JOSLIN GEOTECHNICAL

GEOTECHNICAL AND MINING CONSULTANTS

924 Stockton Street * P.O. Box 193 * Dutch Flat * California 95714 * (916) 389-2581

93 AUG -6 PM 2:07

July 30, 1993

Barney M. Chan
Hazardous Material Specialist
Alameda County
Department of Environmental Health
80 Swan Way, Rm 200
Oakland, CA 94621

Reference: Snow Cleaners STID # 72

Dear Mr. Chan:

The following information and proposal is in response to your request for Implementation of Subsurface Investigation at Snow Cleaners at 2678 Coolidge Ave., Oakland CA 94601.

Work plan and site safety plan proposals for the installation of three monitoring wells at the site. Upon approval of this proposal we will immediately schedule the work with the contractor and USA and advised your office of the schedule. We have contacted the city of Oakland on the monitoring well permits in Davis Street and are waiting for their response.

Statement of qualifications is attached.

If you have any questions or comments please contact us.

Sincerely,

Robert O. Joslin

Robert Joslin
Civil / Geological Engineer
CE 37716

Attachments: Workplan and Site Safety
Statement of Qualifications
Site Map

cc: Harold Turner
R. Hiett, RWQCB

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PROPOSAL FOR
WORKPLAN & SITE SAFETY PLAN

Underground Tank Investigation and Monitoring Well Installation at Snow Cleaners (Oakland).

SITE LOCATION

2678 Coolidge Avenue
Oakland, California 94601

OWNERS:

Harold Turner
2678 Coolidge Avenue
Oakland, California 94601

CONSULTANT:

Joslin Geotechnical
PO Box 193
Dutch Flat, CA 95714

CONTRACTOR:

KvilHaug Drilling
1109 Landini Ln.
Concord, CA 94520

License # 482390

LABORATORY

McCampbell Analytical
110 2nd. Avenue South, # D7
Pacheco, CA 94553

I. INTRODUCTION

This proposal/workplan is presented by Joslin Geotechnical for Snow Cleaners for the installation of three monitoring wells at the Oakland site.

A. SCOPE Of WORK

1. The placement of three monitoring wells to determine any impact to ground water from underground tanks that were located at the site and the gradient flow of ground water in the area.

B. SITE LOCATION

2678 Coolidge Avenue
Oakland, California 94621

C. BACKGROUND

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks were in use at the time of the tank field removal and were examined at the time of the removal to be intact. Four additional tanks of different sizes (from 100 to 400 gallon capacity) were removed and holes were

observed in two of these tanks. These tanks were not used by Mr. Turner in his operation of the site which began in the 1970's.

Contents and use of the additional tanks was not determined. Date stamps on one of the tanks indicated a manufacturing date of 1927. Snow Cleaners has been in operation at the site since 1907.

D. SITE HISTORY

The current operator of the site is Harold Turner. The operation consists of a dry cleaning operation of primarily leather and fur products. The operation is a wholesale operation receiving leather and fur products from central and northern California and northern Nevada. The operation includes local walk-in retail business as well.

Two of the underground tanks were used in the operation for the storage of Stoddard Solvent. The remaining tanks were not used by Mr. Turner, and he was not aware the additional tanks. The openings to the additional tanks were sealed with concrete covers.

II. Site Description

The site is located in a residential area of Oakland with only local businesses located on Coolidge Avenue. The site is level and occupies a corner lot with Coolidge Avenue on the west, Davis Street on the south, a private residence on the north and an

apartment building on the east. The lot is 95% covered with concrete and structures.

At the time of the tank removal, the soil observed in the excavation was clayey in nature and non-permeable. Tanks that had been in the ground and unused for 25 plus (?) years still contained product with visible holes in the bottom of the tanks.

B. Site map included.

III. Plan for determining extent of soil contamination on-site.

Any existing currently?

A. This workplan is primarily for the installation of three additional monitoring wells to establish gradient flow of ground water in the vicinity as well as any impact of contamination to the water. Two of the wells will be placed in a location that will contribute in determining the extent of any soil contamination.

IV. Plan for installation of monitoring well.

A. Three additional monitoring wells will be placed on the site. Two of the wells will be placed on Davis Street in close proximity to the tank removal site. Care will be taken in the installation of these wells so as to not provide a conduit for contamination from the tank field to the ground water. However, due to the limited locations allowed for the installation of these wells field monitoring will be conducted at the time of the installation and the drilling of the wells will be discontinued if any contaminated soil is observed. Installation of the

third well will be attempted on the north side of the site on the north west corner. Some preliminary investigation will be conducted to determine the suitability of this site. Overhead wires and underground utilities are both present in this area. We are hopeful that a well can be placed at this location on the site. Permission has been received from the adjacent property owner to cross and park the drilling rig on his property to install this well. Should gradient flow not be established with the addition of the proposed in this plan, additional monitoring wells may be necessary.

B. Drilling method for construction of monitoring well will be with a mobile drill rig equipped with 7-inch outside diameter hollow augers.

The well will be constructed with 2-inch PVC casing and screen. The well screen slot size would be 0.010 inch due to the fine-grained nature of some subsurface materials identified in the tank excavation. A typical well construction diagram is shown in the appendix. The depths of the screened intervals in the wells would depend on field conditions. 5' above & 10' into aquifer

Development of the well will occur promptly after its construction. This would be performed by hand using a pre-cleaned PVC bailer. At least two well volumes will be removed from the well and placed in steel containers for storage on site until results are reported. (no sooner than 48hrs) pH, conductivity should stabilize prior to sampling

Water level will be measured, depending on depth to water level, by electronic depth meter or metal tape and visual observation.

Soil samples would be collected in the unsaturated zone at a minimum intervals of five feet. Additional samples would be collected if major changes in lithology were encountered or monitoring of soil cuttings indicated the presence indicated the presence of hydrocarbons. Samples would be collected with a California-modified sampler sampling through hollow-stem augers. Soil sampling will be in accordance with recommended procedures by the Department of Health Services and Regional Water Control Board, and will be collected and handled under chain of custody. The samples will be transported in a iced container to the laboratory.

All augers and sampling equipment would be decontaminated by steam cleaning prior to mobilization onto the site. All sampling equipment would be decontaminated with deionized water between each sampling event. All drill cuttings would be stored on-site in labeled, secured, 55-gallon drums until analytical results have been obtained to determine disposal options.

need to also TPH g, d & mo. [illegible] what was found originally in soil splrs *

Soil samples collected in the unsaturated zone during well bore drilling would be analyzed for TPH as gasoline (EPA Method 8015) and B-TEX. The water samples would be analyzed for TPH as gasoline (EPA Method 8015) and BTEX. Ground water samples would be examined for sheen, odor, and floating product. If floating product were observed in the wells, the thickness would be measured using a dual-interface probe. All soil and water well samples would be submitted under chain of custody to a California-certified laboratory for analysis.

All work associated with well installation would be supervised by a professional engineer registered in the state of California. A log of the well would be submitted to the California Department of water Resources for its files.

After completion of the wells and sampling, a report would be submitted to the County Health Department and the RCQCB delineating the methods used and the results of the well installation and sampling. The report would include recommendations for additional activities to further delineate potential ground water contamination, remediation, or future monitoring activities.

SITE SAFETY PLAN

EMPLOYEE TRAINING ASSIGNMENTS

Employees will have completed the required courses to be on a potential hazardous waste site. Employees will understand proper sampling techniques and be able to perform them. Designated employees will also be familiar with basic first aid techniques and cardiopulmonary resuscitation.

HEALTH AND SAFETY ISSUES

Joslin Geotechnical has not identified any health or safety issues that would endanger employees or the general public during this phase of this work plan. The contaminate is commonly referred to as Stoddard solvent. Material Safety Data Sheets will be made available to all prior to entering the site. Federal OSHA exposure standards and ACGIH TLV

standards will be monitored but it is not deemed an inhalation hazard in well ventilated areas. Due to mixture with soil and water, the material is below the flammability and explosive levels. These levels will be monitored during drilling activities at the site to assure worker safety.

Drill cuttings removed from installation of the monitoring wells will be stored on site until laboratory analysis is completed and disposal options prepared.

Therefore, Joslin Geotechnical has determined that class D personal protection equipment (Coveralls; Gloves; Boots - steel toe and shank; Safety Glasses; Hard Hat) are all that may be necessary. In the event of an accident, any responding outside medical personnel will not be endangered if they enter the site and will not require any special training for hazardous materials handling.

Overhead wires or cables are present at the drilling locations and care will be taken to prevent injuries during the drilling process. Awareness of potential unmarked utilities was taken into consideration in selecting the monitoring well sites. The services of USA will be utilized, although it is noted that additional underground utilities were discovered during the original tank removal that were unknown to USA.

At the reported levels of hydrocarbons at the site, there appears to be no explosive or fire hazard to the drilling operation

STAFF ASSIGNMENTS

Joslin Geotechnical will provide the site management. Their staff will coordinate the following personnel and task:

1. Project Manager will supervise the staff to maintain a coordinated effort and efficiency during the job.

2. KvilHaug Drilling will provide all supplies and equipment for the drilling of the monitoring well as well as providing qualified personnel.

3. State Registered Civil Engineer will supervise the drilling and installation of the monitoring wells, maintain a drilling log, and supervise the sampling.

4. Designated staff will collect soil samples from the bore holes for laboratory analysis using proper collection and sampling techniques and chain-of custody papers.

5. Site Manager will supervise the collection water samples after 24 hours.

MEDICAL SURVEILLANCE

The Site Medical/Safety Officer will always be available to render any first aid that may be needed. In the event of an emergency, 911 will be utilized to obtain assistance. Local hospitals will utilized in the event of a medical emergency. Since hydrocarbons in soil do not present an inhalation risk and will not cause burns when it comes into contact with the skin, the Medical Officer's role will be relatively passive. Joslin Geotechnical will continue to follow the CAL/OSHA guidelines and office policy for medical surveillance.

MONITORING EQUIPMENT

The following monitoring equipment will be used during this project:

1. Gastech environmental monitor calibrated to hexane to be used continuously while staff are present at the site. Maintenance for the monitor is done routinely on a monthly basis.

SITE CONTROL MEASURES

Spectators will be kept away from the drilling sites by designated employees. The wells will be capped and locked to keep contamination out of the water and a metal guard will be placed over the well head to protect it from destruction.

DECONTAMINATION PROCEDURES

The following procedure will be observed for the decontamination of the involved equipment and personnel:

1. Hydrocarbons can be removed by using water. Necessary equipment and personnel will decontaminate themselves by rinsing themselves and their equipment off at the site with water. The residue is considered to be a nuisance material and not hazardous to human health.

CONTINGENCY PLAN

In the event that other contamination or health issues arise, Joslin Geotechnical will follow these guidelines:

1. Stop activity.

2. Assess the new situation and determine the possible hazards to staff safety and health.

3. Resolve any identified hazards without continuing to contribute to the problem.

4. Proceed with drilling when all other issues have been resolved.

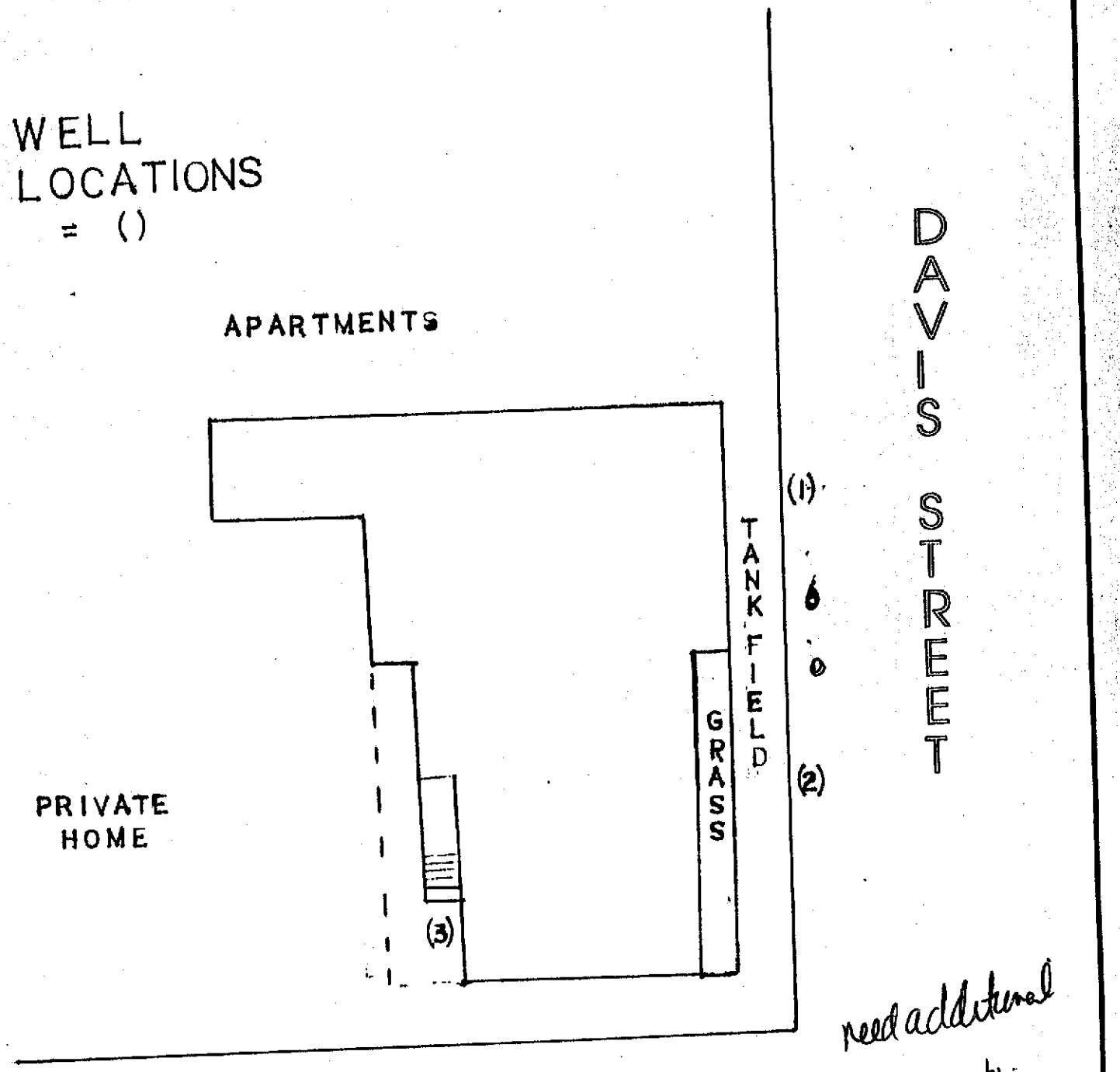
CONFINED SPACE ENTRY PROCEDURES

Since the contaminated area is under the ground or in the open, it will not be necessary to use confined space entry procedures.

Submitted by:

Robert D. Joslin

Robert Joslin, CE #37716
Joslin Geotechnical
924 Stockton St.
Dutch Flat, CA 95714



JOSLIN GEOTECHNICAL	SNOW CLEANERS OAKLAND, CALIFORNIA	PLATE ONE

CERTIFICATE OF INSURANCE

The Insurance Company indicated below certifies that the insurance afforded by the policy numbered and described below is in force as the effective date of this certificate. This Certificate of Insurance does not amend, extend, or otherwise alter the Terms and Conditions of Insurance coverage contained in any policy or policies numbered and described below.

Certificate Holder's Name and Address:
JOSLIN GEOTECHNICAL
ATTN: BOB JOSLIN
P.O. BOX 193
DUTCH FLAT, CA 95714

Insured's Name and Address
KVILHAUG WELL DRILLING & PUMP
1109 Landini Lane
Concord, CA 94520

TYPE OF INSURANCE	POLICY NUMBER AND ISSUING COMPANY	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	LIMITS OF LIABILITY (*Limits at Inception)	
GENERAL LIABILITY					
[x] Premises - Operations	73-			General Aggregate*	$2,000,000
[x] Products - completed Operations	PR506204-0001	5-15-93	5-15-94	Pr. Comp. Op. Agg*	$2,000,000
				Each Occurrence	$2,000,000
[x] Personal & Advertising Injury				Any One Person/Org	$2,000,000
[x] Medical Expense				Any One Person	$ 5,000
[x] Fire Damage Legal				Any One Fire	$ 50,000
[ ] Other Liability					
[ ] GARAGE LIABILITY-PREMISES				Each Accident	
				Aggregate*	
AUTOMOBILE LIABILITY #					
[x] BUSINESS AUTO	73-			Bodily Injury	OCCURRENCE
[ ] GARAGE	BA 506204-0002	5-15-93	5-15-94	(Each Person)	
[x] Owned				(Each Accident)	
[x] Hired				Property Damage	
[x] Non-Owned				(Each Accident)	
				Combined Single	
#Fill-in Either Combined				Limit	$1,000,000
Single Limits or Split Limits					
EXCESS LIABILITY					
	73-				
	CU 506204-0004	5-15-93	5-15-94	Each occurrence	$1,000,000
[X] Umbrella Form				Aggregate#	$1,000,000
[x] Workers Compensation				Statutory Limits	
				Bodily Injury	Ea. Accident
	73-			by Accident	$ 100,000
and	WC 506204-0003	1/01/93	1/01/94	Bodily Injury	Ea. Employee
				by Disease	$ 100,000
[x] Employer's Liability				Bodily Injury	Policy Limit
					$ 500,000
[ ] Other					

Insurance in force only for hazards indicated by X. Should any of the above described policies be cancelled before the expiration date thereof, the insurance company will mail 30 days written notice to the certificate holder named above.

Description of Operations/ Locations/Vehicles/ Restrictions/Special Item

Effective Date of Certificate: 5-15-93

Date Certificate Issued: 6-2-93

Authorized Representative: Gary C. Cardani
NATIONWIDE MUTUAL INSURANCE COMPANY
Countersigned at: 601 Gateway Blvd, Suite 740
So. San Francisco, CA 94080

STATE OF CALIFORNIA
DEPARTMENT OF
Consumer Affairs

Board of Registration for Professional
Engineers & Land Surveyors

2535 CAPITOL OAKS DRIVE, SUITE 300
SACRAMENTO, CA 95833-2926
916 920-7466

CIVIL ENGINEER

EXPIRATION 12/31/96

CERTIFICATE NO. C 37716

ROBERT DAVID JOSLIN
P O BOX 193
DUTCH FLAT CA 95714

Signature Robert David Joslin

RECEIPT NO.
32400895

PPRC 10/15/92

ROBERT DAVID JOSLIN

924 Stockton Street
P.O. Box 193
Dutch Flat, California 95714
(916) 389-2581

EDUCATION

M.S.Degree, Mining Engineering, University of Nevada-Reno, 5/82
B.S. Degree, Civil Engineering, University of Nevada-Reno, 12/76
B.S. Degree, Mining Engineering University of Nevada-Reno, 5/76
B.S. Degree, Geological Engineering University of Nevada-Reno 12/75
A.A.S. Degree Fire Science, Western Nevada Community College, 12/78

Specialization in geotechnical engineering: Management courses.
Thesis topic: "Effects of Stemming Variations on Open-Pit Blasting, A Laboratory Study."

CONTINUING EDUCATION (LAST 5 YEARS)

Fire assaying; Sierra College, 1988 (semester course)
Gold Tech III conference; Reno, Nevada, 1989
Fluid Transport in Vadose and Saturated Zones; Association of Engineering Geologists, Sacramento, California, 1988
Tailings Dam Design Short Course; University of Nevada, Reno, Nevada, 1989
25th Symposium on Engineering Geology and Geotechnical Engineering; Reno, Nevada, 1989 (Our firm presented a paper on Soil Nailing at this conference on our then on-going project).
Pavement Maintenance seminar; PEI, Hayward, CA, 1988
16 Hour Hazardous Materials Training; California Highway Patrol, Alta, CA, 1989
40 Hour OSHA-SARA Hazardous Materials Training; Ecotech Services, Auburn, CA, 1991; 8 hr. refresher, Oct. 1992.
Reinforced Earth Design, Maintenance and Construction; Sacramento, CA, 1990
Existing Concrete & Masonry Evaluation, Repair & Anchorage; TTEA, Lake Tahoe,CA, 1/91
In Situ Soil Remediation; University of Wisconsin, Milwaukee; New Orleans, 1993
Slope and Trench Excavation and Safety OSHA Standards; ASCE, Sacramento, CA, 1993
Geotechnical Practice for Dam Rehabilitation; ASCE, Raleigh, NC,1993

REGISTRATION

Geological Engineer No. 6633, Nevada
Civil Engineer No.37716, California

EXPERIENCE

JOSLIN GEOTECHNICAL, Dutch Flat, CA
Owner, 1982 to present
JUDD HULL & ASSOCIATES, Hayward, CA
Staff Engineer, 1983
ECOM INDUSTRIAL, INC., San Ramon, CA
Geotechnical Engineer, 1982
EARTH SCIENCE CONSULTANTS ASSOC.
Sparks, NV
Staff Engineer, 1978 to 1982
UNIVERSITY OF NEVADA, RENO,
Reno, NV
Junior Research Engineer, 1977
U.S. FOREST SERVICE, Reno, NV
Civil Engineering technician, 1976
HAWKE ENGINEERS,San Francisco, CA
Field Engineer, 1975
JOSLIN ENGINEERING, Dutch Flat, CA
Partner, 1974 to 1975
PACIFIC GAS AND ELECTRIC CO.,
San Francisco, CA
Engineer's Aide, Summers, 1970 to 1974

TYPICAL PROJECTS AND AREAS OF EXPERIENCE GEOTECHNICAL AND CIVIL:

High angle (via ropes) soil nailing investigation

State-of-art soil nailing design

Senior geotechnical field engineer during construction, California State Prison, Pelican Bay

Reinforced earth construction

Underwater (including scuba diving) marina geotechnical investigations in environmentally sensitive areas (Lake Tahoe)

Sewage treatment plant geotechnical design and recommendations

Foundation analysis for dam safety, concrete gravity dam

Roller-compacted concrete dam buttress and spillway design (ongoing, 1993)

Geotechnical analysis and recommendation of and for mine slopes in environmentally sensitive area (Santa Cruz County, California)

Pressure grouting of dam abutments, 200 foot high dam

TYPICAL PROJECTS AND AREAS OF EXPERIENCE, Continued

Geotechnical and foundation investigations of subdivisions of up to 300 units, single and multi-story hospitals, multi-story hotels and office buildings, liquid storage tanks, schools, hydro-electric power plants, sewage treatment plants, multi-level parking garages and numerous other commercial and residential projects.

Slope stability and landslide investigation for commercial and residential structures, roads, and geothermal well and sump pads, including use of inclinometer and extensometers.

Geologic mapping for site analysis.

Liquefaction potential studies.

Geophysical seismic investigations for rippability studies, determination of bedrock engineering properties, and ground water investigations.

Retaining wall investigations and recommendations.

Fault location and determination of seismic responses of soil.

Solid waste disposal site investigations.

Geological studies for water supply and waste water collection lines.

Geotechnical investigations and recommendations for location of and mitigation of hazardous materials - diesel, grease and oil, gasoline.

Ground water and soil monitoring of chemical contamination and cleanup.

Dewatering studies and recommendations for construction excavations.

Ground water aquifer evaluation including water well siting, well logging, well design, and pump testing.

Site investigation for earth fill dams, rock and concrete flood-diversion dams and dikes.

Earth fill dam design.

Explosives and ordinance testing related to soil and anchor behavior during blast loading.

Environmental impact report preparation and review

Field and laboratory soil testing.

Field and laboratory materials testing, including aggregate, portland cement concrete, asphalt concrete and rock.

Erosion control studies and recommendations

MINING-TUNNELING-ROCK MECHANICS

Analysis of mine property and preliminary development of dewatering and assessment plan; Whitehorse, Yukon Territory

Analysis of fluvial deposits for use as aggregate and precious metals mines, several locations - California and Georgia

Development of and permitting work for operation of mines, reclamation and remediation plans, etc.

Mine property evaluations, surface and underground.

Analysis and preliminary geologic exploration of mining properties.

Surface mine design formulation.

Equipment analysis for mine operations.

Rippability studies for mine stripping.

Ore reserve calculations and economic analysis of properties.

Marketing of mining properties.

Efficiency improvements studies for small surface mines.

Consultant during repair of a caved hydroelectric pressure tunnel.

Analysis and design of various rock bolt patterns and methods, including expanding head types, portland cement and epoxy grouted bars, and split sets.

Rock mechanics studies for microwave tower installations.

Design of anchorage systems of foundations to rock using rock bolts

PROFESSIONAL AFFILIATIONS

Association of Engineering Geologists

American Institute of Mining Engineers

American Society of Civil Engineers

Tau Beta Pi Engineering Scholastic Society

PROFESSIONAL AFFILIATIONS, Continued

American Council of Independent Laboratories

American Society of Testing Materials

Tahoe Truckee Engineers Association, (Director, 1991-1993)

SEMINAR PRESENTATIONS

Short Course on Soil Compaction, Tahoe Truckee Engineers Assn., 11/88

Short Course on Soil Compaction and Civil Design Improvement Recommendations, Tahoe Truckee Engineers Assn., 11/90

COMMUNITY SERVICE

Assistant Cub Scout Leader (1989 to present)

Assistant Boy Scout Leader, (1992 to present)

Firefighter, Dutch Flat Volunteer Fire Department, (1983 to present)

Commissioner, Dutch Flat Volunteer Fire Department, (1983 to present)

Emergency Medical Technician, (1977 to present)

Certificate of Attendance

This certifies that

JOEL VIGIL

has completed forty hours

of

Hazardous Waste Site Operations Training

September 29, 30 & October 6, 7 of 1989

Oakland, California

Presented by:
Environmental & Safety Resources

Certificate of Attendance

MAY IT BE KNOWN THAT THIS CERTIFICATE HAS BEEN PRESENTED TO

Mike Crocker

FOR THE SUCCESSFUL COMPLETION OF 8 HOURS OF REFRESHER TRAINING
IN HAZARDOUS WASTE SITE OPERATIONS
IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY
THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
AND CALIFORNIA DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH
AS DEFINED IN 29 CFR 1910.120 AND TITLE 8 CCR 5192

April 8, 1993

[redacted]

Kevin Boss, Instructor

Certificate of Attendance

MAY IT BE KNOWN THAT THIS CERTIFICATE HAS BEEN PRESENTED TO

Joel Vigil

FOR THE SUCCESSFUL COMPLETION OF AN EIGHT HOUR REFRESHER COURSE
IN HAZARDOUS WASTE SITE OPERATIONS
IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY
THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
AS DEFINED IN 29 CFR 1910.120

ON THIS TWENTY-FIRST DAY OF DECEMBER, 1992

[redacted]

Eric Rothwell, Instructor

Keith Walsh and Associates, Inc.

Certificate of Completion

This Is To Certify That

MIKE CROCKER

Has Completed 40 *Hours Of:*

HAZARDOUS WASTE OPERATIONS 29CFR 1910.120

MARCH 14, 15, 16, AND 17, 1988
Date

HAYWARD, CALIFORNIA
Location

Keith Walsh
President