July 20, 1988

Mr. Walter Kaczmarek
The Martin Company
6475 Christie Street #406 500
Emeryville, CA 94608 11

Subject: Handling of Waste Tar Paper Material Which May Contain Asbestos and Disposition of Excavation Spoils at the Marketplace Site in Emeryville, California

Dear Mr. Kaczmarek:

Aqua Terra Technologies (ATT) is pleased to submit this report on the proposed disposition of the waste tar paper and other excavation spoils at the Marketplace site in Emeryville.

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
94596
415 934-4884

ASBESTOS CONTAINING MATERIAL

A tar paper material, some of which contains asbestos in concentrations greater than one percent (based on analysis according to NIOSH Method 7400), was removed in the eight-story building pad area as a result of excavation. This type of material has not been found in excavations outside the eight-story building pad area. Of six samples of the tar paper analyzed for asbestos, two samples were found to contain asbestos at estimated concentrations greater than one percent. Asbestos was not detected in the other four samples. Data for the analysis was provided verbally by Mr. Gregory Raymond of J.M. Cohen, Inc.

Asbestos containing material was manually removed from the pad and properly disposed of by personnel of SOS International, a licenced asbestos removal contractor. The removal process was continued until all visible tar paper material on the pad surface was removed.

For worker safety, the surface of soil on the pad area should be kept moist by periodically spraying of water when workers are present in the area. The wetting process should continue until a layer of concrete is poured on the pad as part of the planned construction. The concrete pad will effectively cap this area for the future encapsuling any remaining asbestos.

For future planned excavation of utility line trenches in the area of the eight-story building pad, procedures have been developed and will be implemented to identify, separate, remove and properly dispose of asbestos containing materials should they be found. These

procedures and on going asbestos sampling programs are described in the July 15, 1988 letter from J.M. Cohen Inc. (Attachment A). All excavation trenches will be filled and capped with clean fill material.

DISPOSITION OF EXCAVATION SPOILS

Approximately 1500 cubic yards of soil and associated materials have been excavated from the construction area on the Marketplace site. The excavated soil is presently stacked on site in discrete waste piles. A map of the waste pile which identifies the origin of the waste material has been prepared (Attachment B, Plate 1). A letter and number designation system corresponding to the plan for excavations is used to identify spoils piles. The dotted line separates soils removed from the eight-story building pad (bottom of map) from soils from excavations outside the pad area. An additional letter number designation is given to selected piles (top of map) to identify sampling locations. A visual inspection of the surface of 42 individual waste piles containing material removed from or near the area of the eight-story pad was conducted by Mr. Marc Papineau of Earth Metrics, Inc. and ATT staff on July 15, 1988. Tar paper material was identified in 21 of the individual piles during the site reconnaissance. Specific piles which were observed to contain tar paper are shaded in Plate 1, Attachment B. The total volume of soil removed from the eight-story building pad is approximately 1000 cubic yards. The volume of soil containing the tar paper is estimated to be approximately 500 cubic yards. The tar paper composes a minute fraction of the total volume of material.

According to the California Code of Regulations (CCR) Title 22, Section 66699(b), a waste may be classified as hazardous if it contains a Total Threshold Limit Concentration (TTLC) of one percent or more friable asbestos. According to the available data the hazardous classification may be applied to those tar paper samples which contain more than one percent asbestos by weight and can be crumbled by hand pressure.

Some tar paper samples do not contain asbestos. Four of the original six samples did not contain asbestos. However, asbestos containing and non-asbestos containing tar paper is difficult to separate visually without more

detailed analysis which would require the use of a light microscope. Therefore, ATT recommends treating all tar paper as if it were asbestos contaminated.

In cases where the asbestos containing material is in a discrete form which may be separated from the soil, the volume of waste material to be treated as hazardous may be greatly reduced by removing the asbestos containing material. Mr. Stan Lau of the Alternative Technologies Group of the State of California Department of Health Services confirms the applicability of this approach.

ATT therefore suggests that disposal of the excavation spoils be handled as follows:

- Stock piles containing spoils removed from areas outside of the pad of the eight-story building should be visually inspected under the supervision of Mr. Peter Geiger of Earth Metrics to assure that tar paper is not included with soil materials. Then, these stockpiles should be transported and disposed off-site at the Richmond landfill provided that the below listed conditions are met:

  A) Soil is found not to contain tar paper

  B) Soil is free of heavy metals, volatile organic chemicals, semivolatile organic chemicals and asbestos fibers at levels defined by CCR Title 22, Article 11 to constitute a hazardous waste

  The spoil piles labelled as Eastside Block Building, Sanitary Sewer Line (SSL) and associated tailings piles T,U,V,W,X,Y, and Z should be handled as described above. These specific piles are identified in the top portion of the map (Attachment B, Plate 1).

- All spoils piles of soil removed from the pad of the eight-story building should be spread into a thin (2 to 3 inches) layer to facilitate visual inspection and removal of the tar paper. The tar paper should be removed manually and placed in double plastic bags for disposal as a hazardous waste at the

West Contra Costa Landfill. Mr. Peter Gieger should supervise the tar paper removal operation. Workers handling asbestos must be appropriately equipped with NIOSH approved respirators to minimize possible exposure to asbestos. The soil and materials remaining after the tar paper has been separated can then be handled and disposed of as non-hazardous waste provided that conditions A and B described above are met. The specific piles designated as Grade Beam B, Grade Beam F, D-F Line 6, T Line 1, D6, D6T, B8T, G1, G6, G10, A-G, A Line 1-5, Line 1 Pile Cap, and Tailings Piles P and Q should be handled as described above. These specific piles are identified in the lower portion of the map (Attachment B, Plate 1).

Analytical data for composite samples from selected spoils piles indicates that the soil is free of volatile and semivolatile organic chemicals and contains levels of metals well below TTLC criteria concentrations for a hazardous waste as described in CCR Title 22, Section 66696(b) (Attachment C). Asbestos analysis of a composite soil sample from the excavation spoils is presently being conducted and results will be available shortly.

If you have any questions concerning the contents of this report, do not hesitate to call me.

Very truly yours,

AQUA TERRA TECHNOLOGIES, INC.

Patrick J. Sheehan, Ph.D.
Environmental Toxicologist

PJS/pd

cc: Mr. Robert Wyatt
Mr. Marc Papineau

Attachments

J. M. COHEN, Inc.
ENVIRONMENTAL & OCCUPATIONAL HEALTH SERVICES

July 15, 1988

Mr. Steven D. Graziano
Project Manager
Devcon Construction, Inc.
555 Los Cochos St.
Milpitas, CA 95035

Re: Abatement Procedures for Tar Paper on the Marketplace/Nielsen Site

Dear Steve:

This letter is written in response to your request for a summary of the measures taken to safeguard worker health on the Marketplace/Nielsen site in light of recently developed information indicating that asbestos-containing tar paper is present.

In summary, SOS personnel would began the abatement procedure on the afternoon of July 12 by wetting the ground at the 8-story with a gentle spray of water. Subsequently, SOS personnel progressed end-to-end through the pad, manually removing any material with a tar paper-like appearance. Al Toy of J.M. Cohen, Inc. assisted in the identification of suspect material. The removal process continued until all visible suspect surface material was removed. When completed, construction personnel were allowed to resume normal operations in the area. However, as a means of dust suppression, whenever workers are present in the area the surface of the soil will be kept moist by periodic spraying of water. The wetting will continue until a concrete cap is established on the pad.

Whenever new excavation is to occur in the area, Al Toy will be present to identify any suspect material unearthed. Upon detection of suspect material, construction personnel are to temporarily leave the immediate area and SOS personnel will remove the material. Soil surfaces in newly excavated areas on the 8-story pad will be kept moist as per the procedure described above. Excavated areas beyond the 8-story pad, for instance, utility trenches, will not be kept moist unless tar paper-like material is discovered. Subsequent to discovery, the excavated areas will require wetting until back-filled and capped, or filled with soil which has been established to be free of suspect material.

Al Toy will conduct periodic air monitoring to assure that airborne fiber counts are acceptably low, as per federal OSHA standards. Air samples will be collected both where suspect material has been

identified and on the perimeter of the site. Additionally, personal air samples will be collected on representative construction personnel during the course of normal activities in areas where suspect asbestos-containing materials have been identified.

Four air samples were collected on July 12 at the 8-story pad. On July 13 four air samples were collected at the perimeter of the site, one at each corner. On July 14 four air personnel air samples were collected.

Air samples provide a means of estimating average airborne chemical or particulate concentration during the monitored period. There are two basic approaches to air monitoring: area and personnel sampling. The latter requires an individual to wear the adsorbing matrix positioned in his or her breathing zone. Alternatively, for an area sample the matrix is positioned in a fixed location. Personnel samples, also known as personal samples, allow estimation of average employee exposure during the sampled interval, while area samples allow estimation of the average concentration in a given location during the sampled interval. Both sampling methods have been employed, and will continue to be employed, at the Marketplace/Nielsen site.

As will be detailed on an analytical report to be issued within the next week, fiber counts in the samples analyzed were without exception well below the Action Level of 0.1 fibers per cubic centimeter (fibers/cc) established by the U.S. Occupational Safety and Health Administration for asbestos. Fiber levels in the area samples collected on the 8-story pad on July 12 ranged from less than 0.003 to 0.008 fibers/cc. Three of the four samples collected at the site perimeter on July 13 were determined to have fiber counts of less than 0.004 fibers/cc; one of the samples was too loaded with non-fibrous dust to be analyzed. Similarly, two of the personnel samples collected on July 14 were to loaded with dust to be counted. The other two samples indicated airborne fiber counts of 0.02 fibers/cc and less than 0.01 fibers/cc.

To date, all available evidence supports the conclusions that asbestos originating in tar paper is not becoming airborne to a significant extent and that exposure to airborne asbestos is unlikely to occur during normal operations at the Marketplace/Nielsen site. Until a cap is put on the site, efforts will continue to be made to suppress dust movement and to remove any suspect material. Additionally, until that time, air monitoring will continue to be conducted periodically to ensure acceptable air quality.

If you have further comments on this matter, or if I may be of additional assistance, please do not hesitate to call.

Very truly yours,

Gregory E. Raymond, CIH

cc: Walter Kazmarek
Bob Russi
Al Toy
Patrick Sheehan

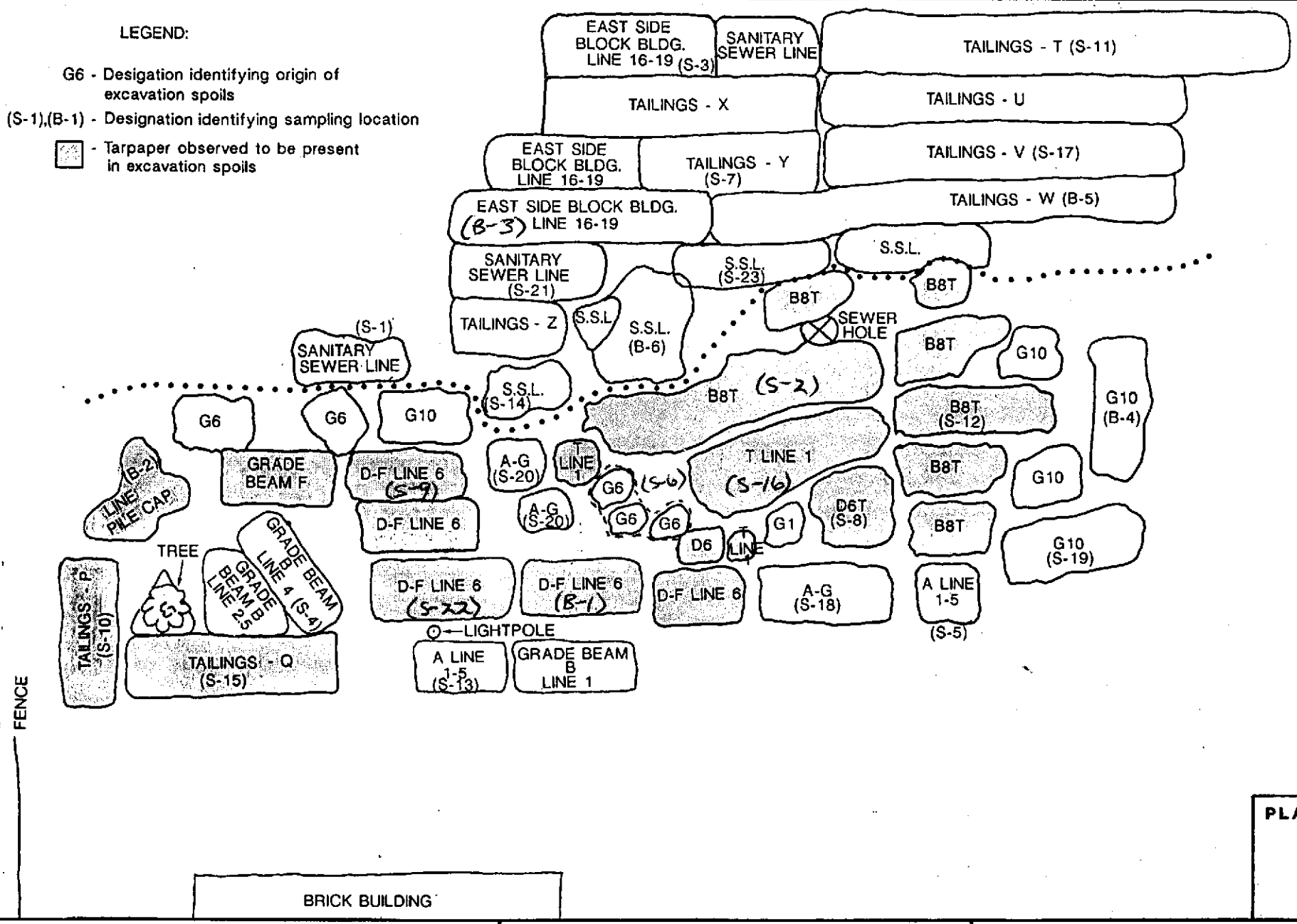

PLATE 1

ATT Aqua Terra Technologies Consulting Engineers & Scientists

Map of Excavation Spoils Piles - The Market Place Site

The Martin Company

JOB NUMBER	DATE
834	7-19-88

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222 • FAX (415) 364-9233

Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070563 Sample Description: Soil, B-1

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222 • FAX (415) 364-9233

Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070564
Sample Description: Soil, B-2

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

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859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070565

Sample Description: Soil, B-3

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	160
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

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Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070566

Sample Description: Soil, B-4

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

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Arthur G. Burton
Laboratory Director

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Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070567

Sample Description: Soil, B-5

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

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Earth Metrics
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Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070568

Sample Description: Soil, B-6

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

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Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 07/08/88
Date Received: 07/08/88
Date Analyzed: 07/13/88
Date Reported: 07/15/88
Project: #9570 A7, Eastshore

Sample Number: 8070569

Sample Description: Soil, Composite
S-1 thru S-23
(23 Samples)

VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit, µg/kg	Sample Results, µg/kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chlorodibromomethane	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	500	N.D.
Chloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
Total-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Method of Analysis: EPA 5030/8240
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222 • FAX (415) 364-9233

Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 06/29/88
Date Received: 07/08/88
Date Extracted: 07/12/88
Date Analyzed: 07/14/88
Date Reported: 07/15/88

Project: #9570 A7, Eastshore

Sample Number: 8070569

Sample Description: Soil, Composite S-1 thru S-23 (23 Samples)

SEMI-VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	22000	N.D.
Acenaphthylene	22000	N.D.
Anthracene	22000	N.D.
Benzidine	550000	N.D.
Benzoic acid	22000	N.D.
Benzo(a)anthracene	22000	N.D.
Benzo(b)fluoranthene	22000	N.D.
Benzo(k)fluoranthene	22000	N.D.
Benzo(g,h,i)perylene	22000	N.D.
Benzo(a)pyrene	22000	N.D.
Benzyl alcohol	22000	N.D.
Bis(2-chloroethoxy)methane	22000	N.D.
Bis(2-chloroethyl)ether	22000	N.D.
Bis(2-chloroisopropyl)ether	22000	N.D.
Bis(2-ethylhexyl)phthalate	110000	N.D.
4-Bromophenyl phenyl ether	22000	N.D.
Butyl benzyl phthalate	22000	N.D.
4-Chloroaniline	22000	N.D.
2-Chloronaphthalene	22000	N.D.
4-Chloro-3-methylphenol	22000	N.D.
2-Chlorophenol	22000	N.D.
4-Chlorophenyl phenyl ether	22000	N.D.
Chrysene	22000	N.D.
Dibenz(a,h)anthracene	22000	N.D.
Dibenzofuran	22000	N.D.
Di-N-butyl phthalate	110000	N.D.
1,3-Dichlorobenzene	22000	N.D.
1,4-Dichlorobenzene	22000	N.D.
1,2-Dichlorobenzene	22000	N.D.
3,3-Dichlorobenzidine	110000	N.D.
2,4-Dichlorophenol	22000	N.D.
Diethyl phthalate	22000	N.D.
2,4-Dimethylphenol	22000	N.D.
Dimethyl phthalate	22000	N.D.
4,6-Dinitro-2-methylphenol	110000	N.D.
2,4-Dinitrophenol	110000	N.D.
2,4-Dinitrotoluene	22000	N.D.
2,6-Dinitrotoluene	22000	N.D.

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Earth Metrics

Sample Number	Sample Description
8070569	Soil, Composite S-1 thru S-23 (23 Samples)

SEMI-VOLATILE ORGANICS by MASS SPECTROMETRY

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Di-N-octyl phthalate	22000	N.D.
Fluoranthene	22000	N.D.
Fluorene	22000	N.D.
Hexachlorobenzene	22000	N.D.
Hexachlorobutadiene	22000	N.D.
Hexachlorocyclopentadiene	22000	N.D.
Hexachloroethane	22000	N.D.
Indeno(1,2,3-cd)pyrene	22000	N.D.
Isophorone	22000	N.D.
2-Methylnaphthalene	22000	N.D.
2-Methylphenol	22000	N.D.
4-Methylphenol	22000	N.D.
Naphthalene	22000	N.D.
2-Nitroaniline	22000	N.D.
3-Nitroaniline	22000	N.D.
4-Nitroaniline	22000	N.D.
Nitrobenzene	22000	N.D.
2-Nitrophenol	22000	N.D.
4-Nitrophenol	110000	N.D.
N-Nitrosodiphenylamine	22000	N.D.
N-Nitroso-di-N-propylamine	22000	N.D.
Pentachlorophenol	110000	N.D.
Phenanthrene	22000	N.D.
Phenol	22000	N.D.
Pyrene	22000	N.D.
1,2,4-Trichlorobenzene	22000	N.D.
2,4,5-Trichlorophenol	22000	N.D.
2,4,6-Trichlorophenol	22000	N.D.

Method of Extraction: EPA 3550 Method of Analysis: EPA 8270
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222 • FAX (415) 364-9233

Earth Metrics
859 Cowan Road
Burlingame, CA 94010
Attn: Marc Papineau

Date Sampled: 06/29/88, 07/01/88
Date Received: 07/08/88
Date Extracted: 07/11/88
Date Reported: 07/15/88

Project: #9570 A7, Eastshore

Sample Number: 8070569
Sample Description: Soil, Composite S-1 thru S-23 (23 Samples)

WASTE EXTRACTION TEST
INORGANIC SUBSTANCES

Analysis	STLC, mg/L		TTLC, mg/kg-wet wt.	
	Limit	Result	Limit	Result
Antimony	15	-	500	< 5
Arsenic	5	0.25	500	5.8
Asbestos	-	-	10,000	-
Barium	100	3.8	10,000	150
Beryllium	0.75	-	75	0.20
Cadmium	1	-	100	0.36
Chromium (VI)	5	-	500	< 0.05
Chromium (III)	560	-	2,500	38
Cobalt	80	-	8,000	8.7
Copper	25	1.4	2,500	31
Fluoride	180	-	18,000	-
Lead	5	3.6	1,000	100
Mercury	0.2	-	20	0.45
Molybdenum	350	-	3,500	< 5
Nickel	20	0.28	2,000	30
Selenium	1	-	100	0.90
Silver	5	-	500	< 0.1
Thallium	7	-	700	< 5
Vanadium	24	-	2,400	23
Zinc	250	-	5,000	150

SEQUOIA ANALYTICAL LABORATORY

Scott Cameron

Arthur G. Burton
Laboratory Director

CHAIN OF CUSTODY RECORD

FOR: ROSS
DUE 7/15/88

PROJ. NO.	PROJECT NAME
9570 A7 ~~AG~~	EASTSHORE

SAMPLERS: Signature: Gregory Gruner / BRUCE JENSEN

STA NO	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO OF CONTAINERS	EPA 8240	REMARKS
B-1	7/8/88	8:30 AM	✓		"D.F. LINE 6"	1 BRASS	✓	
B-2	7/8/88	8:50 AM	✓		"T LINE PILE CAP"	1 BRASS	✓	
B-3	7/8/88	9:10 AM	✓		"BLOCK BUILDING EAST SIDE"	1 BRASS	✓	
B-4	7/8/88	9:30 AM	✓		"10 G"	1 BRASS	✓	
B-5	7/8/88	9:50 AM	✓		"TAILINGS"	1 BRASS	✓	
B-6	7/8/88	10:10 AM	✓		"S.S.L."	1 BRASS	✓	

Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time
Gregory Gruner	7/8/88 4:35 PM		7/8/88 4:35
Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time
Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time

REMARKS:

Earth Metrics Incorporated
859 Cowan Road, 1st Floor
Burlingame, CA 94010
(415) 697-7103

CHAIN OF CUSTODY RECORD

DUR 7/15/88

PROJ. NO.	PROJECT NAME
9570 ~~A6~~ A7	EAST SHORE

SAMPLERS: Signature Gregory Gruman

STA NO	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO OF CONTAINERS Glass Jar	Title 22 metals Total	Title 22 Metals Extractable	EPA 8240	EPA 8270	Asbestos	REMARKS
S-1 ~~G-1~~	6/29/88	9:20 AM		✓	"SANITARY SEWER LINE"	1						PAGE 1 OF 2
S-2 ~~G-2~~	6/29/88	9:30 AM		✓	"B8T"	1						Please composite S-1 through S-23
S-3 ~~G-3~~	6/29/88	9:40 AM		✓	"EAST SIDE BLOCK BLD"	1						
S-4 ~~G-4~~	6/29/88	9:45 AM		✓	"GRADE BEAM B LINE 4"	1						
S-5 ~~G-5~~	6/29/88	10:08 AM	✓		"A LINE 1-5"	1						
S-6 ~~G-6~~	6/29/88	10:25 AM	✓		"G6"	1						
S-7 ~~G-7~~	6/29/88	11:10 AM	✓		"TAILINGS"	1						
S-8 ~~G-8~~	6/29/88	11:30 AM	✓		"DGT"	1						
S-9 ~~G-9~~	7/1/88	10:30 AM	✓		"D-F LINE 6"	1						
S-10 ~~G-10~~	7/1/88	10:45 AM	✓		"TAILINGS"	1						
S-11 ~~G-11~~	7/1/88	11:10 AM	✓		"TAILINGS"	1						
S-12 ~~G-12~~	7/1/88	11:30 AM	✓		"B8T"	1						
S-13 ~~G-13~~	7/1/88	11:40 AM	✓		"A LINE 1-5"	1						

Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time
Gregory Gruman	7/8/88 4:35 pm	B. Day	7/8/88 4:35
Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time
Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time

REMARKS:

Earth Metrics Incorporated
859 Cowan Road, 1st Floor
Burlingame, CA 94010
(415) 697-7103

(CONTINUED)

CHAIN OF CUSTODY RECORD

PROJ. NO. 9570 A7 (~~AC~~) | PROJECT NAME: EAST SHORE

SAMPLERS: Signature: Gregory Gruner

	STA NO	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO OF CONTAINERS	Glass Jar	Title 22 Metals Total	Title 22 Metals Extract	EPA 8240	EPA 8270	Asbestos	REMARKS
S-14	~~G-14~~	7/1/88	11:50 AM	✓		"S.S.L."	1							PAGE 2 OF 2
S-15	~~G-15~~	7/1/88	12:40 PM	✓		"TAILINGS"	1							
S-16	~~G-16~~	7/1/88	12:50 PM	✓		"1 LINE T"	1							
S-17	~~G-17~~	7/1/88	1:20 PM	✓		"TAILINGS"	1							
S-18	~~G-18~~	7/1/88	1:40 PM	✓		"A-6"	1							
S-19	~~G-19~~	7/1/88	2:00 PM	✓		"10G"	1							
S-20	~~G-20~~	7/1/88	2:20 PM	✓		"AG"	1							
S-21	~~G-21~~	7/1/88	2:40 PM	✓		"SANITARY SEWERLINE"	1							
S-22	~~G-22~~	7/1/88	2:50 PM	✓		"D-F LINE 6"	1							
S-23	~~G-23~~	7/1/88	3:10 PM	✓		"S.S.L."	1							

Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time
Gregory Gruner	7/8/88 4:35 PM	B. Wu	7/8/88 4:35
Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time
Relinquished by:Signature	Date/Time	Received by:Signature	Date/Time

REMARKS:

Earth Metrics Incorporated
859 Cowan Road, 1st Floor
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(415) 697-7103