

Environmental Management & Engineering, Inc. 437 Industrial Lane Post Office Box 19866 Birmingham, AL 35219 (205) 940-7700 Fax (205) 940-7701

July 2, 1996

Mr. Brian Oliva Senior Hazardous Materials Specialist Division of Environmental Protection Department of Environmental Health 1131 Harbor Bay Parkway, 2nd Floor Alameda CA 94502

RE: Grove Valve and Regulator Company, Emeryville, California

Sump Analytical Report

DRS-95-E942

Dear Mr. Oliva:

As you are aware, on May 21, 1996, Environmental Management & Engineering, Inc. (EME) collected soil samples associated with two (2) machine sumps located at the Grove Valve and Regulator Company facility in Emeryville, California.

The machine sumps in question were constructed of steel and were an integral part of shallow one-piece pans on which machine tools were located. The sump portion of the pan was approximately 18 x 18 x 12 inches in size. When the pans were installed, a hole was cut through the concrete pad to allow the sump to be recessed into the floor. When the pan/sump was removed, free product (primarily cutting oils) was noted on the underlying soils in one of the sumps. This free product was removed and included with other waste oil to await subsequent proper disposal. The pan/sump has been inspected and water tested and determined to be sound with no apparent leaks, therefore, it appears that the source of the contamination was incidental spillage and overfilling of the machine, resulting in overflow of the pan in the area of the sump.

Sampling was conducted using a stainless steel hand auger. At the first machine sump, a hand auger boring (Boring M-1) was advanced to a depth of 10 feet, at which depth groundwater was encountered. Soil samples were collected at depths of 4, 6, 8 and 10 feet. This was the boring observed by you during your visit. In addition, soil samples at the second machine sump location (Boring M-2) were collected from the underlying fill material at depths of 2 and 4 feet. A profile of the boring M-1 revealed a layer of stained silty gravel underlain by heavy clay with no apparent visible staining or odor. Boring M-2 was terminated in the silty gravel due to the fact that no visible staining was apparent. The samples were submitted to the American Environmental Network (AEN) laboratory located in Pleasant Hill, California and per your request analyzed for Total Oil and Grease (TOG)

> Houston Office: 5715 Northwest Central Drive Suite 104 Houston, TX 77092 (713) 939-7028 Fax: (713) 939-7029

Mr. Brian Oliva Department of Environmental Health July 2, 1996 Page 2

and Total Petroleum Hydrocarbons as diesel (TPH-D). Also per your request, one sample from below the visibly stained zone in Boring M-1 was analyzed for Volatile Organic Compounds (VOC).

I am pleased to report that the sample results for sample M1-B revealed no detectable concentrations of VOC's, which are, of course, the contaminants of greatest potential concern. The TPH-D and TOG concentrations in the samples from both borings were somewhat elevated, even in the soils which were not visibly stained. This is not surprising in that impact to soil by light cutting fluids is often difficult to assess by visual/olfactory field screening. A summary of analytical results are presented in Table 1. A copy of the laboratory analytical report is included as Attachment 1.

As you are aware, Grove is currently conducting quarterly groundwater monitoring at the facility. Oil and grease, which is included as a parameter in this monitoring, has never been detected in facility monitoring wells, two of which are located downgradient from the subject machine sumps. This, combined with the point source nature of the subject sumps, appears to indicate that the area of impact is localized and that groundwater has not been impacted. Also, the fact that the impacted area is covered by the building slab means that there are no apparent human exposure pathways and thus no apparent threat to human health or the environment. Due to the fact that the sumps were located immediately adjacent to main building support columns, excavation of even minimal amounts of soil from the areas would compromise the buildings integrity. For these reasons, Grove proposes that the impacted soils be left in place. Oil and grease will continue to be included as a parameter in the quarterly groundwater monitoring program in order to assess any future impact.

We appreciate your assistance with the above project. If you have any questions or need additional information, please call me at (205) 940-7700.

Call regional

Thank you for your kind consideration.

Sincerely,

Kevin Holloran

Environmental Specialist

KH/iif

Enclosures

cc: Mr. Lee DeNooyer

Mr. Bill Tallent

TABLE 1 SUMMARY OF ANALYTICAL RESULTS - SOIL RESULTS IN PPM

Sample	Depth	TPH as	Oil &	VOC
Numbers	(Ft)	Diesel	Grease	
M1 A	4	NA	NA	NA
M1 B	6	4	50	ND
M1 C	8	96	680	NA
M1 D	10	1000	1700	NA
M2 A	2	720	2600	NA
M2 B	4	1000	7300	NA

ND - Non Detect

NA - Not Analysed

VOC - Volatile Organic Compounds

M1 - Machine #1

M2 - Machine # 2



American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

ENV. MANGT & ENGINEERING INC. PO BOX 19866
BIRMINGHAM, AL 35219

ATTN: KEVIN HOLLORAN

CLIENT PROJ. ID: DRS-95-E942 CLIENT PROJ. NAME: GROVE VALVE REPORT DATE: 06/20/96

DATE(S) SAMPLED: 05/21/96

DATE RECEIVED: 05/21/96

AEN WORK ORDER: 9605282

PROJECT SUMMARY:

On May 21, 1996, this laboratory received 6 soil sample(s).

Client requested 5 sample(s) be analyzed for chemical parameters; one sample was placed on hold. Portion for EPA 8010 was subcontracted to a DOHS certified laboratory; subcontract report will follow at a later date. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

ar**n**y/Klein

Laboratory Director

ENV. MANAGEMENT & ENGINEERING

SAMPLE ID: M1B

AEN LAB NO: 9605282-02 AEN WORK ORDER: 9605282 CLIENT PROJ. ID: DRS-95-E942

DATE SAMPLED: 05/21/96

DATE RECEIVED: 05/21/96

REPORT DATE: 06/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE ANALYZED
	·		<u></u>		
#Extraction for TPH	EPA 3550	-		Extrn Date	05/23/96
TPH as Diesel	GC-FID	4	* 1	mg/kg	05/29/96
#Soil Extrn for O&G (GR)		-		Extrn Date	05/29/96
Oil & Grease (Gravimetric)	SM 5520E	50	* 30	mg/kg	05/29/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

ENV. MANAGEMENT & ENGINEERING

SAMPLE ID: M1C

AEN LAB NO: 9605282-03 AEN WORK ORDER: 9605282 CLIENT PROJ. ID: DRS-95-E942

DATE SAMPLED: 05/21/96 DATE RECEIVED: 05/21/96 REPORT DATE: 06/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTIN LIMIT	G UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	-		Extrn Date	05/23/96
TPH as Diesel	GC-FID	96	* 1	mg/kg	05/29/96
#Soil Extrn for O&G (GR)		-		Extrn Date	05/29/96
Oil & Grease (Gravimetric)	SM 5520E	680	* 30	mg/kg	05/29/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

ENV. MANAGEMENT & ENGINEERING

SAMPLE ID: M1D

AEN LAB NO: 9605282-04 AEN WORK ORDER: 9605282

CLIENT PROJ. ID: DRS-95-E942

DATE SAMPLED: 05/21/96

DATE RECEIVED: 05/21/96 REPORT DATE: 06/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	_	Е	xtrn Date	06/03/96
TPH as Diesel	GC-FID	1,000 *	20 m	ng/kg	06/05/96
#Soil Extrn for O&G (GR)		-	E	xtrn Date	06/13/96
Oil & Grease (Gravimetric)	SM 5520E	1,700 *	30 m	ıg/kg	06/13/96

Reporting limit elevated for diesel due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

ENV. MANAGEMENT & ENGINEERING

SAMPLE ID: M2A

AEN LAB NO: 9605282-05

AEN WORK ORDER: 9605282 CLIENT PROJ. ID: DRS-95-E942

DATE SAMPLED: 05/21/96

DATE RECEIVED: 05/21/96 REPORT DATE: 06/20/96

	METHOD/		REPORTING	DATE
ANALYTE	CAS#	RESULT	LIMIT UNITS	ANALYZED
#Extraction for TPH	EPA 3550	-	Extrn Date	05/28/96
TPH as Diesel	GC-FID	720 *	1 mg/kg	05/29/96
#Soil Extrn for O&G (GR)		-	Extrn Date	05/29/96
Oil & Grease (Gravimetric)	SM 5520E	2,600 *	30 mg/kg	05/29/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

ENV. MANAGEMENT & ENGINEERING

SAMPLE ID: M2B

AEN LAB NO: 9605282-06 AEN WORK ORDER: 9605282

CLIENT PROJ. ID: DRS-95-E942

DATE SAMPLED: 05/21/96 DATE RECEIVED: 05/21/96

REPORT DATE: 06/20/96

ANALYTE	METHOD/ CAS#	RESULT		ORTING IMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3550	-		E	Extrn Date	06/03/96
TPH as Diesel	GC-FID	1,000	*	50 п	ng/kg	06/05/96
#Soil Extrn for O&G (GR)		-		E	Extrn Date	06/13/96
Oil & Grease (Gravimetric)	SM 5520E	7,300	*	30 п	ng/kg	06/13/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

AEN (CALIFORNIA) QUALITY CONTROL REPORT

AEN JOB NUMBER: 9605282

CLIENT PROJECT ID: DRS-95-E942

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

- D: Surrogates diluted out.
- #: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3550 GCFID

AEN JOB NO: 9605282

DATE EXTRACTED: 05/23-06/03/96

INSTRUMENT: C MATRIX: SOIL

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
05/29/96 05/29/96 06/05/96 05/29/96 06/05/96	M1B M1C M1D M2A M2B	02 03 04 05 06	99 86 D D D
QC Limits:			59-118

D: Surrogates diluted out.

DATE EXTRACTED: 05/23/96 DATE ANALYZED: 05/28/96 SAMPLE SPIKED: 9605273-01

INSTRUMENT: C

Matrix Spike Recovery Summary

	Carlos	A		QC Lim	its
Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD	Percent Recovery	RPD
Diesel	40.0	61	10	50-115	20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

QUALITY CONTROL DATA

METHOD: SM 5520

AEN JOB NO: 9605282 DATE EXTRACTED: 05/29/96 DATE ANALYZED: 05/29/96 SAMPLE SPIKED: LCS INSTRUMENT: GRAVIMETRIC MATRIX: SOIL

Laboratory Control Sample

Analyte	Spike Added (mg/kg)	Average Percent Recovery	QC Limits Percent Recovery
0i1	100	93	70-105

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

Environmental Management & Engineering, Inc. Birthingham Office: (205) 940-7/00 (205) 940-7/01 Pax Houston Office: (7(3) 939-7028 (205) 939-7029 Pax

9605282

CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

Client	e Vah	Project)R5-1	95-E9	42		Daté Delivered	a	Ana	lyses I	Reques	ted	Send Report to KEUIN HOLLORAN ENU. MANAGEMENT + ENGINEERING, INC
Sumplers, Kevin			Ken	Thel				- Deck	2	OUG 20 E			PO BOX 19866 BIRMINGHAM, AL 35219 (205) 940-7700 Please FAX RESULTS TO (205) 940-7701
Sample #	Date Sampled	Time Sampled		Sample Descr	iption	LAB NC,	No. of Containers	7.P.H 35.5	200	707AL CUG 6520E			Please FAX RESULTS TO (205) 940-7701 Remarks
MIA	5/21/46	8:15A		Soil		OIA	1		<u> </u>				Hold
MIB	<u> </u>	8:151		li .		02A		/	/	/			
MIC	4	8:40A	l	ft		03A	1	V		V			
MID	"	7:30A		/:	1	D4A	1	<u> </u>					Hold
M1D M2A	h	10:15 A		μ	(05A		1		/			
Mab	"	10:30A		/+		06A							Hold
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American Environmental Network	Client Projec	ct ID: # 9605282	Date Sampled: 05/21/96		
3440 Vincent Road			Date Received: 05/21/96		
Pleasant Hill, CA 94523	Client Conta	act: Bill Svoboda	Date Extracted: 05/22/96		
	Client P.O:	# 96052 8 2	Date Analyzed: 05/22/96		
	Vola	tile Halocarbons			
EPA method 601 or 8010					
Lab ID	65330				
Client ID	M1B				
Matrix	S				
Compound		Concentrat	ion*		
Bromodichloromethane	ND				
Bromoform ^(b)	ND				
Bromomethane	ND				
Carbon Tetrachloride ^(c)	ND				
Chlorobenzene	ND				
Chloroethane	ND				
2-Chloroethyl Viny l Ether ^(d)	ND				
Chloroform (e)	ND				
Chloromethane	ND				
Dibromochloromethane	ND				
1,2-Dichlorobenzene	ND				
1,3-Dichlorobenzene	ND				
1,4-Dichlorobenzene	ND				
Dichlorodifluoromethane	ND				
1,1-Dichloroethane	ND				
1,2-Dichloroethane	ND				
1,1-Dichloroethene	ND				
cis 1,2-Dichloroethene	ND				
trans 1,2-Dichloroethene	ND				
1,2-Dichloropropane	ND				
cis 1,3-Dichloropropene	ND				
trans 1,3-Dichloropropene	ND				
Methylene Chloride ^(f)	ND				
1,1,2,2-Tetrachloroethane	ND				
Tetrachloroethene	ND				
1,1,1-Trichloroethane	ND				
1,1,2-Trichloroethane	ND				
Trichloroethene	ND				
Trichlorofluoromethane	ND				
Vinyl Chloride (g)	ND				
% Recovery Surrogate	95				
Comments					
* water and vapor samples are reported in a	o/L soil sommles	in valles and all TCLP automatain			

^{*} water and vapor samples are reported in ug/L, soil samples in ug/kg and all TCLP extracts in ug/L.

Reporting limit unless otherwise stated: water/TCLP extracts, ND< 0.5ug/L; soil, ND< 5ug/kg

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

⁽b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~ 5 vol. % sediment.

QC REPORT FOR EPA 8010/8020/EDB

Date: 05/22/96

Matrix: Soil

Analuto	Conce	entratio	3)	% Reco			
Analyte	Sample (#63468)	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0	101	101	100	101	101	0.0
Trichloroethene	0	102	102	100	102	102	0.0
EDB	0	75	75	100	75	75	0.0
Chlorobenzene	0	94	9 6	100	94	96	2.1
Benzene	0	104	104	100	104	104	0.0
Toluene	0	104	104	100	104	104	0.0
Chlorobz (PID)	0	105	105	100	105	105	0.0

% Rec. = (MS - Sample) / amount spiked x 100

RPD = $(MS - MSD) / (MS + MSD) \times 2 \times 100$

Reporting Information: 1. Client: Address: Contact: Alt. Contact: Rebig Byars	3440 Vincent Roa Phone	ironmental Netwo d, Pleasant Hill, CA 94523 (510) 930-9090 510) 930-0256	Lab Job Number: Lab Destination:	Page of REQUEST FOR ANALYSIS / CHAIN OF CUSTOE 6444AENX64		
Address Report To:	Send Invoice To:		Date Samples Shippe Lab Contact:			
2.	3.		Date Results Require	ed:		
Send Report To: 1 or 2 (Circle one) Client P.O. No.: 460.5282 Client Project (Sample Team Member (s)	I.D. No.: 96050	82		ANALYSIS		
Lab Client Sample Air Number Identification Volum		Pres. No. Type of of Cont. Cont.	/9 / / /	Comments / Hazards		
024 MIB	5/21/94 Soil			65330		
		ICE/I	PRESERVATIVE_	AZ TOSE I WEINT STOLL LES		
		GOOD CONDITION INSAC SPACE ABSEN	APPROPRIATE CONTAINERS			
Relinquished by: (Signature)	5/21/a6	TIME Receiver (Signatu	i by: Ms lead EN	DATE TIME 4 Mully 5-21-86 15:45		
Relinquished by: Mules Achiel	S'-DATE 2/-SC	TIME Received (Signatur	l by:	DATE TIME		
Relinquished by: (Signature)	DATE	TIME Received (Signatu	iba	DATE TIME		
Method of Shipment		Lab Con	ments CEF 3) 25mm 0.4 um polyca			

4) PVC filter, diam. _____ pore size _____ 5) Charcoal lube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample 10) Other _____ 11) Other _____ 11) Other _____ PINK - CLIENT

Environmental Management & Engineering, Inc. Birthingham Office: (205) 940-7700 (205) 940-7701 Pax Houston Office: (713) 939-7028 (205) 939-7029 Pax

9605282

CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

Grove Value DR5-95-E942					Daté Delivered	ā	Analyses Requested				Send Report to KEUIN HOLLORAN ENV. MANAGEMENT + ENGINEERING, INC
Samplers, Kevin	(Signat	ure)	Lan Hell			- D -	20	ore 20 E			Please Place RESUITS 70 (205) 940-7701
Sample #	Date Sampled	Time Sampled	Sample Description	LAB No.	No. of Containers	7PH 355	2010	5530			Please FAX RESUITS 70 (205) 940-7701 Remarks
MIA	5/21/46	8:15 A	Soil	OIA	1						Hold
MIB	н	8:15A	<i></i>	02A		1	1	1			
M1C		8:40A	ft :	03A	1	V		V			
MID	//	7:30A	/r	D4A	1						Hold
MZA	4	10:15 A	//	05A		1		V			
M2B		10:301	/1	06A							Hold
											6-3-96 adolitional variabosis sequestrel - see Change Order Rio Riogenso
K	Relinquished by (Signature) Date Time Received by (Signature) Relinquished by (Signature) Relinquished by (Signature)		Mille	Relinquished by (Signature) Relinquished by (Signature)					Date Time Received by (Signature) Date Time Received by (Signature)		
Relinquished by (Signature) Date Time Received by Laborato (Signature)				<u> </u>	Indicate Special Hazards Here						

Belltallut Po. 721900 Howsten 77272-1900