

STID 6593
January 16, 2002
RGA Job # HSHI3908
Report 0164.R10

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502

RE: POST-CONSTRUCTION RISK MANAGEMENT PLAN
Hardage Construction Corporation/Woodfin Suite Hotels Site
5800 Shellmound Avenue
Emeryville, CA

Dear Ms. Hugo:

In accordance with our discussions concerning residual risk at the subject site, RGA Environmental, Inc. (RGA) is pleased to present this Post-Construction Risk Management Plan (RMP) for residual risk management associated with soil and groundwater contaminants at the subject site. The results of quarterly groundwater monitoring and sampling have shown no substantial change in water quality at the site. The risk posed by residual contamination in soil and groundwater at the site is compatible with the current land use, which is a hotel with a surrounding parking lot. This RMP provides procedures for long term risk management for future facility maintenance and construction workers. A Site Location Map is attached as Figure 1, and a Site Plan showing the existing building footprint and the existing groundwater monitoring well locations is attached with this report as Figure 2.

BACKGROUND

Historical site use and site investigation results are summarized in RGA's Site History Report Summary dated May 15, 1998. The range of contaminant concentrations historically encountered during investigations at the site is provided in the May 15, 1998 report. Contaminant concentrations encountered during soil characterization for disposal purposes during site construction are summarized in RGA's Soil and Water Management Documentation Report. The minimum and maximum concentrations encountered at the site for the different contaminants in soil are summarized in Table 1. The results of one year of quarterly monitoring and sampling of the groundwater monitoring network for the subject site are summarized in RGA's Quarterly Monitoring and Sampling Report dated May 2, 2001. The minimum and maximum concentrations for the different contaminants in groundwater are summarized in Table 2. A total of seven groundwater monitoring wells are present at the site.



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Site construction activities consisted of removal of a parking lot and associated landscaped areas, excavation for installation of piles, footings, two elevator sumps, a swimming pool and underground utilities; construction of a hotel; and resurfacing of the remaining portions of the site. During construction activities, the portions of the site located outside the footprint of the existing structure were covered with a sheet of visqueen, which was in turn covered with approximately six to twelve inches of soil. The purpose of these cover materials was to eliminate worker exposure to soil contaminants at the site.

Soil and water generated during construction activities were managed in accordance with RGA's Contamination Mitigation Work Plan dated March 24, 1998 and RGA's Contamination Mitigation Work Plan Addendum dated June 22, 1998. Following completion of construction, indoor air quality testing was performed. Documentation of the air sampling and sample results is provided in RGA's Air Testing for Volatile Organic Compounds (VOCs) letter dated September 7, 2000.

RISK POSED BY SOIL AND GROUNDWATER CONTAMINATION

Volatile Organic Compounds have been encountered in soil and water at the site only at low concentrations and infrequently. The results of post-construction indoor air testing showed no VOCs. The primary contaminants of concern are heavy metals and diesel-range or oil-range petroleum hydrocarbons. As discussed above, the ground surface outside the building footprint was capped with a sheet of plastic and clean soil, separating people on the ground surface at the site from the contaminants in soil and water located below the plastic and soil cover. These cover materials were subsequently covered by an asphalt parking lot or landscaping. The soil within the footprint of the building was covered with a concrete floor slab. The results of quarterly groundwater monitoring and sampling have shown no substantial change in water quality at the site. Routine hotel operations at the site do not entail exposure to soil or groundwater contaminants located beneath the cover materials. For these reasons, the risk posed by residual contamination in soil and groundwater at the site is compatible with the current land use.

Facility employees and customers should not come into contact with subsurface contaminants through routine facility operations. Based upon conversations with Hardage Construction personnel, it is RGA's understanding that additional landscaping soil was placed into planters to reduce the risk of maintenance personnel exposure to subsurface contaminants. However, maintenance personnel and construction workers associated with any future excavation below the plastic liner located outside the building footprint or the concrete floor within the building footprint may be exposed to soil and groundwater contaminants.

The San Francisco Bay Regional Water Quality Control Board (RWQCB) has prepared Risk-Based Screening Levels (RBSLs) for over 100 common contaminants. A copy of

Table K-3, entitled, "Direct-Exposure Screening Levels For Construction/Trench Worker Exposure Scenario," from the RWQCB document entitled, "Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater (Interim Final – August 2000)," is attached with this report. Comparison of the RWQCB table with the maximum concentrations of contaminants encountered at the site in soil (Table 1) shows that an unacceptable level of risk may exist for workers who come into contact with subsurface soil for the following compounds: arsenic and copper. *and lead*

Table I-2, entitled, "Components For Groundwater Ceiling Levels (Groundwater IS NOT a current or potential source of drinking water)," from the RWQCB document entitled, "Application of Risk-Based Screening Levels and Decision Making to Sites With Impacted Soil and Groundwater (Interim Final – August 2000)," is also attached with this report. Comparison of the RWQCB table with the maximum concentrations of contaminants encountered at the site in groundwater (Table 2) shows that there are no compounds for which an unacceptable level of risk may exist for workers who come into contact with groundwater.

RISK MANAGEMENT PROCEDURES

To minimize risk to maintenance personnel and construction workers associated with any future excavation below the plastic liner located outside the building footprint, the following policies and procedures will be implemented.

- A copy of this RMP will be maintained at the subject site by the facility operations manager.
- All subcontractors who may be exposed to subsurface soil or water at the site will be informed of the subsurface conditions and potential exposure hazards.
- All facility personnel who may be exposed to subsurface soil or water at the site will be informed of the subsurface conditions and potential exposure hazards upon receipt of this RMP and on an annual basis thereafter. RGA recommends that the potential subsurface hazard be reviewed during hazard communication refresher training.
- ✓ All new employees or employees transferred to the facility who may be exposed to subsurface soil or water will be informed of the subsurface conditions and potential exposure hazards at the time of assignment, and thereafter on an annual basis.
- Hazardous waste site operations and procedures will be followed in accordance with California Code of Regulations Title 8 Section 5192 for all work performed beneath the concrete slab located within the building footprint, and for all work performed beneath the subsurface plastic liner located outside the building footprint.
- Any excavated soil from beneath the concrete slab located within the building footprint, and for all work performed beneath the subsurface plastic liner located

outside the building footprint will be managed in accordance with RGA's Contamination Mitigation Work Plan and Contamination Mitigation Work Plan Addendum, attached with this report as Appendix A.

LIMITATIONS

This report was prepared solely for the use of Hardage Construction Corporation. The content and conclusions provided by RGA in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

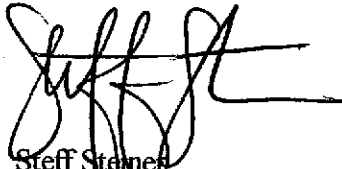
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. RGA is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

January 16, 2002
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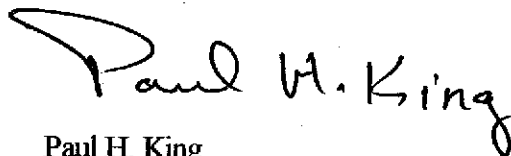
Should you have any questions, please do not hesitate to call us at (510) 547-7771.

Sincerely,

RGA Environmental



Steff Steiner
Project Manager



Paul H. King
California Registered Geologist
Registration No.: 5907
Expires: 12/31/01

Attachments: Site Location Map (Figure 1)
Site Plan Showing Well Locations (Figure 2)
Table 1 – Maximum and Minimum Contaminant Concentrations in Soil
Table 2 – Maximum and Minimum Contaminant Concentrations in
Groundwater
Table K-3 - Direct-Exposure Screening Levels For Construction/Trench
Worker Exposure Scenario
Table I-2 – Components For Groundwater Ceiling Levels (Groundwater IS
NOT a current or potential source of drinking water)
Appendix A –Contamination Mitigation Work Plan and Contamination
Mitigation Work Plan Addendum

cc: Mr. Sam Hardage, Hardage Construction Corporation

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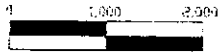


FIGURE 1
SITE LOCATION MAP
 Hardage Construction Corporation Site
 5800 Shellmound Street
 Emeryville, California



Source:
 U.S. Geological Survey
 Oakland West, California
 7.5 Minute Quadrangle
 Photorevised, 1980

RGA Environmental, Inc.
 4701 Doyle Street, Suite 14
 Emeryville, California 94608



SCALE IN FEET

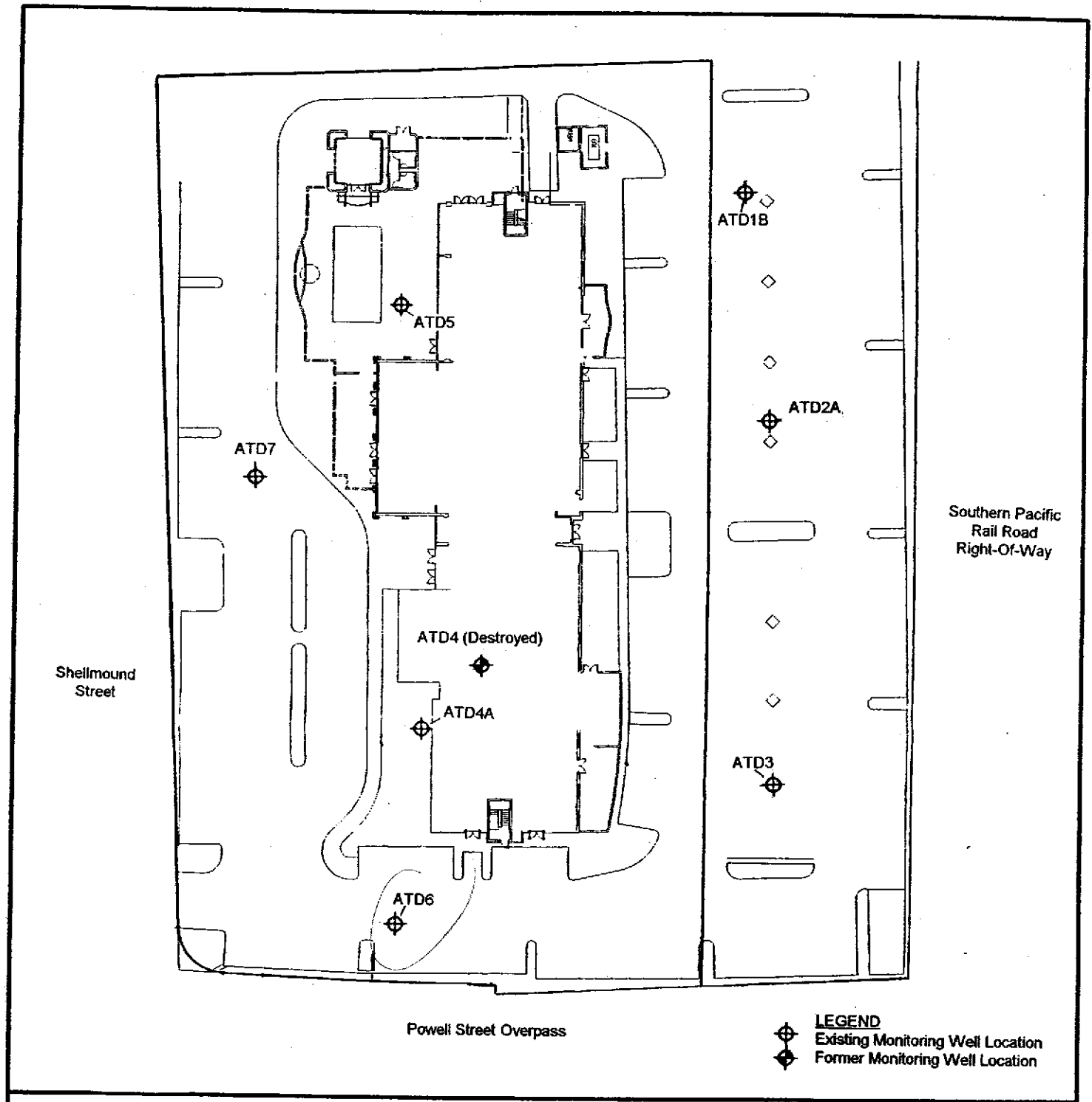


FIGURE 2
SITE PLAN
 Harbage Construction Corporation Site
 5800 Shellmound Street
 Emeryville, California



Source:
 Sandline & Thompson, Inc.
 Woodfin Suite Hotel
 Monitoring Well Location and Elevation Map
 March, 1999

RGA Environmental, Inc.
 4701 Doyle Street, Suite 14
 Emeryville, California 94608



SCALE IN FEET

0164R10T1	TABLE 1					
	MINIMUM AND MAXIMUM CONTAMINANT CONCENTRATIONS					
	IN SOIL (MG/KG)					
	5800 Shellmound Street					
	Emeryville, CA					
Compound	Minimum	Maximum	Table K-3			
	Conc.	Conc.	Conc.			
	(mg/kg)	(mg/kg)	(mg/kg)			
Antimony	1	205.9	210			
Arsenic	2.8	45.5	13 *			
Barium	29.4	377.2	2400			
Benzene	0.006	0.012	16			
Benzo(a)anthracene	2.6	2.6	12			
Benzo(b)fluoranthene	3.7	3.7	12			
Benzo(k)fluoranthene	3.1	3.1	12			
Benzo(a)pyrene	0.8	0.8	1.2			
Benzo(ghi)perylene	1.8	1.8	12000			
Beryllium	0.4	0.4	95			
Cadmium	0.57	6.1	61			
Chrysene	0.8	0.8	120			
Chromium III	5	880	800000			
Chromium VI	0.2	0.2	1.8			
Cobalt	1.8	37.6	32000			
Copper	16	46,819	20000 *			
Dibenz(ah)anthracene	2.4	2.4	3.5			
Ethylbenzene	0.005	0.037	230			
Fluoranthene	30.2	30.2	12000			
Fluoride	2.7	3				
Indenopyrene	1	1				
Lead	6	10,634	1000 *			
Mercury	0.07	75.5	160			
Manganese	94.4	1181.7				
Molybdenum	3	4.3	2700			
Nickel	7.7	82.7	1000			
Phenanthrene	4.3	4.3	18000			
Pyrene	16.7	16.7	16000			
Selenium	ND<3.9	39.8	2700			
Silver	0.4	20.4	2700			
Tin	140.7	140.7				
Toluene	0.01	0.028	520			
TPH-Gasoline	0.62	470	16000			
TPH-Diesel	6	890	16000			
TPH-Residual	1	7500	16000			
Vanadium	14.6	59	3700			
Xylenes	0.009	0.04	210			
Zinc	36	24317.3	160000			
NOTES:						
* Indicates concentration resulting in unacceptable level of risk to construction workers performing work in trenches.						

0164R10T2		TABLE 2				
		MINIMUM AND MAXIMUM CONTAMINANT CONCENTRATIONS				
		IN GROUNDWATER (ug/L)				
		5800 Shellmound Street				
		Emeryville, CA				
Compound	Minimum	Maximum	Table 1 - 2			
	Conc.	Conc.	Conc			
	(ug/L)	(ug/L)	(ug/L)			
Arsenic	5.5	10000	50000			
Barium	27	340	50000			
Benzene	1.4	3.2	20000			
Cadmium	ND	ND	50000			
Chromium III	24	31	50000			
Lead	13	100	50000			
Mercury	1	6	28			
Selenium	ND	ND	50000			
Silver	ND	ND	50000			
Toluene	0.51	12	400			
TPH-Gasoline			5000			
TPH-Diesel	99	3000	5000			
TPH-Residual			5000			
Xylenes	0.92	25	5300			
No concentrations encountered resulting in unacceptable level of risk to construction workers performing work in trenches.						

**TABLE K-3. DIRECT-EXPOSURE SCREENING LEVELS
FOR CONSTRUCTION/TRENCH WORKER EXPOSURE SCENARIO**

CHEMICAL	Final Screening Level (mg/kg)	Basis	Carcinogens (Risk = 10 ⁻⁶) (mg/kg)	Noncarcinogens HQ = 0.2 (mg/kg)	Noncarcinogens (HQ = 1.0) (mg/kg)	Saturation (mg/kg)
ACENAPHTHENE	26000 nc	noncarcinogenic effects	-	2.6E+04	1.3E+05	N/A
ACENAPHTHYLENE	18000 nc	=fluorene	-	-	-	N/A
ACETONE	12000 nc	noncarcinogenic effects	-	1.2E+04	6.1E+04	1.0E+05
*ALDRIN	0.95 ca	carcinogenic effects	9.5E-01	9.7E+00	4.9E+01	N/A
ANTHRACENE	150000 nc	noncarcinogenic effects	-	1.5E+05	7.5E+05	N/A
ANTIMONY	210 nc	noncarcinogenic effects	-	2.1E+02	1.1E+03	N/A
*ARSENIC	13 ca	carcinogenic effects	1.3E+01	1.3E+02	6.7E+02	N/A
BARIUM	2400 nc	noncarcinogenic effects	-	2.4E+03	1.2E+04	N/A
*BENZENE	16 ca	noncarcinogenic effects	1.6E+01	5.8E+01	2.9E+02	9.3E+02
*BENZO(a)ANTHRACENE	12 ca	carcinogenic effects	1.2E+01	-	-	N/A
*BENZO(b)FLUORANTHENE	12 ca	carcinogenic effects	1.2E+01	-	-	N/A
*BENZO(k)FLUORANTHENE	12 ca	carcinogenic effects	1.2E+01	-	-	N/A
BENZO(g,h,i)PERYLENE	12000 nc	=fluoranthene	-	-	-	N/A
*BENZO(a)PYRENE	1.2 ca	carcinogenic effects	1.2E+00	-	-	N/A
BERYLLIUM	95 nc	noncarcinogenic effects	1.1E+02	9.5E+01	4.8E+02	N/A
BIPHENYL 1,1	350 sat	saturation limit	-	2.1E+04	1.1E+05	3.5E+02
*BIS(2-CHLOROETHYL)ETHER	6.1 ca	carcinogenic effects	6.1E+00	-	-	9.6E+03
BIS(2-CHLOROISOPROPYL)ETHER	200 ca	carcinogenic effects	2.0E+02	7.4E+03	3.7E+04	7.9E+02
BIS(2-ETHYLHEXYL)PHTHALATE	1200 ca	carcinogenic effects	1.2E+03	6.5E+03	3.2E+04	N/A
BORON	23000 nc	noncarcinogenic effects	-	2.3E+04	1.2E+05	N/A
*BROMODICHLOROMETHANE	41 ca	carcinogenic effects	4.1E+01	2.1E+03	1.1E+04	4.8E+03
BROMOFORM	2100 ca	carcinogenic effects	2.1E+03	6.5E+03	3.2E+04	N/A
BROMOMETHANE	31 nc	noncarcinogenic effects	-	3.1E+01	1.5E+02	N/A
*CADMIUM	61 ca	carcinogenic effects	6.1E+01	2.6E+02	1.3E+03	N/A
*CARBON TETRACHLORIDE	7.9 ca	carcinogenic effects	7.9E+00	1.7E+01	8.3E+01	9.8E+02
*CHLORDANE	17 ca	noncarcinogenic effects	1.7E+01	2.0E+02	1.0E+03	N/A
CHLOROANILINE, p-	1300 nc	noncarcinogenic effects	-	1.3E+03	6.5E+03	N/A
CHLOROBENZENE	680 sat	saturation limit	-	1.2E+03	6.0E+03	6.8E+02
CHLOROETHANE	290 ca	carcinogenic effects	2.9E+02	4.0E+04	2.0E+05	N/A
*CHLOROFORM	3.2 nc	noncarcinogenic effects	8.8E+01	3.2E+00	1.6E+01	3.5E+03
CHLOROMETHANE	110 ca	carcinogenic effects	1.1E+02	1.3E+03	6.4E+03	N/A
CHLOROPHENOL, 2-	500 nc	noncarcinogenic effects	-	5.0E+02	2.5E+03	5.5E+04

**TABLE K-3. DIRECT-EXPOSURE SCREENING LEVELS
FOR CONSTRUCTION/TRENCH WORKER EXPOSURE SCENARIO**

CHEMICAL	Final Screening Level (mg/kg)	Basis	Carcinogens (Risk = 10 ⁻⁶) (mg/kg)	Noncarcinogens HQ = 0.2 (mg/kg)	Noncarcinogens (HQ = 1.0) (mg/kg)	Saturation (mg/kg)
*CHROMIUM (Total - assumes 1/6 ratio Cr6/Cr3)	12 ca	carcinogenic effects	1.2E+01	-	-	N/A
CHROMIUM III	800000 nc	noncarcinogenic effects	-	8.0E+05	4.0E+06	N/A
*CHROMIUM VI	1.8 ca	carcinogenic effects	1.8E+00	1.6E+03	8.0E+03	N/A
*CHRYSENE	120 ca	carcinogenic effects	1.2E+02	-	-	N/A
COBALT	32000 nc	noncarcinogenic effects	-	3.2E+04	1.6E+05	N/A
COPPER	20000 nc	noncarcinogenic effects	-	2.0E+04	9.8E+04	N/A
CYANIDE (Free)	6600 nc	noncarcinogenic effects	-	6.6E+03	3.3E+04	N/A
*DIBENZO(a,h)ANTHTRACENE	3.5 ca	carcinogenic effects	3.5E+00	-	-	N/A
DIBROMOCHLOROMETHANE	88 ca	carcinogenic effects	8.8E+01	3.0E+03	1.5E+04	N/A
*DIBROMOETHANE, 1,2-	5.4 nc	noncarcinogenic effects	5.6E+00	5.4E+00	2.7E+01	N/A
DICHLOROBENZENE, 1,2-	370 sat	saturation limit		7.1E+03	3.6E+04	3.7E+02
DICHLOROBENZENE, 1,3-	100 nc	noncarcinogenic effects		1.0E+02	5.2E+02	3.8E+02
*DICHLOROBENZENE, 1,4-	160 ca	carcinogenic effects	1.6E+02	3.8E+03	1.9E+04	N/A
*DICHLOROBENZIDINE, 3,3-	13 ca	carcinogenic effects	1.3E+01	-	-	N/A
*DICHLORODIPHENYLDICHLOROETHANE (DDD)	91 ca	carcinogenic effects	9.1E+01	-	-	N/A
*DICHLORODIPHENYLDICHLOROETHYLENE (DDE)	64 ca	carcinogenic effects	6.4E+01	-	-	N/A
*DICHLORODIPHENYLTRICHLOROETHANE (DDT)	64 ca	carcinogenic effects	6.4E+01	2.2E+02	1.1E+03	N/A
*DICHLOROETHANE, 1,1	300 ca	carcinogenic effects	3.0E+02	4.6E+03	2.3E+04	2.3E+03
*DICHLOROETHANE 1,2	40 ca	carcinogenic effects	4.0E+01	8.7E+01	4.3E+02	2.9E+03
DICHLOROETHYLENE, 1,1	4.6 ca	carcinogenic effects	4.6E+00	1.6E+02	8.1E+02	1.6E+03
DICHLOROETHYLENE, Cis 1,2	340 nc	noncarcinogenic effects		3.4E+02	1.7E+03	1.2E+03
DICHLOROETHYLENE, Trans 1,2-	510 nc	noncarcinogenic effects		5.1E+02	2.5E+03	2.5E+03
DICHLOROPHENOL, 2,4-	970 nc	noncarcinogenic effects		9.7E+02	4.9E+03	N/A
*DICHLOROPROPANE, 1,2-	34 ca	carcinogenic effects	3.4E+01	4.7E+01	2.4E+02	1.1E+03
*DICHLOROPROPENE, 1,3	17 ca	carcinogenic effects	1.7E+01	6.8E+01	3.4E+02	1.1E+03
*DIELDRIN	1.0 ca	carcinogenic effects	1.0E+00	1.6E+01	8.1E+01	N/A
DIETHYLPHTHALATE	260000 nc	noncarcinogenic effects		2.6E+05	1.3E+06	N/A
DIMETHYLPHTHALATE	>1000000 nc	noncarcinogenic effects		3.2E+06	1.6E+07	N/A
DIMETHYLPHENOL, 2,4-	4300 nc	noncarcinogenic effects		4.3E+03	2.2E+04	N/A
DINITROPHENOL 2,4	650 nc	noncarcinogenic effects		6.5E+02	3.2E+03	N/A
*DINITROTOLUENE, 2,4-	52 ca	carcinogenic effects	5.2E+01	6.5E+02	3.2E+03	N/A
*DIOXIN / FURAN (ng TEQ /g soil)	0.00015 ca	carcinogenic effects	1.5E-04	-	-	N/A

**TABLE K-3. DIRECT-EXPOSURE SCREENING LEVELS
FOR CONSTRUCTION/TRENCH WORKER EXPOSURE SCENARIO**

CHEMICAL	Final Screening Level (mg/kg)	Basis	Carcinogens (Risk = 10 ⁻⁶) (mg/kg)	Noncarcinogens HQ = 0.2 (mg/kg)	Noncarcinogens (HQ = 1.0) (mg/kg)	Saturation (mg/kg)
ENDOSULFAN	1900 nc	noncarcinogenic effects		1.9E+03	9.7E+03	N/A
ENDRIN	97 nc	noncarcinogenic effects		9.7E+01	4.9E+02	N/A
ETHYLBENZENE	230 sat	saturation limit		1.2E+04	5.9E+04	2.3E+02
FLUORANTHENE	12000 nc	noncarcinogenic effects		1.2E+04	5.8E+04	N/A
FLUORENE	18000 nc	noncarcinogenic effects		1.8E+04	9.2E+04	N/A
*HEPTACHLOR	2.8 ca	carcinogenic effects	2.8E+00	1.6E+02	8.1E+02	N/A
*HEPTACHLOR EPOXIDE	1.2 ca	carcinogenic effects	1.2E+00	4.2E+00	2.1E+01	N/A
*HEXACHLOROBENZENE	9.0 ca	carcinogenic effects	9.0E+00	2.6E+02	1.3E+03	N/A
HEXACHLOROBUTADIENE	65 nc	noncarcinogenic effects	2.1E+02	6.5E+01	3.2E+02	N/A
*HEXACHLOROCYCLOHEXANE (gamma) LINDANE	19 ca	carcinogenic effects	1.9E+01	1.3E+02	6.3E+02	N/A
*HEXACHLOROETHANE	320 nc	carcinogenic effects	4.1E+02	3.2E+02	1.6E+03	N/A
*INDENO(1,2,3-cd)PYRENE	12 ca	carcinogenic effects	1.2E+01	-	-	N/A
LEAD	1000 nc	=occupational		-	-	N/A
MERCURY	160 nc	noncarcinogenic effects		1.6E+02	8.0E+02	N/A
METHOXYCHLOR	1600 nc	noncarcinogenic effects		1.6E+03	8.1E+03	N/A
*METHYLENE CHLORIDE	360 ca	carcinogenic effects	3.6E+02	1.4E+04	7.2E+04	2.3E+03
METHYL ETHYL KETONE	34000 sat	saturation limit		5.8E+04	2.9E+05	3.4E+04
METHYL ISOBUTYL KETONE	6200 nc	noncarcinogenic effects		6.2E+03	3.1E+04	1.7E+04
METHYL MERCURY	33 nc	noncarcinogenic effects		3.3E+01	1.6E+02	N/A
METHYLNAPHTHALENE, 2-(1-)	18000 nc	=fluorene		-	-	N/A
*METHYL TERT BUTYL ETHER	4900 nc	noncarcinogenic effects	8.6E+03	4.9E+03	2.4E+04	8.4E+03
MOLYBDENUM	2700 nc	noncarcinogenic effects		2.7E+03	1.3E+04	N/A
NAPHTHALENE	450 nc	noncarcinogenic effects		4.6E+02	2.3E+03	N/A
*NICKEL (soluble salts)	1000 ca	carcinogenic effects	1.0E+03	1.1E+04	5.3E+04	N/A
*PENTACHLOROPHENOL	580 ca	carcinogenic effects	5.8E+02	6.2E+03	3.1E+04	N/A
PHENANTHRENE	18000 nc	=fluorene		-	-	N/A
PHENOL	190000 nc	noncarcinogenic effects		1.9E+05	9.7E+05	N/A
*POLYCHLORINATED BIPHENYLS (PCBs)	5.6E+00	noncarcinogenic effects	7.0E+00	5.6E+00	2.8E+01	N/A
PYRENE	16000 nc	noncarcinogenic effects		1.6E+04	7.9E+04	N/A
SELENIUM	2700 nc	noncarcinogenic effects		2.7E+03	1.3E+04	N/A
SILVER COMPOUNDS	2700 nc	noncarcinogenic effects		2.7E+03	1.3E+04	N/A
STYRENE	1700 sat	saturation limit		3.5E+04	1.8E+05	1.7E+03

**TABLE K-3. DIRECT-EXPOSURE SCREENING LEVELS
FOR CONSTRUCTION/TRENCH WORKER EXPOSURE SCENARIO**

CHEMICAL	Final Screening Level (mg/kg)	Basis	Carcinogens (Risk = 10 ⁻⁶) (mg/kg)	Noncarcinogens HQ = 0.2 (mg/kg)	Noncarcinogens (HQ = 1.0) (mg/kg)	Saturation (mg/kg)
TETRACHLOROETHANE, 1,1,1,2-	240 ca	carcinogenic effects	2.4E+02	3.8E+03	1.9E+04	1.7E+03
*TETRACHLOROETHANE, 1,1,2,2-	23 ca	carcinogenic effects	2.3E+01	7.6E+03	3.8E+04	1.7E+03
*TETRACHLOROETHYLENE	82 ca	carcinogenic effects	8.2E+01	2.4E+03	1.2E+04	3.7E+02
THALLIUM	37 nc	noncarcinogenic effects		3.7E+01	1.9E+02	N/A
TOLUENE	520 sat	saturation limit		4.7E+03	2.4E+04	5.2E+02
TPH (gasolines)	16000 nc	=pyrene		-	-	N/A
TPH (middle distillates)	16000 nc	=pyrene		-	-	N/A
TPH (residual fuels)	16000 nc	=pyrene		-	-	N/A
TRICHLOROBENZENE, 1,2,4	3100 sat	saturation limit		4.5E+03	2.3E+04	3.1E+03
TRICHLOROETHANE, 1,1,1	1400 sat	saturation limit		6.0E+03	3.0E+04	1.4E+03
TRICHLOROETHANE, 1,1,2-	72 ca	carcinogenic effects	7.2E+01	3.2E+02	1.6E+03	2.5E+03
*TRICHLOROETHYLENE	150 ca	carcinogenic effects	1.5E+02	1.9E+02	9.3E+02	8.2E+02
TRICHLOROPHENOL, 2,4,5-	17000 nc	noncarcinogenic effects		1.7E+04	8.4E+04	N/A
*TRICHLOROPHENOL, 2,4,6-	230 ca	carcinogenic effects	2.3E+02	-	-	N/A
VANADIUM	3700 nc	noncarcinogenic effects		3.7E+03	1.9E+04	N/A

**TABLE K-3. DIRECT-EXPOSURE SCREENING LEVELS
FOR CONSTRUCTION/TRENCH WORKER EXPOSURE SCENARIO**

CHEMICAL	Final Screening Level (mg/kg)	Basis	Carcinogens (Risk = 10 ⁻⁶) (mg/kg)	Noncarcinogens HQ = 0.2 (mg/kg)	Noncarcinogens (HQ = 1.0) (mg/kg)	Saturation (mg/kg)
*VINYL CHLORIDE	2.4 ca	carcinogenic effects	2.4E+00	-	-	N/A
XYLENES	210 sat	saturation limit		1.1E+04	5.5E+04	2.1E+02
ZINC	160000 nc	noncarcinogenic effects		1.6E+05	8.0E+05	N/A

Primary source: Based on models presented in USEPA Region IX Preliminary Remediation Goals (USEPA 1999). See text for discussion.

Notes:

See text for equations and assumptions used in models.

ca: Cancer Risk; nc: Noncancer Risk; sat: saturation limit; blank: no screening level

Final screening level is lowest of individual screening levels for carcinogenic effects and noncarcinogenic effects based on HQ=0.2. Saturation limit used as upper limit for volatile organic compounds that are liquid at ambient conditions (see text).

Carcinogens: USEPA PRGs, based on target cancer risk of 1E-06; modified with respect to CalEPA/OEHHA slope factors when available (marked by "**"). Screening levels for PCBs based on updated USEPA slope factors as presented in USEPA Preliminary Remediation Goals document (USEPA 1999).

Noncarcinogens: USEPA PRGs adjusted to target hazard quotient of 0.2 used in tables. PRGs based on hazard quotient of 1.0 provided for reference.

Saturation: Theoretical soil saturation level in the absence of free product; calculated primarily for volatile organic compounds that are liquids under ambient conditions.

TPH: Total Petroleum Hydrocarbons. See text for discussion of different TPH categories. Direct exposure screening levels after Massachusetts Department of Environmental Protection (see text).

1,1 Biphenyl: Use of saturation limit from USEPA Region IX Preliminary Remediation Goals document (USEPA 1999).

TABLE I-2. COMPONENTS FOR GROUNDWATER CEILING LEVELS
(groundwater IS NOT a current or potential source of drinking water)
(ug/L)

CHEMICAL	Final Ceiling Level	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
ACENAPHTHENE	200	2100	200	Ontario MOEE	50000
ACENAPHTHYLENE	2000	2000	-	-	50000
ACETONE	50000	500000000	200000	Ontario MOEE	50000
ALDRIN	8.5	8.5	170	Ontario MOEE	50000
ANTHRACENE	22	22	-	-	50000
ANTIMONY	50000	-	-	-	50000
ARSENIC	50000	-	-	-	50000
BARIUM	50000	-	-	-	50000
BENZENE	20000	900000	20000	Ontario MOEE	50000
BENZO(a)ANTHRACENE	5.0	5.0	-	-	50000
BENZO(b)FLUORANTHENE	7.0	7.0	-	-	50000
BENZO(k)FLUORANTHENE	0.40	0.40	-	-	50000
BENZO(g,h,i)PERYLENE	0.13	0.13	-	-	50000
BENZO(a)PYRENE	1.9	1.9	-	-	50000
BERYLLIUM	50000	-	-	-	50000
BIPHENYL 1,1	5.0	3800	5.0	Amoore & Hautala	50000
BIS(2-CHLOROETHYL)ETHER	3600	8600000	3600	Amoore & Hautala	50000
BIS(2-CHLOROISOPROPYL)ETHER	3200	850000	3200	Ontario MOEE	50000
BIS(2-ETHYLHEXYL)PHTHALATE	650	650	-	-	50000
BORON	50000	-	-	-	50000
BROMODICHLOROMETHANE	50000	3400000	-	-	50000
BROMOFORM	5100	1600000	5100	Ontario MOEE	50000
BROMOMETHANE	50000	7500000	-	-	50000
CADMIUM	50000	-	-	-	50000
CARBON TETRACHLORIDE	5200	400000	5200	Ontario MOEE	50000
CHLORDANE	25	28	25	Ontario MOEE	50000
CHLOROANILINE, p-	50000	1300000	-	-	50000
CHLOROBENZENE	500	240000	500	Ontario MOEE	50000
CHLOROETHANE	160	2900000	160	Amoore & Hautala	50000
CHLOROFORM	24000	4000000	24000	Ontario MOEE	50000
CHLOROMETHANE	50000	4100000	-	-	50000
CHLOROPHENOL, 2-	1.8	11000000	1.8	Ontario MOEE	50000
CHROMIUM (Total - assumes 1/6 ratio Cr6/Cr3)	50000	-	-	-	50000
CHROMIUM III	50000	-	-	-	50000

**TABLE I-2. COMPONENTS FOR GROUNDWATER CEILING LEVELS
(groundwater IS NOT a current or potential source of drinking water)
(ug/L)**

CHEMICAL	Final Ceiling Level	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
BENZOPHENANTHRENE	50000	2100	200	Ontario MOEE	50000
CHRYSENE	0.80	0.80	-	-	50000
COBALT	50000	-	-	-	50000
COPPER	50000	-	-	-	50000
CYANIDE (Free)	1700	500000000	1700	Ontario MOEE	50000
DIBENZO(a,h)ANTHTRACENE	0.25	0.25	-	-	50000
DIBROMOCHLOROMETHANE	50000	2000000	-	-	50000
DIBROMOETHANE, 1,2-	50000	1700000	-	-	50000
DICHLOROBENZENE, 1,2-	100	78000	100	Ontario MOEE	50000
DICHLOROBENZENE, 1,3-	50000	80000	-	-	50000
DICHLOROBENZENE, 1,4-	110	37000	110	Ontario MOEE	50000
DICHLOROBENZIDINE, 3,3-	1600	1600	-	-	50000
DICHLORODIPHENYLDICHLOROETHANE (DDD)	80	80	-	-	50000
DICHLORODIPHENYLDICHLOROETHYLENE (DDE)	20	20	-	-	50000
DICHLORODIPHENYLTRICHLOROETHANE (DDT)	1.5	1.5	3500	Ontario MOEE	50000
DICHLOROETHANE, 1,1	50000	2500000	-	-	50000
DICHLOROETHANE 1,2	50000	4300000	200000	Ontario MOEE	50000
DICHLOROETHYLENE, 1,1	15000	1100000	15000	Amoore & Hautala	50000
DICHLOROETHYLENE, Cis 1,2	50000	1800000	-	-	50000
DICHLOROETHYLENE, Trans 1,2-	2600	3200000	2600	Ontario MOEE	50000
DICHLOROPHENOL, 2,4-	3.0	2300000	3.0	Ontario MOEE	50000
DICHLOROPROPANE, 1,2-	100	1400000	100	Ontario MOEE	50000
DICHLOROPROPENE, 1,3	50000	1400000	-	-	50000
DIELDRIN	93	93	410	Ontario MOEE	50000
DIETHYLPHTHALATE	50000	450000	-	-	50000
DIMETHYLPHTHALATE	50000	2500000	-	-	50000
DIMETHYLPHENOL, 2,4-	4000	3900000	4000	Ontario MOEE	50000
DINITROPHENOL 2,4	50000	2800000	-	-	50000
DINITROTOLUENE, 2,4-	50000	140000	-	-	50000
DIOXIN / FURAN (ng TEQ /g soil)	50000	-	-	-	50000
ENDOSULFAN	75	75	-	-	50000
ENDRIN	130	130	410	Ontario MOEE	50000
ETHYLBENZENE	300	85000	300	USEPA 2nd MCL	50000
FLUORANTHENE	130	130	-	-	50000

TABLE I-2. COMPONENTS FOR GROUNDWATER CEILING LEVELS
(groundwater IS NOT a current or potential source of drinking water)
(ug/L)

CHEMICAL	Final Ceiling Level	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
ACENAPHTHENE	250	2500	200	Ontario MOEE	50000
HEPTACHLOR	28	28	200	Ontario MOEE	50000
HEPTACHLOR EPOXIDE	180	180	-	-	50000
HEXACHLOROBENZENE	55	55	30000	Ontario MOEE	50000
HEXACHLOROBUTADIENE	60	1000	60	Ontario MOEE	50000
HEXACHLOROCYCLOHEXANE (gamma) LINDANE	3500	3500	120000	Ontario MOEE	50000
HEXACHLOROETHANE	100	25000	100	Ontario MOEE	50000
INDENO(1,2,3-cd)PYRENE	0.27	0.27	-	-	50000
LEAD	50000	-	-	-	50000
MERCURY	28	28	-	-	50000
METHOXYCHLOR	20	20	47000	Ontario MOEE	50000
METHYLENE CHLORIDE	50000	6500000	91000	Ontario MOEE	50000
METHYL ETHYL KETONE	50000	140000000	84000	Amoore & Hautala	50000
METHYL ISOBUTYL KETONE	13000	9500000	13000	Amoore & Hautala	50000
METHYL MERCURY	50000	-	-	-	50000
METHYLNAPHTHALENE, 2-(1-)	100	-	100	Ontario MOEE	50000
METHYL TERT BUTYL ETHER	1800	24000000	1800	CalDHS	50000
MOLYBDENUM	50000	-	-	-	50000
NAPHTHALENE	210	16000	210	Ontario MOEE	50000
NICKEL (soluable salts)	50000	-	-	-	50000
PENTACHLOROPHENOL	5900	7000000	5900	Ontario MOEE	50000
PHENANTHRENE	410	410	10000	Ontario MOEE	50000
PHENOL	50000	40000000	79000	Ontario MOEE	50000
POLYCHLORINATED BIPHENYLS (PCBs)	16	16	-	-	50000
PYRENE	68	68	-	-	50000
SELENIUM	50000	-	-	-	50000
SILVER COMPOUNDS	50000	-	-	-	50000
STYRENE	110	160000	110	Ontario MOEE	50000
TETRACHLOROETHANE, 1,1,1,2-	50000	1500000	-	-	50000
TETRACHLOROETHANE, 1,1,2,2-	5000	1500000	5000	Ontario MOEE	50000
TETRACHLOROETHYLENE	3000	100000	3000	Ontario MOEE	50000
THALLIUM	50000	-	-	-	50000
TOLUENE	400	260000	400	Ontario MOEE	50000
TPH (gasolines)	5000	-	5000	MADEP	50000

**TABLE I-2. COMPONENTS FOR GROUNDWATER CEILING LEVELS
(groundwater IS NOT a current or potential source of drinking water)
(ug/L)**

CHEMICAL	Final Ceiling Level	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
PERMETHYLATES	5000	2100	5000	Ontario MOEE	50000
TPH (residual fuels)	5000	-	5000	MADEP	50000
TRICHLOROBENZENE, 1,2,4	30000	150000	30000	USEPA (1995)	50000
TRICHLOROETHANE, 1,1,1	50000	670000	500000	Ontario MOEE	50000
TRICHLOROETHANE, 1,1,2-	50000	2200000	-	-	50000
TRICHLOROETHYLENE	50000	550000	100000	Ontario MOEE	50000
TRICHLOROPHENOL, 2,4,5-	2000	600000	2000	Ontario MOEE	50000
TRICHLOROPHENOL, 2,4,6-	1000	400000	1000	Ontario MOEE	50000
VANADIUM	50000	-	-	-	50000
VINYL CHLORIDE	34000	1400000	34000	Ontario MOEE	50000
XYLENES	5300	81000	5300	Ontario MOEE	50000
ZINC	50000	-	-	-	50000

References:

Unless otherwise noted, criteria for nuisance odor threshold from Ontario MOEE (MOEE 1996) OR data from Amoores and Hautala (1983) as presented in *A Compilation of Water Quality Goals if not available (RWQCBCV 1998)*.

Upper limit of 50000 ug/L intended to limit general groundwater resource degradation (MOEE 1996).

1/2 solubility based on solubility constants in USEPA Region IX (USEPA 1999) or Ontario MOEE (MOEE 1996) if not available.

Odor threshold for MTBE based on average, upper range at which most subjects could smell MTBE in water (CalEPA 1999).

Notes:

Nuisance Odor Thresholds assume ten-fold attenuation/dilution of chemical in groundwater upon discharge to surface water.

Ceiling Level: lowest of 1/2 solubility, odor/taste threshold and 50000 ug/L maximum level (intended to limit general groundwater resource degradation).

TPH -Total Petroleum Hydrocarbons. See text for discussion of different TPH categories.

TPH ceiling level after Massachusetts DEP (MADEP 1997).

Appendix A

**Soil and Groundwater Contamination Mitigation
Work Plan
and
Soil and Groundwater Contamination Mitigation
Work Plan Addendum**



April 9, 1998
Work Plan 0164.W1

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: CONTAMINATION MITIGATION WORK PLAN
Hardage Suite Hotels, Inc. Site
Intersection of Shellmound Street and Powell Street
Emeryville, California

Dear Ms. Hugo:

This work plan addresses the management and monitoring of contaminated soil and groundwater, which may be encountered during development of the subject property. The subject property is located at the northeast corner of the intersection of Shellmound Street and Powell Street in Emeryville. The development of the property consists of the construction of a multi-story hotel. Soil which has been identified during previous subsurface investigations as containing organic and inorganic contaminants may be encountered while excavating for the construction of structure footings and utility trenches.

This work plan includes the following elements.

- Health and safety plan.
- Soil contamination management plan.
- Groundwater contamination management plan.

A Site Location Map is attached as Figure 1, and a Site Plan is attached as Figure 2.

BACKGROUND

A summary of investigations performed at the subject site is provided in RGA's "Environmental Site Assessment Update Report" dated December 11, 1997.

HEALTH AND SAFETY PLAN

A health and safety plan will be prepared and implemented for all site workers who may be exposed to contaminated soil. The health and safety plan will address all known or suspected



4701 Doyle Street
Suite 14
Emeryville, CA 94608

510 547 7771
FAX 547 1983

contaminants which may be encountered in soil or groundwater at the site. The plan will include the following information.

- The types of contaminants which may be encountered.
- The physiological effects and symptoms of exposure to the contaminants.
- The anticipated locations of the contaminants.
- Engineering and administrative procedures to minimize exposure to contaminants.
- Contaminant monitoring requirements.
- Personal protective equipment requirements.
- Equipment and personnel decontamination procedures.
- Procedures for implementation and administration of the plan.

SOIL CONTAMINATION MANAGEMENT PLAN

Soil will only be excavated for construction purposes, such as construction of structural footings or digging of utility trenches. Soil excavated during construction activities will be stockpiled on site on a sheet of visqueen and covered with visqueen to prevent runoff during rain events or to minimize dust generation. Exposed soil will be wetted during excavation activities to minimize dust generation.

Composite soil samples consisting of four discrete samples will be collected for each 100 cubic yards of stockpiled soil for characterization purposes. The samples will be collected in the following manner. Four evenly spaced locations will be selected for each 100 cubic yards of soil. The stockpile will be excavated to a depth of approximately one to two feet at each location, and a brass tube will be filled with soil at each location. After sample collection, the ends of the brass tubes will be sealed in aluminum foil, covered with plastic endcaps, labeled, and placed in ziplock baggies. The capped brass tubes were then placed into a cooler with ice pending delivery to a State-certified hazardous waste testing laboratory. Chain of custody procedures were followed for all sample handling.

The composite samples will be analyzed for the following constituents.

- Total Recoverable Petroleum Hydrocarbons (EPA Method 418.1)
- BTEX (EPA Method 8020)
- CAM 17 Metals, total concentrations (using EPA-approved methods).

Based on the sample results, the stockpiled soil will be evaluated for use as fill material at the site. In the event that hazardous waste concentrations are encountered, the soil which exhibited the hazardous waste concentrations will be removed from the site as hazardous waste to a hazardous waste disposal facility.

GROUNDWATER CONTAMINATION MANAGEMENT PLAN

Groundwater removed during construction activities eg. for dewatering will be stored in holding tanks and analyzed prior to discharge to either the sanitary sewer or the storm drain. The samples will be analyzed for constituents and at frequencies required by the permitting agency for discharge.

A total of six existing groundwater monitoring wells, designated as ATD1 through ATD6, have been identified at the site. The wells were installed during previous subsurface investigations. Review of site conditions during a site visit in November, 1997 revealed a hole filled with concrete at the location of one of the wells identified as ATD1. During the site visit, two of the wells (ATD2 and ATD3) were not located because of the presence of soil which had been spread on the central and eastern portion of the site.

Comparison of the planned area of construction for development of the site with the location of the existing wells shows that well ATD5 is located within the footprint of the planned building.

Prior to the beginning of construction at the site, well ATD5 will be permitted and destroyed by a properly licensed contractor. Well ATD5 will be replaced with a well of similar construction designated as ATD5A at a location approximately 10 to 15 feet to the west of the present ATD5 location.

Soil covering the ATD2 and ATD3 well locations will be removed to locate the wells. In the event that the wells are not located, replacement wells designated as ATD2A and ATD3A of similar construction will be installed at the ATD2 and ATD3 locations.

The groundwater monitoring network for the site (six wells) will be monitored and sampled for four quarters. Quarterly monitoring and sampling procedures will be as follows. Prior to sampling, the monitoring wells will be purged of a minimum of three casing volumes of water, or until the wells have been purged dry. During purging operations, the field parameters of electrical conductivity, temperature and pH will be monitored. Once the field parameters are observed to stabilize, and a minimum of three casing volumes have been purged or the wells have been purged dry and partially recovered, water samples will be collected using a clean Teflon bailer.

The water samples will be transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles which will be sealed with Teflon-lined screw caps. The VOA vials will be overturned and tapped to assure that no air bubbles are present.

The VOA vials and bottles will then be transferred to a cooler with ice, until they are transported to a State-certified hazardous waste testing laboratory. Chain of custody documentation will accompany the samples to the laboratory.

The groundwater samples will be analyzed for TPH-Diesel and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX). Monitoring and sampling reports will be prepared and submitted to the Alameda County Department of Environmental Health on a quarterly basis. After four quarters, the sample results will be evaluated to determine if contaminant concentrations have changed. If there is no evidence of increasing contaminant concentrations, case closure will be requested.

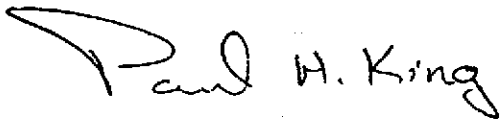
Should you have any questions or comments, please do not hesitate to contact us at (510) 547-7771.

Sincerely,

RGA Environmental, Inc.



Karin Schroeter
Project Manager



Paul H. King
California Registered Geologist
Registration No.: 5901
Expiration Date: 12/31/99



PHK
0164.W1

Attachments: Figures 1 and 2

cc: Ms. Judith S. Fabion, Hardage Suite Hotels, Inc.



FIGURE 1
 SITE LOCATION MAP
 Hardage Suite Hotels, Inc.
 Intersection of Shellmound and Powell Street (Northeast corner)
 Emeryville, California

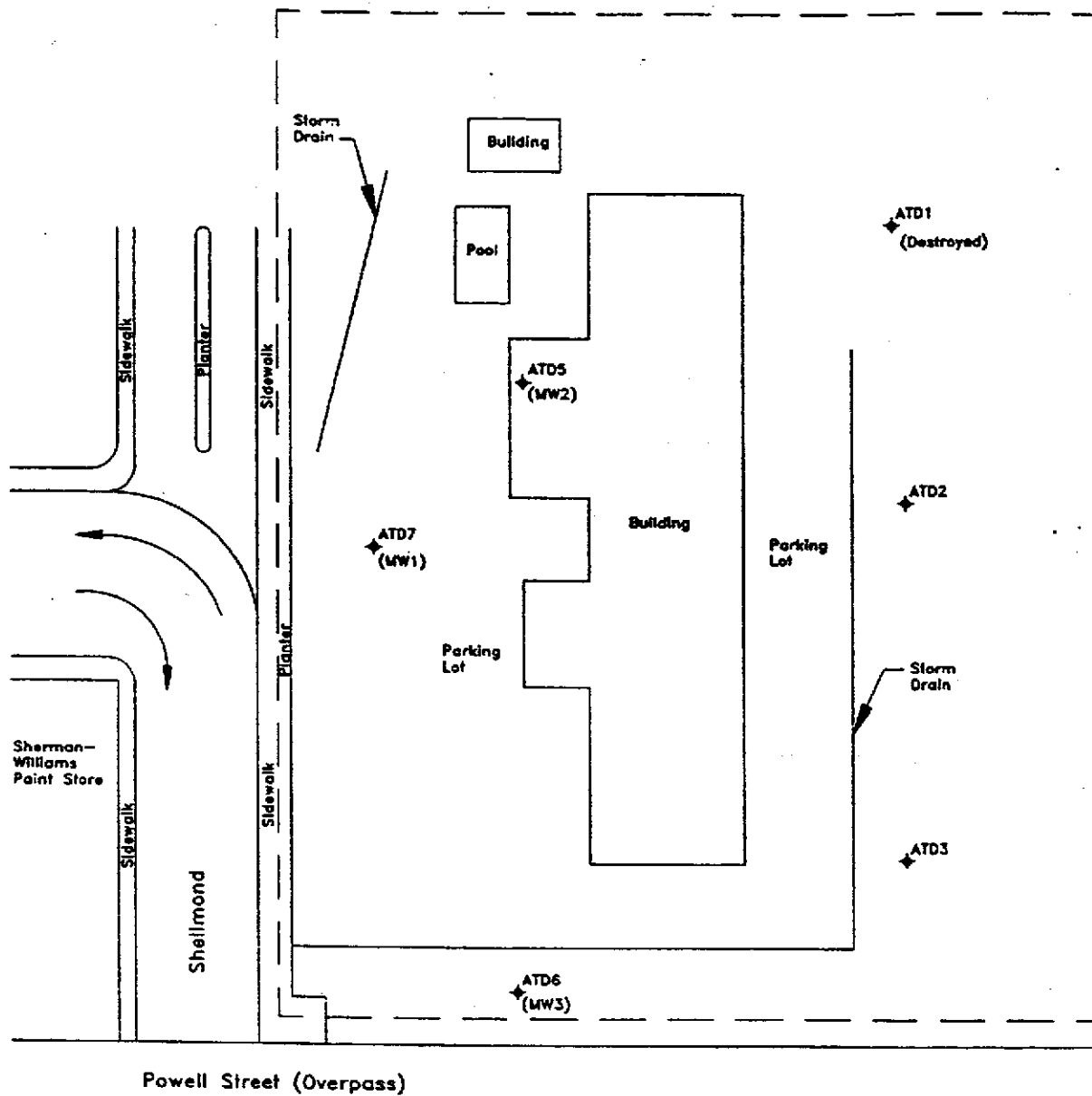


Source:
 U.S. Geological Survey
 Oak and West, California
 7.5 Minute Quadrangle
 Photorevised, 1980

RGA Environmental, Inc.
 1260 45th Street
 Emeryville, California 94608



SCALE IN FEET



LEGEND

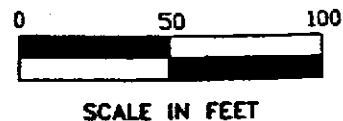
- ◆ Monitoring Well Location
- — Property Boundary

FIGURE 2
SITE PLAN
 Hardage Suite Hotels, Inc.
 Intersection of Shellmond and Powell Street (Northeast corner)
 Emeryville, California



Map From:
 Environmental Inc.
 November, 1987
 Mission Engineers, Inc.
 August 6, 1991
 Applied GeoSciences
 February, 1992
 (B110640035)

RGA Environmental, Inc.
 1260 45th Street
 Emeryville, California 94608





June 23, 1998
Work Plan 0164.W2

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: CONTAMINATION MITIGATION WORK PLAN ADDENDUM
Woodlin Suite Hotels, Inc. Site
Intersection of Shellmound Street and Powell Street
Emeryville, California

Dear Ms. Hugo:

This work plan addendum modifies RGA Environmental, Inc's (RGA) Contamination Mitigation Work Plan 0164.W1 dated March 24, 1998 for the subject site. The amendments provided in this work plan are prepared in accordance with the following:

- o A telephone conversation with Ms. Barbara Cook of the California Department of Toxic Substance Control (DTSC).
- o Telephone conversations with Mr. Derek Lee of the San Francisco Bay Regional Water Quality Control Board (RWQCB).
- o A meeting between Paul King of RGA, Chuck Hibert of Woodlin Site Hotels, Inc., (WSHI), formerly Hardage Suite Hotels, Inc., and Susan Hugo of the Alameda County Department of Environmental Health (ACDEH) at the ACDEH offices on June 11, 1998.

Based upon discussions with the DTSC, the only concern of the DTSC at this time is that a Health and Safety Plan (HASP) be approved by the DTSC prior to the beginning of field activities. A HASP will be submitted to the DTSC and ACDEH for review and approval prior to the beginning of field activities.

Based upon discussions with the RWQCB, the only concern of the RWQCB is that any potential contaminants in the fill material at the site not be carried into deeper strata during the driving of piles for the proposed construction. Based upon a telephone conversation with Mr. Derek Lee at the RWQCB, Mr. Lee has received a work plan discussing the pile driving



methodology and the work plan appears to address his concerns. The work plan proposes to drill a pile pilot hole to a depth of approximately ten feet prior to driving the piles.

Based upon our meeting at the ACDEH offices, the Contamination Mitigation Work Plan for the site will be amended as follows:

- o Review of boring logs and well construction details by Applied Geosciences, Inc. from Appendix C.2 of the Phase II Subsurface Investigation Report dated February 12, 1992 shows two boring logs, designated as ATD1 and ATD1A, and one well construction diagram designated as ATD1. The boreholes for ATD1 and ATD1A are 10.5 and 19.5 feet, respectively. The ATD1 boring log stratigraphy consists of clayey gravel and fill debris to a depth of 7.5 feet, which is underlain by silty clay to the total depth explored of 7.5 feet. The ATD1A boring log stratigraphy consists of silty clay to the total depth explored of 19.5 feet.

The well construction diagram shows a borehole with a total depth of 19.0 feet, a five foot screened interval (between the depths of 13.5 and 18.5 feet), and a six foot sand pack. During a site inspection, a concrete-filled depression was observed at the location where ATD1 is identified on the Applied Geosciences, Inc. report map.

- o Prior to the beginning of construction at the site, soil presently covering the asphalt-covered ground surface in the vicinity of well ATD4 will be removed to locate this well. In the event that the well is not located, a magnetometer will be used to locate the well lid. If the well is located, it will be destroyed at the time that well ATD5 is destroyed. If the well is not located, notification will be provided to the ACDEH. All well destruction will be performed in accordance with all appropriate permit requirements.
- o Replacement wells for wells ATD1, ATD4 and ATD5 will be installed at locations outside the footprint of the proposed building at the site.
- o In the event that any USTs are encountered during site development, the USTs will be closed in accordance with ACDEH permitting requirements, including appropriate permit fees.
- o Composite soil sample analysis will be amended from Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1 to TPH Multi-Range.
- o If excavated soil is to be considered for re-use at the site, it will be sampled at a frequency of one discrete sample for each 20 cubic yards of soil, and EPA Method

8270 analysis will be performed in addition to the analytes specified in the March 24, 1998 work plan. However, if the soil is to be hauled from the site, EPA Method 8270 analysis will not be performed unless required by the disposal facility.

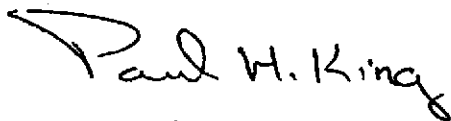
- o In addition to the analytes identified in the March 24, 1998 work plan for the quarterly groundwater monitoring and sampling program, samples collected from the onsite groundwater monitoring wells will be analyzed for the 8 RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.
- o A Storm Water Pollution Prevention Plan (SWPP) is required and has been prepared for construction activities at the site. However, a Notice of Intent to the State for the SWPP is not required because the construction site is not larger than five acres in size.

Should you have any questions or comments, please do not hesitate to contact us at (510) 547-7771.

Sincerely,

RGA Environmental, Inc.

Karin Schroeter
Project Manager



Paul H. King
California Registered Geologist
Registration No.: 5901
Expiration Date: 12/31/99



cc: Mr. Chuck Hibert, Hardage Suite Hotels, Inc.

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