GeoStrategies Inc.





# ASBESTOS SURVEY

UNOCAL Service Station 5325
3220 Lakeshore Avenue
Oakland, California

Prepared For:
UNOCAL Corporation
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583



GeoStrategies Project Number: 5180.01

April 6, 1994

GeoStrategies Inc.

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Mr. David DeWitt
UNOCAL Corporation
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Reference: **ASBESTOS SURVEY**
UNOCAL Station #5325, Oakland, California
GeoStrategies Project No.: 5180.01

Dear Mr. DeWitt:

GeoStrategies Inc. (GSI) was retained by UNOCAL Corporation (UNOCAL) to perform an asbestos survey of UNOCAL Station 5325 located at 3220 Lakeshore Avenue, Oakland, California. The purpose of the survey was to identify and sample suspect construction materials to determine the presence or absence of asbestos. It is GSI's understanding that this location is a part of the retail reformat program.

GSI performed the following environmental services as a part of the asbestos survey:

- Performed a walk-through of all accessible areas of the structure to identify the location and extent of suspect materials, define homogeneous areas and characterize functional spaces.
- Collected bulk samples of suspect materials in accordance with the protocols set forth under the Asbestos Hazard Emergency Response Act (AHERA) in 40 CFR 763. Submitted samples for analysis by Polarized Light Microscopy (PLM).
- Physically assessed the condition of the suspect materials in each functional space.
- Provided a single line sketch indicating sample locations and the type and extent of confirmed and assumed asbestos-containing materials.
- Prepared this written report presenting the findings, protocols, recommendations and supporting documentation.

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## 1.0 SUMMARY

Table 1 below provides a summary of the suspect building materials that were sampled and the detected or assumed presence of asbestos. Detailed information on the specific locations and condition of the identified asbestos-containing materials is found in Section 4.0 and Appendix A.

**TABLE 1. HOMOGENEOUS AREA SAMPLE SUMMARY**

| Homogeneous Area Number | Material Name | Number of Samples | Asbestos Present |
|---|---|---|---|
| 001 | Interior Paint | 1 | ND[a] |
| 002 | Caulk | 1 | ND |
| 003 | Exterior Paint | 4 | ND |
| 004 | Roofing Mastic | 1 | Yes |
| 007[b] | Fire Wall Material | 1 | Yes |

a - None Detected
b - Homogenous Area Number 005 and 006 not used.

Table 2 provides a summary of the functional spaces that were assessed during the survey, the number of homogeneous areas (HAs) identified in each space and the presence of asbestos-containing materials. Detailed information on the specific asbestos-containing materials in each functional space, as well as their condition, is found in Appendix B.

**TABLE 2. FUNCTIONAL SPACE SUMMARY**

| Functional Space Number | Description | Number of HAs | Asbestos Present |
|---|---|---|---|
| 1 | Cashier | 1 | ND[a] |
| 2 | Office | 1 | ND |
| 3 | Waiting Area | 1 | ND |
| 4 | Restrooms | 1 | ND |
| 5 | Garage | 1 | ND |
| 6 | Exterior | 4 | Yes |

a - None Detected

## 2.0 BUILDING DESCRIPTION

The building is a metal frame structure on a concrete foundation. It has an approximate total area of 1,200 square feet and consists of a single floor. The building construction date is unknown. A cinder block wall is located adjacent to the back wall of the station.

The floors in this building consist of concrete, and ceramic tile over concrete. The interior wall finishes in this building consist of painted metal or ceramic tile over metal. The ceiling material used in this building is metal. The building Heating, Ventilating and Air Conditioning (HVAC) system is uninsulated. The exterior finishes on this building consist of metal. The roof of this building consists of rolled tar roofing materials over metal. The observable plumbing lines were uninsulated.

## 3.0 SURVEY PROTOCOLS

Homogeneous areas were determined and bulk samples of suspect building materials were collected in accordance with the protocols set forth in the Asbestos Hazard Emergency Response Act (AHERA) as codified in 40 CFR 763. Samples were collected using wet methods and other techniques to minimize the potential for releasing airborne asbestos fibers. Sample locations were sprayed with an encapsulant or other sealant upon completion of sample collection to prevent the additional release of fibers. Sampling tools were cleaned between the collection of each sample with a wet, lint-free cloth in order to minimize the possibility of cross contamination. The samples were placed into sealable plastic bags and marked with a unique identification number.

A Chain-of-Custody form was prepared and accompanied the sample shipment to Forensic Analytical Services, Inc. located in Hayward, California. The samples were analyzed by PLM in accordance with the Environmental Protection Agency (EPA) "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/M4-82-020). Copies of the laboratory reports are provided in Appendix C. Copies of the Chain-of-Custody forms that accompanied the sample shipment are provided in Appendix D.

The current industry standard for analyzing PLM samples using visual area estimation techniques is to report the results as a range of percentages down to one percent, (i.e. 1 to 5 percent chrysotile asbestos). Samples in which asbestos is observed but is not present in quantities above one percent, are reported as "less than one percent" or "trace". Samples in which no asbestos is observed are reported as "none detected". The EPA National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos regulates materials containing more than one percent asbestos. The California Division of Occupational Safety and Health (Cal-OSHA) regulates construction materials containing more than one tenth of one percent of asbestos.

## 4.0 SURVEY RESULTS

GSI identified suspect asbestos-containing materials in the form of roofing materials, and fire wall materials. Bulk samples were collected of the materials and analyzed using PLM. A single line sketch indicating the location of each sample is included in Appendix E.

The black roofing mastic, associated with all roof surfaces was identified as containing 15-20 percent chrysotile asbestos. This material is nonfriable and has a low level of damage.

The fire wall material, located on the wall adjacent to the back of the structure was identified as containing trace amounts of chrysotile asbestos. This material is nonfriable and has a low level of damage.

## 5.0 RECOMMENDATIONS

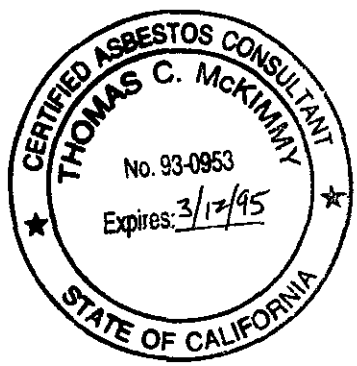
This section presents recommended response actions for each asbestos-containing material identified at Service Station 5325. GSI develops a specific response action based upon the condition of the material, its potential for disturbance and the activities being performed in the general vicinity of the material. The recommendations are based upon GSI's professional judgement in applying industry standards and the site conditions existing at the time of the survey. Recommendations may include removal, repair, encapsulation, enclosure, or periodic reinspection or a combination thereof.

It is GSI's understanding that the station will be remodeled as a part of the retail reformat program. If the structure is slated for demolition the local Air Quality Management District must be notified at least 10 working days prior to the start of work. The roofing sealants and fire are Category I nonfriable asbestos-containing materials and GSI does not anticipate that these materials will become friable or be subjected to sanding, grinding, cutting, or abrading during the course of demolition activities and may remain in place. The fire wall materials are Category II nonfriable materials. GSI recommends that tenants of the property be notified according to State Assembly Bill 3713, and that all renovation or demolition activities involving the fire wall be conducted by a licensed and

*registered asbestos abatement contractor according to all existing Federal, State,* and local regulations.

GSI appreciates this opportunity to provide our technical services to the UNOCAL Corporation. If you have any questions regarding the contents of this document, please feel free to contact me at (510) 551-8777, ext. 299.

Sincerely,
**GeoStrategies Inc.**




Thomas McKimmy
Project Manager

Appendix A: Homogeneous Area Sample Results Table
Appendix B: Functional Space Assessment Summary Table
Appendix C: Laboratory Reports
Appendix D: Chain-of-Custody Forms
Appendix E: Drawing

# APPENDIX A

# HOMOGENEOUS AREA SAMPLE RESULTS TABLE

Homogeneous Area Sample Summary
UNOCAL Service Station #5325
3220 Lakeshore Avenue, Oakland, California
March 1994

| Homogeneous Area/Sample # | Material | Percent Asbestos | Type of Asbestos | Quantity |
|---|---|---|---|---|
| 5180-001 | Paint (interior) | -- | -- | 6,600 SF[b] |
| 5180-001-01 | | ND[a] | -- | -- |
| 5180-002 | Caulk | -- | -- | 3,200 SF |
| 5180-002-01 | | ND | -- | -- |
| 5180-003 | Paint (Exterior) | -- | -- | 1,500 SF |
| 5180-003-01 | | ND | -- | -- |
| 5180-003-01A | | ND | -- | -- |
| 5180-003-02 | | ND | -- | |
| 5180-003-03 | | ND | -- | -- |
| 5180-004 | Roof Mastic | -- | -- | <50 SF |
| 5180-004-01 | | 15-20 | Chrysotile | -- |
| 5180-007 | Fire Wall | -- | -- | 1,000 CF[c] |
| 5180-007-01 | | Trace | Chrysotile | -- |

a - None Detected
b - Square Feet
c - Cubic Feet



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# APPENDIX B

# FUNCTIONAL SPACE ASSESSMENT SUMMARY TABLE

Homogeneous Area Sample Summary
UNOCAL Service Station #5325
3220 Lakeshore Avenue, Oakland, California
March 1994

| Functional Space/Name | Material | H.A. Number | Friability | Damage |
|---|---|---|---|---|
| 1/Cashier | Interior Paint | 001 | Nonfriable | Low |
| 2/Office | Interior Paint | 001 | Nonfriable | Low |
| 3/Waiting Area | Interior Paint | 001 | Nonfriable | Low |
| 4/Restrooms | Interior Paint | 001 | Nonfriable | Low |
| 5/Garage | Interior Paint | 001 | Nonfriable | Low |
| 6/Building Exterior | Caulk | 002 | Nonfriable | Low |
| | Exterior Paint | 003 | Nonfriable | Low |
| | Roof Mastic | 004[a] | Nonfriable | Low |
| | Fire Wall | 007[a] | Nonfriable | Low |

a - Asbestos-Containing Material

# APPENDIX C

# LABORATORY REPORTS

# FORENSIC ANALYTICAL



FAX TRANSMISSION
Summary of Results
Polarized Light Microscopy

To: GeoStrategies Inc. Date/Time: 3-29-94

Project : 518001
Report #: 211316

Attn: Thomas McKinney Sender: Sandi

If you do not receive all pages, please contact Sender at (510) 887-8828

C: Chrysotile Cr: Crocidolite
A: Amosite ND: No Asbestos detected

| Sample Number | Asbestos % | Asb. Type(s) | Notes |
|---|---|---|---|
| 5180-001-01 | ND | | |
| 5180-002-01 | ND | | |
| 5180-003-01 * | Trace | C | In beige mat'l (trace). |
| 5180-004-01 | 15-20 | C | In black fibrous mat'l (15-20). |

* Sample volume is less than that advised by method. Result may not represent the actual building material.

FAXED TO: 551-7888

These results are preliminary. Hard copy will follow in the mail.

Supervisor Approval: [signature]

# FORENSIC ANALYTICAL



FAX TRANSMISSION
Summary of Results
Polarized Light Microscopy

To: GeoStrategies Inc. Date/Time: 4/5/94

Project : 518001
Report #: 211678

Attn: Tom McKimmy Sender: _____

If you do not receive all pages, please contact Sender at (510) 887-8828

C: Chrysotile Cr: Crocidolite
A: Amosite ND: No Asbestos detected

| Sample Number | Asbestos % | Asb. Type(s) | Notes |
|---|---|---|---|
| 5180-003-01A | ND | | |
| 5180-003-02 | ND | | |
| 5180-003-03 | ND | | |
| 5180-007-01 | Trace | C | tan gray powder (trace) |

FAXED TO: 551-7888

These results are preliminary. Hard copy will follow in the mail.

Supervisor Approval: _____

# APPENDIX D

# CHAIN-OF-CUSTODY FORMS

GSI

GEOSTRATEGIES, INC.
CHAIN-OF-CUSTODY

| PROJECT NO. | PROJECT NAME |
|---|---|
| 5179.01 / 5180.01 | UNOCAL 5043 + 5325 |

SAMPLER (Signature): THOMAS McKIMMY

| Sample Number | Date | Sample Location/Material | No. of Samples | Parameters: Asb. by PLM | REMARKS |
|---|---|---|---|---|---|
| 5179-001-01 | 3/28/94 | Garage/Interior Paint | 1 | X | (*) 24-48 Hr. Turn-around. |
| -002-01 | | Restrooms/Caulk | | | |
| -003-01 | | Exterior/Paint | | | |
| -004-01 | | Roof/Mastic | | | |
| -005-01 | | Roof/Penetration Seal | | | |
| 5180-001-01 | | Garage/Interior Paint | | | |
| -002-01 | | Restrooms/Caulk | | | |
| -003-01 | | Exterior Paint | | | |
| -004-01 | ↓ | Roof/Mastic | ↓ | ↓ | |

| Relinquished By: (Signature) | Date | Received By: (Signature) | Date | REMARKS |
|---|---|---|---|---|
| (Printed) THOMAS McKIMMY | 3/28/94 | (Printed) | 3/28/94 1:30 | |

6747 Sierra Ct., Suite G (510) 551-8777

# Forensic Analytical

# BULK Request Form

Client Name and Address:
GeoStrategies Inc.
6747 Sierra Ct, ste G
Dublin CA 94568

Phone: 510/ 551-8777 Date: 4/4/94

☒ PLM ☐ 2hr ☒ 24hr ☐ Ext ☐ P.C. 435

☐ TEM Bulk Qualitative
☐ TEM Bulk Quantitative
☐ TEM Water

Results Needed: _____

Contact: TOM McKimmy

P.O. # Job ID: 5180.01

Site: UNOCAL - Lakeshore, Oakland

ATOMIC ABSORPTION
☐ Flame ☐ Furnace
Metals _____

| Sample Number | Date Collected | Sample Location/Description |
|---|---|---|
| 5180-003 -01A | 4/4/94 | Exterior / Paint |
| 5180-003 -02 | ↓ | ↓ ↓ |
| 5180-003 -03 | ↓ | ↓ ↓ |
| 5180-007 -01 | ↓ | Exterior / Brick |
| | | |
| | | |
| | | |
| | | |

Relinquished By: [signature] 4/4/94
Date/Time:

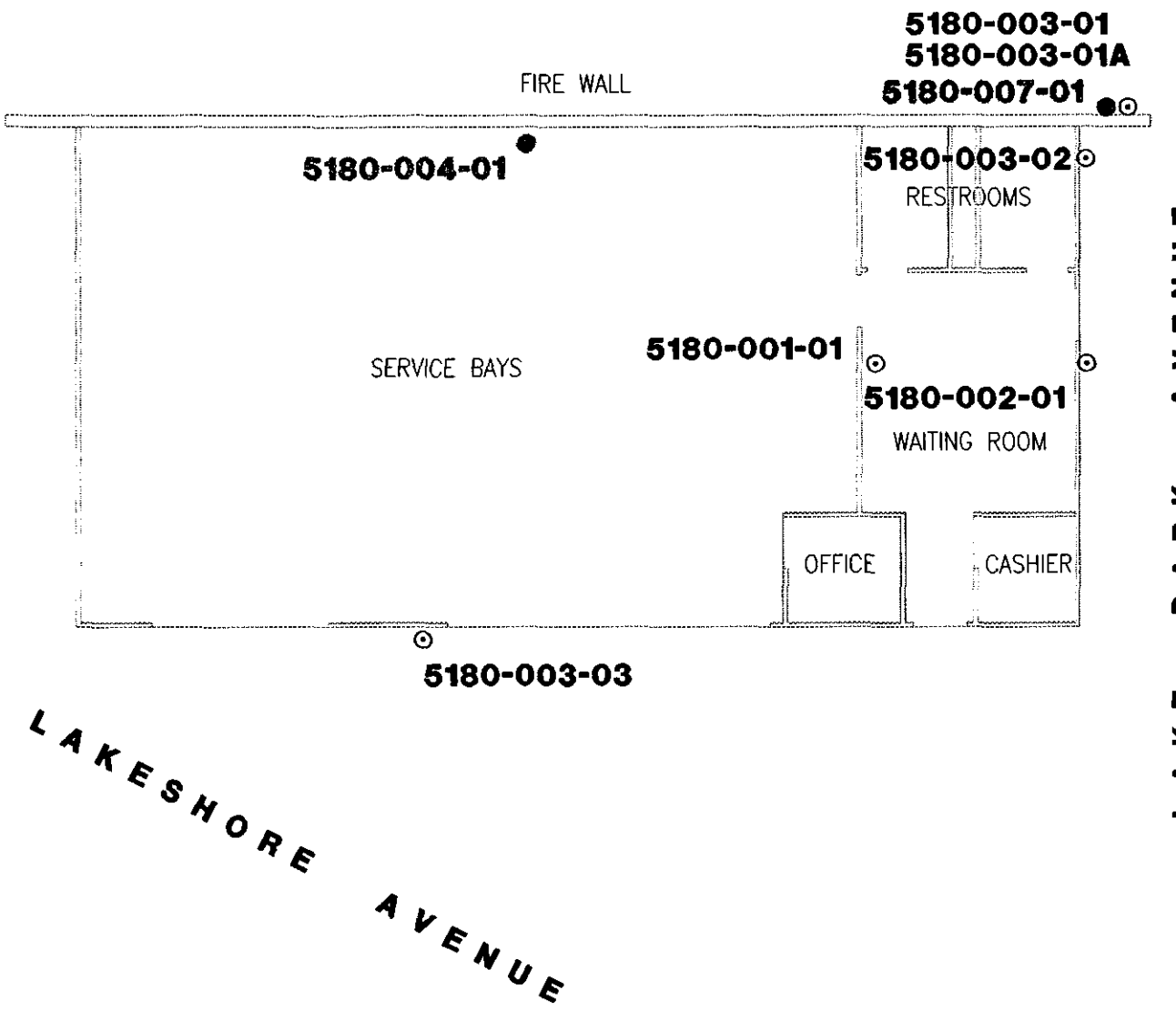
Received By: [signature] 4/4/94 1:5
Date/Time

Relinquished By:
Date/Time:

Received By:
Date/Time

# APPENDIX E

# SKETCH




## LEGEND

⊙ SAMPLE LOCATION – ASBESTOS NOT DETECTED

● SAMPLE LOCATION – ASBESTOS DETECTED

## NOTES

A. ASBESTOS PRESENT IN THE FORM OF ROOFING MASTIC

B. ASBESTOS PRESENT IN THE FORM OF FIRE WALL MATERIALS

NOT TO SCALE

GeoStrategies Inc.

**ASBESTOS SAMPLING PLAN**
UNOCAL Service Station #5325
3220 Lakeshore Avenue
Oakland, California

FIGURE
1

| JOB NUMBER | REVIEWED BY | DATE | REVISED DATE |
|---|---|---|---|
| 518001 | DAC | 4-5-94 | |