Topographical Maps

Map Date	Findings
1902	The major streets of Whittier Boulevard and Sorenson Avenue are present on northeast and northwest side of the site, respectively. Seven small buildings that appear to be residences are present at the location of the Site; however they do not appear to be oriented in the pattern as the buildings that comprise the Fred C. Nelles layout. The Whittier Branch of the Southern Pacific Railroad is present on the east side of the Site. Buildings or residences are located on the northeast side of Whittier Boulevard. The areas to the north, west, and south of the Site do not have any buildings. (Map Scale 1:62,500)
1925	The buildings and road network of Fred C. Nelles Site are present. One building is now present on the north side of Sorenson Avenue. Additional buildings are present on the northeast side of Whittier Boulevard. (Map Scale 1:24,000)
1947	Because of the scale of this map, the level of detail is similar to the 1902 historical topographical map. The Whittier Branch of the Southern Pacific Railroad is no longer present on the east side of the Site. Limited information is shown on this map. (Map Scale 1:50,000)
1953	The buildings and road network of Fred C. Nelles Site are present. The area to the north of the Site is shown as developed. Areas to the west of the Site are depicted as agricultural. The area to the south of the Site is depicted as vacant. Additional large buildings are present on the northeast side of Whittier Boulevard. (Map Scale 1:24,000)
1965	The buildings and road network of Fred C. Nelles Site are present. The area to the north, south, and west of the Site are shown as developed. A school is present on the western border of the Site. A hospital is depicted on the south side of the Site. Additional large buildings are present in the area to the east of the Site and adjacent to the Southern Pacific Railroad. (Map Scale 1:24,000).
1972	No changes from previous historical topographical map. (Map Scale 1:24,000)
1981	No changes from previous historical topographical map. (Map Scale 1:24,000)

3.3.3 Sanborn Maps

Historic Sanborn maps were obtained from EDR. The Sanborn maps dated 1900, 1907, 1912, 1925, 1949, and 1962 provide only limited coverage of the northeast corner the Site, adjacent to Whittier Boulevard. The 1900 map shows one small building (not named) present approximately 25 feet west of North County Road (Whittier Boulevard was identified as North County Road at that time). The historical Sanborn maps were obtained from EDR, and are provided in Appendix E. Provided below in Table 3-7 is a description of the features observed for each year.

TABLE 3-7

Historical Use Information - Sanborn Maps

Map Date	Findings
1900	The map shows only limited coverage on the northeast side of the Site. One small building (not named) was present approximately 25 feet west of North County Road (Whittier Boulevard was identified as North County Road at that time).
1907	The map shows only limited coverage on the northeast side of the Site. No buildings shown on the Site.
1912	The map shows only limited coverage on the northeast side of the Site. No buildings shown on the Site.
1925	The map shows only limited coverage on the northeast side of the Site. No buildings shown on the Site.
1949	The map shows only limited coverage on the northeast side of the Site. No buildings shown on the Site.
1962	The map shows only limited coverage on the northeast side of the Site. No buildings shown on the Site.

3.3.4 Oil and Gas Maps

No oil and gas related features were identified on the Site. Three plugged and abandoned dry holes have been drilled within 1 mile of the Site. The nearest plugged and abandoned dry hole is located approximately 500 feet to the east of the Site, adjacent to Whittier Boulevard. Two additional plugged and abandoned dry holes are located approximately 2,000 feet to the south of the Site. This information was obtained from Map Nos. W1-5 and 104, published by the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (State of California, 2003 and 2004).

3.3.5 Other Historical Use Records

Many of the typical historical sources such as Sanborn Maps, City Directories, and Building Department Records were not available for this Site.

4.0 Site Reconnaissance and Interviews

4.1 Site Visit

4.1.1 Site Observations

CH2M HILL staff performed a site reconnaissance on January 6, 2005 to assess current land use and potential environmental concerns at the Site. Weather conditions at the time of the Site reconnaissance were clear with temperatures of approximately 70° F. A few days prior to the visit, heavy precipitation occurred at the Site. Photographs were taken during the Site reconnaissance and are included in Appendix A. A description of the Site, based on observations during the Site reconnaissance, is provided below.

As part of the site visit, the primary focus of the Phase I ESA is to identify RECs, as defined by the ASTM standard.

In addition to RECs, CH2M HILL has identified AOPCs in this Phase I ESA to address those environmental issues that do not specifically meet the definition of a REC but do warrant further investigation, possibly including investigation.

Building 3, Control and Visiting. This building provides control and access to the Site. Former uses also included a visiting center. Weapons that were stored at this building were cleaned off-site. No solvents or cleaners were used at this building to clean weapons. A small diesel generator is located on the north side of the facility. Several 1-gallon cans of paint were observed on a concrete pad near the generator.

Building 12, Library and Barber Shop. Small quantities of barbicide (fungicide and virucide) disinfectant were observed inside the barber shop portion of this building.

Building 14, Current Maintenance Garage. This building was constructed approximately in 1999. Within this building is an electrical shop, plumbing shop, engineering shop, maintenance mechanic shop, maintenance warehouse, paint shop and paint spray booth, carpenter shop, grounds shop, and key room. The types of hazardous materials observed in these shops included: disinfectant, fungicide, rodenticide, paints, adhesives, gasket sealers, degreasers, contact cleaner, coil brightener (anti-corrosion), gasoline, motor oil, 2-stroke mix oil, hydraulic fluid, bar chain oil, cutting oil, automatic transmission fluid, differential fluid, bearing grease, and automotive batteries. A large paint spray booth for painting large pieces of equipment or automobiles is present in the paint shop; however, this unit has reportedly never been used.

Located to the south of Building 14 is the hazardous materials and hazardous waste storage shed that was constructed in approximately 1999. This shed is designed with three enclosed bays that have secondary containment. The types of hazardous materials stored at this unit include small quantities of flammable materials, waste asbestos, waste paints, sealants, waste fluorescent lights, and miscellaneous hazardous wastes. During the site reconnaissance of this hazardous waste storage shed, no evidence of a release was observed or reported.

An above-ground storage tank (AST) is present on the southeast side of the building. The AST has a reported capacity of 5,200 gallons and has secondary containment within the concrete vault. The AST reportedly stores both diesel and gasoline, so it is presumed that the internal capacity for both gasoline and diesel is 2,600 gallons each. The diesel AST provide fuel for the emergency generator. The gasoline was reportedly used by the maintenance personnel. During the site reconnaissance of this AST, no evidence of a release was observed or reported.

Building 15, Former Maintenance Garage. This building was constructed approximately in 1931 and was used as the maintenance garage until approximately 1999, when the new maintenance garage (Building 14) was constructed. This building formerly housed the maintenance garage, plumbing shop, welding shop, grounds maintenance, and vocational shop.

A small room located next to the maintenance garage was used for storage of hazardous materials. No floor drains were observed in the room that stored hazardous materials. The concrete floor of the hazardous material storage room was heavily stained, however, no cracks were observed in the concrete.

A hydraulic lift is located within the maintenance garage portion of this building. Maintenance personnel at the Site indicated that it is unknown whether there is a hydraulic tank associated with this lift and whether the hydraulic tank has been drained if present. The integrity of the hydraulic lines and hydraulic operational tank that are below ground is unknown. Because of the integrity of this hydraulic lift is unknown, it is considered an AOPC.

A below ground pit is located within this building that was used for the purpose of changing vehicle fluids. Fluids such as motor oil, transmission oil, differential oil, and antifreeze were drained into containers for proper disposal. According to the maintenance personnel, the floor of this pit is concrete lined. At the time of the visual inspection, rainwater had accumulated in the pit and, therefore, the integrity of the concrete at the bottom of this pit could not be verified. Because of the integrity of this drain pit is unknown, it is considered an AOPC.

Based on information provided in the site visit, database search, and file review, the following USTs were located at Building 15:

Tanks 1 and 2. Tanks 1 and 2 each had a capacity of 2,000 gallons and stored unleaded and regular gasoline, respectively. Geo-Tox conducted a leak detection investigation in January 1990 and a supplemental investigation in April 1991. Soil samples indicated maximum Total Recoverable Petroleum Hydrocarbon (TRPH) concentrations of 2,100 mg/kg at 10 feet bgs, 32 mg/kg bgs at 15 feet bgs, and non-detect (ND) at 20 feet bgs. The maximum depth of the investigation was 35 feet bgs and no groundwater was encountered. During the supplemental investigation in April 1991, visual observations indicated no odors or staining. Additionally, no evidence of leakage was observed from the USTs, piping, or dispenser island. According to the California Youth Authority Staff, these USTs were subsequently removed. Based on available information, these USTs were apparently closed by the Regional Water Quality Control Board (RWQCB) with Tanks 3G and 4G described below. Based on this information, these USTs are considered a historical REC.

Tank 3G. This 550-gallon diesel UST was located on the south side of Building 15. The UST was removed by Calscience Engineering, Inc. (Calscience) on April 1, 1991. During removal of the UST, soil samples were collected at depths of 2 and 4 feet below the UST invert. Two additional samples were collected at depths of 2 and 4 feet below the dispenser. Soil samples were tested for TRPH and Benzene, Toluene, Xylenes, and Ethylbenzene (BTXE). Slight discoloration and odors was observed during excavation. No groundwater was encountered during the tank removal or sample collection. Sample results indicated a maximum TRPH of 279 mg/kg at 2 feet bgs (ND at 4 feet bgs) and a maximum BTXE concentration of 25 μg/kg at 2 feet bgs and 920 μg/kg at 4 feet bgs (Calscience, 1991).

On March 30, 1995, the Los Angeles Department of Public Works requested additional characterization to better define the vertical extent of contamination of Tanks 3G and 4G (Tank 4G is described below). Based on this request, Leighton and Associates performed a Preliminary Environmental Site Assessment in October 1995. The Preliminary Site Assessment advanced six borings at depths from 21 feet bgs to 61 feet bgs, with samples collected every 5 feet. No groundwater was encountered during these borings. Results from the borings around Tank 3G indicate that TRPH were only detected in the 5 to 10 feet bgs range. Based on the depth to groundwater being greater than 60 feet bgs, Leighton and Associates indicated a low potential for the groundwater to be impacted from the petroleum hydrocarbons associated with Tank 3G (Leighton and Associates, 1995).

The UST received closure by the RWQCB on July 22, 1996. Based on this information, the 550-gallon diesel UST is considered a historical REC.

Tank 4G. This 550-gallon waste oil UST was located on the west side of Building 15. Upon removal of this UST on April 1, 1991, it was discovered that the UST was leaking. This UST was identified in the EDR database report as a LUST site. During removal of the UST, soil samples were collected at depths of 2 and 4 feet below the UST invert. Two additional samples were collected at depths of 2 and 4 feet below the dispenser. Soil samples were tested for TRPH and BTXE. Slight discoloration and odors was observed during excavation. No groundwater was encountered during the tank removal or sample collection. Sample results indicated a maximum TRPH of 175 mg/kg at 4 feet bgs (ND at 2 feet bgs) and a maximum BTXE concentration of 20 μg/kg at 2 feet bgs (ND at 4 feet bgs) (Calscience, 1991).

Information provided by the RWQCB indicated that the LUST impacted the soil only (RWQCB, 1998). The LUST received closure by the RWQCB on July 22, 1996. Based on this information, the waste oil LUST is considered a historical REC.

Building 18, Warehouse. This building was used as the warehouse for the Site. This building stored various types of cleaners, strippers, and bleach. According to the maintenance personnel, no hazardous materials were stored inside this building.

Building 19, Former Blueprint Room (Paint Storage). This building was reportedly used as a paint storage room from 2000 to 2004. Prior to being used for paint storage, it was the blueprint storage room and lock-shop. Small quantities of paint that had been spilled unto the concrete floor and floor seams was observed during the visual inspection.

Building 21, Transformer Room; Building 22, Switch Panel; and Building 23 Generator. These buildings comprise one building, however, each room of the building has been given a separate building number.

Building 21 has several transformers that were labeled as being tested for PCBs. According to the Site Maintenance personnel, all PCB containing equipment on site has been replaced or retrofitted with non-PCB equipment (or less than 50 parts per million [ppm]). Minor staining was observed beneath one of the transformers. No floor drains, floor cracks, or floor seams were observed where the staining was observed.

Building 22 houses the switch panel for the transformers and electrical boxes.

Building 23 houses an emergency generator. This generator provided electricity to the Site in the event of a power outage. Lead acid batteries and diesel engine oil were observed inside this building.

Building 26, Laundry Facility. This building provided laundry services to the Site. However, the majority of the items to be laundered were sent to the State Chino facility for laundering. No dry cleaning activities were performed at this building.

Building 27, Boiler Room. This building is connected to building 26 (Laundry Facility). Two boilers were reportedly installed in 1967 and 1968.

Tank 3P. A 30,000 gallon diesel underground storage tank (UST) (Tank 3P) that supplied the boilers is located on the east side of the building. This UST was also identified in the reports as a "concrete diesel fuel bunker." The diesel fuel bunker was reported to be a concrete cylinder that was 20 feet in diameter and 19 feet deep. In 1973, this UST was closed in place by filling it with a cement slurry mix.

Investigations of Tank 3P have included soil and groundwater assessments by Ninyo and Moore in May 2001 (Ninyo & Moore, 2001) and by Essentia in 2003 (Essentia, 2003a, 2003b, 2003c, 2003d, 2003e). The 2001 subsurface assessment by Ninyo and Moore summarized previous investigations performed by the Mark Group in 1998. The results from this 1998 investigation indicated that maximum soil concentrations for TPH-D were 24,700 mg/kg at 65 feet bgs. Oily globules were reported in the groundwater at this location (Boring B-2). Boring B-3 indicated maximum concentrations of TPH-D at 21,400 mg/kg at 55 bgs. TPH-D was ND in groundwater at 71 feet bgs. Grab groundwater samples indicated maximum concentrations of TPH-D in groundwater were reported at 32 mg/L.

A subsequent investigation by Essentia as part of a 2003 quarterly groundwater sampling assessment concluded that TPH-D in the soil appears to be delineated vertically and horizontally to the south, southeast, and east of the UST, but does not appear to be delineated to the north and west of the UST due to presence of buildings (Essentia, 2003a).

Quarterly groundwater monitoring events performed in February, June, August, and December of 2003 for this location indicated that TPH-D, TPH-G, BTEX, oxygenates, 1,2-DCA, and EDB were not detected, with the exception of one detection of MTBE (27 μg/L at MW-2) during the first quarter of groundwater sampling. MTBE was not detected in any of the subsequent quarterly groundwater sampling events. Toluene was detected at 2.3 μg/L during the third quarter sampling event.

This UST was closed by the Regional Water Quality Control Board (RWQCB) on March 10, 2004. Based on this information, this UST is considered a historical REC.

Building 40, Carter Nixon Cottage. A grease trap associated with the drains in the kitchen area is located on the east side of this building.

Building 43, Food Service Building. A grease trap associated with the drains in the kitchen area is located on the south side of this building.

Building 47, Ford Cottage/Pool. The pool filter and chemical room for this building stores chemicals for maintaining and cleaning the pool. Hazardous materials observed included acid, soda ash, chlorine, bleach, tile cleaner, and thread lubricating compound. Two 55-gallon drums of acid located on secondary containment pallets were also observed at this location. Portions of the concrete surrounding a floor drain located within this room showed sign of etching.

Building 59, Facilities Planning Complex. This building was formerly used as the horticulture instructional center. At the time of the site survey, this building was being used for storage of paints, deglosser, epoprime catalyst, roofing sealer, wood & concrete sealer, paint remover, pre-paint surface conditioner, linseed oil, and rubbing compound. No floor drains were observed inside the building. Small amounts of paint were observed on the floor.

A portable metal bin located to the northeast of Building 59 was formerly used for storage of pesticides and herbicides. The landscape maintenance personnel at the Site were using supplies from this metal bin. Contents within the metal bin included: roedenticide, metaldehyde, bait dry powder, Dursban®, Roundup®, Orthene®, Dowpon N®, Drione®, Safrotin®, snail pellets, linseed oil, spray adhesive, and copper oil spray. The floor of this metal bin was made of wood and appeared to be in good condition. No floor drains were observed inside the metal bin.

Building 61, New Infirmary. This building included a hospital (Infirmary), pharmacy, nursing station, x-ray room, and dental office. Medical supplies observed in the dental office included methyl methacrylate denture material, calcium hydroxide, and other medicines. In the x-ray room, small amounts of fixer and developer were observed. No drains were observed in the x-ray room.

4.1.2 Adjacent Property Observations

As part of the Site visit, CH2M HILL performed a windshield survey of accessible adjacent properties to the Site.

Adjacent Property to the North/Northeast. The Site is bordered by Sorensen Avenue on the north and Whittier Boulevard on the north east. On the north side of Sorensen Avenue, there is commercial property. On the east side of Whittier Boulevard, there is commercial property.

Adjacent Property on the East/Southeast. A former railway line that was operated by Southern Pacific bordered the Site on the east. This railway line is no longer present, however, a portion of the old railway grade and right-of-way (ROW) is still present. Because of the potential for arsenic associated with the creosote from the railway ties, the area along the ROW is an AOPC. To the south east of the former railroad, there is an Auto Wrecking Yard, and several industrial buildings.

One of these industrial buildings located to the east of the Site was identified on the EDR database search as a location with a LUST. This property is identified as Leggett & Platt. Information provided in the EDR database report indicates that the LUST has impacted the groundwater with solvents. The status of this LUST is post remedial action monitoring.

Based on this information, and the proximity of Leggett & Platt, there is a potential that groundwater impacted by this LUST has migrated toward or onto the Site.

Adjacent Property to the South. A hospital is located to the south of the Site.

Adjacent Property ton the West. Residential neighborhoods are located to the west of the Site. An elementary school is located to the north west of the Site.

4.2 Interviews

The interview process for this Phase I ESA included interview with two former Fred C. Nelles Maintenance employees; Walter Keen and Miguel Ochoa (CH2M HILL, 2005). A copy of the interview questionnaire completed by these two former employees is provided in Appendix F.

Miguel Ochoa references an aerospace industry in the environmental questionnaire as being an adjacent property of concern. The former and present businesses that are considered adjacent property are included in this investigation and are also listed in the Environmental Database Report included Appendix C.

No environmental concerns were identified by the individuals interviewed for this Site.

5.0 Findings and Conclusions

The conclusions of this Phase I ESA have been completed by CH2M HILL in conformance with the scope and limitations of ASTM Practice E 1527-00.

Based on a review of available records, regulatory agency documents, historical aerial photographs, a site visit, and personnel interviews, the following RECs and AOPCs have been identified at the Site: 2 RECs, 5 historical RECs and 6 AOPCs were identified. Adjacent to the Site, two RECs and one AOPC have been identified. A summary of the RECs and AOPCs are described below and also listed in Table 5-1.

Table 5-1

Summary Table for RECs and AOPCs

Description	REC/AOPC Status	Basis for Recommendation	Potential Phase II Investigation Recommended
Site			
Building 15, Waste Oil Leaking Underground Storage Tank (LUST), (Tank 3G)	Historical REC	This LUST received closure from the RWQCB on July 22, 1996. .	Yes. Soil and groundwater Investigation.
Building 15, Diesel UST (Tank 4G)	Historical REC	This UST received closure from the RWQCB on July 22, 1996.	Yes. Soil and groundwater Investigation.
Building 15, Gasoline USTs (Tanks 1 and 2)	2 Historical RECs	These USTs received closure from the RWQCB on July 22, 1996...	Yes. Soil and groundwater Investigation.
Building 15, Hydraulic Lift	AOPC	Potential releases to the soil and groundwater.	Yes. Soil and groundwater Investigation.
Building 15, Drain Pit	AOPC	Potential releases to the soil and groundwater.	Yes. Soil and groundwater Investigation.
Building 27, Boiler Room UST (Tank 3P)	Historical REC	This UST received closure from the RWQCB on March 10, 2004.	Yes. Soil and groundwater Investigation.
Lead in Soil (34 Bldgs.)	AOPC	Potential releases to the soil.	Yes. Soil Investigation.
Former Agricultural Areas	AOPC	Potential for pesticides and metals.	Yes. Soil Investigation.
PCBs	AOPC	Potential for PCBs to be present in the capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems AOPC.	Yes. Soil Investigation and/or wipe samples.
Adjacent Property			
Leggett & Platt	REC	Documented releases to the groundwater.	Yes. Soil and groundwater investigation.

Table 5-1

Summary Table for RECs and AOPCs

Description	REC/AOPC Status	Basis for Recommendation	Potential Phase II Investigation Recommended
Modine Manufacturing Company	REC	Documented releases to the groundwater.	Yes. Soil and groundwater investigation.
Southern Pacific Railway Line	AOPC	Potential releases to the soil.	Yes. Soil Investigation.

Fred C. Nelles (Site):

- Building 15, Waste Oil LUST (Tank 3G). A waste oil underground storage tank (UST) was located on the west side of the former Maintenance Garage. Based on soil investigations at this UST, low concentrations of TRPH and BTXE were identified at shallow soil depths. This UST was closed by the Regional Water Quality Control Board (RWQCB). Based on this information, this UST is considered a historical REC.

  Because of the potential for soil and groundwater contamination at the Waste Oil LUST, it is recommended that an investigation of the soil and groundwater be performed.

- Building 15, Diesel UST (Tank 4G). A diesel UST was located on the south side of the former Maintenance Garage. Based on soil investigations at this UST, low concentrations of TRPH and BTXE were identified at shallow soil depths. This UST was closed by the RWQCB. Based on this information, this UST is considered a historical REC.

  Because of the potential for soil and groundwater contamination at the Diesel UST, it is recommended that an investigation of the soil and groundwater be performed.

- Building 15, Gasoline USTs (Tanks 1 and 2). Two gasoline USTs were located on the south side of Building 15. These USTs were identified in the EDR database report as UST sites. Information provided in the EDR database report indicated that the USTs stored leaded and unleaded gasoline. The USTs were reportedly installed in 1979 and had a capacity of 2,000 gallons each. These USTs have since been removed. Based on soil and groundwater investigations at this UST, low concentrations of TRPH and BTXE were identified at shallow soil depths. This UST was closed by the RWQCB. Based on this information, this UST is considered a historical REC.

  Because of the potential for soil and groundwater contamination at the Gasoline USTs, it is recommended that an investigation of the soil and groundwater be performed

- Building 15, Hydraulic Lift. A hydraulic lift is located on the interior of the former Maintenance Garage. The building was reportedly constructed in 1931 and it presumed that the hydraulic lift was installed at about the same time. The integrity of the hydraulic lines and hydraulic operational tank that are below ground is unknown. Because of the length of time the lift has been in service and the unknown integrity of this hydraulic system, it is considered an AOPC.

  Because of the potential for soil and groundwater contamination at the hydraulic lift, it is recommended that an investigation of the soil and groundwater be performed.

- Building 15, Drain Pit. A drain pit for vehicle fluids is located on the interior of the former Maintenance Garage. The building was reportedly constructed in 1931 and it is presumed that the drain pit was installed at about the same time. The integrity of the drain pit is unknown. Because of the length of time the drain pit was in service and the integrity of this drain pit is unknown, it is considered an AOPC.

  Because of the potential for soil and groundwater contamination at the drain pit, it is recommended that an investigation of the soil and groundwater be performed.

- Building 27, Boiler Room UST (Tank 3P). A 30,000-gallon diesel tank has been reportedly abandoned in-place and filled with slurry on the east side of Building 27. Investigations performed at this UST indicated maximum soil concentrations for TPH-D of 24,700 mg/kg at 65 feet bgs. Quarterly groundwater monitoring indicated that TPH-D, TPH-G, BTEX, oxygenates, 1,2-DCA, and EDB were not detected. One detection of MTBE (27 μg/L at MW-2) was recorded during the first quarter of groundwater sampling. MTBE was not detected in any of the subsequent quarterly groundwater sampling events. This UST was closed by the Regional Water Quality Control Board (RWQCB) on March 10, 2004. Based on this information, this UST is considered a historical REC for groundwater and a REC for soil.

  Because of the potential for soil and groundwater contamination at the former Boiler Room UST, it is recommended that an investigation of the soil and groundwater be performed

- Lead Based Paint (LBP). Because a comprehensive LBP survey has not been performed at the Site, it assumed that all buildings constructed prior to 1978, have LBP. There are 34 buildings located at the Site that were constructed prior to 1978. Because of the potential for lead in the soil surrounding these buildings, the soil surrounding these buildings is considered an AOPC.

  Because of the potential for soil to be contaminated with lead at these 34 buildings, it is recommended that during the abatement survey, a limited soil investigation focused on the unpaved areas along the foundation or drip lines of buildings constructed prior to 1978 be performed.

- Former Agricultural Areas. Agricultural areas were present on the western and southwest portions of the Site according to historical aerial photographs dated: 1928, 1938, 1949, and 1956. Because of the potential for residual pesticides in the soil, the soil in the former agricultural areas is considered an AOPC.

  Because of the potential for residual pesticides remaining in the soil, it is recommended that an investigation of the soil in the former agricultural areas be performed.

- PCBs. Detailed information on the former and current locations of transformers, electrical transformers, capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems was not available from the California Youth Authority Environmental Compliance Bureau. The potential for PCBs to be present in locations where the former and current transformers, capacitors, electrical equipment, light ballasts, and machinery with hydraulic systems, these features are considered an AOPC.

  Because of the potential for PCBs to be present at locations of former and current transformers, electrical transformers, capacitors, electrical equipment, light ballasts, and

machinery with hydraulic systems, it is recommended that an investigation of the soil and/or wipe samples at these locations be performed.

Adjacent Property:

Two properties that border the Site on the east have been identified as environmentally significant because of documented groundwater contamination. The Leggett & Platt property was reported by the EDR database as a LUST that is undergoing post remediation monitoring; and the Modine Manufacturing Company that has documented groundwater contamination associated with manufacturing of automobile radiators. Because of the groundwater contamination that exists at these two sites and because of the proximity to the Site, these two sites are considered RECs. Because of the potential for groundwater contamination at these adjacent properties, it is recommended that an investigation of the soil and groundwater be performed.

A former railway line that was operated by Southern Pacific bordered the Site on the east. This railway line is no longer present; however, a portion of the old railway grade and ROW is still present. Because of the potential for arsenic associated with the creosote from the railway ties and herbicides associated with track maintenance, the area along the ROW is an AOPC. Because of the potential for soil contamination from arsenic and herbicides, it is recommended that an investigation of the soil be performed along the Site fenceline bordering the former railway line.

6.0 Limitations and Exceptions

This Phase I ESA report has been prepared for the exclusive use of Brookfield Homes for the specific purpose of evaluating the potential environmental liability associated with the Fred C. Nelles Youth Correction Facility located in Whittier, California. No warranty, expressed or implied, is made. The beneficiaries of this report, identified as: Brookfield Homes, is entitled to rely upon this report without the written authorization of CH2M HILL, and a written agreement limiting CH2M HILL's liability. No other persons or entities are beneficiaries to this report.

CH2M HILL is not responsible for any claims, damages, or liabilities associated with the interpretation of these findings or reuse of the analysis, associated site data, or recommendations without the express written authorization of CH2M HILL. Limitations of this assessment may not be altered or waived without written consent of CH2M HILL.

It was beyond CH2M HILL's authorized scope of work to review: (1) asbestos-containing material, (2) radon, (3) lead-based paint, (4) lead in drinking water, (5) issues relating to regulatory compliance, (6) issues associated with industrial hygiene, (7) issues associated with worker health and safety, (8) ecological resources, (9) indoor air quality, or (10) high voltage powerlines. The exclusion of the above items is not a representation of the relevance of these nonscope considerations to the Site.

This is a technical report and is not a legal representation or interpretation of environmental laws, rules, regulations, or policies of local, state, or federal governmental agencies. CH2M HILL makes no representation regarding whether this investigation constitutes "all appropriate inquiry into the previous ownership and uses of this property consistent with good commercial or customary practice" as defined in Section 101(35)(B) of Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

This report is based, in part, on unverified information supplied to CH2M HILL from several sources during the project research; therefore, CH2M HILL does not guarantee its completeness or accuracy.

CH2M HILL assumes no responsibility for conditions we are not authorized to investigate or conditions not generally recognized as environmentally unacceptable when services were performed. CH2M HILL has not performed any surface or subsurface sampling and, therefore, cannot provide any assurance as to the absence or presence of surface or subsurface contamination.

Any opinions or recommendations presented herein apply to Site conditions existing when services were performed by CH2M HILL. CH2M HILL is unable to report on or accurately predict events that may change the Site conditions after the described services are performed, whether occurring naturally or caused by external forces.

No investigation is thorough enough to exclude the presence of hazardous substances at a given site. If hazardous substances or hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of

the absence of such substances or conditions, but rather as the result of the services performed within the scope and limitations of the work performed.

7.0 Signature Page

The following CH2M HILL Environmental Professionals are primarily responsible for the Phase I ESA performed for Fred C. Nelles Site.

David Golles — 4/26/2005

Dave Golles, Task Leader — Date

R. Lowey — 4/26/2005

Rob Lowey, Project Manager — Date

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Appendix A

Site Photographs

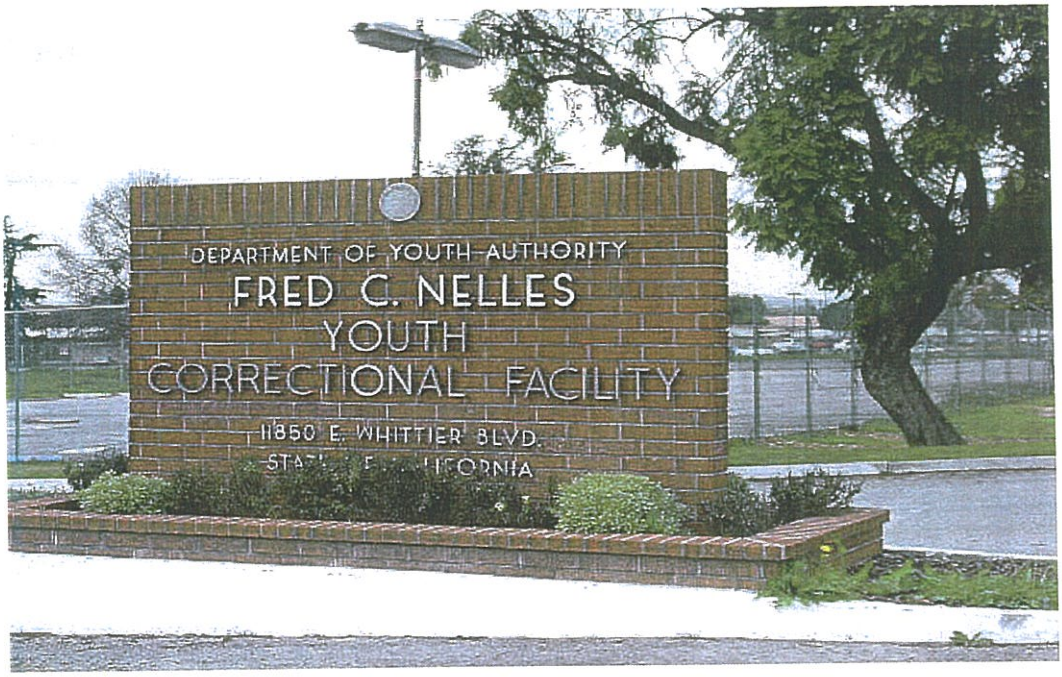


Photo 1: Entrance to the Fred C. Nelles Youth Correctional Facility

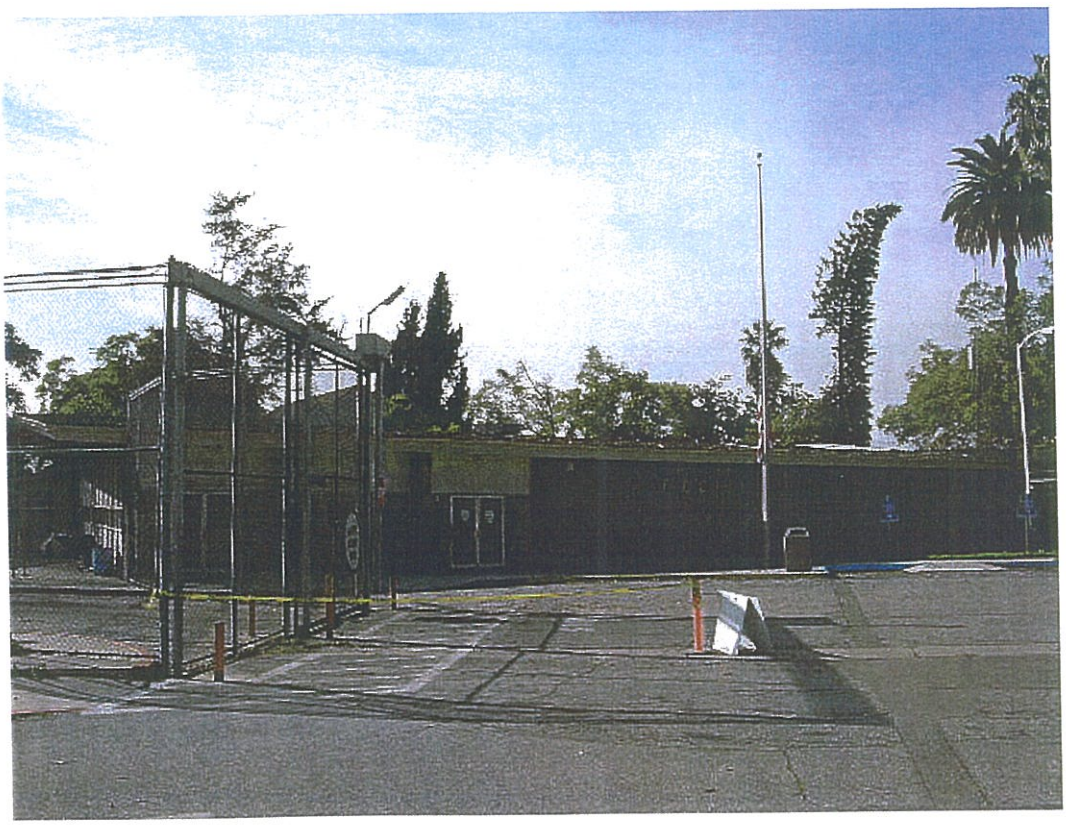


Photo 2: Main gate for the Site. Building 3, Control and Visiting is in the background.

Photo 3: Diesel emergency generator located on the north side of Building 3.

Photo 4: Building 14, Current Maintenance Garage.

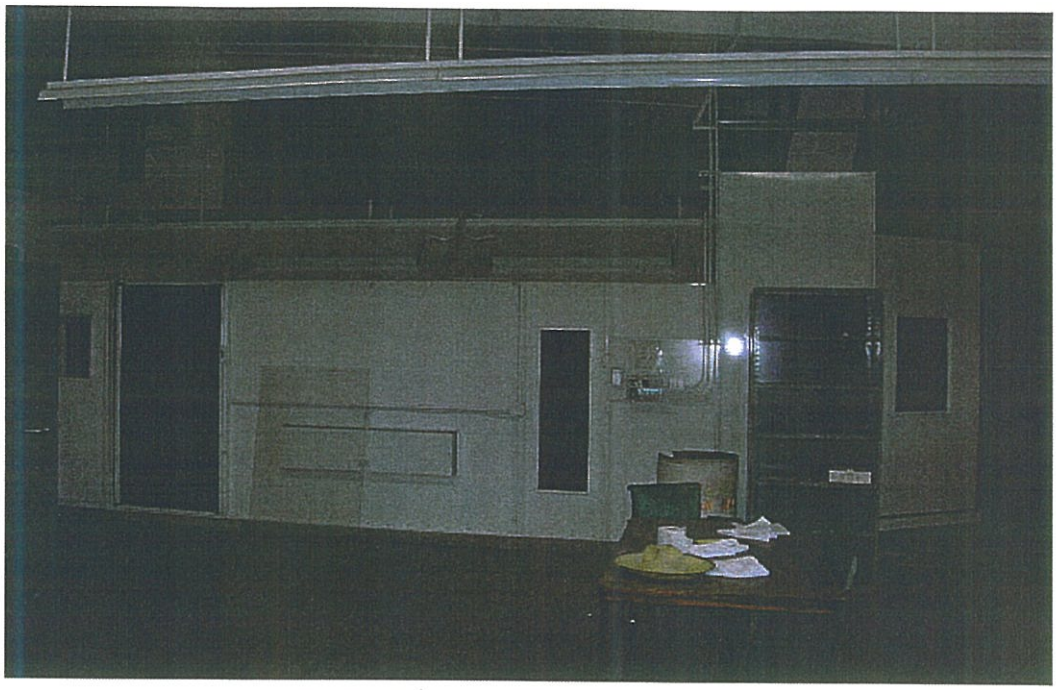


Photo 5: Paint booth located inside Building 14. This unit has never been used.

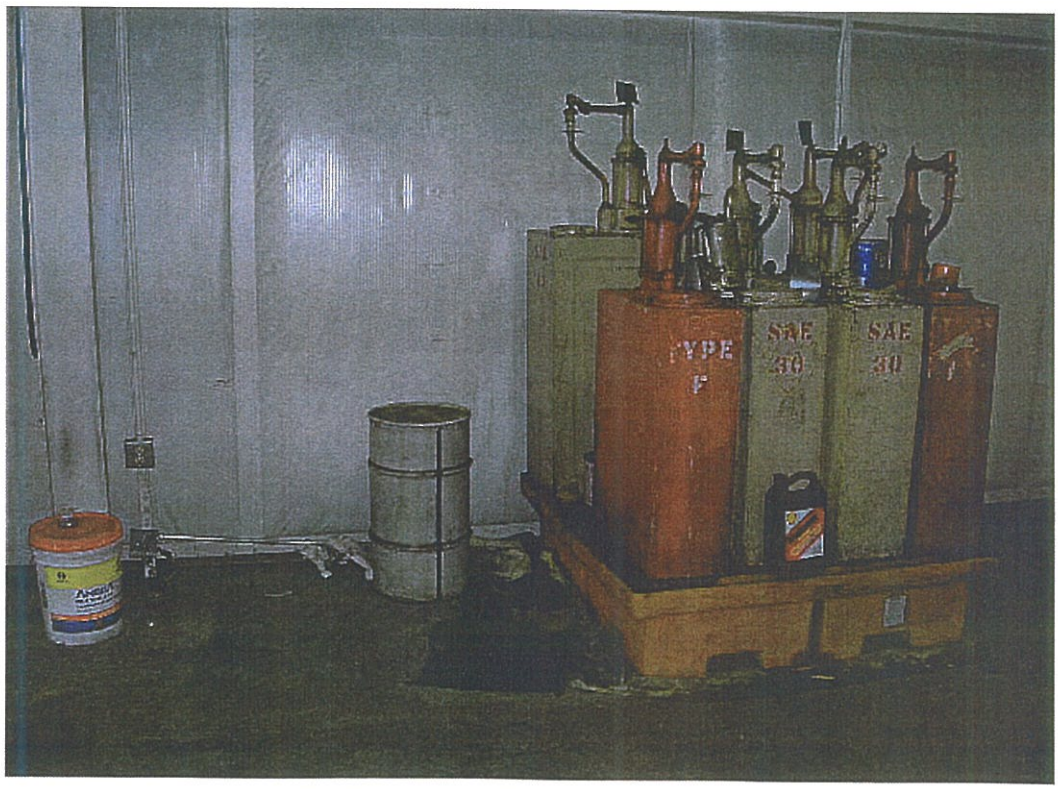


Photo 6: Petroleum products storage area locate inside Building 14.

Photo 7: Hazardous Material/Hazardous Waste Storage Unit located to the southeast of Building 14.

Photo 8: Hazardous materials temporarily stored outside of the Hazardous Materials/Hazardous Waste Storage Unit.

Photo 9: Hazardous Wastes stored inside the Hazardous Material/Hazardous Waste Storage Unit.

Photo 10: Hazardous Wastes stored inside the Hazardous Material/Hazardous Waste Storage Unit.

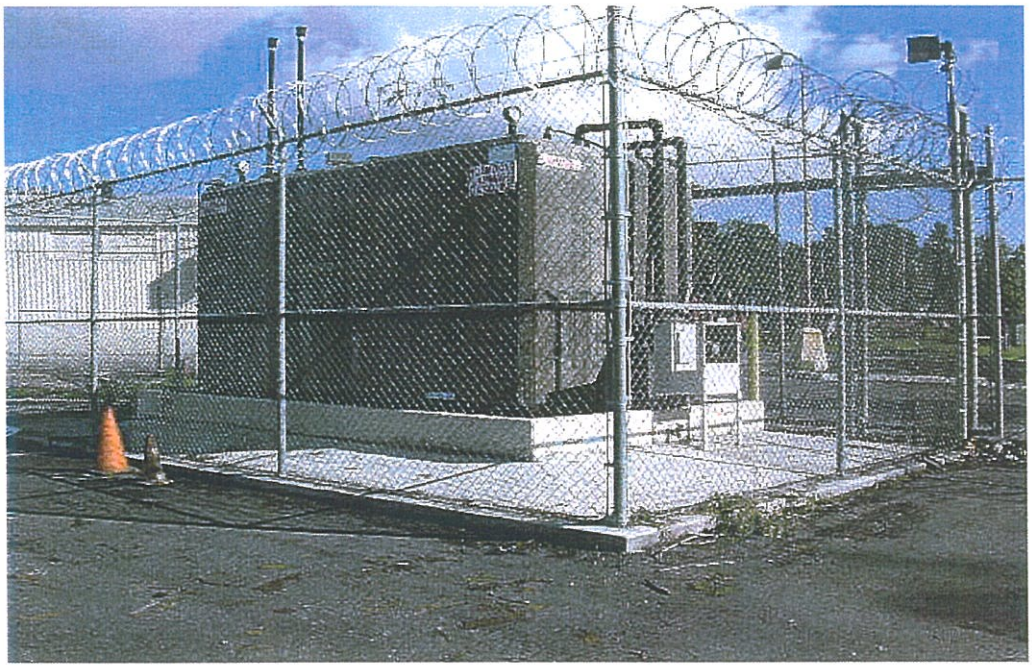


Photo 11: Above ground storage tank (AST) located to the southeast of Building 14. This AST contains 2,600 gallons of Diesel and 2,600 gallons of Gasoline.

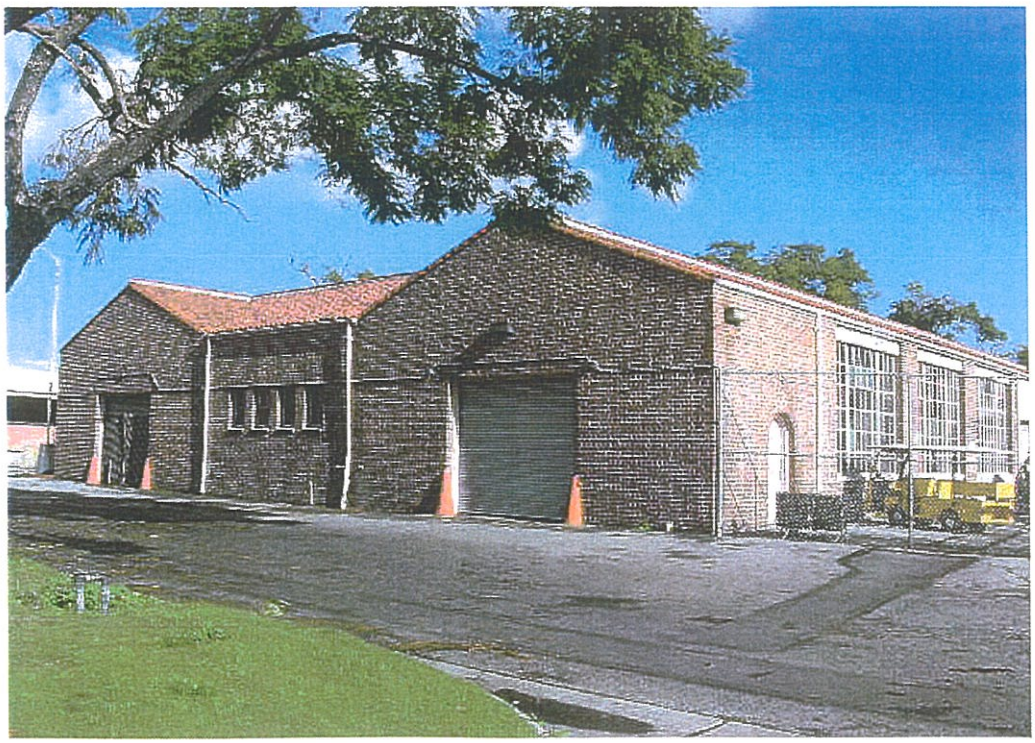


Photo 12: Building 15, Former Maintenance Garage.

Photo 13: Location of a former waste oil underground storage tank (UST) located on the west side of Building 15.

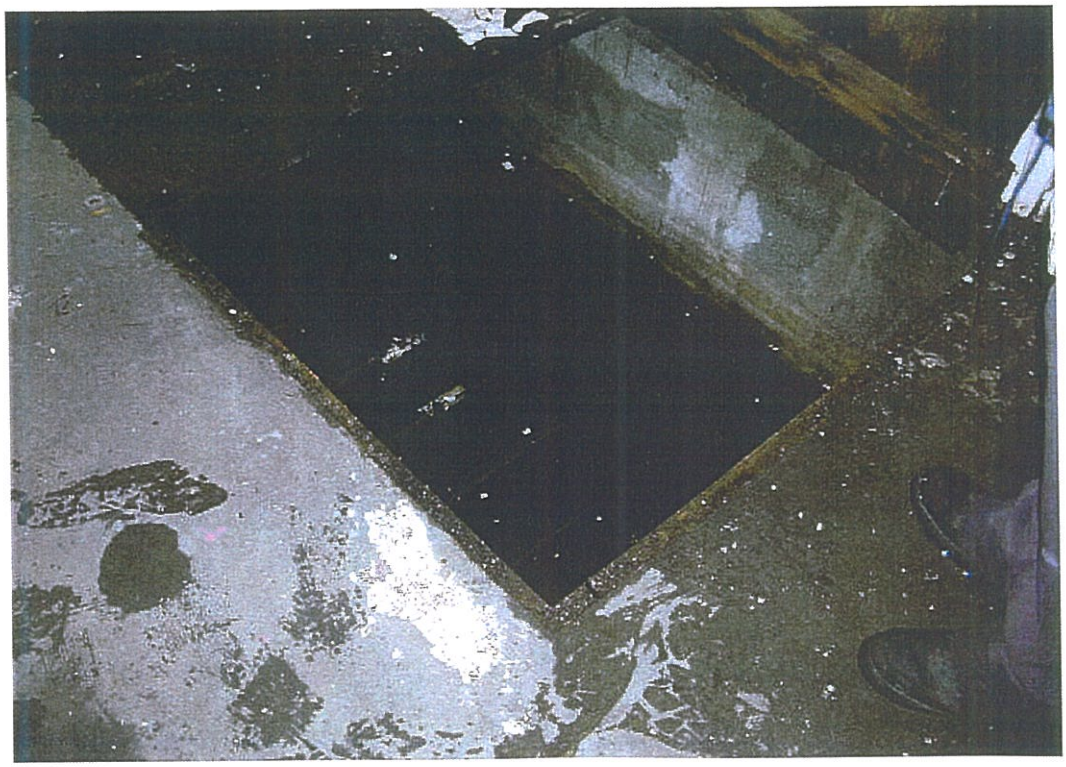


Photo 14: A concrete lined drain pit formerly used inside Building 15 to drain fluids from motor vehicles. Rain water had accumulated inside the pit at the time of the site survey.

Photo 15: Building 19, Former blueprint and lock shop.

Photo 16: Paint residue on the floor of Building 19.

Photo 17: Building 21, Transformer Room; Building 22, Switch Panel, and Building 23, Generator.

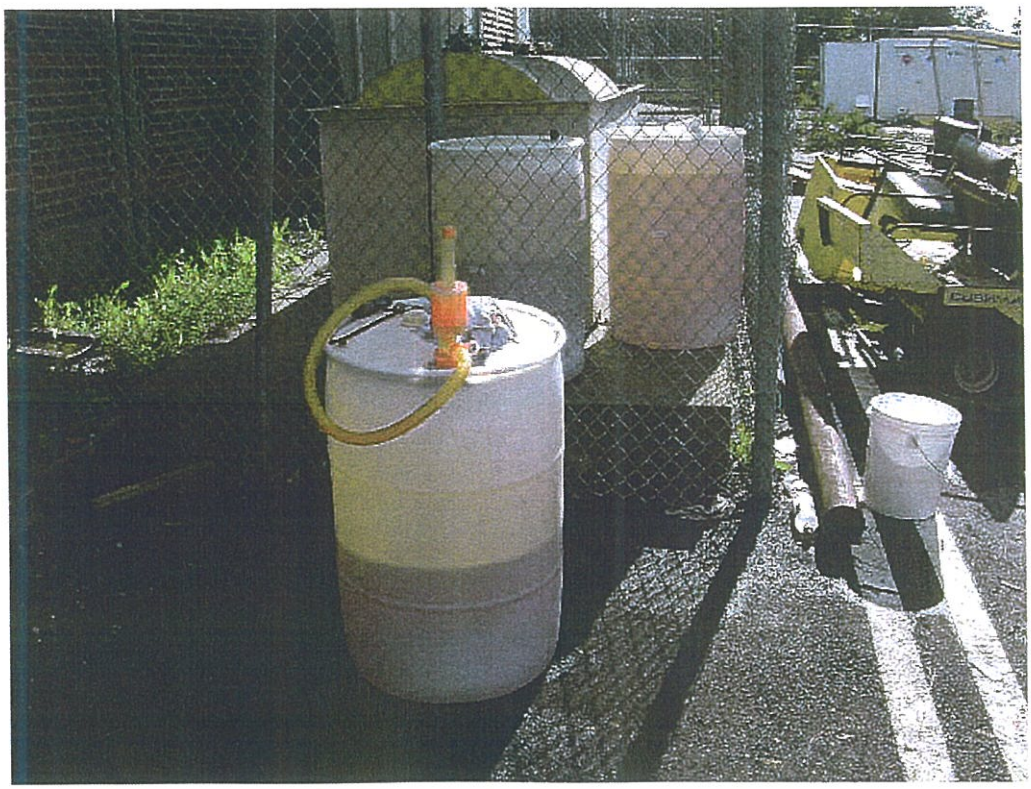


Photo 18: Diesel AST (1,000 gallons) and 55-gallon transfer drums located to west of Building 21.

Photo 19: Building 21, Transformer Room. Minor oil staining observed at the base of one of the transformers.

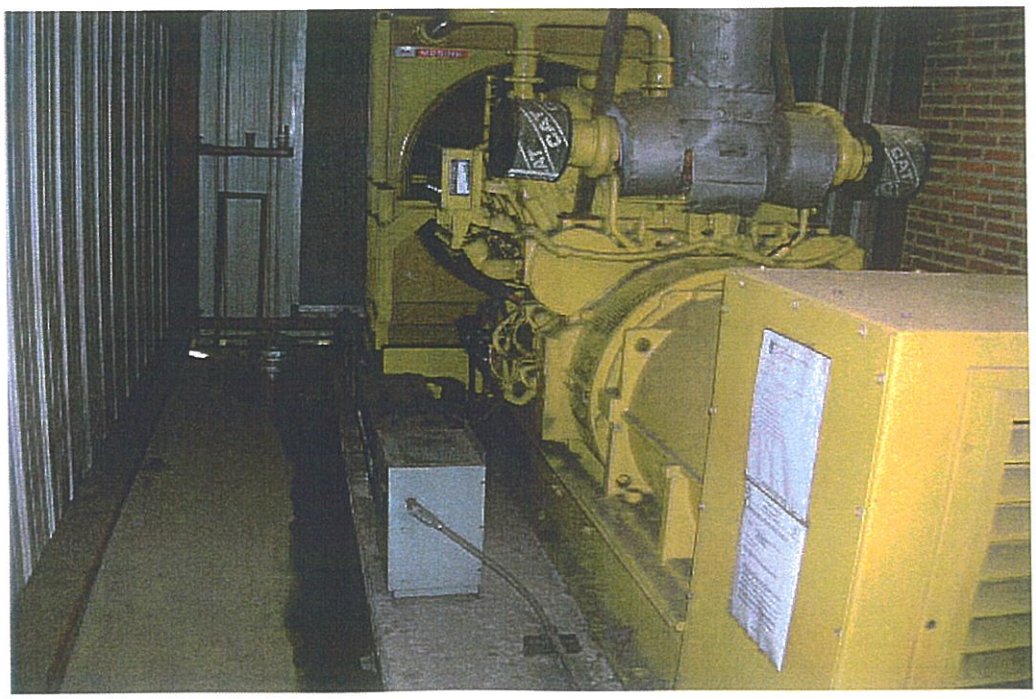


Photo 20: Building 23, Generator Room.

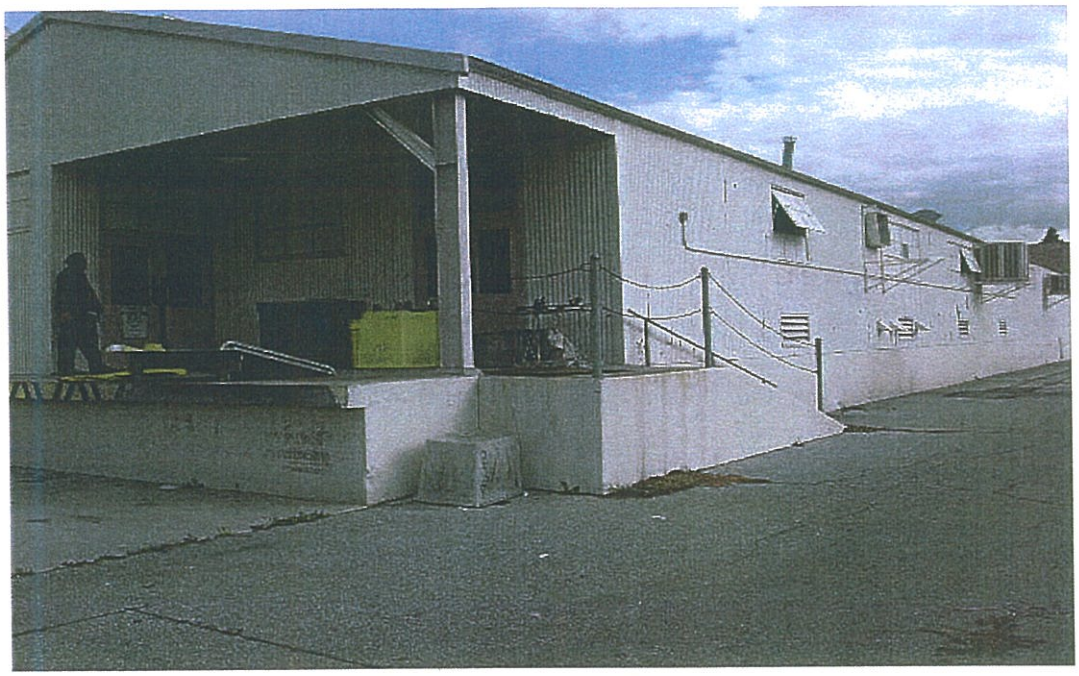


Photo 21: Building 26, Laundry Facility.

Photo 22: Interior of Building 26.

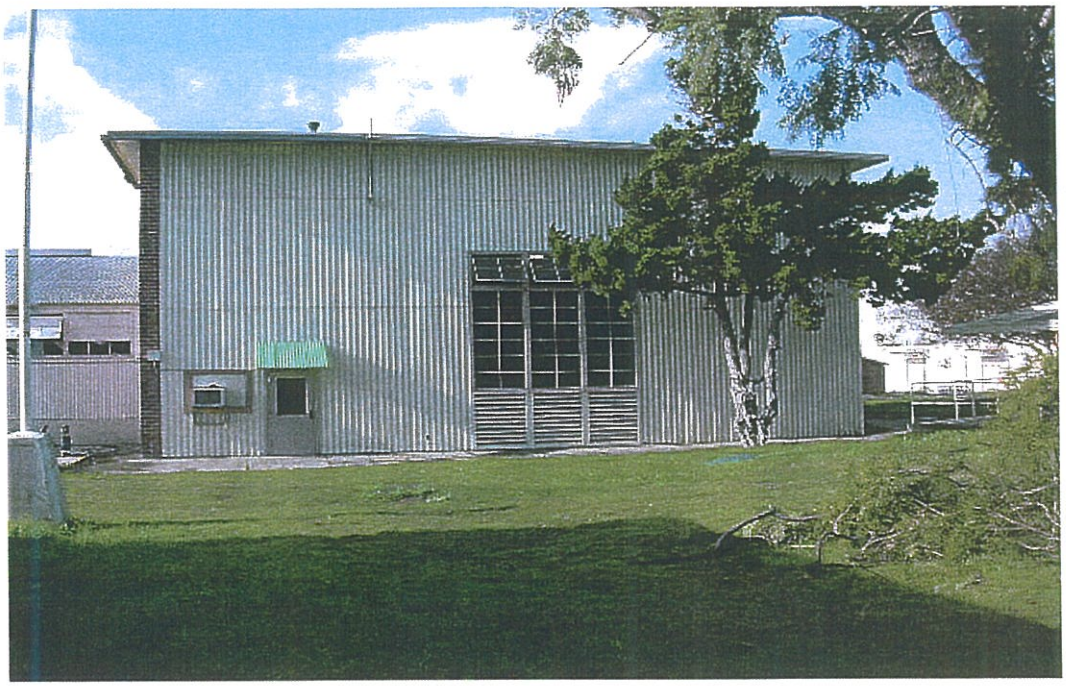


Photo 23: Building 27, Boiler Room. A 30,000-gallon diesel UST has been closed in-place with a slurry mix. This UST is located on the east side of the building in the grassy area in the foreground of this photograph.

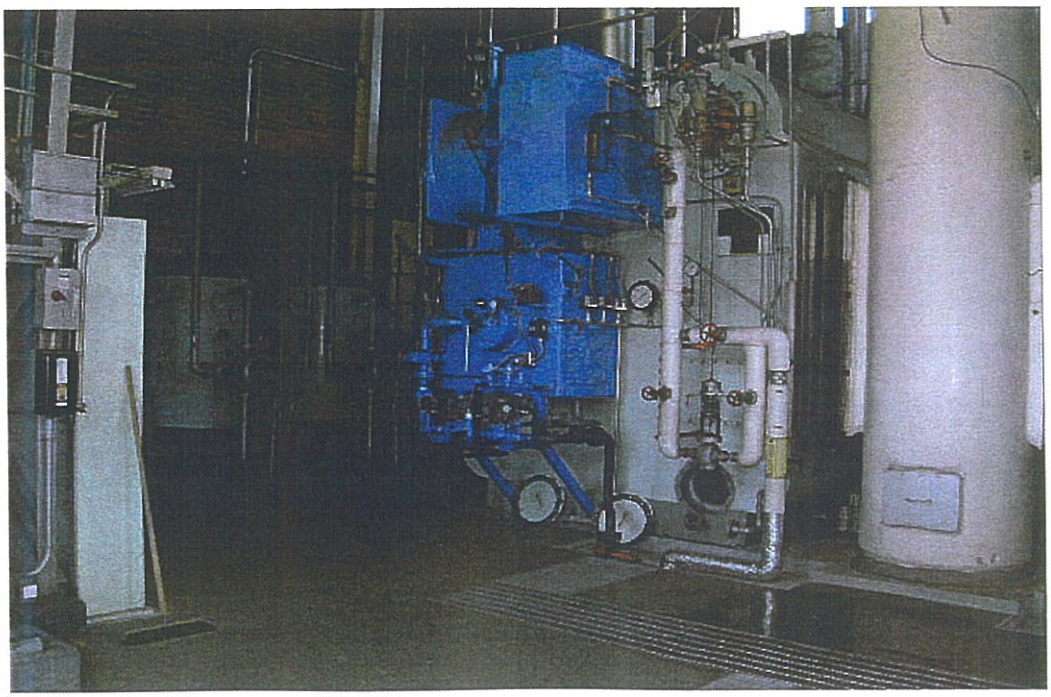


Photo 24: One of the two boilers located inside Building 27.

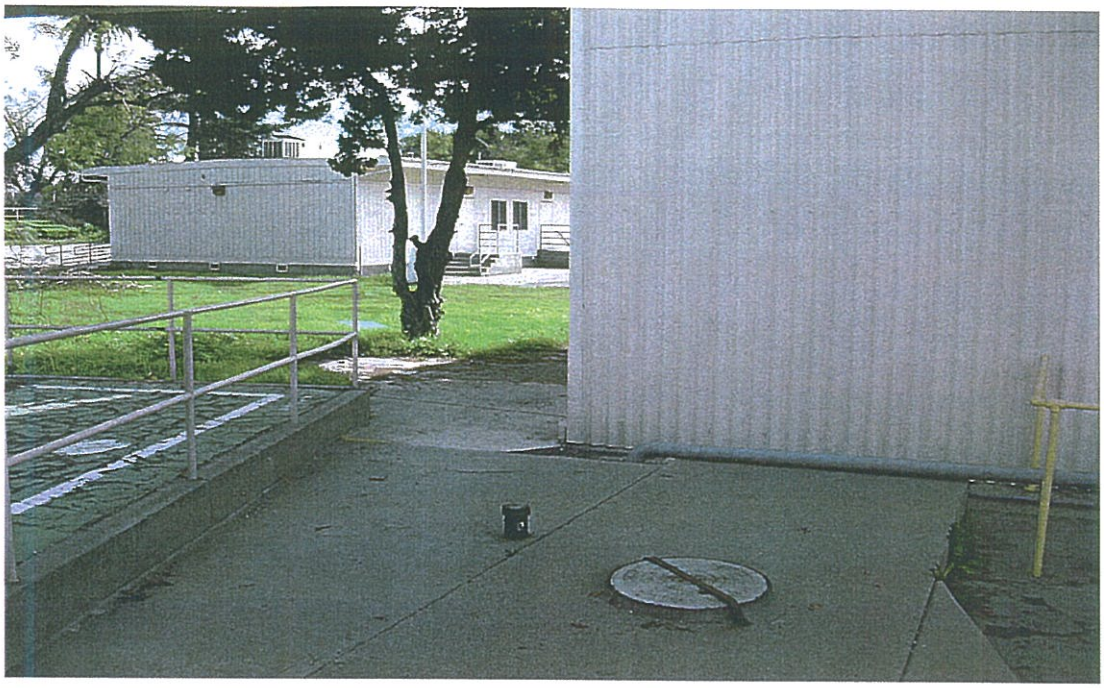


Photo 25: The fill pipe for the 30,000-gallon diesel UST located at Building 27 is located in the center of the photograph.

Photo 26: Building 47, Ford Cottage Pool.

Photo 27: Pool filter and chemical room located at Building 47.

Photo 28: Interior of the pool filter and chemical room located at Building 47.

Photo 29: Building 59, Facilities Planning Complex.

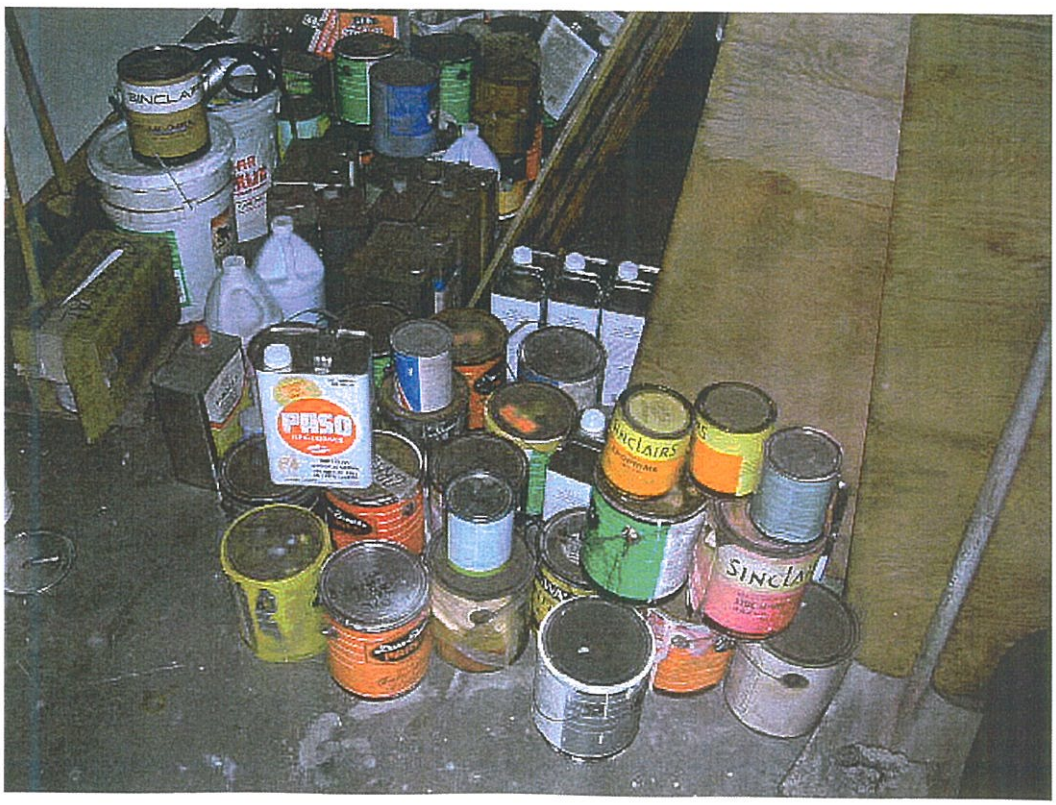


Photo 30: Paints and other hazardous materials stored inside Building 59.

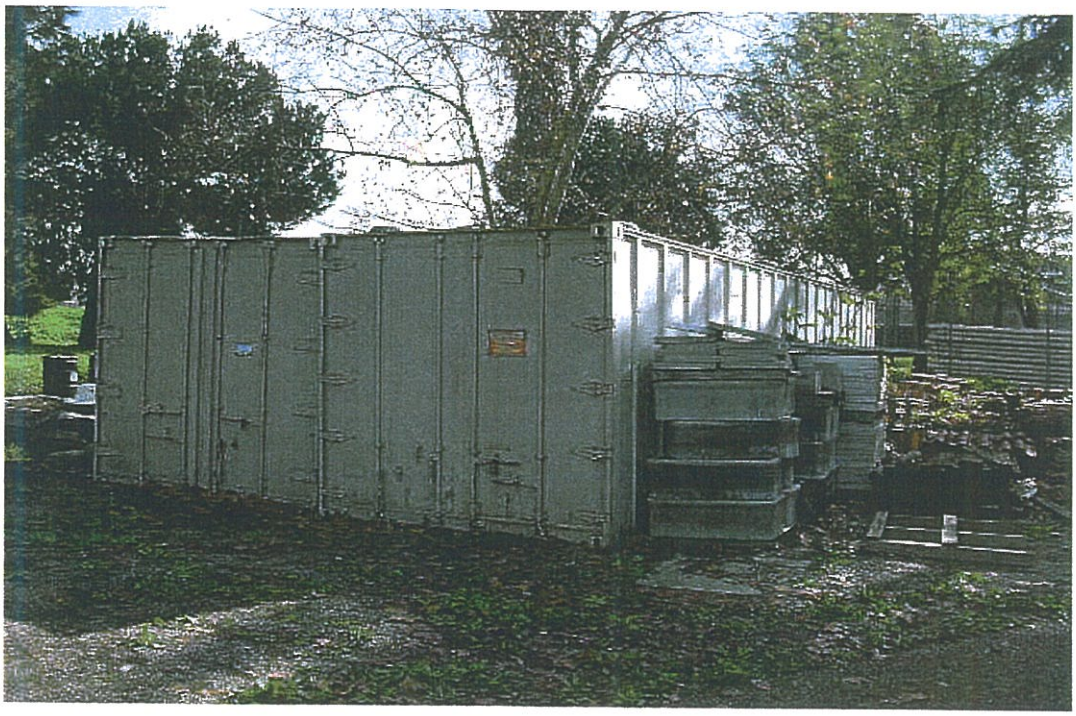


Photo 31: Pesticide/herbicide/roedenticide storage bin (right), located to the northeast of Building 59.

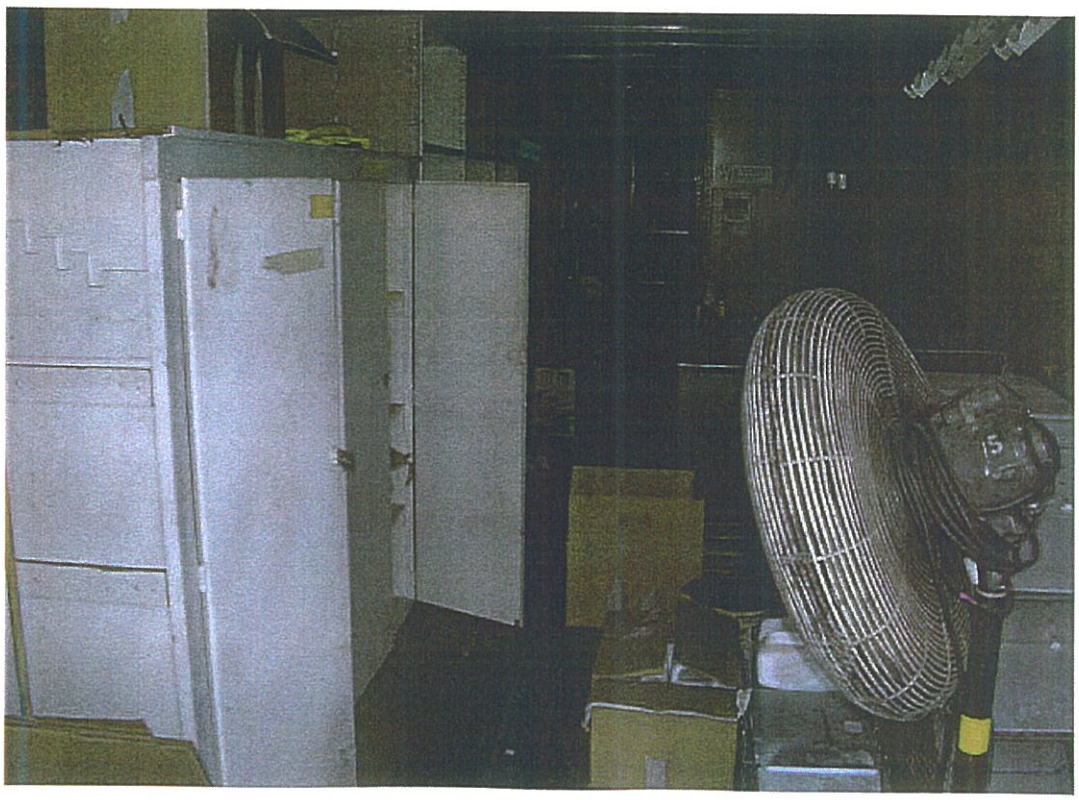


Photo 32: Interior of pesticide/herbicide/roedenticide storage bin.

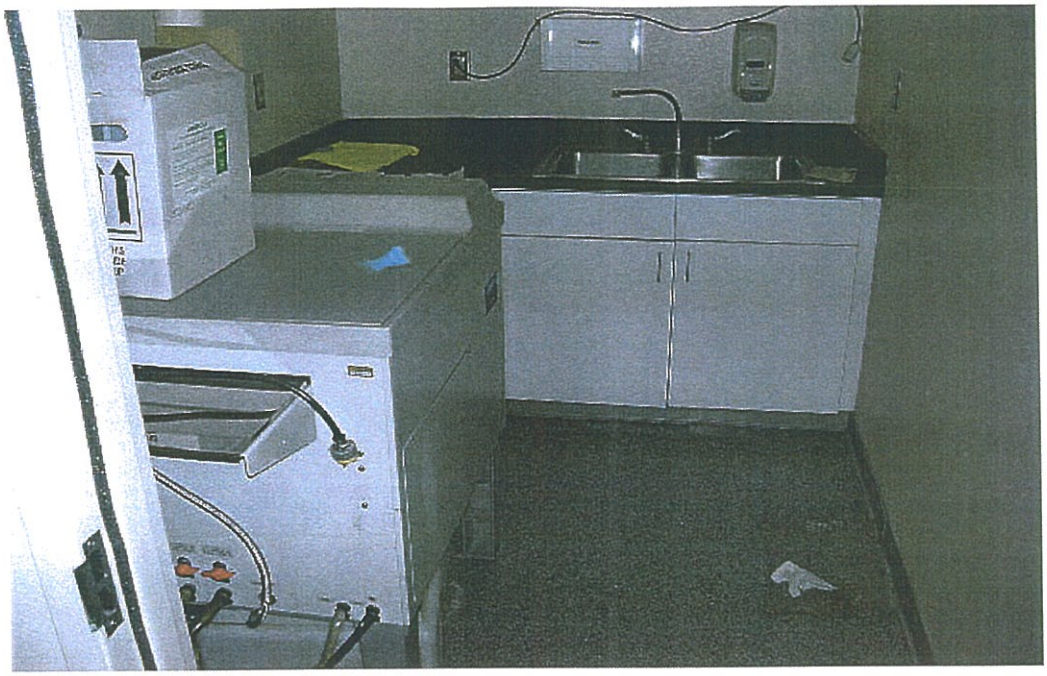


Photo 33: X-ray Development room located inside Building 61.

Photo 34: Containers for Developer and Fixer (25 Liters each) associated with the X-ray developer in Building 61.

Photo 35: Waste container for Developer and Fixer associated with the X-ray developer located in Building 61.

Appendix B

Chain-of-Title Report

EDR INQUIRY NO.: 1340547

CHAIN OF TITLE REPORT

OWNER (S): State of California

ADDRESS: No Site Address
Whittier, California
Los Angeles County

ASSESSOR'S PARCEL NO.: 8170-013-904

-LEGAL DESCRIPTION-

All that real property in the City of Whittier, County of Los Angeles, State of California, described as follows:

Those portions of the Southeast Quarter of Section 20, Township 2 South, Range 11, San Bernardino Base and Meridian, according to the official plat thereof, the Rancho Paso de Bartolo as per Map filed in Book 1, Page 77 of Maps, and the Subdivision of Dunlap and Tyler Tract No. 2 as per Map filed in Superior Court Case No. 14271.

---

1. Document: Grant Deed
Grantor: Susan Dunlap
Grantee: A. H. Dunlap and M. F. Tyler
Recorded: August 24, 1882
Instrument: Book 90, Page 606

2. Document: Grant Deed
Grantor: A. H. Dunlap and M. F. Tyler
Grantee: State of California
Recorded: May 6, 1889
Instrument: Book 562, Page 186

3. Document: Grant Deed
Grantor: M. F. Tyler
Grantee: Jennie Tyler, et al
Recorded: November 5, 1898
Instrument: Document No. 22

4. Document: Grant Deed
Grantor: Jennie Tyler, et al
Grantee: Mae A. English

Recorded:	April 7, 1891
Instrument:	Document No. 35

5. Document:	Grant Deed
Grantor:	Mrs. Mary Dunlap
Grantee:	Mae A. English
Recorded:	June 10, 1891
Instrument:	Document No. 1

6. Document:	Grant Deed
Grantor:	Mae A. English
Grantee:	Washington W. Hadley
Recorded:	June 11, 1891
Instrument:	Document No. 24

7. Document:	Grant Deed
Grantor:	Washington W. Hadley
Grantee:	William J. Kennedy
Recorded:	April 3, 1893
Instrument:	Document No. 44

8. Document:	Grant Deed
Grantor:	A. H. Dunlap
Grantee:	A. J. Stevens
Recorded:	January 16, 1895
Instrument:	Document No. 14

9. Document:	Grant Deed
Grantor:	William J. Kennedy
Grantee:	Naomi Hadley
Recorded:	June 10, 1896
Instrument:	Document No. 30

10. Document:	Grant Deed
Grantor:	A. J. Stevens
Grantee:	A. H. Dunlap
Recorded:	June 16, 1897
Instrument:	Document No. 22

11. Document:	Grant Deed
Grantor:	A. H. Dunlap
Grantee:	Naomi Hadley
Recorded:	April 22, 1898
Instrument:	Document No. 5

12. Document:	Grant Deed
Grantor:	Naomi Hadley, et al
Grantee:	Hadley Ranch
Recorded:	June 17, 1903
Instrument:	Document No. 86

13. Document:	Grant Deed
Grantor:	Hadley Ranch
Grantee:	TRS Whittier State School
Recorded:	July 6, 1909
Instrument:	Document No. 145

14. Document:	Tax Deed
Grantor:	TRS Whittier State School
Grantee:	State of California
Filed:	July 1, 1910
Instrument:	Document No. 121081

NOTE: THERE WERE NO ENVIRONMENTAL LIENS FOUND OF RECORD.

END OF REPORT

THIS REPORT CONTAINS INFORMATION OBTAINED FROM PUBLIC LAND RECORDS. NO REPRESENTATION IS MADE CONCERNING THE ACCURACY OF SAID PUBLIC RECORD INFORMATION. THIS REPORT IS NOT AN ABSTRACT OR OPINION OF TITLE, TITLE COMMITMENT OR GUARANTEE, OR TITLE INSURANCE POLICY. THE TOTAL LIABILITY IS LIMITED TO THE FEE PAID FOR THIS REPORT.

Appendix D

State and Regulatory Agency File Review

Los Angeles Department of Health Services - Modine Manufacturing Co.

GROUNDWATER INVESTIGATION SUMMARY
MODINE MANUFACTURING COMPANY
WHITTIER FACILITY
WHITTIER, CALIFORNIA

Prepared For:

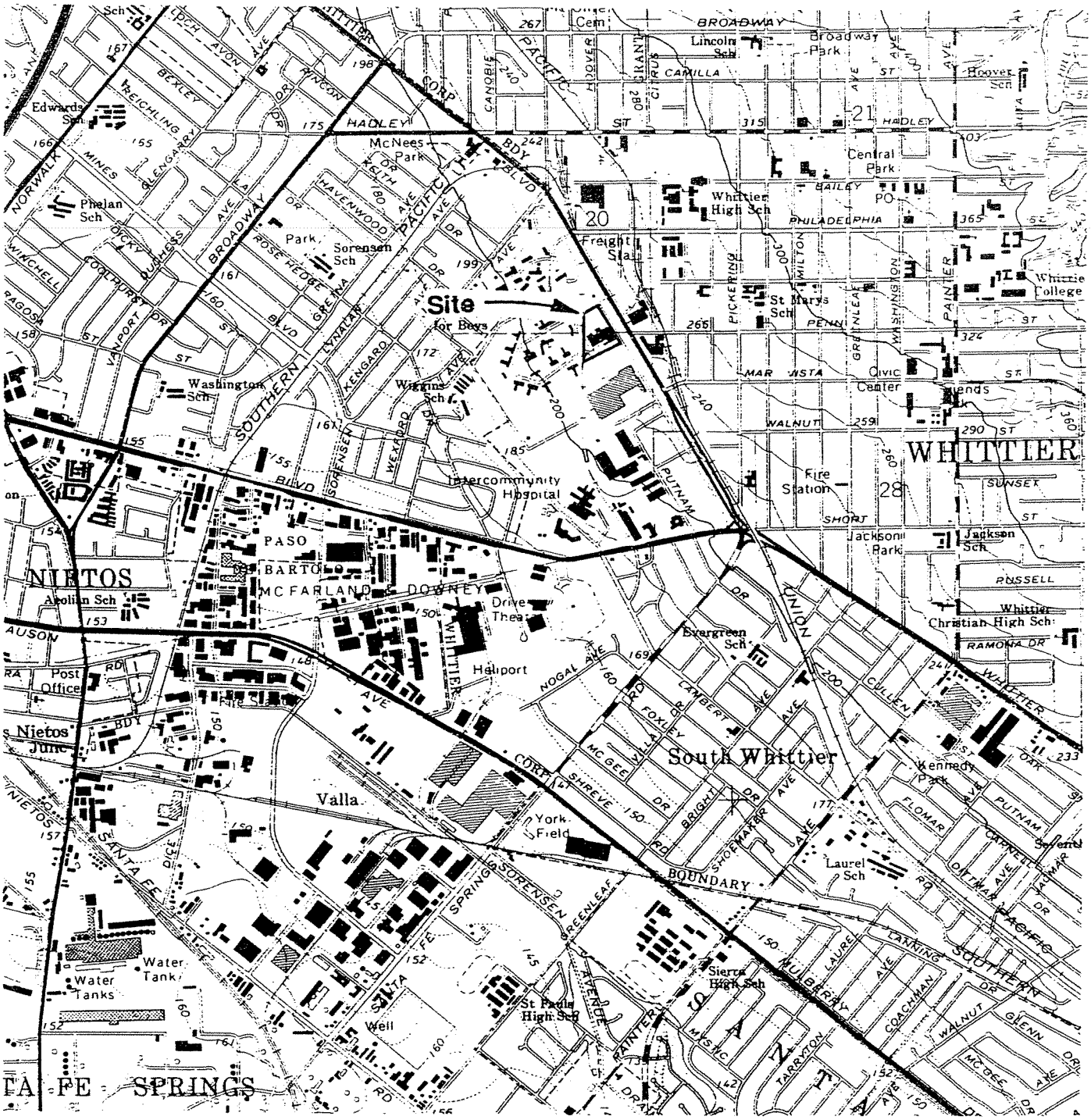
MODINE MANUFACTURING COMPANY
ENVIRONMENTAL ENGINEERING DEPARTMENT
1500 DeKoven Avenue
Racine, WI 53401

Prepared By:

THE EARTH TECHNOLOGY CORPORATION
COMMERCIAL SERVICES DIVISION
100 West Broadway, Suite 5000
Long Beach, CA 90802
(213) 495-4449

EARTH TECHNOLOGY PROJECT NO. 90-1026

November, 1989



0 2000 4000 Feet

Scale

Source: U. S. G. S. Whittier, California Quadrangle, Photorevised 1972

The Earth Technology Corporation

Project No.: 90-1026

Modine Manufacturing Co.

Site Location Plan

10-89

Figure 1-1

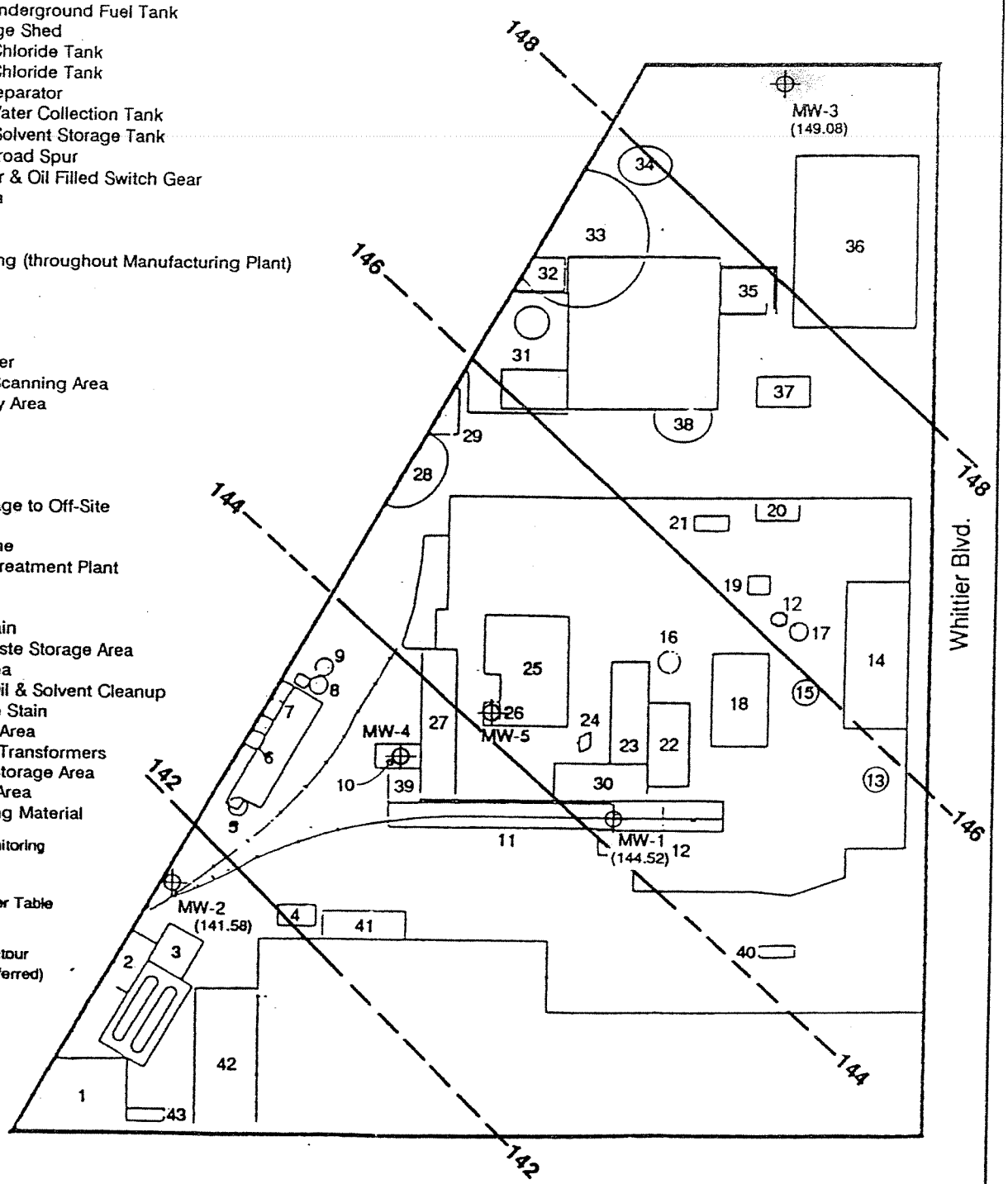
Section

1 Landfill
2 Paint Sludge Storage Area
3 Drum Storage Area
4 Abandoned Underground Fuel Tank
5 Solvent Storage Shed
6 Former Zinc Chloride Tank
7 Former Zinc Chloride Tank
8 Three State Separator
9 Main Waste Water Collection Tank
10 7,500 Gallon Solvent Storage Tank
11 Corroded Railroad Spur
12 PCB Capacitor & Oil Filled Switch Gear
13 Pipe Insulation
14 Oil Press Pits
15 Tube Mills
16 Transite Roofing (throughout Manufacturing Plant)
17 Tin Mill
18 Tin Mill Drain
19 Test Area
20 Hybrite
21 Corroded Sewer
22 Solder Dip & Scanning Area
23 Final Assembly Area
24 Press Pit
25 Test Areas
26 Paint Pit
27 Shipping
28 Surface Drainage to Off-Site
29 Storage Area
30 Old Hybrite Line
31 Waste Water Treatment Plant
32 Sludge Area
33 Soil Fill Area
34 Surface Oil Stain
35 Hazardous Waste Storage Area
36 Tank Rinse Area
37 Area of 1983 Oil & Solvent Cleanup
38 Oil & Kerosene Stain
39 Drum Storage Area
40 Pole Mounted Transformers
41 Raw Material Storage Area
42 Paint Storage Area
43 Transite Roofing Material

MW-1 Approximate Monitoring Well Locations

(149.08) Elevation of Water Table in parenthesis

148 Groundwater Contour (dashed where inferred)



NORTH

0 90 180 Feet

Scale

The Earth Technology Corporation

Project No.: 90-1026

Modine Manufacturing Co.

Groundwater Contour Map

10-89

Figure 4-1

TABLE 5-1. SUMMARY OF LABORATORY RESULTS OF GROUNDWATER SAMPLING

Monitoring Well	Date Sampled	Sample Number	Analysis Performed	Compounds Identified	Concen-tration	Sampled By	Lab
MW-1	5-10-89	476	EPA 624[1]	Trichloroethene	Trace[2]	TETC[3]	ETAL[4]
			Copper	Cu	0.03 mg/L		
			Lead	Pb	0.006 mg/L		
			Zinc	Zn	0.12 mg/L		
MW-1	7-13-89	483	EPA 624	Trichloroethene	Trace	TETC	ETAL
MW-1	8-8-89	499	EPA 624	Trichloroethene	Trace	TETC	ETAL
MW-2	6-6-89	ESI-1	EPA 624	Tetrachloroethene	39 ug/L	ESI[5]	B&C[6]
				Trichloroethene	9 ug/L		
				Trichlorofluoromethane	3 ug/L		
				Toluene	21 ug/L		
			Copper	Cu	<0.05 mg/L		
			Lead	Pb	<0.002 mg/L		
			Zinc	Zn	0.28 mg/L		
MW-2	7-17-89	485	EPA 624	Tetrachloroethene	42 ug/L	TETC	ETAL
				Trichloroethene	13 ug/L		
				Trichlorofluoromethane	Trace		
				Toluene	Trace		
MW-2	8-8-89	500	EPA 624	Tetrachloroethene	42 ug/L	TETC	ETAL
				Trichloroethene	12 ug/L		
				1,1,2,2-Tetrachloroethane	Trace		
MW-3	8-8-89	501	EPA 624	None	----	TETC	ETAL
MW-4[7]	9-29-89	546	EPA 624	Tetrachloroethene	27 ug/L	TETC	ETAL
				Trichloroethene	8 ug/L		
				Toluene	Trace		
MW-5[7]	9-29-89	553	EPA 624	Tetrachloroethene	Trace	TETC	ETAL
				Trichloroethene	Trace		

Notes:
1 EPA 624 — EPA Method 624 analysis - volatile organic analysis
2 Trace — Compound was identified but in quantities less than reportable limits. Reportable limits are given on the lab reports in Appendix D.
3 TETC — The Earth Technology Corporation (includes BCL Associates, Inc.
4 ETAL — Earth Technology Analytical Laboratory (formerly BCL Analytical Lab)
5 ESI — Environmental Solutions Inc.
6 B&C — Brown and Caldwell Laboratories
7 Represents data from Hydropounch™ samples taken adjacent to well location.

6.0 INVESTIGATION FINDINGS

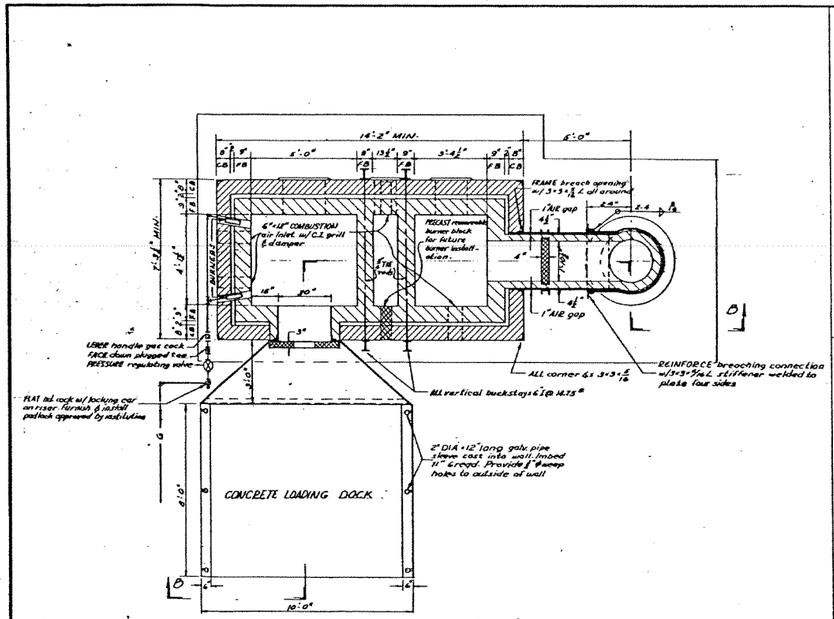
Based on the groundwater investigation detailed above, Earth Technology reports the following findings:

- Groundwater exists under water table conditions at the site and was encountered between 77 and 80 feet below ground surface. Groundwater flow at the site is generally to the south-southwest with a hydraulic gradient of approximately 0.012 feet/feet.

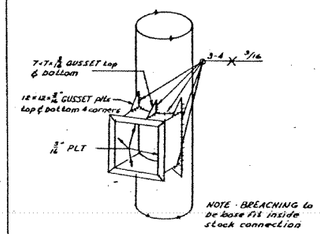
- Concentrations of PCE and TCE are present in groundwater beneath the site in excess of California action levels. The area of groundwater contamination appears to begin in the area near MW-4 and extends south-southwest encompassing MW-2.

- Based on discussions with Modine Manufacturing officials, it appears that the source of the PCE and TCE in the groundwater may be related to the past use of paint stripping solvents in the area of MW-4. According to Modine's records, PCE or TCE were (in the pure state) never stored in the solvent tank nor were they used in the manufacturing process.

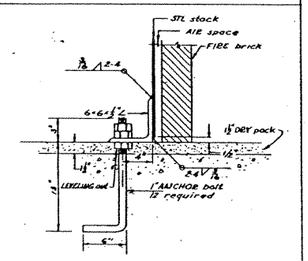
Former Incinerator Construction Details Diagram - Year 1952



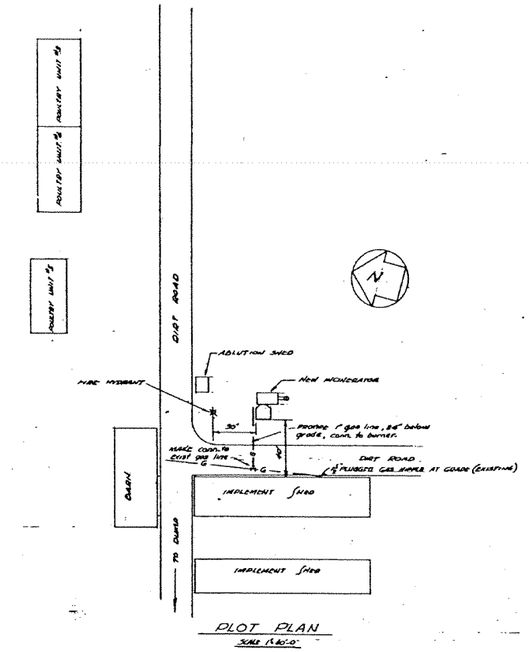
PLAN - SECTION A-A
scale ½"=1'-0"



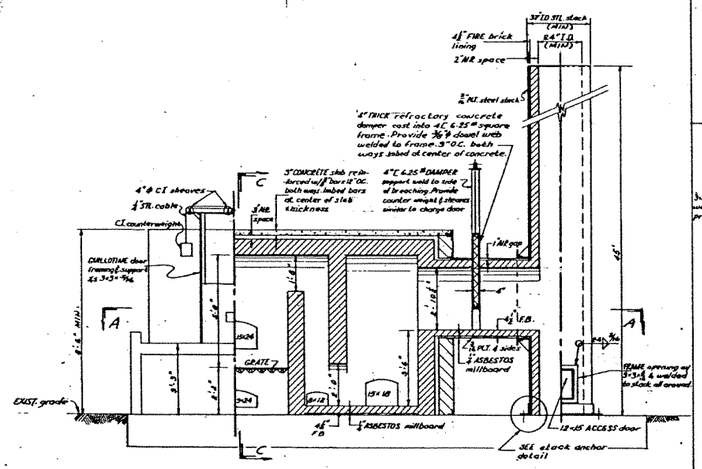
DETAIL OF BREACHING CONNECTION ON STACK
NO SCALE



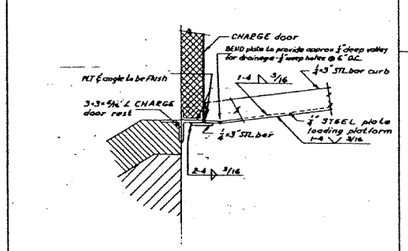
STACK ANCHOR DETAIL
SCALE 1½"=1'-0"



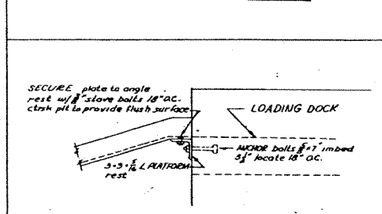
PLOT PLAN
SCALE 1"=80'-0"



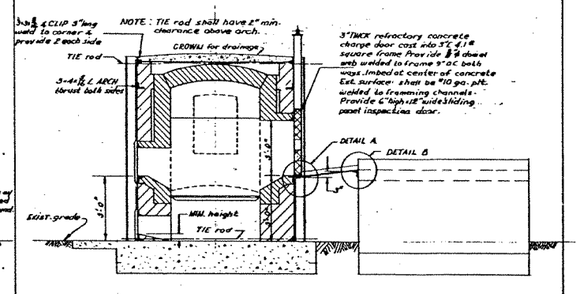
SECTION D-D
scale ½"=1'-0"



DETAIL A
SCALE 1½"=1'-0"



DETAIL B
SCALE 1½"=1'-0"



SECTION C-C
scale ½"=1'-0"

GENERAL NOTES

1. BURNER & combustion air openings shall be centered at elevation of midpoint of charging door.

2. ALL doors in brickwork shall be supported from 3x3x3/16 L. L welded frame secured to brickwork. Lintels shall extend min of 3" each side of door.

3. ALL structural steel work including corner angles, arch thrusts, door framing, breech opening framing & buckstays shall be integrally constructed w/welded joints.

4. REFER to sheet S1 for structural reinforcing details of platform & foundation.

5. FIRE brick lining of stack shall have header bricks 90° apart built out against steel stack. Header bricks shall be 24" O.C. for full height of stack & shall be rotated 45° to each header course.

LEGEND

- REFRACTORY
- COMMON BRICK
- CAST REFRACTORY CONCRETE
- F.B. FIRE BRICK
- C.B. COMMON BRICK

THIS DRAWING IS HEREBY ACKNOWLEDGED TO BE PART OF THE PLANS REFERRED TO IN MY CONTRACT WITH THE STATE DEPARTMENT OF PUBLIC WORKS, DIVISION OF ARCHITECTURE.

DATE [redacted]

CONTRACTOR [redacted]

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ARCHITECTURE
LOS ANGELES BRANCH OFFICE

BY ASSISTANT STATE ARCHITECT

DESIGNED	DATE Mar 3, 1952	SHEET TITLE	PLOT PLAN & DETAILS
DRAWN	W.O. 2649 GC	PROJECT	INCINERATOR
TRACED	REVISED	INSTITUTION	FRED C NELLES SCHOOL FOR BOYS
CHECKED	FILE 30 C 3	LOCATION	WHITTIER CALIFORNIA

SHEET M-1 OF 9

LA Regional Water Quality Control Board - Modine Manufacturing Co.

SUC No. 118 JA

REPORT

QUARTERLY GROUND-WATER MONITORING REPORT THIRD QUARTER 1995

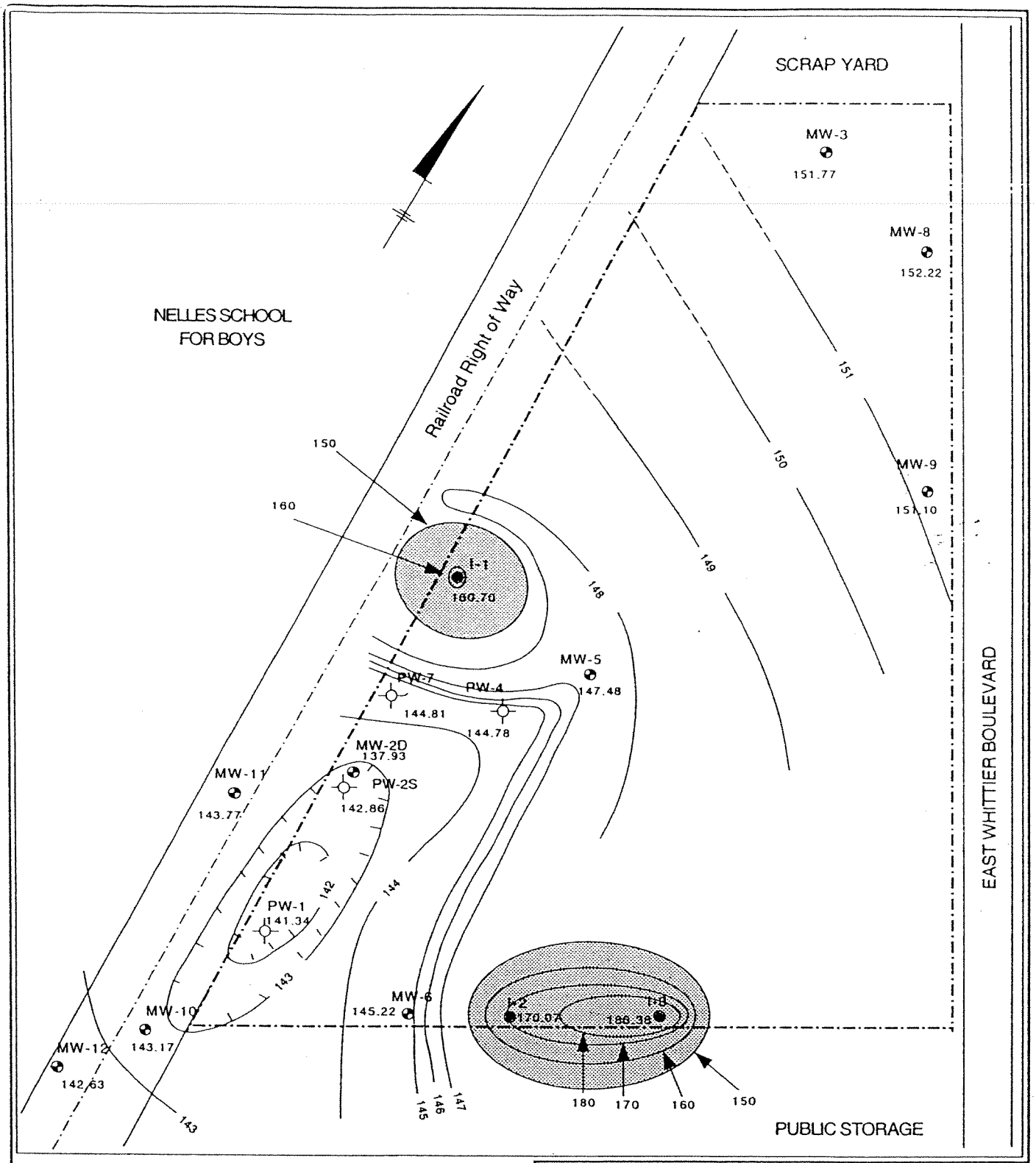
FORMER MODINE MANUFACTURING FACILITY
12252 EAST WHITTIER BOULEVARD
WHITTIER, CALIFORNIA

Modine Manufacturing Company

Racine, Wisconsin

October 1995

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists



EXPLANATION

Property Outline

Monitoring Well

148 Equipotential Line

Datum Sea Level

Contour Interval =1 foot

Production Well

Injection Well

Area Where

Contour Interval =10 feet

100 0 100

Approximate Scale

(in feet)

BBL

BLASLAND, BOUCK & LEE, INC.

engineers & scientists

MODINE MANUFACTURING COMPANY

RACINE, WISCONSIN

MODINE MANUFACTURING FACILITY

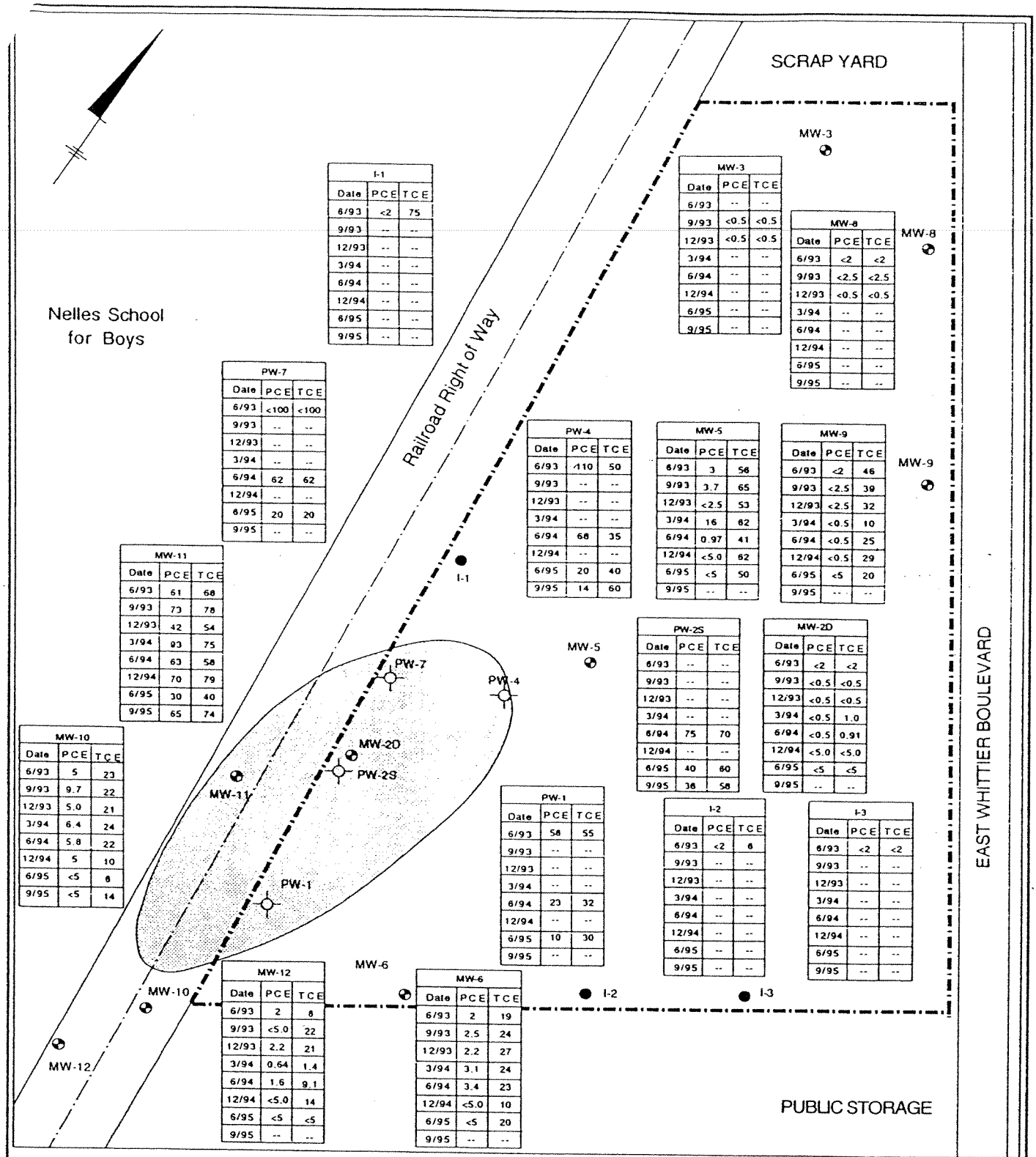
12252 East Whittier Boulevard

Whittier, Califorina

46701

CONTOUR MAP OF WATER TABLE ELEVATIONS OCTOBER, 1995

FIGURE 2



I-1		
Date	PCE	TCE
6/93	<2	75
9/93	--	--
12/93	--	--
3/94	--	--
6/94	--	--
12/94	--	--
6/95	--	--
9/95	--	--

MW-3		
Date	PCE	TCE
6/93	--	--
9/93	<0.5	<0.5
12/93	<0.5	<0.5
3/94	--	--
6/94	--	--
12/94	--	--
6/95	--	--
9/95	--	--

MW-8		
Date	PCE	TCE
6/93	<2	<2
9/93	<2.5	<2.5
12/93	<0.5	<0.5
3/94	--	--
6/94	--	--
12/94	--	--
6/95	--	--
9/95	--	--

PW-7		
Date	PCE	TCE
6/93	<100	<100
9/93	--	--
12/93	--	--
3/94	--	--
6/94	62	62
12/94	--	--
6/95	20	20
9/95	--	--

PW-4		
Date	PCE	TCE
6/93	110	50
9/93	--	--
12/93	--	--
3/94	--	--
6/94	68	35
12/94	--	--
6/95	20	40
9/95	14	60

MW-5		
Date	PCE	TCE
6/93	3	56
9/93	3.7	65
12/93	<2.5	53
3/94	16	62
6/94	0.97	41
12/94	<5.0	62
6/95	<5	50
9/95	--	--

MW-9		
Date	PCE	TCE
6/93	<2	46
9/93	<2.5	39
12/93	<2.5	32
3/94	<0.5	10
6/94	<0.5	25
12/94	<0.5	29
6/95	<5	20
9/95	--	--

MW-11		
Date	PCE	TCE
6/93	61	68
9/93	73	78
12/93	42	54
3/94	93	75
6/94	63	58
12/94	70	79
6/95	30	40
9/95	65	74

PW-2S		
Date	PCE	TCE
6/93	--	--
9/93	--	--
12/93	--	--
3/94	--	--
6/94	75	70
12/94	--	--
6/95	40	60
9/95	36	58

MW-2D		
Date	PCE	TCE
6/93	<2	<2
9/93	<0.5	<0.5
12/93	<0.5	<0.5
3/94	<0.5	1.0
6/94	<0.5	0.91
12/94	<5.0	<5.0
6/95	<5	<5
9/95	--	--

MW-10		
Date	PCE	TCE
6/93	5	23
9/93	9.7	22
12/93	5.0	21
3/94	6.4	24
6/94	5.8	22
12/94	5	10
6/95	<5	8
9/95	<5	14

PW-1		
Date	PCE	TCE
6/93	58	55
9/93	--	--
12/93	--	--
3/94	--	--
6/94	23	32
12/94	--	--
6/95	10	30
9/95	--	--

I-2		
Date	PCE	TCE
6/93	<2	6
9/93	--	--
12/93	--	--
3/94	--	--
6/94	--	--
12/94	--	--
6/95	--	--
9/95	--	--

I-3		
Date	PCE	TCE
6/93	<2	<2
9/93	--	--
12/93	--	--
3/94	--	--
6/94	--	--
12/94	--	--
6/95	--	--
9/95	--	--

MW-12		
Date	PCE	TCE
6/93	2	8
9/93	<5.0	22
12/93	2.2	21
3/94	0.64	1.4
6/94	1.6	9.1
12/94	<5.0	14
6/95	<5	<5
9/95	--	--

MW-6		
Date	PCE	TCE
6/93	2	19
9/93	2.5	24
12/93	2.2	27
3/94	3.1	24
6/94	3.4	23
12/94	<5.0	10
6/95	<5	20
9/95	--	--

EXPLANATION

Subject Property Outline

Production Well

PCE Plume

Injection Well

Monitoring Well

100 0 100

Approximate Scale (in feet)

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

MODINE MANUFACTURING COMPANY
RACINE, WISCONSIN

MODINE MANUFACTURING FACILITY
12252 East Whittier Boulevard
Whittier, Califorina

48701.04

OCCURRENCE OF PCE AND TCE
SEPTEMBER, 1995

FIGURE 3

REPORT

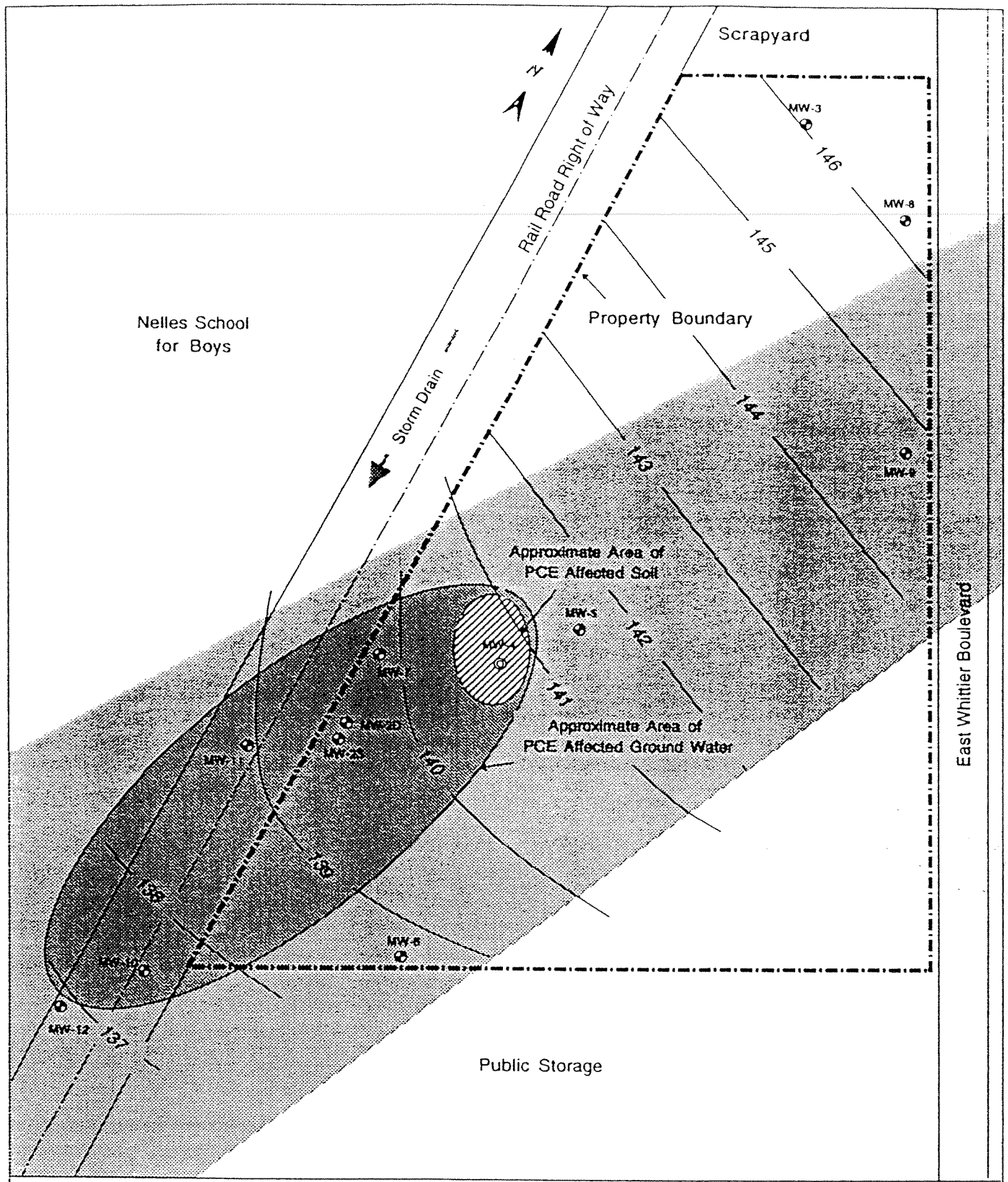
SLIC # 118

REMEDIAL ACTION PLAN GROUND-WATER TREATMENT SYSTEM FORMER MODINE MANUFACTURING FACILITY

Modine Manufacturing
Racine, Wisconsin

March 1993

BLASLAND & BOUCK ENGINEERS, P.C.
BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS



EXPLANATION

— · — · —	Property Boundary
MW-5	Monitoring Wells
— 137 —	Equipotential Lines (feet MSL)
	Approximate Area of TCE Affected Groundwater (off-site source)

100 0 100

Approximate Scale (in feet)

MODINE MANUFACTURING
WHITTIER, CALIFORNIA

PCE AFFECTED SOIL
AND PCE AND TCE
AFFECTED GROUND WATER

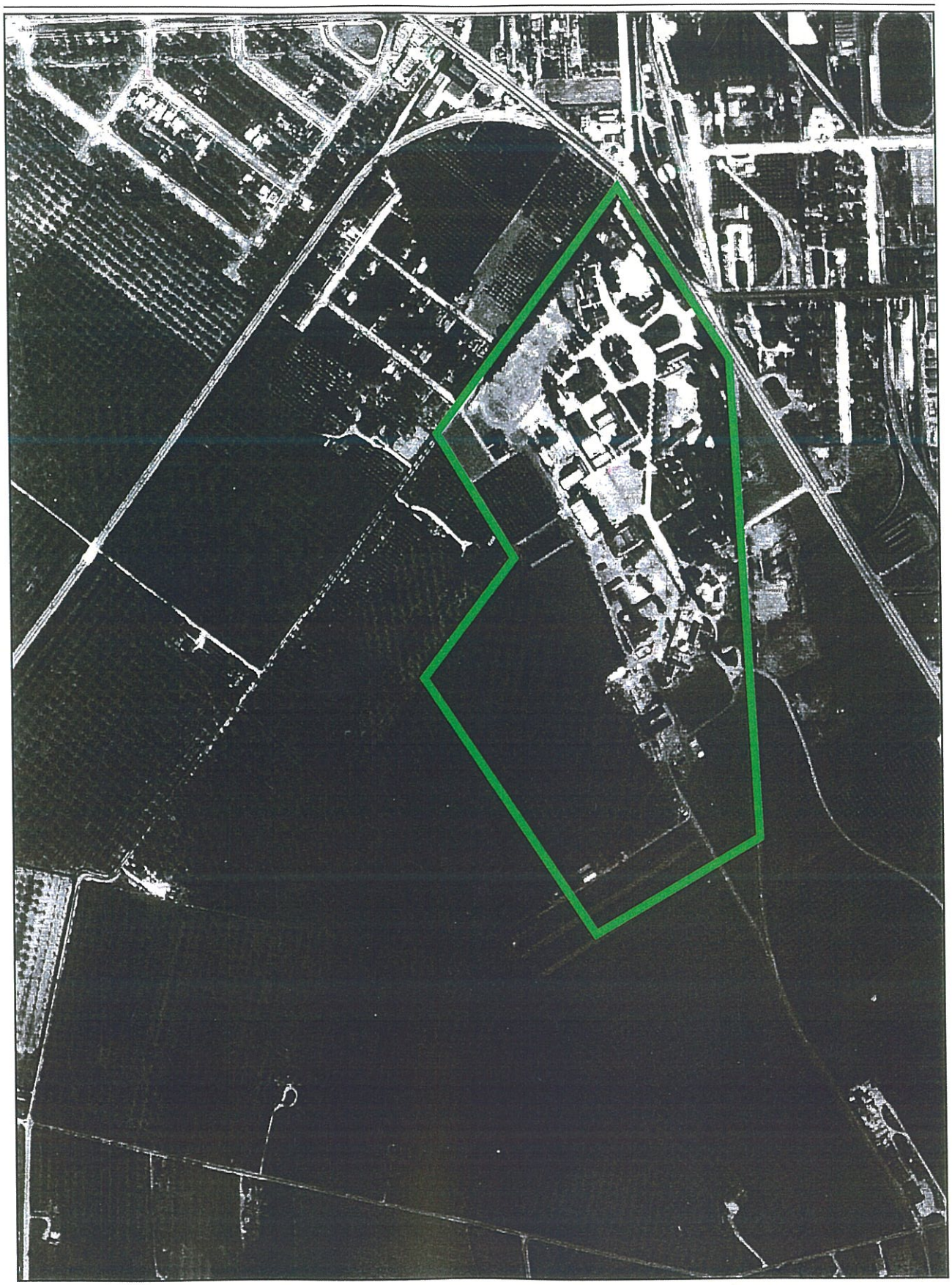
48701

FIGURE 2

Appendix E

Historical Use Documentation and Maps

Historical Topographical Maps



North

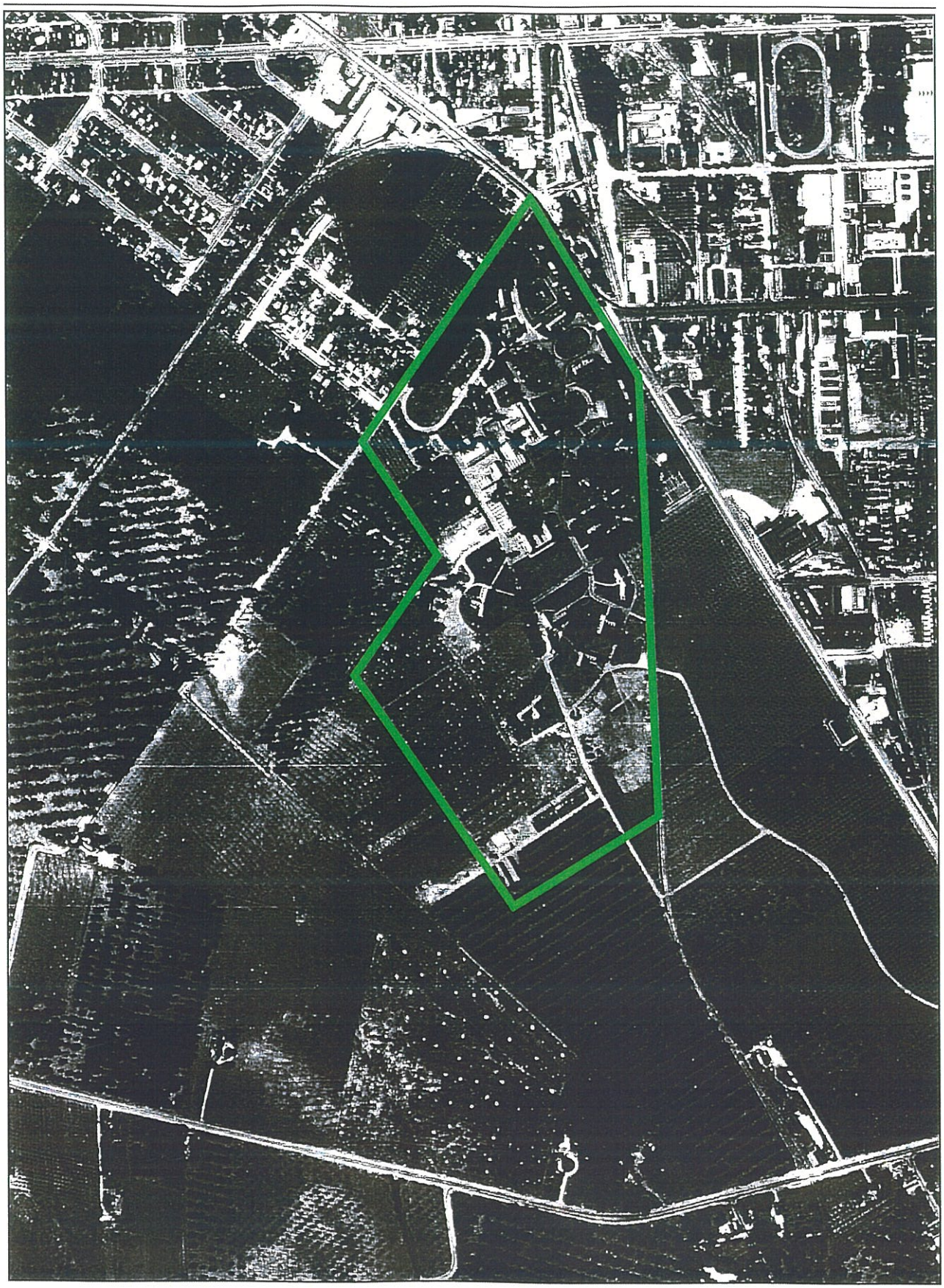
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1928
Fred C. Nelles Site
Phase I Environmental Site Assessment

CH2MHILL

SCO324292.CP.CT VicinityMap1928.ai 01/2005



North

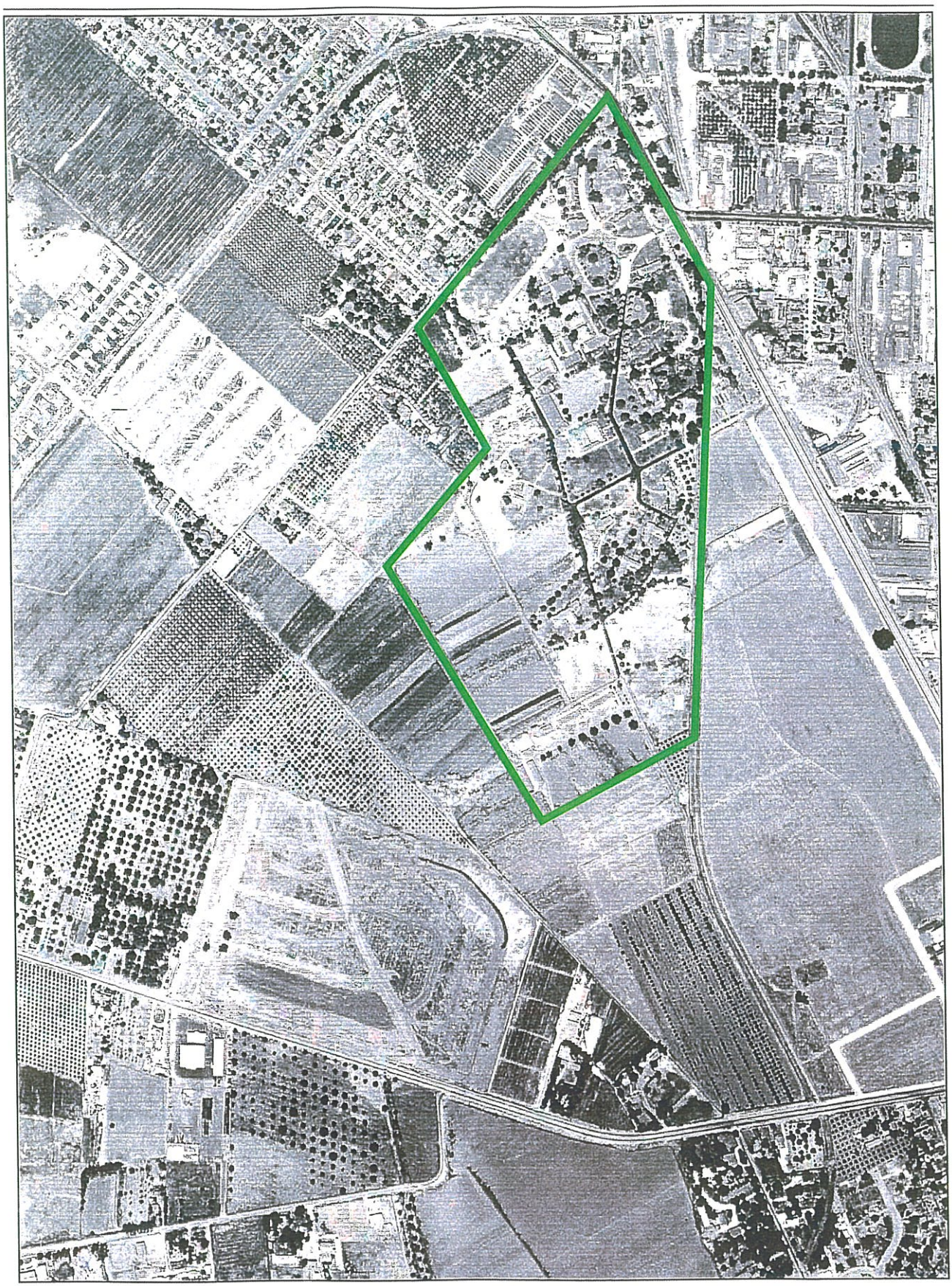
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1938
Fred C. Nelles Site
Phase I Environmental Site Assessment

SCO324292.CP.CT VicinityMap1938.ai 01/2005

CH2MHILL



North

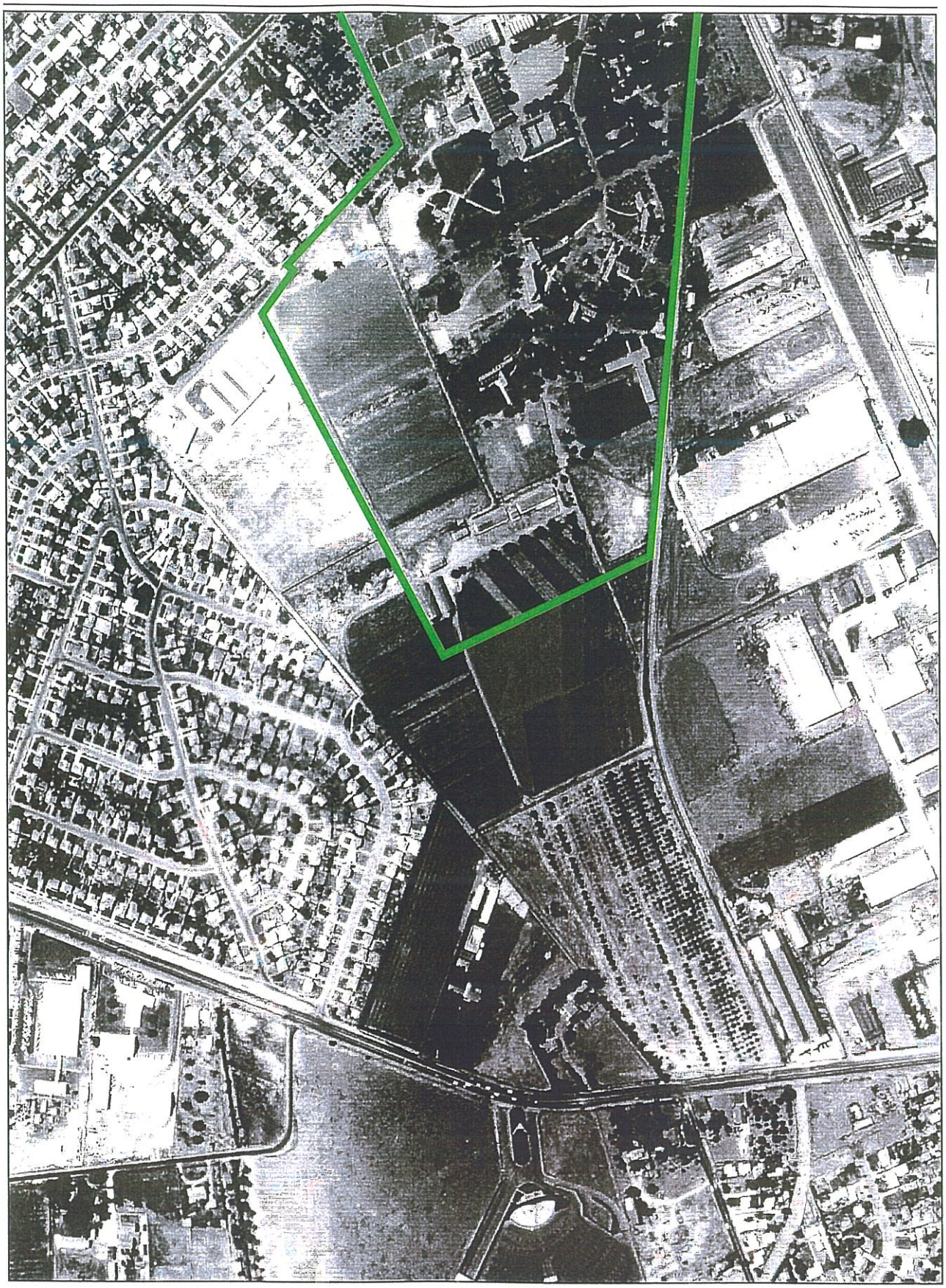
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1949
Fred C. Nelles Site
Phase I Environmental Site Assessment

CH2MHILL

SCO324292.CP.CT VicinityMap1949.ai 01/2005



North

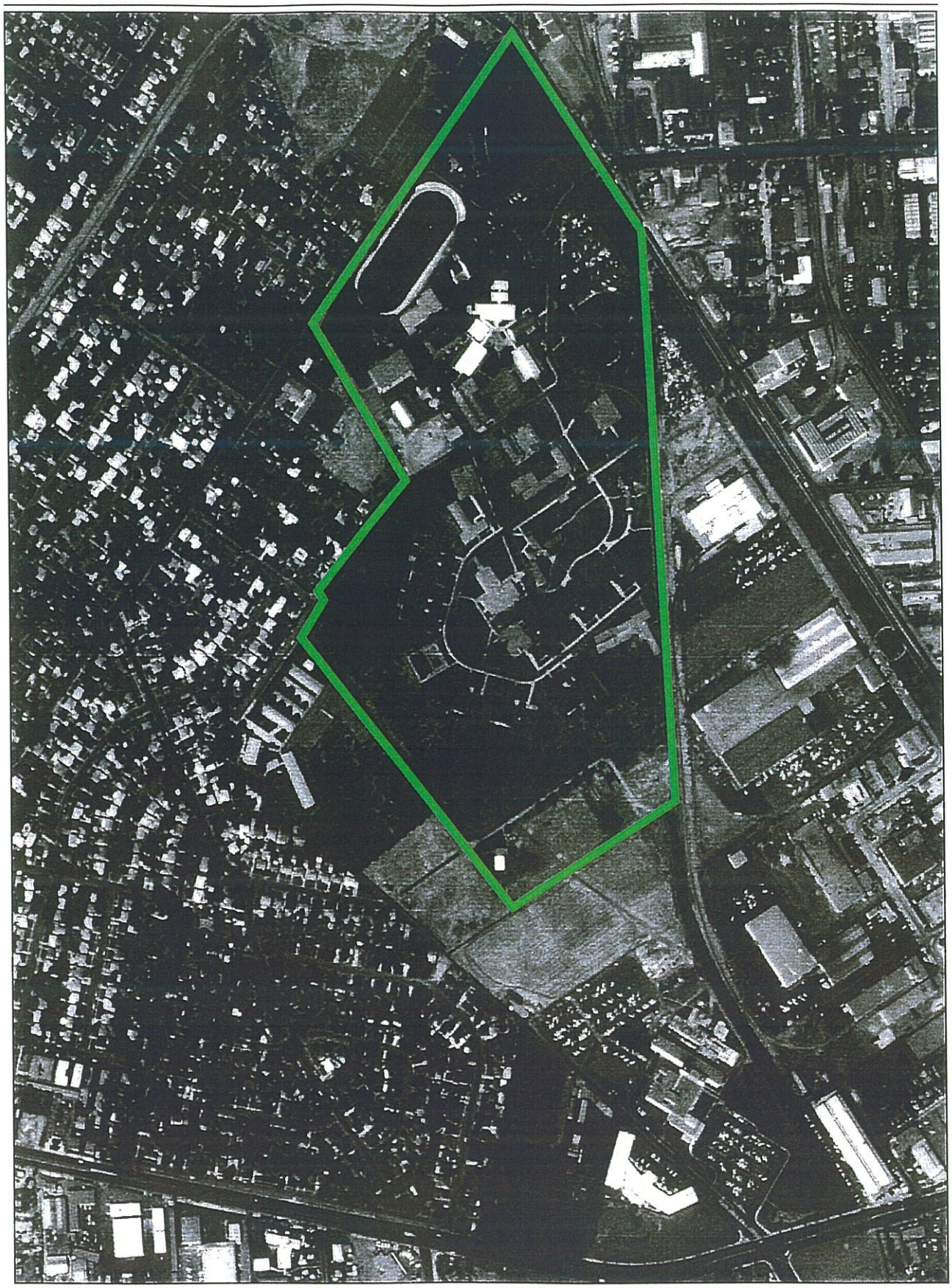
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1956b
Fred C. Nelles Site
Phase I Environmental Site Assessment

SCO324292.CP.CT VicinityMap1956b.ai 01/2005

CH2MHILL



North

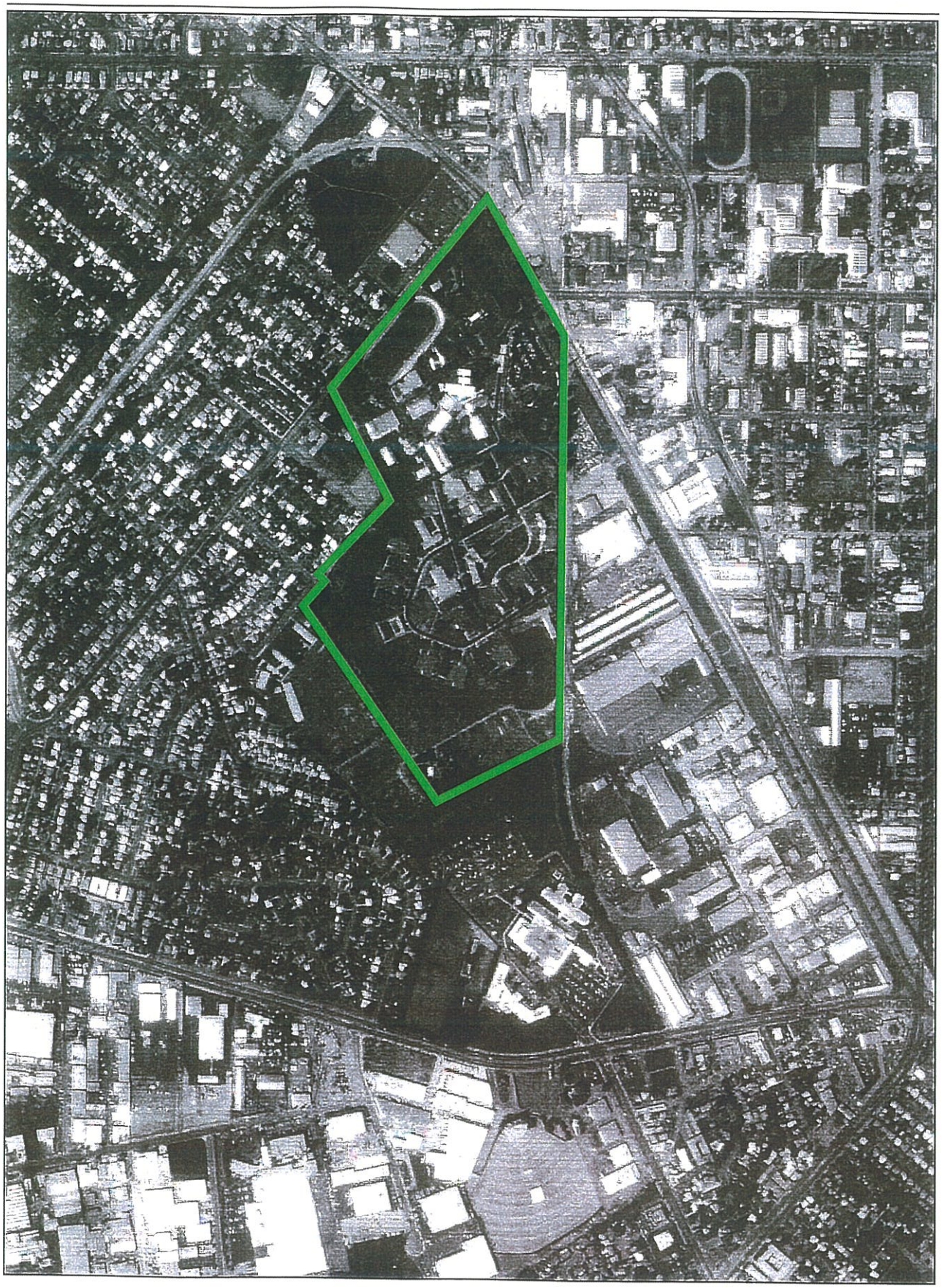
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1968
Fred C. Nelles Site
Phase I Environmental Site Assessment

CH2MHILL

SCO324292.CP.CT VicinityMap1968.ai 01/2005



North

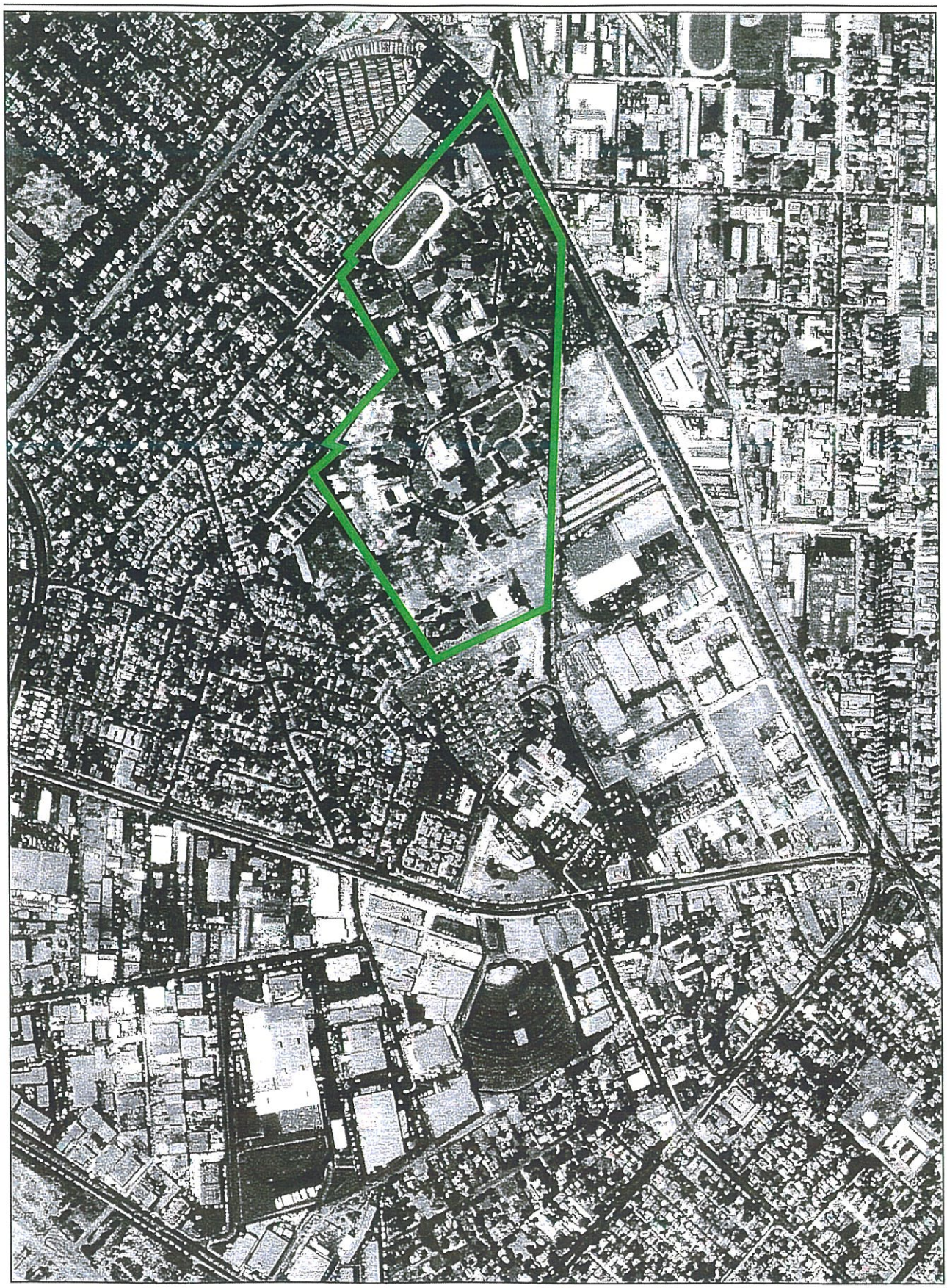
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1976
Fred C. Nelles Site
Phase I Environmental Site Assessment

SCO324292.CP.CT VicinityMap1976.ai 01/2005

CH2MHILL



North

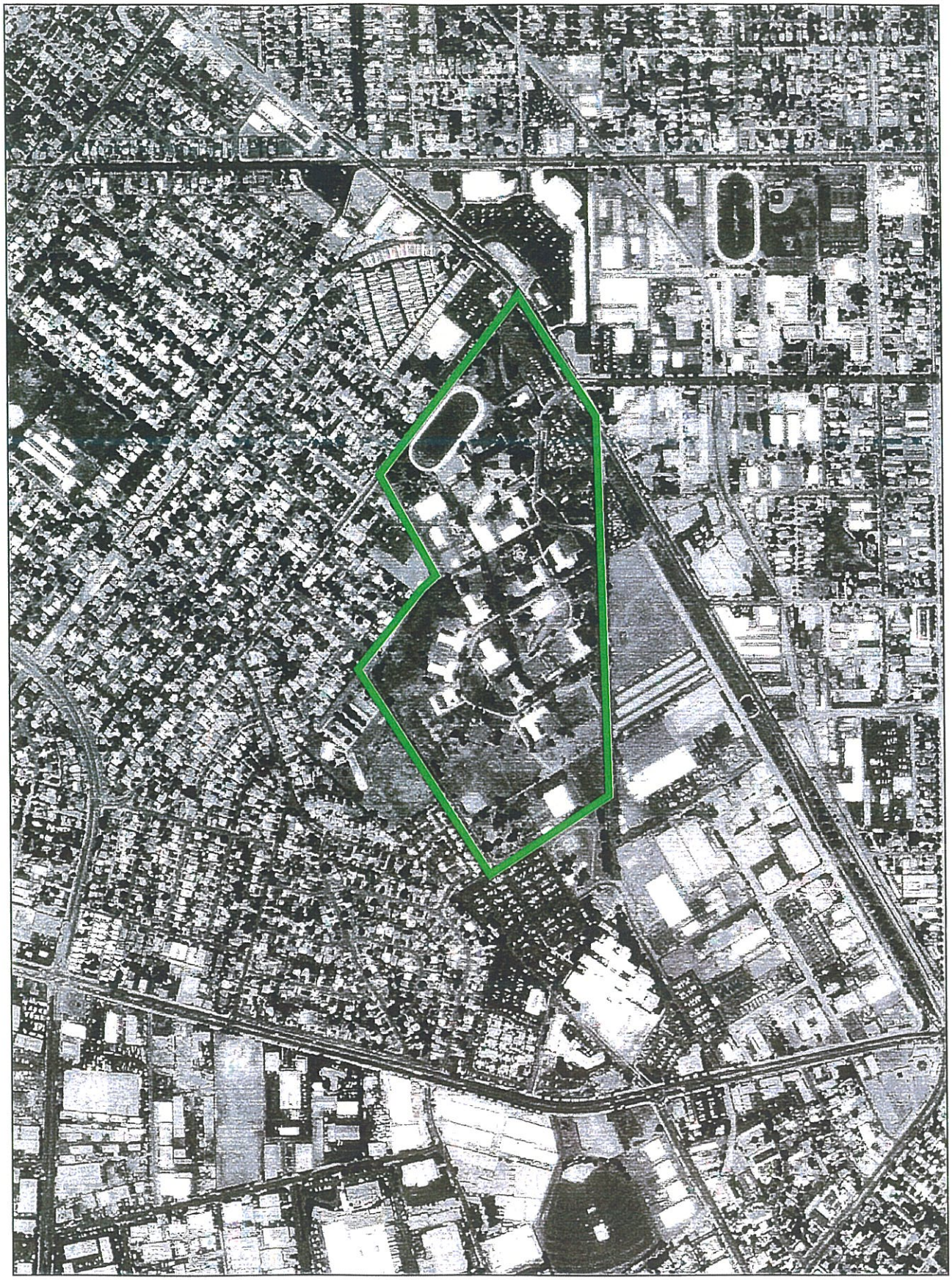
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1989
Fred C. Nelles Site
Phase I Environmental Site Assessment

CH2MHILL

SCO324292.CP.CT VicinityMap1989.ai 01/2005



North

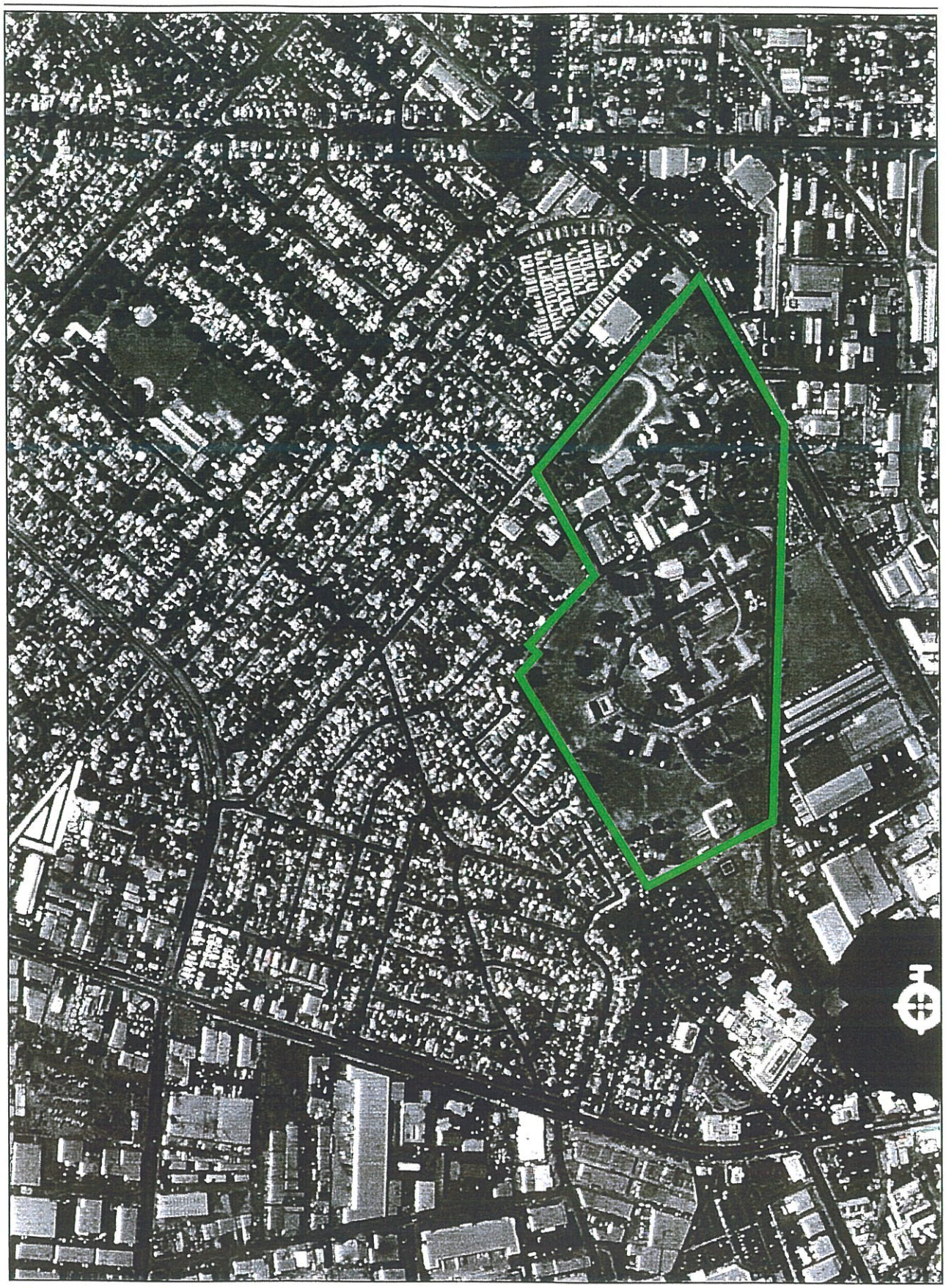
LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 1994
Fred C. Nelles Site
Phase I Environmental Site Assessment

CH2MHILL

SCO324292.CP.CT VicinityMap1994.ai 01/2005



North

LEGEND

Site Boundary

Appendix E, Historical Aerial Photographs
Date of Photograph: 2002
Fred C. Nelles Site
Phase I Environmental Site Assessment

SCO324292.CP.CT VicinityMap2002.ai 01/2005

CH2MHILL

The EDR-Historical Topographic Map Report

Whittier - Nelles Site
Whittier Boulevard
Whittier, CA 90606

December 29, 2004

Inquiry Number: 1333364-4

EDR™ Environmental Data Resources Inc

The Standard In Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802

Environmental Data Resources, Inc.
Historical Topographic Map Report

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property, and its surrounding area, resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of *reasonably ascertainable standard historical sources. Reasonably ascertainable is defined as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.*

To meet the prior use requirements of ASTM E 1527-00, Section 7.3.4, the following *standard historical sources* may be used: aerial photographs, city directories, fire insurance maps, topographic maps, property tax files, land title records (although these cannot be the sole historical source consulted), building department records, or zoning/and use records. ASTM E 1527-00 requires *"All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful."* (ASTM E 1527-00, Section 7.3.2 page 12.)

EDR's Historical Topographic Map Report includes a search of available public and private color historical topographic map collections.

Topographic Maps

A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. Many features are shown by lines that may be straight, curved, solid, dashed, dotted, or in any combination. The colors of the lines usually indicate similar classes of information. For example, topographic contours (brown); lakes, streams, irrigation ditches, etc. (blue); land grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (black); and features that have been updated using aerial photography, but not field verified, such as disturbed land areas (e.g., gravel pits) and newly developed water bodies (purple).

For more than a century, the USGS has been creating and revising topographic maps for the entire country at a variety of scales. There are about 60,000 U.S. Geological Survey (USGS) produced topo maps covering the United States. Each map covers a specific quadrangle (quad) defined as a four-sided area bounded by latitude and longitude. Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area, and due to their frequent availability can be particularly helpful when other standard historical sources (such as city directories, fire insurance maps, or aerial photographs) are not reasonably ascertainable.

Please call EDR Nationwide Customer Service at
1-800-352-0050 (8am-8pm ET)
with questions or comments about your report.
Thank you for your business!

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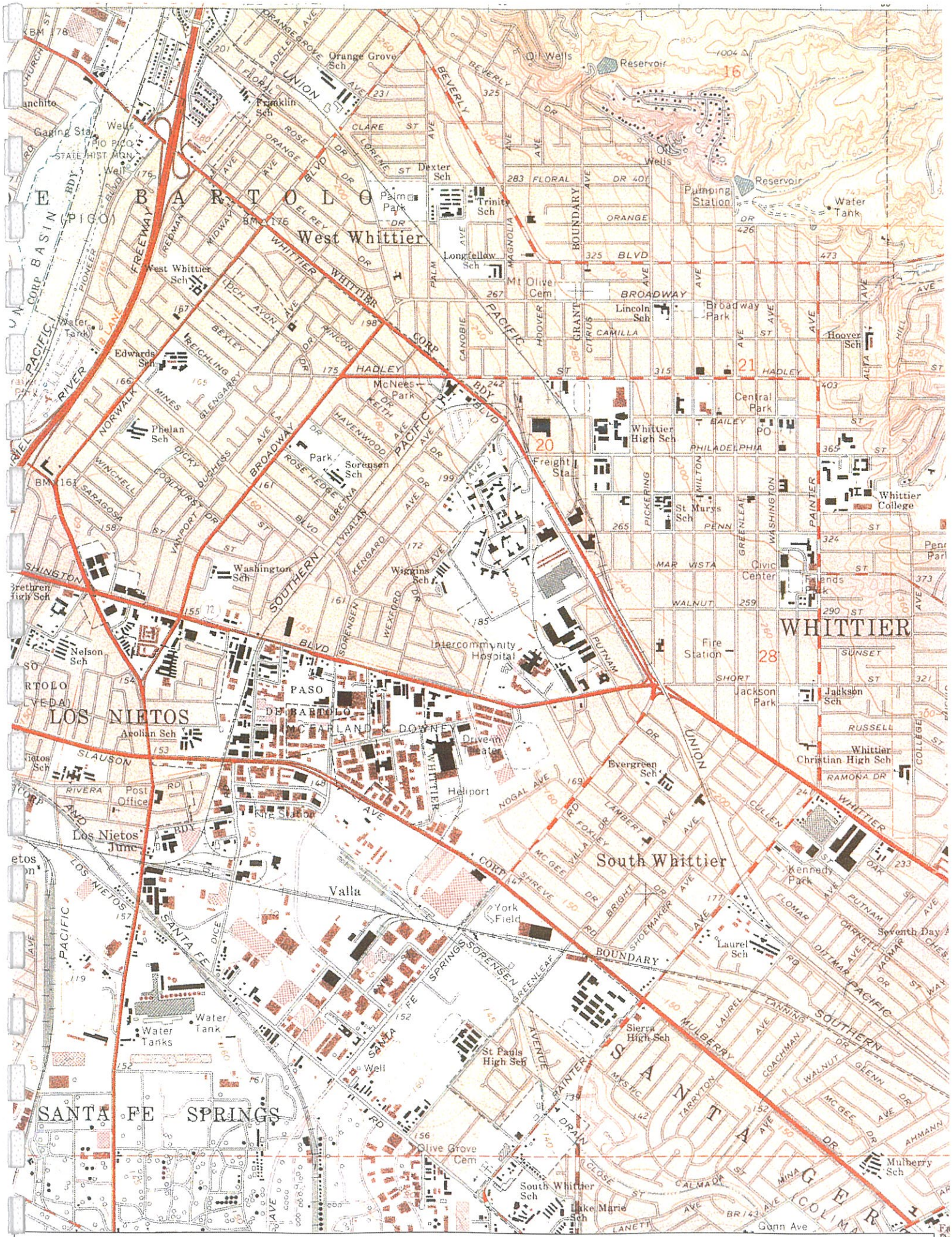

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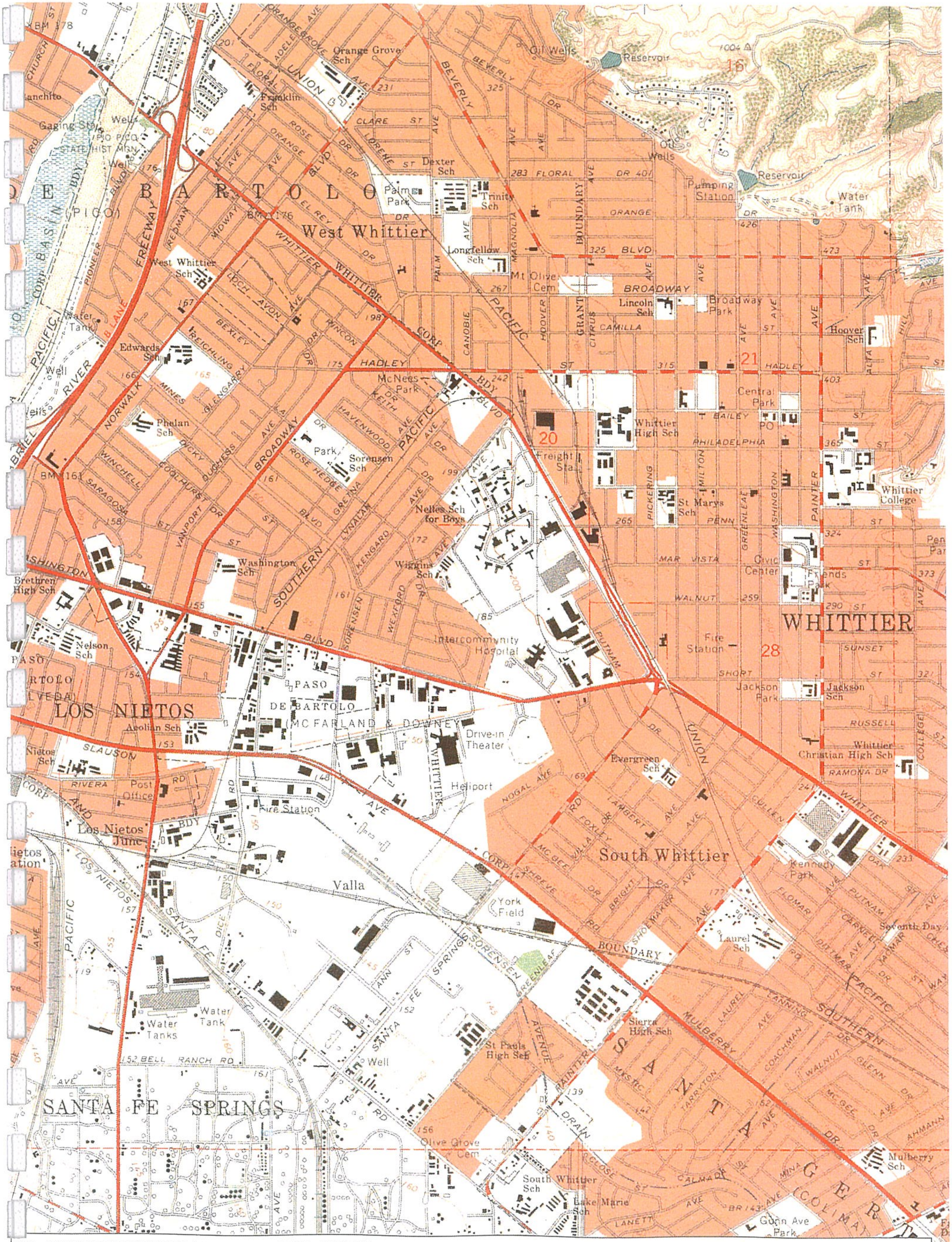

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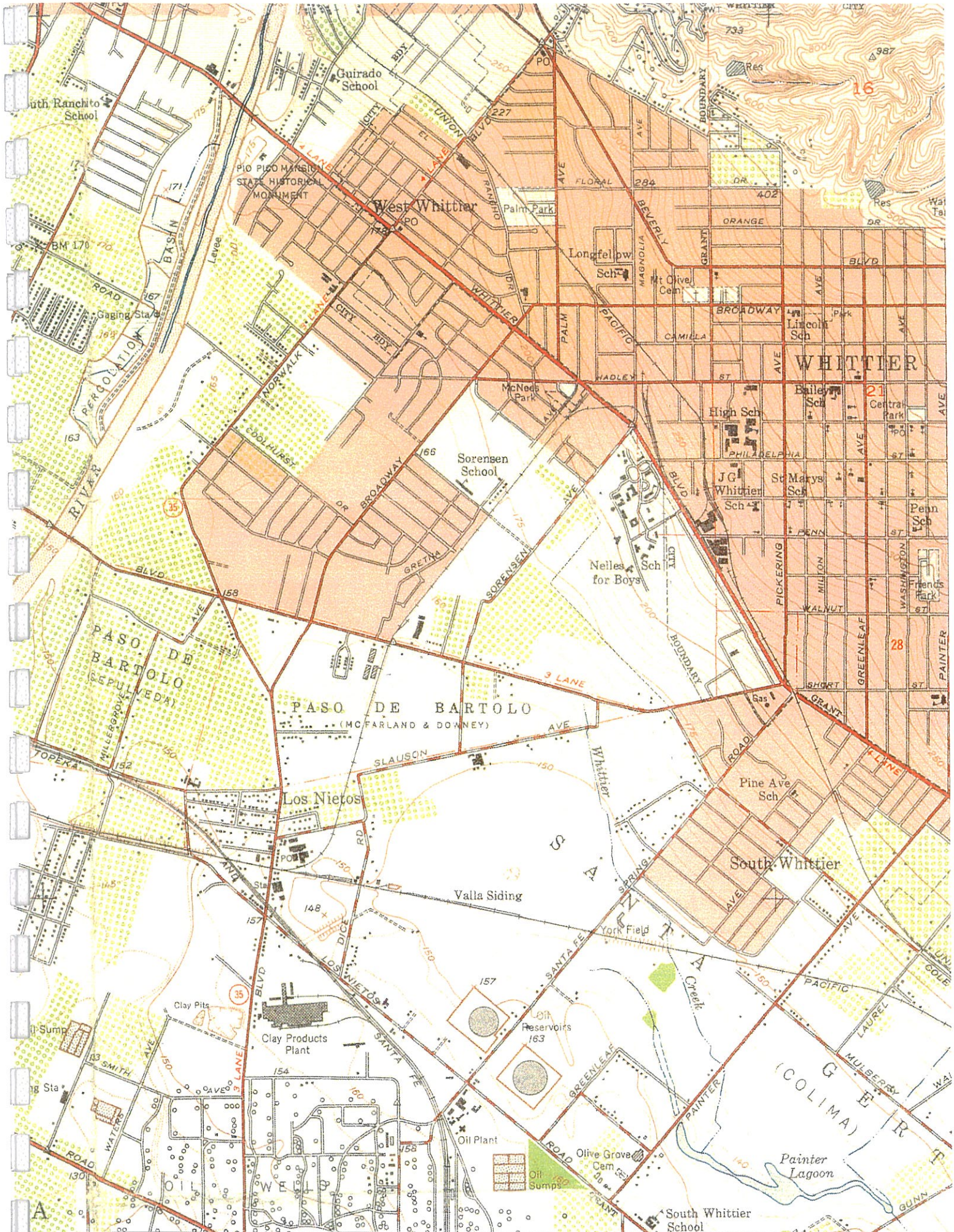

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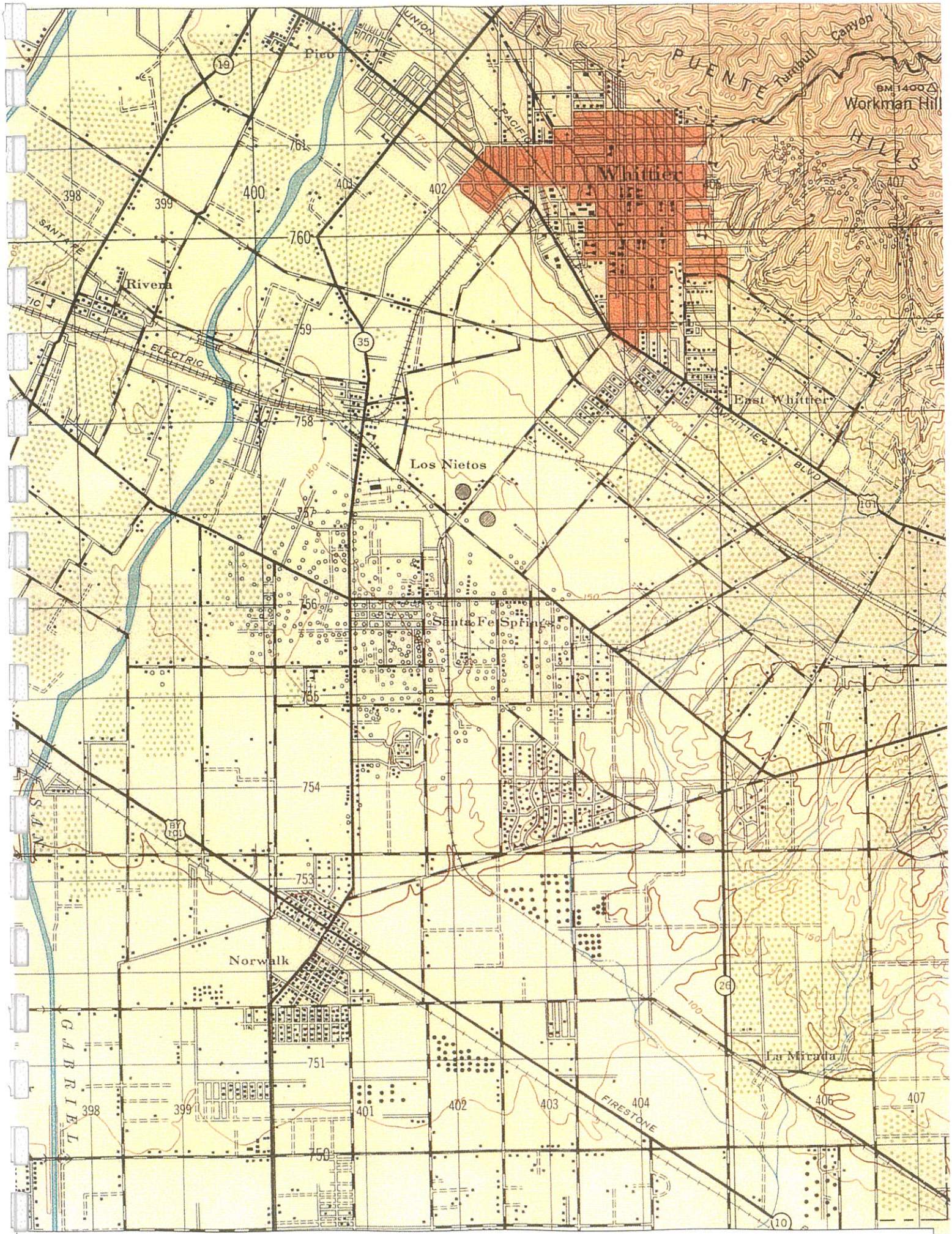

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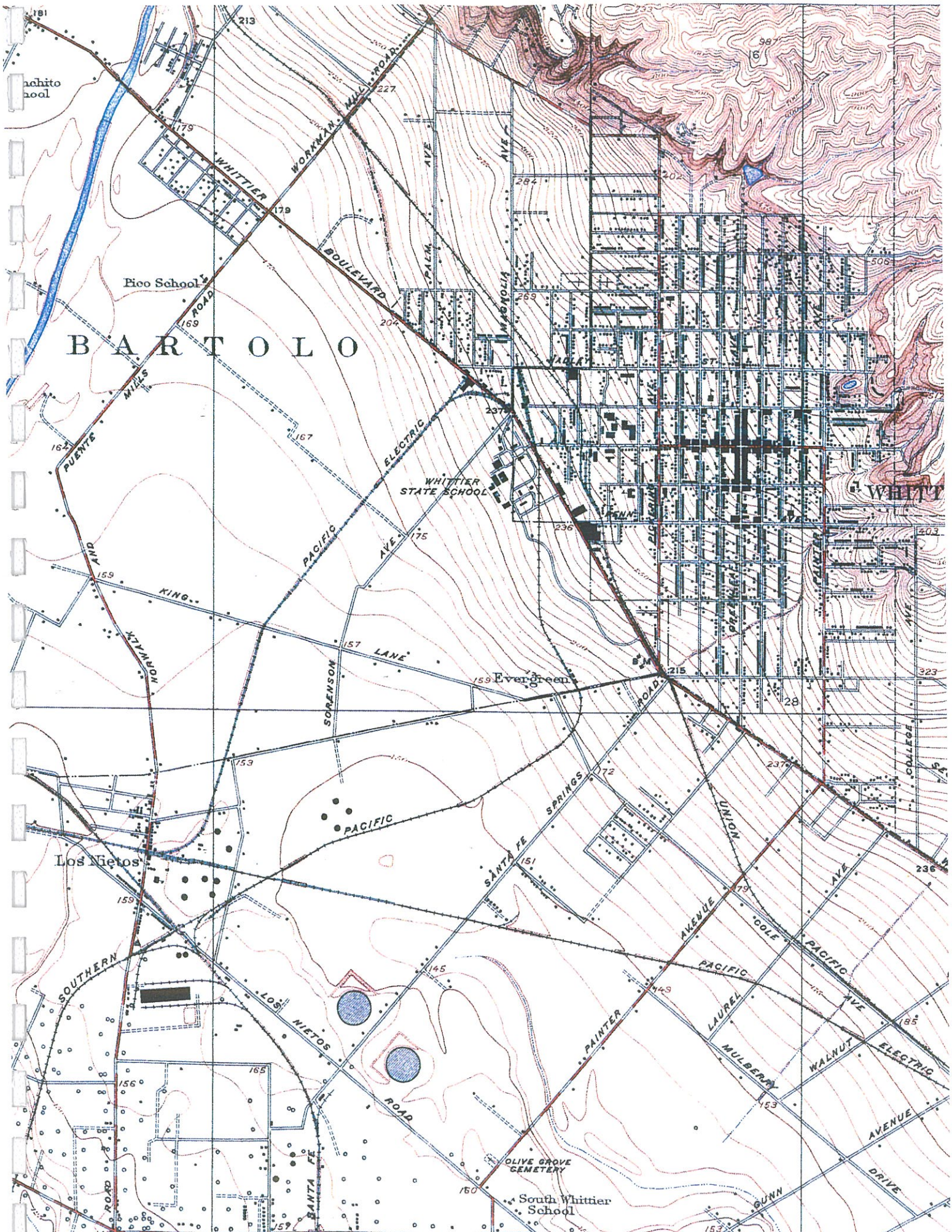

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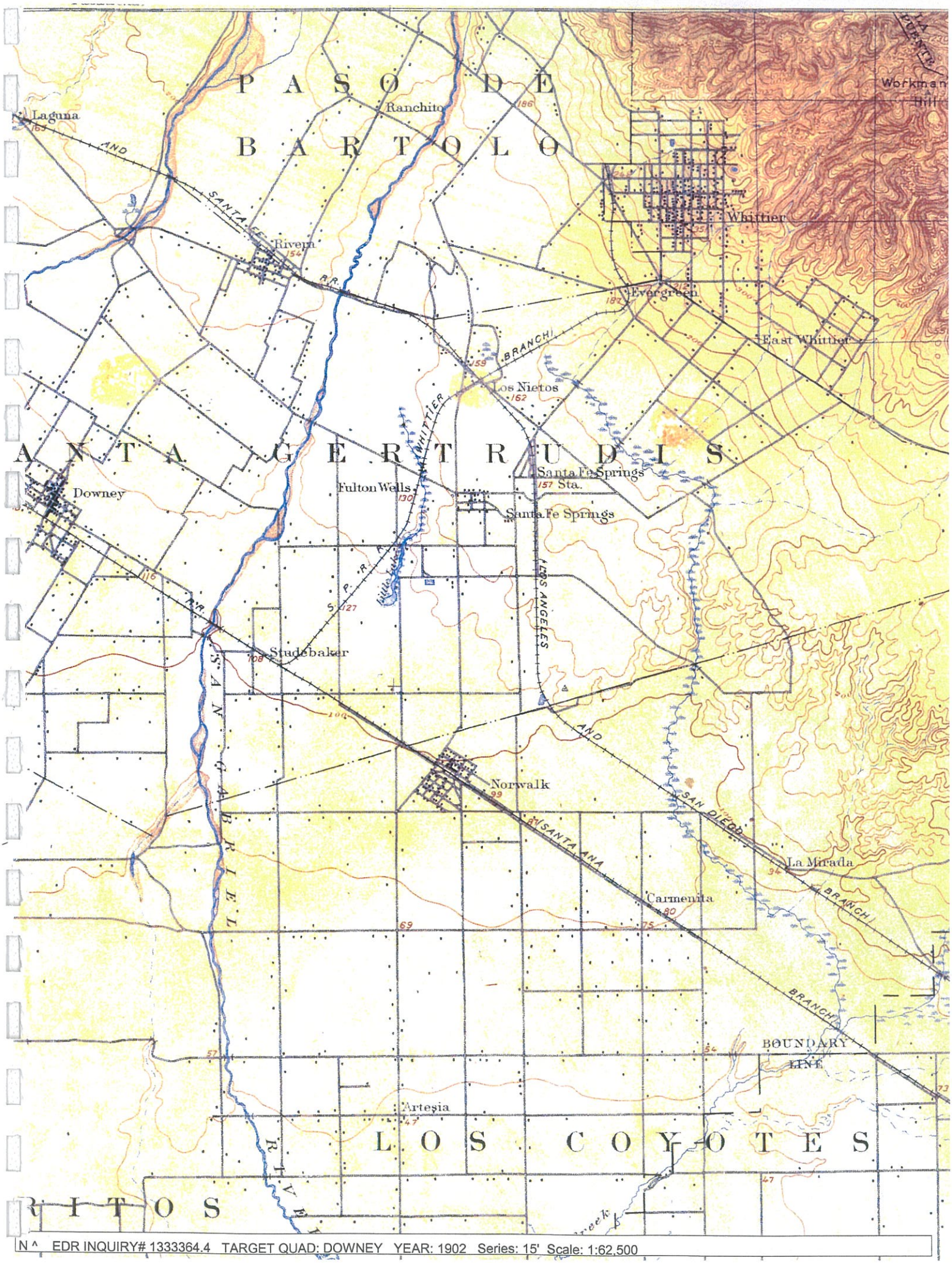

N ^ EDR INQUIRY# 1333364.4 TARGET QUAD: DOWNEY YEAR: 1902 Series: 15' Scale: 1:62,500

City Directory Maps

The EDR-City Directory
Abstract

Whittier - Nelles Site
11850 East Whittier Boulevard
Whittier, CA 90606

January 05, 2005

Inquiry Number: 1333364-7

EDR™ Environmental
Data Resources Inc

The Standard In Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802

4. SUMMARY

- *City Directories:*

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1970 through 2004. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

Date EDR Searched Historical Sources:
City Directories Jan 05, 2005

Target Property:
11850 East Whittier Boulevard
Whittier, CA 90606

PUR ID Year	*Uses*	*NAICS*	*Source*
-- 1970	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 1975	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 1980	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 1985	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 1990	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 1995	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 2000	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
-- 2004	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory

Adjoining Properties

SURROUNDING

,

PUR ID Year	*Uses*	*NAICS*	*Source*
1970	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
1975	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
1980	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
1985	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
1990	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
1995	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
2000	Address not Listed in Research Source	N/A	Haines Criss-Cross Directory
2004	****East Whittier Blvd**** -No Street Listings From 11300-12000 Blocks		Haines Criss-Cross Directory

Sanborn Maps

EDR™ Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

To: David Golles
CH2M Hill, Inc.
3 Hutton Centre Drive
Santa Ana, CA 92707

Order Date: 12/28/2004 **Completion Date:** 12/28/2004
Inquiry #: 1333364.3s
P.O. #: NA
Site Name: Whittier - Nelles Site
Address: Whittier Boulevard
City/State: Whittier, CA 90606
Cross Streets:

tomer Project: 324292.CP.EA
163TIM 714-429-2000

Based on client-supplied information, fire insurance maps for the following years were identified

1900 - 1 Map
1907 - 1 Map
1912 - 1 Map
1925 - 1 Map
1949 - 1 Map
1962 - 1 Map

Limited Permission to Photocopy Total Maps: 6

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(Fire Dist.) 1

Note.

WATER FACILITIES: WATER SUPPLIED BY WHITTIER CITY WATER WORKS FOR DOMESTIC USE ONLY. - GRAVITY SYSTEM. - 3 RESERVOIRS: 1 CONCRETE RESERVOIR (OPEN) CAP. 850,000 GALLONS ELEVATED 1 MILE N.E. OF THIS SHEET, 286' ABOVE P.O. AND FILLED THRU 5" BRASS WORK PIPE FROM SPRINGS IN TUNNEL, 1/4 MILE E. OF RESERVOIR. - 1/2 X CONCRETE RESERVOIR, CAP. 500,000 GALLONS LOCATED 1/4 MILE N.E. OF THIS SHEET, ELEV. 105' ABOVE P.O. AND FILLED FROM RESERVOIR 1/2 MILE - HALF OF THIS SHEET BY PUMP. - 1/2 X 1,000,000 GALLONS CONCRETE RESERVOIR, ELEVATED 1/2 MILE N.E. OF THIS SHEET ABOVE P.O. AND FILLED BY A 3 MILE PIPE. OUT OF THIS SHEET FROM CAP. 1,000,000 GALLONS IN 24 HOURS PUMPED IN PUMPING PLANT 1/2 MILE N.E. OF TOWN. - WATER FROM 2 WELLS 150' & 152' DEEP. PROPOSED TO LAY 3" MAIN ON SECOND AVE. CONNECTING AT WRIGHT WITH THE 10" RESERVOIR SUPPLY MAIN - TO EXTEND TO COLLEGE ST. WHERE TWO FIRE HYDS. ARE TO BE SET.

SANBORN-PERRIS MAP CO. LIMITED
11 Broadway
NEW YORK

Population 2000
No Steam and No Hand Engine
No Inspected Hose Carts
Water Facilities See Note.
Presenting Made S.W.

WHITTIER
LOS ANGELES CO., CAL.
MARCH 1900.
SCALE 50 Ft. TO AN INCH.

COPYRIGHTED BY THE SANBORN PERRIS MAP CO. LIMITED

APR 24 1900
10,1900
7541
1861 Copy
MAP DIVISION
June 22, 1900
Library of Congress Maps & Charts

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SPECIALS.

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Congregational Church	5	
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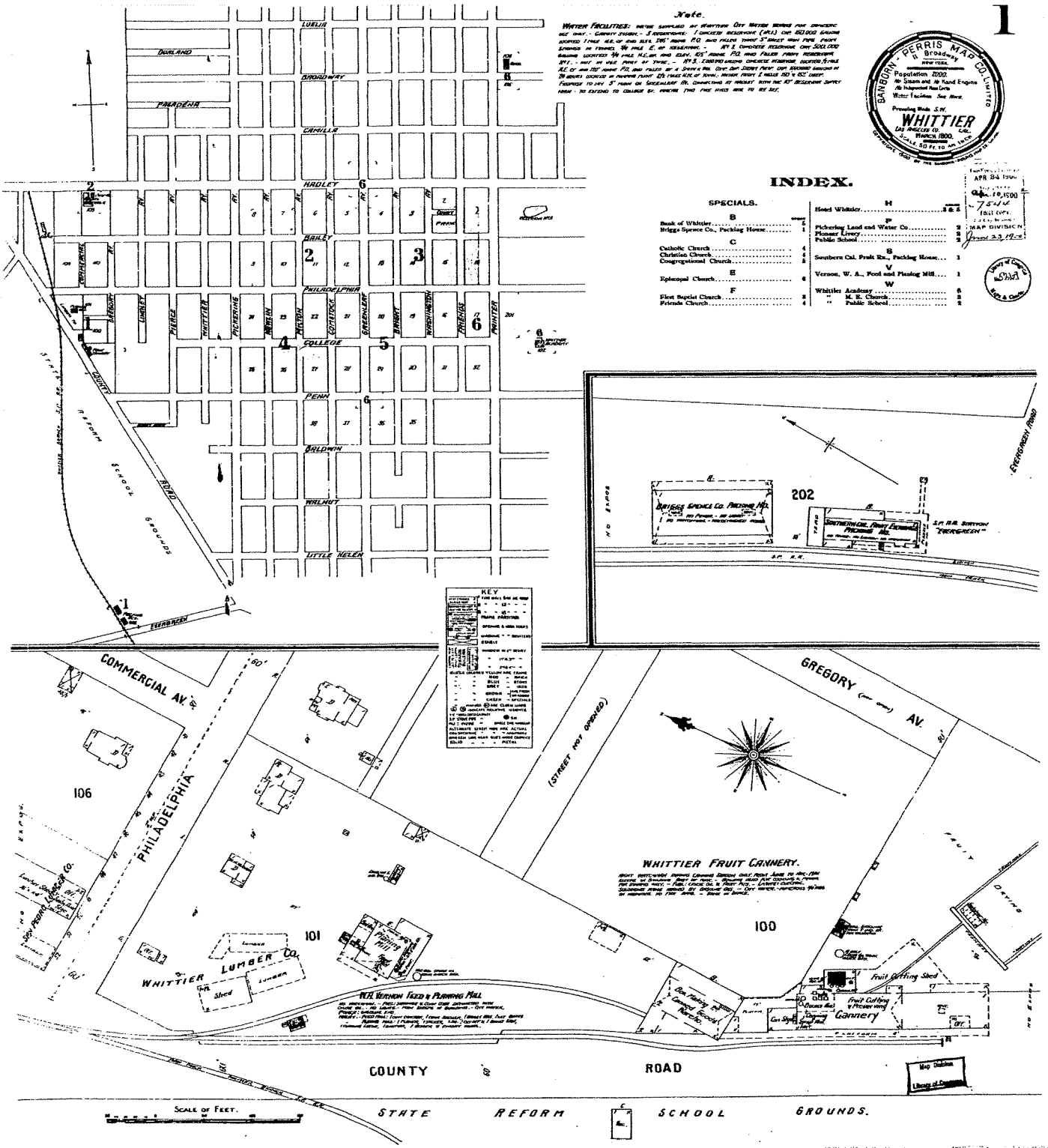
Episcopal Church	6	
F		
First Baptist Church	3	
Friends Church	4	
H		
Hotel Whittier	3 & 6	
P		
Pickering Land and Water Co.	2	
Pioneer Livery	2	
Public School	2	
S		
Southern Cal. Fruit Ex., Packing House	1	
V		
Vernon, W. A., Feed and Planing Mill	1	
W		
Whittier Academy	6	
" M. E. Church	2	
" Public School	2	



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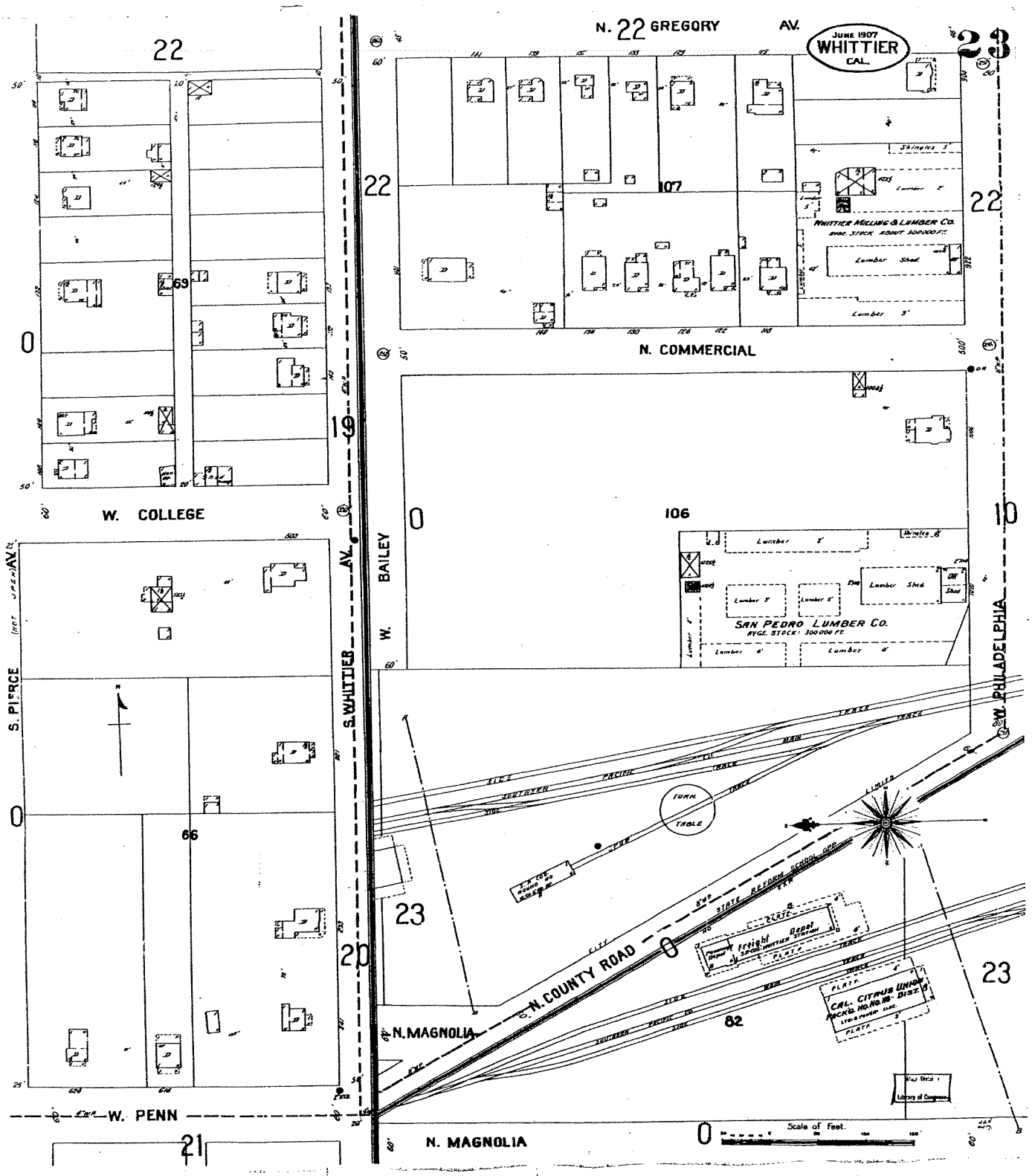

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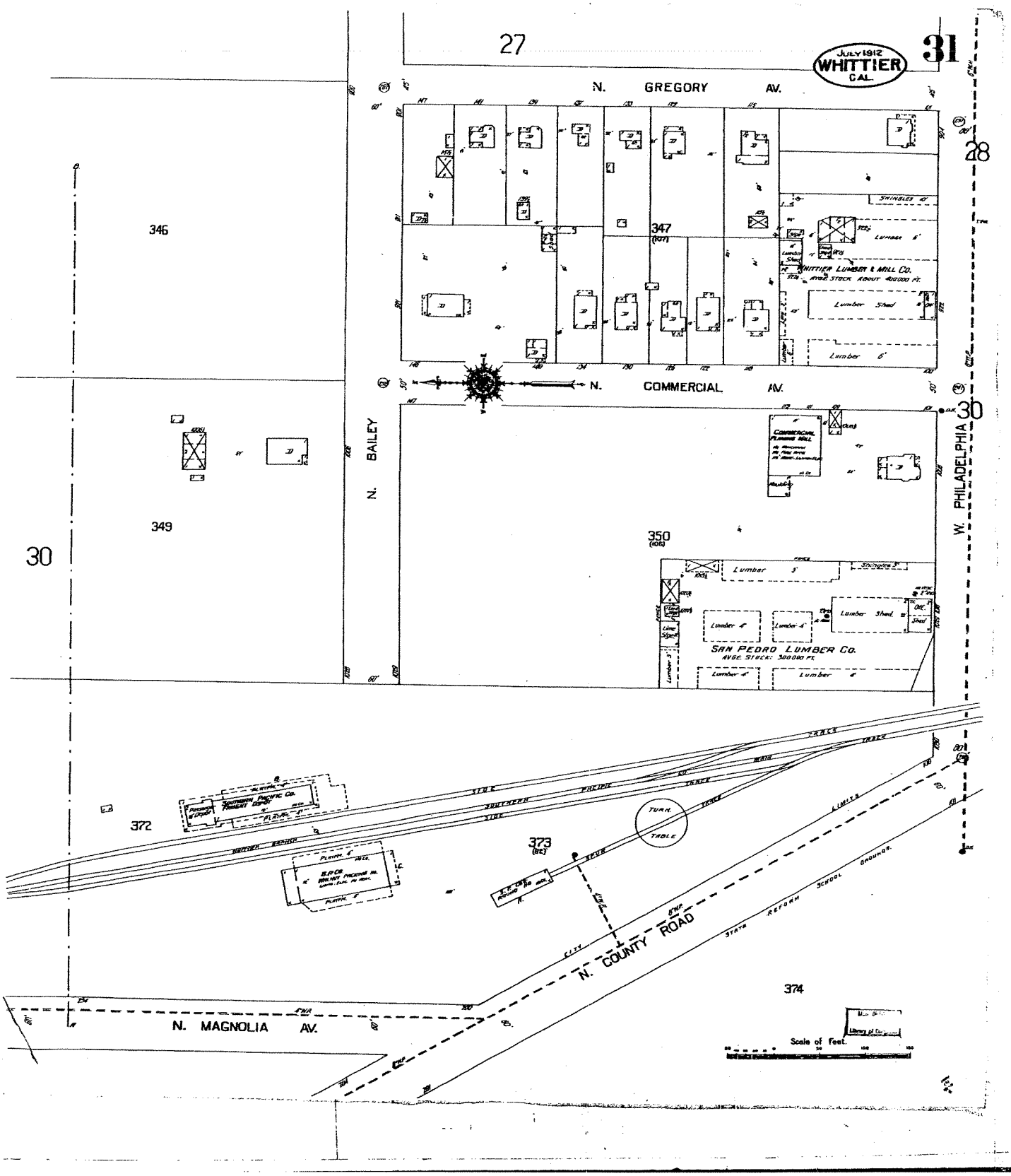

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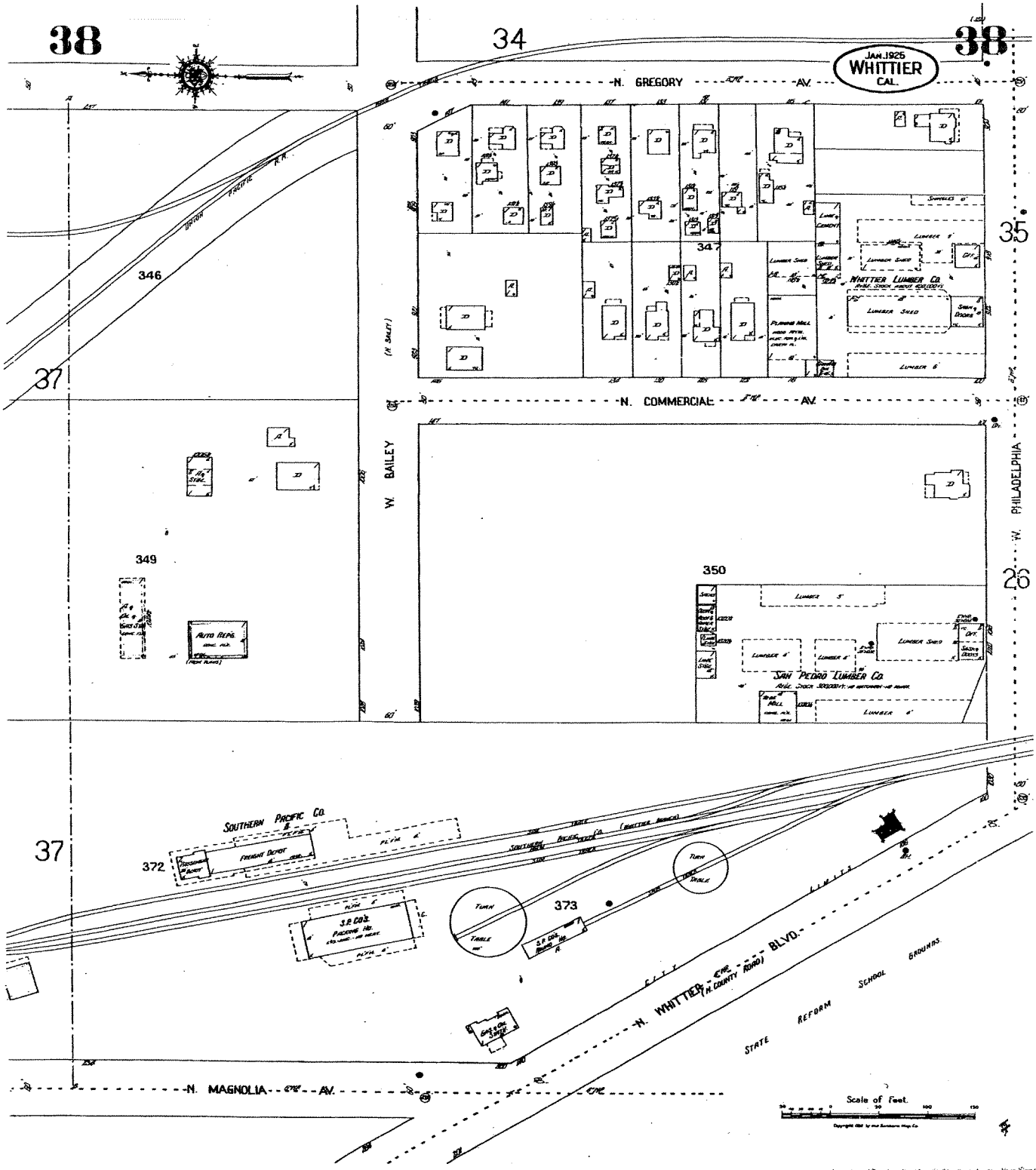

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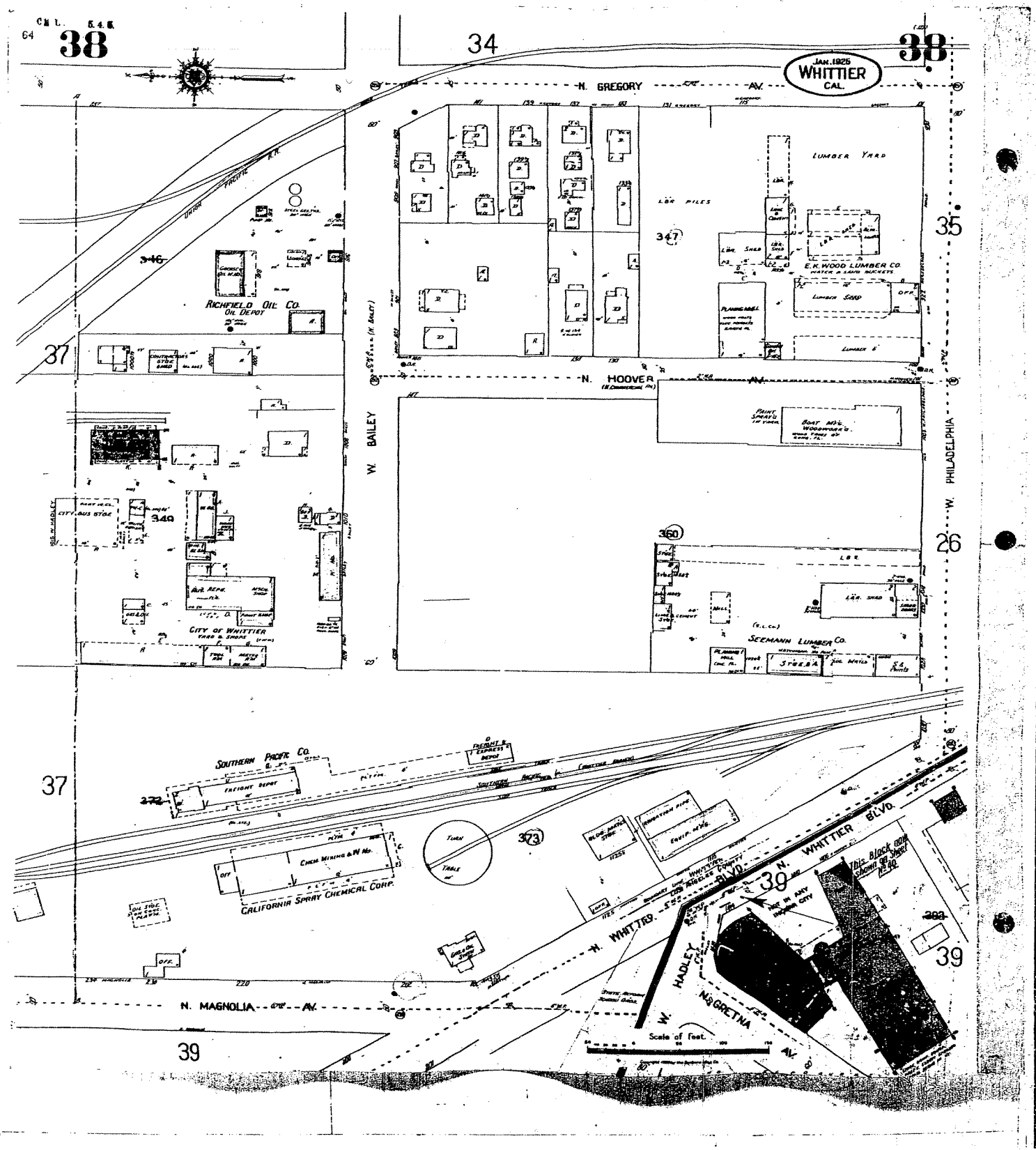

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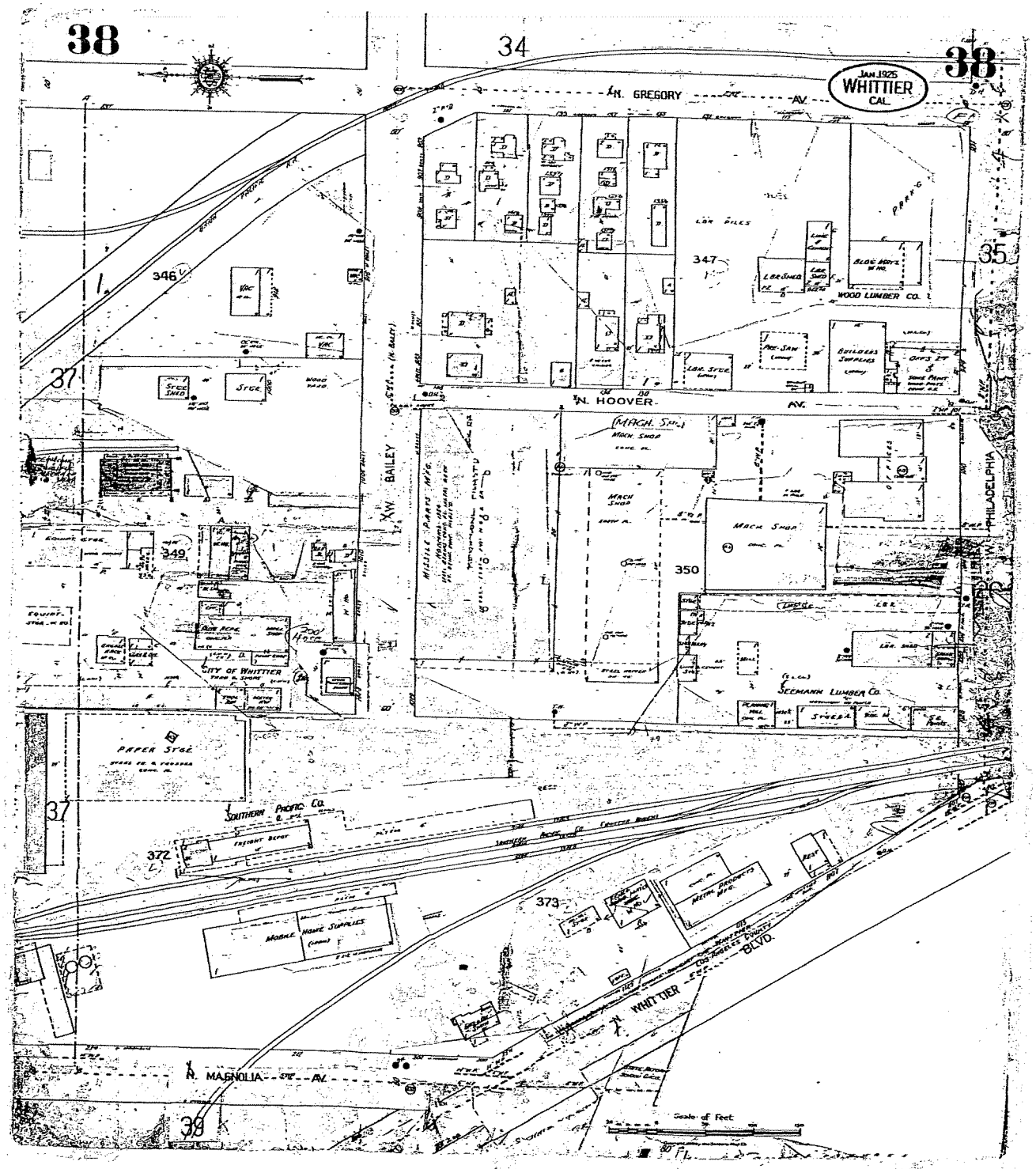

Appendix F

Interview Documentation

PHASE I PRELIMINARY SITE ASSESSMENTS (PSAs)

Environmental Questionnaire

The following information should be obtained for the facility (site). The person most knowledgeable about the site and its history should provide the information:

1. Name and phone number of person providing the information. *Miguel Ochoa 909-606-5003*

2. Property Address. *11850 Whittier Blvd, Whittier CA 90601*

3. If relevant, who was the former owner and operator/occupant of the property? *State of California*

4. What were the past uses of the site and nearby properties that could environmentally impact the site? *Past use was youth Correctional Facility. Nearby properties include factories, aerospace, and possibly a mattress mfg. and a junk yard.*

5. Provide a brief description of site characteristics with respect to:

   - Hazardous materials and chemicals used/stored/disposed. *Fuels and cleaning fluids*

   - Asbestos containing materials (ACM). *Building materials (various) and pipe insulation*

   - Tanks. *Total of three (3). Two (2) above ground and one abandoned and filled with slurry below ground tank*

   - PCB equipment. *Transformers*

   - Solid waste disposal. *Contracted to Consolidated Waste Co*

   - Sewerage. *Connected to City sewer system*

   - Water supply. *Supplied by City*

   - Surrounding land uses. *Residential, Commercial, and Factories*

6. Has there ever been a spill (reported or not reported) of material that could be deemed to have caused contamination?

   ☐Yes X *No* *Not to my knowledge*

   If yes, please explain:

7. Has there ever been an aboveground or underground tank on the site.

   X *Yes* ☐No

   If yes, please explain (i.e., year installed/removed; active/inactive; contents; capacity) *Two active above ground tanks; one is a gas/diesel for vehicles, and the other for an emergency generator. In addition to the 2 listed above there is an abandoned underground fuel tank which was used to provide fuel to steam boilers. The below ground was filled with slurry.*

8. Are there any former septic tanks or sewer leach fields on the site

   ☐Yes X *No Not to my knowledge*

   If yes, please explain:

9. Provide a list of environmental permits for the site. *Boiler operating permits and fuel tank permits.*

10. Have environmental studies reports or assessments been performed on the property's soil, air, or water conditions? If so, provide copies of the report(s).

    X *Yes* ☐No

    If yes, please explain: *Soil testing was done prior to abandoning underground tank being filled with slurry.*

11. Has any regulatory agency listed the property as a site requiring or qualifying for cleanup under any environmental law?

    ☐Yes *X No*

    If yes, please explain:

12. Are there any known citizen complaints or lawsuits filed against the site?

    ☐Yes *X No* *Not to my knowledge*

If yes, please explain:

13. If available, provide the following local geology and hydrology data:
    - Elevation of aquifers and nearest drinking water source *Unknown*
    - Location of aquifers and nearest drinking water source *Unknown*
    - Depth to nearest groundwater *Unknown*
    - Use (and potential for use) of groundwater and surface waters *Unknown*
    - Direction of groundwater flow *Unknown*
    - Known impairments to water quality (e.g., regional pesticide contamination) *Unknown*

14. If you were buying this property, what would you want to know that if you didn't find out until after you owned the property, you'd be upset (focus on environmental)? *The questions asked by this questionaire.*

Specific Questions included with the Overall Questions above

1. Have you observed evidence or do you have any prior knowledge that the property has been used for an industrial use or mining in the past?

   ☐Yes *X No Not to my knowledge*

   If yes, please explain:

2. Have you observed evidence or do you have any prior knowledge that any adjoining property has been used for an industrial use or mining in the past?

   ☐Yes X *No Not to my knowledge*

   If yes, please explain:

3. Is any portion of the property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?

   X Yes ☐No

   If yes, please explain: *The property had an automotive repair shop for the fleet vehicles and a fuel supply system for the vehicles.*

4. Is any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment storage, disposal, processing, or recycling facility?

   X Yes ☐No

   If yes, please explain: *Junkyard*

5. Are there currently any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of >5 gal in volume or 50 gal in the aggregate, stored on or used at the property or at the facility?

   XYes ☐No

   If yes, please explain: *Car batteries, pesticides, paints, and automotive fluids (i.e.;power steering fluid, antifreeze)*

6. Are there currently any industrial drums (typically 55 gal) or sacks of chemicals located on the property or at the facility?

   X Yes ☐No

If yes, please explain: *Petroleum products*

7. Have you observed evidence or do you have any prior knowledge that fill dirt has been brought onto the property that originated from a contaminated site?

   ☐Yes *XNo* *Not to my knowledge*

   If yes, please explain:

8. Have you observed evidence or do you have any prior knowledge that fill dirt has been brought onto the property that is of an unknown origin?

   ☐Yes *XNo* *Not to my knowledge*

   If yes, please explain:

9. Are there currently or has there ever been any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal?

   ☐Yes *XNo* *Not to my knowledge*

   If yes, please explain:

10. Is there currently any stained soil on the property?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

11. Are there currently or has there ever been any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?

    XYes ☐No

    If yes, please explain: *Steam vent pipes from steam vaults, and an unknown fill pipe by the boiler plant.*

12. Are there currently any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

13. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system that exceed guidelines applicable to the water system?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

14. If the property is served by a private well or non-public water system, is there evidence or do you have prior knowledge that the well has been designated as contaminated by any government environmental/health agency?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

15. Do you have any knowledge of environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the Property?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

16. Do you have any knowledge of the past existence of hazardous substances or petroleum products with respect to the property or any facility located on the property?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

17. Do you have any knowledge of the current or past existence of environmental violations with respect to the property or any facility located on the property?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

18. Do you have any knowledge of any environmental site assessment of the property or facility that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property or recommended further assessment of the property?

    ☐Yes *XNo* *Not to my knowledge*

    If yes, please explain:

19. Do you have any knowledge of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous

substance or petroleum products involving the property by any owner or occupant of the property?

☐Yes *XNo* *Not to my knowledge*

If yes, please explain:

20. Does the property discharge waste water, on or adjacent to the property, other than storm water, into a storm water sewer system?

☐Yes *XNo* *Not to my knowledge*

If yes, please explain:

21. Does the property discharge waste water, on or adjacent to the property, other than storm water, into a sanitary sewer system?

☐Yes *XNo* *Not to my knowledge*

If yes, please explain:

22. Is there any electrical or hydraulic equipment for which there are any records indicating the presence of PCBs?

XYes ☐No

If yes, please explain: *Transformers*