



March 1, 2000

49600.4

Mr. Mark Gomez  
City of Oakland Environmental Services  
250 Frank H. Ogawa Plaza, Suite 5301  
Oakland, California 94612

**Anomaly Investigation**  
**9<sup>th</sup> Street and Broadway**  
**Oakland, California**

Dear Mr. Gomez:

This letter presents the results of Harding Lawson Associates' (HLA) subsurface investigation of geophysical anomalies at the 9<sup>th</sup> Street and Broadway property for the City of Oakland (City). The City authorized this investigation to confirm or deny that the metallic anomalies that HLA identified at the same site in 1993 (see HLA report, *Preliminary Soil Characterization, Oakland Broadway Block, Chinatown Redevelopment Project Area*, dated November 11, 1993) were or were not underground storage tanks (USTs). For this subsurface investigation, HLA performed a second geophysical survey of the locations previously identified by HLA in 1993, then excavated at the locations that most likely contained a UST. HLA performed five test pits as part of this subsurface investigation.

HLA's report *Risk-Based Corrective Action (RBCA) Evaluation, 9<sup>th</sup> Street and Broadway, Oakland, California*, dated October 25, 1999, recommended site closure by the Alameda County Hazardous Materials Division (the County) because the contaminants on-site do not present an unacceptable risk to human health and the environment. The report also provided final recommendations prior to regulatory closure:

- abandonment of the three groundwater monitoring wells at the site,
- submittal of a Soil Management Plan, and
- confirmation that the metallic anomalies identified in HLA's 1993 report are not USTs and are not of environmental concern.

The City authorized HLA to implement these recommendations in their authorizations dated November 29, 1999 and February 8, 2000.

#### **ANOMALY SURVEY**

HLA investigated the eight locations of geophysical anomalies identified in HLA's report *Preliminary Soil Characterization, Oakland Broadway Block, Chinatown Redevelopment Project Area, 9<sup>th</sup> Street and*

March 1, 2000  
49600.4  
Mr. Mark Gomez  
City of Oakland Environmental Services  
Page 2

*Broadway, Oakland, California*, dated November 11, 1993. The site location map (Plate C-1 of HLA's 1993 report, see attachment Plate 1) showing the eight locations, designated A through H, provided the starting point for this investigation. These locations were identified in a 1993 geophysical survey as likely to contain buried metal. HLA's 1993 report recommended further investigation of locations A, C, D, E, and G.

On February 14, 2000, HLA used geophysical equipment to re-survey the eight locations and further evaluate the size and location of the anomalies. HLA's geophysicist used the following instruments to scan the eight locations: Model EM31-D electromagnetic terrain conductivity meter, Model TW-6 M-Scope electromagnetic metal detector, Model RD-400 pipe and cable locator, and Model SIR-8 ground penetrating radar (GPR). Due to the high clay content of the soil, which absorbs (attenuates) the electromagnetic energy, HLA's geophysicist estimated that the GPR was only effective at detecting metallic features at a depth of less than three feet below ground surface (bgs).

While surveying location G, HLA detected an additional metallic anomaly not detected in the 1993 geophysical survey. This metallic anomaly was located approximately 30 feet to the east of location G and is designated location I (see Plate 2). 2

The verbal comments of HLA's geophysicist for each of the nine locations are summarized below:

- A Possible tank: high amplitude, may extend under wall, wall contains metal reinforcement which interfered with instruments
- B Not likely to be tank: long, thin, and shallow
- C Not likely to be tank: low amplitude
- D Not likely to be tank: too thin
- E Not likely to be tank: shallow, possible utility
- F Not likely to be tank: shallow and small
- G Possible tank: high amplitude but small
- H Not likely to be tank: high amplitude but ~~was~~ location was recently trenched by Developer's geotechnical consultant
- I Possible tank: additional anomaly located when investigating G, high amplitude and broad (see Plate 2)

On February 18, 2000, Mr. James McCarty of HLA met with Mr. Mark Gomez of the City and Mr. Barney Chan of the County to review the findings. All agreed that because E and F were located offsite, beneath the City sidewalk and within its right-of-way, the City did not need to perform a subsurface investigation at these locations in order to secure the regulatory closure of the 9<sup>th</sup> and Broadway site. The

March 1, 2000  
49600.4  
Mr. Mark Gomez  
City of Oakland Environmental Services  
Page 3

three gentlemen also agreed that location H need not be investigated because recent trenching at that location would have revealed evidence of a UST. Location B, which was not considered a likely location of a UST, would only be investigated in the event that USTs were found at any of the five other locations onsite.

### ANOMALY INVESTIGATION

On February 22, 2000, HLA and our subcontractor, Ogiso, use a backhoe to "pothole" at the five locations. Underground service alert (USA) was notified 48 hours before digging to identify the presence of underground utilities. The overlying asphalt was removed and Ogiso excavated to a maximum of 5 feet or until obstructions were reached. While metal objects or sub-surface structures were found at each location, no USTs or evidence of USTs was noted.

Ogiso stockpiled the soil excavated from each of the five test pits, and then backfilled the excavation with the same soil. HLA screened the worker breathing space and the excavated soil periodically with a photo-ionization detector, an instrument that measures organic vapors. No organic vapors above background were detected during this investigation, and HLA did not observe any discoloration or significant odors in the soil. Ogiso placed and compacted the soils in the test pits using the pressure of the backhoe bucket. Ogiso used a hand-held vibratory plate to recompact the upper soil before patching the locations with hot asphalt concrete.

We provide below a summary of the materials encountered at each location; we present photographs of these materials in the Appendix.

#### Anomaly A

At approximately 1.5 feet bgs, a 2-inch PVC pipe was uncovered (see Photograph 1). The excavation was moved slightly to the north and continued to a final depth of 5 feet bgs. No evidence of a UST or fuel piping was observed.

#### Anomaly C

At approximately 1 foot bgs, a 1-inch electrical conduit made of metal was uncovered (see Photograph 2). The excavation was moved slightly to the north and continued to a final depth of 5 feet bgs. No evidence of a UST or fuel piping was observed.

#### Anomaly D

In the upper foot at this location, a 3/4-inch metal pipe, a large metal footing and brick debris were uncovered (see Photographs 3 and 4). The excavation terminated at 2.5 feet bgs due to difficulty digging through the brick materials (see Photograph 5). No evidence of a UST or fuel piping was observed.

March 1, 2000  
49600.4  
Mr. Mark Gomez  
City of Oakland Environmental Services  
Page 4

**Anomaly G**

At approximately 1 foot bgs two subterranean concrete walls were uncovered (see Photograph 6). The excavation was moved slightly to the north and continued to a final depth of 5 feet bgs. No evidence of a UST or fuel piping was observed.


**Anomaly I**

At approximately 1 foot bgs, a 1-inch PVC pipe was uncovered, which appeared to be an abandoned irrigation line. A subterranean concrete structure was also found at this location (see Photograph 7), and it appeared to be an extension of the structure noted at location G. An approximately 18-inch section of metal pipe (see Photograph 8) was also uncovered from this location. We observed no indication that the pipe had been used to convey a fuel product. Because of rust at either end, it appeared to have been in its current state (i.e. a small section) for some time. The excavation was continued to a final depth of 5 feet bgs. No evidence of a UST or fuel piping was observed.

With this subsurface investigation, HLA confirms that the metallic anomalies investigated herein do not contain USTs. Furthermore, on the basis of this information, the County should proceed to grant site closure because no USTs and no signs of contamination have been identified in this subsurface investigation. We trust that this letter report provides the information that you require at this time. If you have any question, please feel free to contact either of the undersigned at (510) 451-1001.

Yours very truly,

**HARDING LAWSON ASSOCIATES**

  
James G. McCarty  
Project Engineer

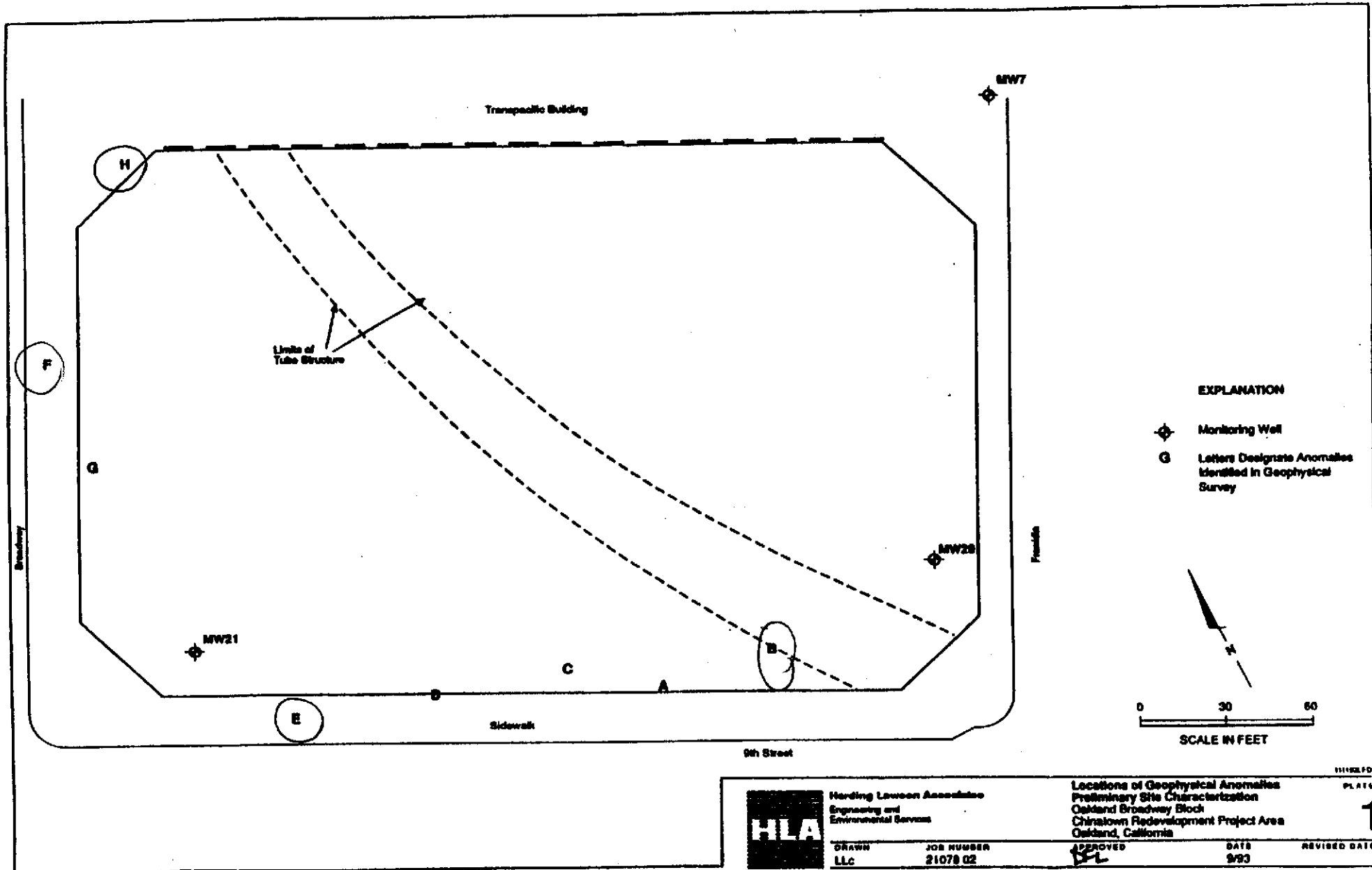
  
Stephen J. Osborne  
Geotechnical Engineer





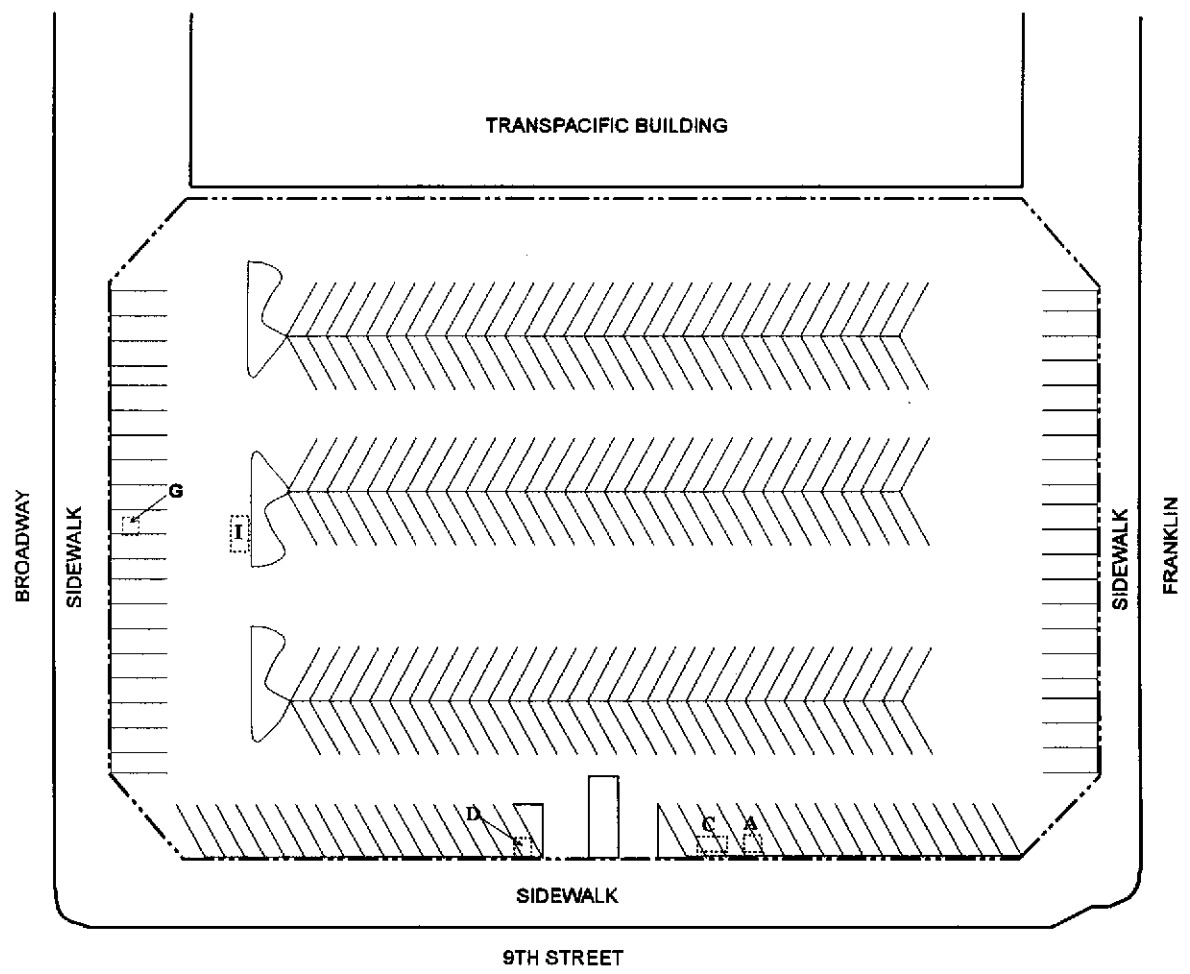
JGM/SJO/mlw/49600/037597L

2 copy submitted

Enclosures: Plate 1 - Anomaly Locations  
Plate 2 - Pothole Locations  
Appendix - Photographs 1 through 8

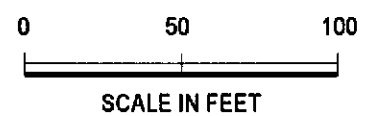


	Harding Lawson Associates Engineering and Environmental Services	Locations of Geophysical Anomalies Preliminary Site Characterization Oakland Broadway Block Chislowm Redevelopment Project Area Oakland, California		PL 114
	DRAWN LLC	JOB NUMBER 21078 02	APPROVED 	DATE 9/93



**LEGEND**

-  Property Line
-  C Location of Anomaly



**Harding Lawson Associates**  
 Engineering and  
 Environmental Services

DRAWN  
 jgm

PROJECT NUMBER  
 4900.4

**Pothole Locations**  
**Soil and Groundwater Investigation**  
**9th Street and Broadway**  
**Oakland, California**

APPROVED

DATE  
 2/24/00

REVISED DATE

PLATE  
**2**



Photograph 1. Location A - 2-inch PVC pipe



Photograph 2. Location C - metal conduit



**Harding Lawson Associates**  
Engineering and  
Environmental Services

**Photographs**  
Garden Hotel Redevelopment  
9th Street and Broadway  
Oakland California

Photographs

1 & 2

Photos by  
HDL

JOB NUMBER  
49600

APPROVED

DATE  
2/00

REVISED DATE



Photograph 3. Location D - metal piping



Photograph 4. Location D - metal footing



**Harding Lawson Associates**  
Engineering and  
Environmental Services

**Photographs**  
Garden Hotel Redevelopment  
9th Street and Broadway  
Oakland California

Photographs

**3 & 4**

Photos by  
HDL

JOB NUMBER  
49600

APPROVED

DATE  
2/00

REVISED DATE





Photograph 5. Location D - brick



Photograph 6. Location G - subterranean structure



**Harding Lawson Associates**  
Engineering and  
Environmental Services

**Photographs**  
Garden Hotel Redevelopment  
9th Street and Broadway  
Oakland California

Photographs

**5 & 6**

Photos by  
HDL

JOB NUMBER  
49600

APPROVED

DATE  
2/00

REVISED DATE



Photograph 7. Location 1 - subterranean structure and pieces of PVC pipe



Photograph 8. Location 1 - metal pipe



**Harding Lawson Associates**  
Engineering and  
Environmental Services

**Photographs**  
Garden Hotel Redevelopment  
9th Street and Broadway  
Oakland California

Photographs

**7 & 8**

Photos by  
HDL

JOB NUMBER  
49600

APPROVED

DATE  
2/00

REVISED DATE