Appendix G

Phase I Environmental Site Assessment

SIGNAL GEOSCIENCE
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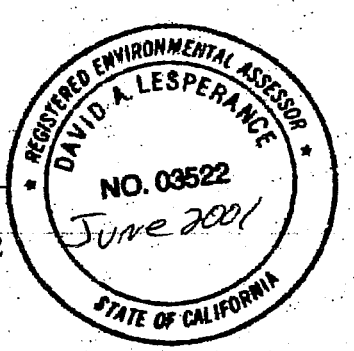
PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

300 E. SPRING STREET
LONG BEACH, CALIFORNIA

Prepared for:

LONG BEACH MEMORIAL MEDICAL CENTER
2801 ATLANTIC AVENUE
LONG BEACH, CALIFORNIA

Prepared by:



David Lesperance,
Registered Environmental Assessor #3522
SIGNAL GEOSCIENCE

MARCH 24, 2001

EXECUTIVE SUMMARY

Signal Geoscience performed a Phase I Environmental Assessment for Long Beach Memorial Medical Center (LBMMC) of the three parcels of land comprising the parking lot area at the southeast corner of the intersection of Spring Street and Long Beach Boulevard. The subject site is collectively identified with a street address of 300 E. Spring Street. However, at least twenty previous street addresses were identified for the site. Most of the property is currently developed as parking lots for the adjacent LBMMC. A landscape belt is located along the perimeter of the property.

The site vicinity consists of oil field production, vacant land, single-family and multiple-family residences, LBMMC and associated medical offices, commercial properties, and retail gasoline stations.

Historical aerial photographs, city directories, and building permits indicate at least seven different uses for portions of the property dating back to at least 1920. The site uses are as follows:

A gasoline service station at 2900 Long Beach Boulevard on the northwest corner of the property from approximately 1925 to 1935. This area was subsequently used for trailer sales until the 1980's.

A welding shop was located at 326 E. Spring Street, on the northwest side of the property, from approximately 1925 to 1950. A 550-gallon underground storage tank (UST) was installed at the welding shop in 1944.

Single family residences were located on the southwest side of the property from prior to 1920 to 1925.

Oil production facilities including oil storage tanks, wells, derricks, material, and equipment storage were located along the northeast corner of the property from the 1920's to 1970's.

The former residential areas and the remainder of the site outside of the northwest and northeast corner of the subject property were occupied by a trailer park from approximately 1941 to 1985.

From 1985 to the present, the site has been used as a parking area for LBMMC.

The areas of environmental concern noted for the property as follows:

No documentation of the location or removal of the USTs at the former gasoline station or welding shop was found. Several areas of patched, deteriorated, and/or cracked asphaltic concrete paving in the current parking areas were noted during the site walk-through. However, there was no definitive evidence of the location of the USTs.

State of California, Division of Oil, Gas, and Geothermal (DOGG) records indicate four oil wells were drilled on the eastern side of the property. Two of the on-site oil wells, Conoco Inc. #1 and #2 were drilled in 1923 and improperly abandoned in 1927. The other two on-site wells were drilled in 1929, produced oil for several decades, and were plugged and abandoned to standards acceptable to the state DOGG in 1973 and 1958 respectively. If construction is performed on the subject property, it is expected that the DOGG and City of Long Beach would require additional study and remedial action related to the abandoned oil wells. At a minimum, it is expected that the agencies would require the location and survey of the wells. Re-abandonment of at least two of the oil wells may also be necessary.

The oil production facilities associated with the two producing wells included at least five above ground storage tanks and, equipment, tool, and materials storage areas. No regulatory agency record of the oil production facilities was found. Dark areas of what appear to be oil contamination of the ground in the oil producing areas are evident in historical aerial photographs of the site. Areas of patched, deteriorated, and/or cracked asphaltic concrete paving are now located above this area.

There is no documentation that the former USTs and oil production facilities were completely removed. The environmental integrity of the soil in the area of the USTs, oil wells, and oil production facilities is not known. It is likely that soil and or ground water contamination maybe associated with one or more of these areas.

It is likely that elevated hydrocarbon gas levels may now or in the future be present in the soil below the site. The potential sources of the hydrocarbon gases are the Long Beach Oil Field, seepage from the four former oil wells on-site, and or degradation of crude oil contamination in the soil. Methane is the most likely gas present.

Ground water is estimated at a depth of 80 feet below the subject property. A search of government agency records indicated approximately 160 listed sites that used, stored, or disposed or hazardous materials within one mile of the subject property. It is likely that one or more of the surrounding oil production facilities and/or sites that used or stored hazardous materials have impacted the ground water below the subject property. However, the ground water in the area of the site is generally not used for a drinking water source due to the oil field, seawater intrusion, and poor water quality. The ground water contamination, if any, is not expected to have a significant impact on the use or development of the property. However, it is possible that crude oil and or hazardous materials/wastes from one or more of the adjoining properties have impacted the soil of the subject property.

Signal Geoscience recommends that a geophysical study and a subsurface soil sampling and testing study (Phase II assessment) be performed on the subject property. The geophysical survey will be used to locate any buried features such as oil wells, oil field pipelines, and the suspected USTs. Subsurface soil samples from the Phase II assessment would be tested in suspect areas noted in this report and any areas identified in the geophysical survey.

LAW/CRANDALL, INC.

geotechnical, environmental & construction materials consultants

REPORT OF PHASE I

AND LIMITED PHASE II SITE ASSESSMENT

PROPOSED CHILDREN'S MEDICAL OFFICE BUILDING

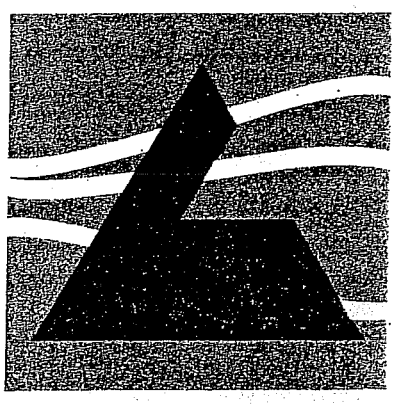
LONG BEACH, CALIFORNIA

FOR THE

LONG BEACH MEMORIAL MEDICAL CENTER

(L91265.FO)

OCTOBER 23, 1991



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October 23, 1991

Long Beach Memorial Medical Center
Engineer Services
2801 Atlantic Avenue
Post Office Box 1428
Long Beach, California 90801-1428

(L91265.FO)

Attention: Mr. Marion Vinton
Construction Property Manager

Ladies/Gentlemen:

We are pleased to submit our "Report of Phase I and Limited Phase II Environmental Site Assessment, Proposed Children's Medical Office Building, Long Beach, California, for the Long Beach Memorial Medical Center." The scope of our work was authorized by Mr. Marion Vinton of Long Beach Memorial Medical Center. A report covering our concurrent foundation investigation of the site was submitted October 8, 1991.

The purpose of the site assessment was to develop an opinion regarding the probability of the soil or ground water at the site having been significantly contaminated with hazardous materials from present or past activities on or in the vicinity of the site. Based on our investigation, soil and ground water contamination was encountered in two of the four exploration borings drilled during the assessment. The findings of the assessment and our conclusions regarding the site are presented in the report.

We appreciate the opportunity to provide this service for you. Please call if you have any questions or need further information.

Respectfully submitted,

LAW/CRANDALL, INC.

William A. Mitchell

William A. Mitchell, R.E.A. 02451
Project Geologist

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Principal Geologist
Environmental Services Manager

R45/az
(3 copies submitted)

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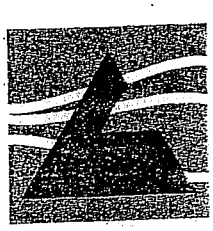
AND LIMITED PHASE II SITE ASSESSMENT

PROPOSED CHILDREN'S MEDICAL OFFICE BUILDING

LONG BEACH, CALIFORNIA

FOR THE

LONG BEACH MEMORIAL MEDICAL CENTER



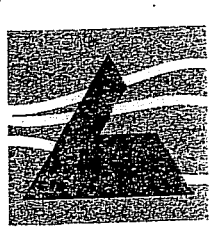
1.0 SUMMARY

We have performed a Phase I and limited Phase II environmental assessment of the site at 2801 Atlantic Avenue Long Beach, California. The purpose of this assessment was to develop an opinion regarding the probability of the soil or ground water at the site having been significantly contaminated with hazardous materials from past or present activities on or in the vicinity of the site.

Based on the findings of our Phase I assessment, the site is within the Long Beach oil field. Prior to construction of the existing hospital complex circa 1959, a portion of the proposed building site was occupied by a single-family dwelling and a restaurant. In the immediate vicinity of the site there were at least three oil wells, an oil sump, and an oil tank-truck cleaning facility. Some of these may actually be on the site. Sometime prior to construction of the hospital, an uncertified artificial fill was placed in a southwest-northeast trending ravine and adjacent to the northwestern portion of the proposed building site. This fill was encountered in the exploration borings that were drilled as part of our concurrent foundation study.

Our limited Phase II study consisted of sampling and chemically analyzing soil and ground water samples from the four concurrent foundation borings, three of which were converted into ground water monitoring wells by installing 2-inch-diameter PVC well casings. The findings of our limited Phase II assessment indicated the presence of hydrocarbon-affected soil and ground water beneath the site. Additionally, three metals (arsenic, barium, and lead) were found in the ground water at concentrations slightly exceeding the State of California Department of Health Services maximum contamination level for drinking water.

It is our opinion that the observed hydrocarbon-contaminated soil may be permitted to be left in place since the proposed building development will provide an impermeable barrier for ground water percolating through the affected soil and potentially leaking into the ground water. Since the area of the site is within an active oil field, much of the



observed hydrocarbon and metal contamination in the ground water may be a naturally occurring regional problem, which may not require remediation. We recommend, nevertheless, that the information contained in this report be submitted to the Long Beach Health Department for their review to determine if remedial action is necessary at the site.

Additionally, the three abandoned oil wells in the site vicinity will probably need to be located prior to construction, in accordance with the requirements of the California Division of Oil Gas regulations. Since all three oil wells were abandoned prior to 1954, additional reabandonment to meet current regulations is likely.