FINAL CLOSURE REPORT

for

6341 Scarlett Court
Dublin, California

SUBMITTED ON

FEBRUARY 1991

TO

MR. RAVI ARULANANTHAM
ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

FINAL CLOSURE REPORT

for

DUBLIN MULTILAYER 6341 Scarlett Court Dublin, California

Written by

Stephen L. Williams of Stephen L. Williams Consulting

Compiled and Managed by Jon Krain of EM Enterprises

Edited and Published by

John Chan of Dublin Multilayer, Inc.

INTRODUCTION

Dublin Multilayer Inc (DMI) is a printed circuit board manufacturer located at 6341 Scarlett Court in Dublin, California and established in November, 1979. Their hazardous materials activities were confined to the area described in Figures A-1, and A-2 and known as the "wet floor". Contained within the wet floor was a collection sump which existed prior to DMI's occupancy. DMI refurbished the sump prior to the commencement of work in 1979 because of its poor condition.

On January 15th of 1990, DMI had a fire originating from what appears to be an electrical equipment failure inside the wet floor area. However, after an extended review, fire investigation teams have concluded that the exact cause of the fire was of "unknown origin".

During the early hours of the fire, IT Corporation was asked to provide direction as a hazardous materials site manager throughout the two days of the firefighting effort. Afterwards, the local fire agency stipulated that they direct IT Corporation's fire and hazardous materials cleanup of the wet floor area. IT Corporation spent the next five days working under the direction of the Fire Department. It was during this time, that water from inside the wet floor and that standing water around the blocked drains was pumped into several large poly tanks for later disposal. In addition, IT Corporation under the instructions of the local fire agency removed all of the wood materials used in the construction of the wet floor and in the area above the plating sump (mezzanine) into a 40 yard debris bin for disposal at a Class-I site (see Attachment II-C).

Additional work in the hazardous materials areas stopped until a formal closure plan was submitted and approved by Dr. Ravi Arulanantham of Alameda County Department of Environmental Health (see Attachment I).

SUMMARY

On February 24, 1990, CKC Inc and DMI personnel dismantled the mezzanine above the wet floor area. All debris not contaminated or effected by Hazardous materials was disposed of into bins as nonhazardous material. All other material in, on or associated with the wet floor activities was disposed of into bins as hazardous debris and shipped to Chemical Waste Management (CWMI), Kettleman Hills for Class-I disposal (see Attachments II-A and II-B). Absorbent material was added to wet sludge to solidify it for shipment in the debris bins for Class-I disposal. All liquid effluents were pumped into storage tanks for treatment by Decon Environmental Inc (DECON)

By March 2, 1990, Delta Technical Services (Delta Tech) was bought in to decontaminate the wet floor area after all the secondary containment berms and barriers were removed. Delta Tech hydroblasted the floor several times and in between each successive washing, the floor was etched with 10% nitric acid (see Attachment VI-D). The liquid effluent was added to the already stored liquid. This procedures was satisfactory for the majority of the wet floor area, but in a few small areas copper staining was still evident. So in these areas, we chose to sandblast and this was very effective. The spent sandblast grit was disposed of with the hazardous solids.

To verify our success at decontamination of the wet floor area, wipe samples were taken by Blaine Technical on March 9, 1990. These samples did in fact/confirm our success (see Attachments III-A, IV-A and Figure B).

On February 21, 1990, Dublin San Ramon Services District issued revised wastewater discharge requirements for the discharge of treated liquid effluents (see Attachment VI-A). Liquid effluents stored in bulk tanks were then treated by DECON

to remove heavy metals. They used the flocculation method incorporating the use of sodium hydroxide and sodium sulfide to enhance precipitation of metals for filtration. Confirmatory analysis were performed on treated batches (see Attachment III-B) and then were discharged into the sanitary sewer. The filter cake was place in bins for transport and recovery at Cypress Miami's facility in Claypool, Arizona (see Attachment II-D and II-E).

After decontamination was completed we noticed several etched areas, one was near an expansion joint, two were near stress cracks in the floor and one was near the edge of the building. This presented the potential for migration of contaminants, so we felt it necessary to investigate this possibility further. Core holes were drilled through the slab to facilitate sampling beneath the slab, as well as beneath the sump (see Figure C).

On March 27, 1990, a three inch hand auger was used by Western Geologic Resources (WGR) to collect samples from approximately one foot below the bottom of the slab and one foot below the bottom of the sump. The auger was washed between each boring to prevent cross contamination of samples. Samples were placed in glass jars with teflon seals and properly preserved. A sufficient quantity of soil was obtained for each sample to insure the absence of voids in the sample container. (see Attachment IV-C).

The samples beneath the floor were analyzed for copper, lead, nickel, chrome and hexavalent chrome. The sample beneath the sump was analyzed for all Priority Pollutants pursuant to 40 CFR and Title 22. (see Attachment III-C for sample results). Sample results showed elevated metals (copper, lead, nickel, chrome) in boring sites S-

3,S-4 and S-6, as well as methylene chloride, freon 113, TCE, 1,2 DCE and xylene in S-6 (see Figure C).

REMEDIATION

A six foot square hole was sawn in the concrete floor to access soils for excavation around sites S-3 and S-4. Upon excavation we encountered a visually contaminated zone approximately one foot thick, partially in the base fill material and partially in the native soil below the slab in site S-4 and below the asphaltic concrete (A/C) in S-3. It was necessary to enlarge the holes to twelve foot square to enable removal of all visually contaminated areas, as well as an additional one foot in each direction to insure complete removal of all contaminants. Final excavations were between three and four feet in depth and approximately twelve foot square.

For removal of the sump, we planned to remove two more feet around all sides and three more feet below the bottom before sampling. When the sump was first removed we noticed a minor degradation of the cast iron drain line to the sanitary sewer. We had encountered the same cast iron line at the edge of S-4 and had determined the line to be sound and intact. Because we did not know how much of the line was corroded, we cut open the floor and removed the entire line between S-6 and S-4, as well as an additional foot of soil below the line. The line showed signs of some corrosion, but was still intact. Upon completion of excavation of the sump, a concentrated pocket of chlorinated solvents was encountered (approximately six foot in depth).

Sample results showed the presence of TCE, PCE, and ethylbenzene (purchasing records show these solvents have not been used by DMI). Since the

property owner (Busick Properties) was aware of a potential previous release of this type of solvent, they assumed responsibility for the remediation of the sump area and associated VOC problem.

Samples were taken to determine if all heavy metal contamination had been removed (see Figure D). Sample results confirmed sufficient remediation and the trench and excavations around S-3 and S-4 were closed (see Attachment III-D).

Heavy metal soils were then stabilized using the IM-TECH method (see Attachment IV-B) and samples were taken to verify that the treated soils met non-hazardous standards (see Attachment III-E). Soils were then transported to Liquid Waste Management McKittrick, CA for disposal (see Attachment II-G).

A report on the subsequent remediation of VOC contaminated soils and groundwater associated with the sump will be submitted by Busick Properties and their consultants at a later date.

POSTSCRIPT

We would like to thank the associated agencies and personnel for their dedication and forthrightness towards helping us conclude this situation. In particular, these individuals made a difference as a result of their knowledge, their guidance, their attention for the safety of the public and professionalism: Tom Hatchcox (Dublin Fire Department), Tom DeHollander (Dublin San Ramon Services District), Dr. Ravi Arulanantham (Alameda County Department of Environmental Health).

TABLE OF ATTACHMENTS - APPENDIX

I.	CLOSURE PLAN
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V.	TRAINING CERTIFICATES
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I. CLOSURE PLAN

ATTACHMENTS

I. Closure Plan: Letter to Alameda County, Department of Environmental Health

DUBLIN MULTILAYER, INC.

6341 Scarlett Court Dublin, California 94566

February 24, 1990

Alameda County Health Agency Division of Hazardous Materials Department of Environmental Health 80 Swan Way, Room 200 Oakland, California 94621

Attention: Ravi Arulanantham

Dear Ravi,

Please accept the enclosed work schedule for the decontamination of Dublin Multilayer's fire damaged wet process area. All of the contractors we have retained for this project are trained and experienced in hazardous materials operations. They and all of us at Dublin Multilayer are determined to proceed in a manner that is safe, responsible, in full compliance with all applicable codes and with the guidance of your department and the Dublin San Ramon Water Services Department.

We have attached a check for \$500.00 payable to the Division of Hazardous Materials. It is our understanding that charges for your services will be deducted at the rate of \$50.00 per hour and the balance refunded to us at the close of this project. Please reference our purchase order number 8254 for these transactions.

Respectfully,

Jon Krain Facilities Manager

DUBLIN MULTILAYER, INC.

6341 Scarlett Court Dublin, California 94566

February 24, 1990

WORK SCHEDULE FOR DECONTAMINATION OF THE WET PROCESS AREA SUBSEQUENT TO FIRE OF JANUARY 15, 1990:

 Remove all liquid hazardous materials from tanks, equipment, sumps and wet floor and store for future batch treatment.

Completed by International Technology Corporation; 2/2/90.

2. Remove all non-contaminated equipment from the area to trash roll-off bin or to secure holding area pending disposition by insurance companies.

Completed by employees of Dublin Multilayer trained and experienced in working in a hazardous wet process area and in the proper use of safety equipment; 2/22/90.

3. Remove collapsed mezzanine to trash roll-off bin.

Completed by employees of Dublin Multilayer; 2/21/90.

4. Remove wet floor and existing containment area to solid hazardous waste bins. Remove contaminated equipment to secure area for future decontamination and storage pending insurance company disposition.

CKC Incorporated placed two hazardous waste bins on site; 2/23/90.

CKC Incorporated, with assistance from employees of Dublin Multilayer, will begin on Monday 2/26/90 and complete within one week.

5. Exposed concrete floor, sumps and contaminated equipment will be hydroblasted and effluent stored for future batch treatment.

Delta Tech Service, Inc. will begin on Thursday 3/1/90 and complete within one week.

6. The wet process area and sumps will be tested for formal closure; if remediation is necessary a plan of action will be submitted for approval by The Alameda County Health Agency.

Steven L. Williams will supervise this process beginning by 3/8/90 and completing within two weeks.

7. All hazardous liquids on site will be batch treated and treated water will be discharged into the sanitary sewer system in accordance with the directives of the Dublin San Ramon Water Services Department. Solid filter cake generated from this process will be stored in bins provided by Chemical Waste Management, Inc. for future off—site metal reclamation.

Decon Environmental Services, Inc. began staging this step on 2/23/90 and will finish within three weeks.

- 8. All hazardous and non-hazardous solid and liquid waste will be removed on an on-going basis as required to maintain free access to the work site.
- 9. Dublin Multilayer, Inc will report and document all work done and the disposition of all materials within one week of the completion of the above. March 26, 1990 is our target date.

II. MANIFESTS AND SHIPPING DOCUMENTS

ATTACHMENTS

- II-A. Manifest 88448274 (02-28-90): 2 bins fire debris to CWMI
- II-B. Manifest 88448269 (03-01-90): 2 bins fire debris to CWMI
- II-C. Manifest 88448270 (03-23-90): 1 bin fire debris to CWMI
- II-D. Manifest 88248442 (09-05-90): 1 rollon bin treated sludge to Haz/Control
- II-E. Manifest 88247434 (09-14-90): consolidation of sludge to Cypress Miami
- II-F. Manifest 90203930 (09-14-90): spent chromic and black oxide to Solvent Services
- II-G. Shipping form (09-17-90): stabilized soil to Liquid Waste Management

UNIFORM HAZARDOUS 1. Generator's US EPA ID No.	tanifest ument_No	2. Pa	informa	ttion in th	ne shaded areas
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Transporter 1 Company Name 6. US EPA ID Number	OIII	C. State	e Transporter's IC		6193/6479
CKC, INC CA D 9805B9510			aporter's Phone		-627-2595
Transporter 2 Company Name 8. US EPA ID Number	11 21 22	-	e Transporter's ID sporter's Phone		
Designated Facility Name and Site Address 10. US EPA ID Number	4-4-4-	120 100	e Fecility's ID	_	
CWMI		H. Facil	ATOPP lity's Phone	164	6/11/7
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5. Trensporter 1 Company Name CKC, Inc	, GA	US EPA ID Numbe D 980589510			e Transporter' aporter's Pho		06174/
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Dublin Multilayer					844	182	70
6341 Searlett Ct. Dublin CA 04568				e Genera	-		ASSESSMENT DAVE
Generator's Phone (410 829-1956	25						17 18 6
GSX Services of CA- CAUGERALD Number	NO.	-	1011-51-51	a Transp aporter	orter's i	0	10477
7. Transporter 2 Company Name 8. US EPA ID Number	ZICIO	-		720/2// 10	orter's II		
	upana	o l	****	sporter's	average and		
9. Designated Facility Name and Site Address 10. US EPA ID Number CWNI	,		CI		200	1614	161/171
35251 Old Skyline Rd.			H. Faci	ity's Ph			
Kettleman City, CA 93239 CA T 0 00 64 6			iners	13. T	-222	14	04
US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	No		Туре		uantity	Unit Wt/Vo	Waste No.
RQ Hazardous Waste Solid Nos ORM-H	355						181
NA 9187 D908	0,0	1	CM	40	1.3		EPA/Other D008
3.	1	-	-				State
							EPA/Other
	1	1	1	1.1	1.1		
							State
	100	, I	ys I	¥ 0	1.7		EPA/Other
1.		1	-		1.1	1	State
							EDA (Other
	1			1.1	1.1		EPA/Other
J. Additional Descriptions for Materials Listed Above			K. Han	dling Co	des for V	Vastes L	isted Above
Pire debris contaminated w/ Cu 0-2000 pp Pb 0-500 ppm Ni 0-100 ppm	РШ		c. (13		d.	
Pb 0-500 ppm Ni 0-100 ppm			a. (13		d.	
Pb 0-500 ppm Ni 0-100 ppm 16. Special Handling Instructions and Additional Information Wear gloves goggles and protective cloth			c. C	SFO	K 55	10000	
Wear gloves goggles and protective cloth Generator's Certification: I hereby declare that the contents of this consignment at and are classified, packed, marked, and labeled, and are in all respects in proper condition national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volum to be economically practicable and that I have selected the practicable method of treatment present and future threat to human health and the environment; OR, if I am a small quantity generation and select the best waste management method that is available to me and that I	re fully an for transp	xicity , or d	curately y highwa of west isposal	describe by accor e genera currently	ed above ding to a sted to the available	by proppplicable degree to me	e international and e i have determined which minimizes the inimize my waste
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RES

t of Health Services

See instructions on Back of Page 6 and Front of Page 7

Department of Health Services
Toxic Sebatances Control Division
Secremento, California

Company of the Compan	ment No. 4 3 4		of 11 is	not re	quired 1	he similed arous by Federal law
3. Generator's Name and Mailing Address HAZ/CONTROL, INC. 731 RENZ LANE		A. Sta	te Merahitest			434
GILROY, CA 95020	0	B. Sta	te Gerenerator		11	101
. Generator's Phone (800) 338-5426		H	A HHGQ	3 [6 [0,1	01018141
. Transporter I Company Name 6. US EPA ID Number	a	1 - 1	te Tremmsport		-	5741
STAMCO C A D 0 6 3 5 4 7	9 9 6	CHANGE INC.	nsport rter's Pi	- 1	408)	683-2395
7. Transporter 2 Company Name 8. US EPA ID Number			te Travanaporte			
	$\perp \perp \perp$		neporteter's Pt			
Designated Facility Name and Site Address 10. US EPA ID Number			te Facicility's			
CYPRUS MIAMI MINING CORP.		H. Fac	A Z4 D	0 10 1	0 16	2 4 2 5 1
U.S. HIGHWAY 60/70 CLAYPOOL, AZ 85532 A Z D 0 6 0 6 2 4	2 (5 (1	100	02) 1 447		25	
CLAYPOOL, AZ 85532 A Z D 0 6 0 6 2 4	12. Cont.		133. Tota		14	
1. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	No.	Туре	Quant	tity	Unit W1/Yet	Waste No.
HAZARDOUS WASTE, SOLID, N.O.S.	1100	1289		-1	1717.104	State
ORM-E NA 9189 RQ1# (F006)		m		- 1		171 EPA/Other
	0 10 12	CIM	3103131	710	D	F006
					•	State
17						EPA/Other
	1.1.		1.11.11	1		
						State
	5000000		76 53.70	- 60		EPA/Other
	_1_1_		1 1 3			
						State
31	28. 8	100	8	· :		EPA/Other
		C.	120		4	3/11
15. Special Handling Instructions and Additional Information LOAD MADE TO PLATING SYMIRON #89746160 BIN#16 LOAD MADE TO PLATING ARTEC #89680584 BIN#03 SURFACE MOUNTED BIRTON MULTIL. #88248442 BIN#03 H/C P.O.#000159	TECH.	. #8	384334829 • I (0	9 BI	N#03 778	
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UNIFORM HAZARDOUS WASTE MANIFEST 3. Generator's Name and Mailing Address Dublin Hultilayer, Inc. 6341 Scarlett Court Dublin, 65, 94560	Document No		age 1	Cart Constant	CONTRACT PROPERTY.
3. Generator's Name and Mailing Address Dublin Hultilayer, Inc.		-	intorm		ne shaded areas by Federal law.
Dublin Hultilayer, Inc.	1 4 4 4 4	43.1		A STATE OF THE PARTY OF THE PAR	NEW TOTAL CONTROL OF THE PARTY
5341 Scarlett Court Jami'r . Galaci		A. Sta	Manifest Docum	ຳລັດ	วัก
MANUAL REPORTS LIGHTED THEFT THE PARTY OF TH			9020	100	30
Constitute Phone Co.			te Generator's ID		
4. Generator's Phone (415) 825-1500		Ei I	A 4 3 6	1-10	1 1 7 8 4
	ID Number		le Transporter's II	103	594
DECOM invironmental Jervices the K lath D 12 to 12		1	saporter's Phone		732-5-44
7. Transporter 2 Company Name 8. US EPA I	ID Number	1 1 Lab Sec. U. 641	e Transporter's IC		
		2000	sporter's Phone	111111	
9. Designated Facility Name and Site Address 10. US EPA I	ID Number		te Facility's ID		
Solvent Services, Inc.		CI	A1010519	1419	43119
1041 Berryessa Rd.		H. Fac	ility's Phone		1 1
San Jose, CA 95133 Liabilital.	Late Late 1	3.0	a-me-had	ć.	
	12. C	ontainers	13. Total	14.	and Kara
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Numb	ner) No.	Туре	Quantity	Unit Wt/Vol	Waste No.
The same was a supplication of the same same same same same same same sam		1		100	State
Waste Acids, Liquid, Corrosive Mater	191,				7.5
RA1760 (Contains Carcaic)	7.3	2 y	1 1 1 1		EPA/Other
Waste Gaisizer, Corrosive,air,					State
Oxidizer, hA9162 (Contains reconsium hydroxi					12.19
women's postar thoughts the saint saint saint	ue)	1.3	9 9 9 9		EPA/Other
		- 212.		-	State
7/					F18000-
(i)		. 1 . 1			EPA/Other
1.	-	+		-	State
N:	1				
					EPA/Other
J. Additional Descriptions for Materials Listed Above	-	- 1.		Vanta I	- ind the
CONTRACTOR STATE AND STATE		a. Hai	ndling Codes for V	t b.	
A. Spent chromic Acid CL1965			99	100	99
A. Spent black exide solution CL1966		C.		d.	
(1) [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]		0			
5. Special Handling Instructions and Additional Information CAUTION Corrosive instartials and deviations Keep cool, bear appropriate productive equipmentator's 24-hr emergency bear-75-1901	morat and of		.L) 99/	15/0	1/02
were were a serie chargeney t size. 75-1961					
		· 4 - b -			
	e the volume and toxi of treatment, storage, all quantity generator.	ort by highw icity of was or disposal I have mad	ay according to a le generated to th currently available	pplicable e degree e to me v	I have determined which minimizes the
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III. CHAIN OF CUSTODY FORMS AND LAB REPORTS

ATTACHMENTS

- III-A. Chain of Custody/Blaine Tech Services with Sequoia Analytical lab report (03-08-90)
- III-B. Chain of Custody/Decon Environmental with Superior Analytical lab reports (03-01-90 through 05-01-90)
- III-C. Chain of Custody/Western Geologic Resources with BC Analytical lab reports (03-27-90 through 05-04-90)
- III-D. Chain of Custody/Western Geologic Resources with BC Analytical lab reports (05-17-90 through 05-30-90)
- III-E. Chain of Custody/Decon Environmental with Kenney/Jenks/Chilton lab report (08-23-90)

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Blaine Tech Services 1370 Tully Rd., Suite 505 Client Project ID: Sample Descript:

#900308K1, Dublin Multilayer Wipe #1

Sampled: Received: Mar 8, 1990 Mar 8, 1990

San Jose, CA 95122 Attention: Richard Blaine Lab Number:

003-1118

Reported:

Mar 19, 1990

LABORATORY ANALYSIS

Analyte

Detection Limit mg/kg

Sample Results mg/kg

Chromiton	A 10	
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	0.20	
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hacki Project Manager

31118.BLA <1>



Blaine Tech Services 1370 Tully Rd., Suite 505 San Jose, CA 95122

#900308K1, Dublin Multilayer Client Project ID:

Sampled:

Mar 8, 1990

Sample Descript: Wipe #3 Received:

Mar 8, 1990

Attention: Richard Blaine

Lab Number:

003-1119

Reported:

Mar 19, 1990

LABORATORY ANALYSIS

Sample Results **Detection Limit** Analyte mg/kg mg/kg

	A 44 A 4
0.10	***************************************
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Nickel 19	
[11UBC[44]	

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl Project Manager

31118.BLA <2>

Blaine Tech Services 1370 Tully Rd., Suite 505 San Jose, CA 95122

Client Project ID:

#900308K1, Dublin Multilayer

Sampled: Received:

Mar 8, 1990 Mar 8, 1990

Attention: Richard Blaine

Sample Descript: Wipe #5

Lab Number:

Reported:

Mar 19, 1990

LABORATORY ANALYSIS

003-1120

Sample Results Analyte **Detection Limit** mg/kg mg/kg

7.12	0.10
Chromium	U. IU 14
Caman	0.20
LODDEF	0.20 ***********************************
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77 i w 100 100 100 100 100 100 100 100 100 1	
INICKEI	1.0 4.3

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl Project Manager

31118.BLA <3>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063 (415) 364-9600 • FAX (415) 364-9233

Blaine Tech Services 1370 Tully Rd., Suite 505 San Jose, CA 95122

Client Project ID: #900308K1, Dublin Multilayer Sample Descript:

Sampled:

Mar 8, 1990

Wipe #7

Received:

Mar 8, 1990

Attention: Richard Blaine

Lab Number:

003-1121

Reported:

Mar 19, 1990

LABORATORY ANALYSIS

Analyte

Detection Limit mg/kg

Sample Results mg/kg

Chromium		S 17	715
Conner	Λ	.20	32

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		· IV	
Nicket	***********	4.0	70
	************************************	*.V	

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl Project Manager

31118.BLA <4>



SEQUOIA ANALYTICAL

680 Chesapeake Drive . Redwood City, CA 94063 (415) 364-9600 • FAX (415) 364-9233

Blaine Tech Services 1370 Tully Rd., Suite 505 San Jose, CA 95122 Attention: Richard Blaine Client Project ID:

#900308K1/Dublin Multilayer

Sampled: Received: Mar 8, 1990

Sample Descript: Wipe

Extracted:

Mar 27, 1990 Mar 28, 1990

Lab Number:

003-3720

Analyzed: Reported: Apr 10, 1990 Apr 13, 1990

LABORATORY ANALYSIS OF STLC EXTRACT

Analyte

Detection Limit mg/L

Sample Results mg/L

Lead...... 0.0020

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl Project Manager

33720.BLA <1>

CHAIN OF CUSTODY RECORD P.O. AYAI.YSES PROJECT NAME PROJ. NO. Dubla Multilayer REQ'D Superior Analytical Inc. 135 Fairles, Suite D SAMPLERS. IS gratured 3an Francisco, CA 94124 Actor Da (415) 847-2061 TURN-AROUND TIME SUSPECTED DETECTION HEDIA SAMPLE LOCATION SAMPLE DATE TIME CONTANTHANT LIMIT 48 hr Tank # P 7140 W301 3-1-9018 AM Water TANK P7140 OK for discharge 3-5-90 Received by: Biground Date / Time Relinquished by: (Signature) Relinquished by: 15-greates Received by: (Signature) Date / Time 3-1-90 5PM Brue Jacobse Received by: 15-punnel Relinquished by: (Systemes) Date / Time Relinquested by: (S-granes) Date / Time | Received by: (Signature) · Brue Jacobse 3.2.90 9AM Remarks Atlanguished by: Isourus Date / Time Received for Laboratory by:

4.44

1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80598

DATE RECEIVED: 03/02/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/06/90

CLIENT JOB NO.: DUBLIN MULT

ANALYSIS FOR TOTAL LEAD by SW-846 Method 7420

LAB		Concentration (mg/L)
#	Sample Identification	Total Lead
1	W301	ND<0.5

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Soil: 10 mg/kg Method Detection Limit for Lead in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery: 62%

Duplicate RPD: 3%

Edward R. Morales

1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80598

DATE RECEIVED: 03/02/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/06/90

CLIENT JOB NO.: DUBLIN MULT

ANALYSIS FOR TOTAL ZINC by SW-846 Method 7950

LAB #	Sample Identification	Concentration (mg/L) Total Zinc				
1	W301	2.0				

mg/L - parts per million (ppm)

Method Detection Limit for Zinc in Soil: 0.2 mg/kg Method Detection Limit for Zinc in Water: 0.01 mg/L

QAQC Summary: MS/MSD Average Recovery: 128%

Duplicate RPD: 14%

Edward R. Morales

1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80598

DATE RECEIVED: 03/02/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/06/90

CLIENT JOB NO.: DUBLIN MULT

ANALYSIS FOR TOTAL ZINC by SW-846 Method 7950

LAB # 	Sample Identification	Concentration (mg/L) Total Zinc
1	W301	2.0

mg/L - parts per million (ppm)

Method Detection Limit for Zinc in Soil: 0.2 mg/kg Method Detection Limit for Zinc in Water: 0.01 mg/L

QAQC Summary: MS/MSD Average Recovery: 128%

Duplicate RPD: 14%

Edward R. Morales

1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

ANALYSIS CERTIFICATE OF

LABORATORY NO.: 80598

DATE RECEIVED: 03/02/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/06/90

CLIENT JOB NO.: DUBLIN MULT

ANALYSIS FOR TOTAL ZINC by SW-846 Method 7950

LAB # 	Sample Identification	Concentration (mg/L) Total Zinc
1	w301	2.0

mg/L - parts per million (ppm)

Method Detection Limit for Zinc in Soil: 0.2 mg/kg Method Detection Limit for Zinc in Water: 0.01 mg/L

QAQC Summary: MS/MSD Average Recovery : 128%

Duplicate RPD: 14%

Edward R. Morales

ratøry Manager

DSRSD WASTEWATER TREATMENT FACILITY LABORATORY INORGANIC/ORGANIC/WET CHEMISTRY ANALYSIS REPORT

Sample Code: DM-3-1 Sample Date: 3-1-90

Digestion Date: 3-1-90

Date Reported: 3-5-90

Date of nalysis	Method #	Parameter	Concentration in MG/L (unless other-wise noted)	Detection Limit in MG/L
/1/90	218.1	Chromium	<0.05	0.05
3 /1/90	220.1	Copper	0.40	0.02
3/1/90	239.1	Lead	<0.10	0.10
/1/90	249.1	Nickel	0.21	0.04
3/1/90	289.1	Zinc	0.341	0.005
/5/90	335.2	Cyanide	0.05	0.01

flodeliga d. Misra Laboratory Supervisor -

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	SAMPLE!	S rem	2 :	Ĺ	زز. رسیع	2	;				S		1			/ '	Sen Fr	ancisco, CA 9 415) 847-2081	1124
	SAMPLE	DATE	THE	COMP.	GRAE	SANTLE LOCATI		HEDIA	/	7	Ž			Ž	_	DETECTI LIMIT	OX 1	TINE	SUSPECTE
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1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80618

DATE RECEIVED: 03/07/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/09/90

CLIENT JOB NO.: DUBLIN

ANALYSIS FOR TOTAL CHROMIUM by SW-846 Method 7190

LAB #	Sample Identification	Concentration (mg/L) Total Chromium
1	1302	ND<0.1

mg/L - parts per million (ppm)

Method Detection Limit for Chromium in Soil: 2 mg/kg Method Detection Limit for Chromium in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery: 83%

Duplicate RPD: 14%

Edward R. Morales

1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80618

DATE RECEIVED: 03/07/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/09/90

CLIENT JOB NO.: DUBLIN

ANALYSIS FOR TOTAL ZINC by SW-846 Method 7950

LAB		Concentration (mg/L)
#	Sample Identification	Total Zinc
1	1302	0.22

mg/L - parts per million (ppm)

Method Detection Limit for Zinc in Soil: 0.2 mg/kg Method Detection Limit for Zinc in Water: 0.01 mg/L

QAQC Summary: MS/MSD Average Recovery: 118%

Duplicate RPD: 5%

Edward R. Morales

Laboratory Manager

Hoaneh Salimpe

1555 Burke, Unit 1 · San Francisco, Ca 94124 · Phone (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80618

DATE RECEIVED: 03/07/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/09/90

CLIENT JOB NO.: DUBLIN

ANALYSIS FOR TOTAL ZINC by SW-846 Method 7950

LAB #	Sample Identification	Concentration (mg/L) Total Zinc
1	1302	0.22

mg/L - parts per million (ppm)

Method Detection Limit for Zinc in Soil: 0.2 mg/kg Method Detection Limit for Zinc in Water: 0.01 mg/L

QAQC Summary: MS/MSD Average Recovery: 118%

Duplicate RPD: 5%

Edward R. Morales

1555 BURKE, UNIT 1 · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081
CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80618

CLIENT: Decon Environmental Services

CLIENT JOB NO.: DUBLIN

DATE RECEIVED: 03/07/90

DATE REPORTED: 03/09/90

ANALYSIS FOR TOTAL LEAD by SW-846 Method 7420

LAB # 	Sample Identification	Concentration (mg/L) Total Lead
1	1302	2.3

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Soil: 10 mg/kg Method Detection Limit for Lead in Water: 0.5 mg/L $\,$

QAQC Summary: MS/MSD Average Recovery : 113%

Duplicate RPD: 6%

Edward R. Morales

1555 Burke, Unit 1 · San Francisco, Ca 94124 · Phone (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80618

CLIENT: Decon Environmental Services

CLIENT JOB NO.: DUBLIN

DATE RECEIVED: 03/07/90

DATE REPORTED: 03/09/90

ANALYSIS FOR TOTAL NICKEL by SW-846 Method 7520

LAB #	Sample Identification	Concentration (mg/L) Total Nickel

1	1302	2.8

mg/L - parts per million (ppm)

Method Detection Limit for Nickel in Soil: 10 mg/kg Method Detection Limit for Nickel in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery: 103%

Duplicate RPD: 4%

Edward R. Morales

DSRSD WASTEWATER TREATMENT FACILITY LABORATORY INORGANIC/ORGANIC/WET CHEMISTRY ANALYSIS REPORT

mample Code: DM-3-6 Sample Date: 3-6-90

-6 Date Reported: 3-13-90

Digestion Date: 3-6-90

Date of nalysis	Method #	Parameter	Concentration in MG/L (unless other- wise noted)	Detection Limit in MG/L
/13/90	218.1	Chromium	<0.05	0.05
2/13/90	220.1	Copper	3.32	0.02
3/13/90	239.1	Lead	<0.10	0.10
/13/90	249.1	Nickel	1.56	0.04
3/13/90	289.1	Zinc	0.189	0.005
/13/90	335.2	Cyanide	0.50	0.01

Hordelige a. Misra Hordel Hza A. Misra Laboratory Supervisor

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SAMPLE	Per	E:		9	,	•			\\ \frac{\pi}{2}	8		100			(415) 847-2081	7144
SMP1.E	DATE	TIME	3	SAAB	SANTIE LOCATI	COM	HEDIA				Z	Z		DETECTION	TURN-AROUND TIME	SUSPECTED CONTAMINATION
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1385 FAIRFAX St., Ste. D. · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80623

DATE RECEIVED: 03/09/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/13/90

CLIENT JOB NO.: L304

ANALYSIS FOR TOTAL CHROMIUM by SW-846 Method 7190

LAB # 	Sample Identification	Concentration (mg/L) Total Chromium
1	L304	ND<0.1

mg/L - parts per million (ppm)

Method Detection Limit for Chromium in Soil: 2 mg/kg Method Detection Limit for Chromium in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery: 98%

Duplicate RPD: 8%

Edward R. Morales

OUTSTANDING QUALITY AND SERVICE

1385 FAIRFAX St., Ste. D. • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80623

DATE RECEIVED: 03/09/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/13/90

CLIENT JOB NO.: L304

ANALYSIS FOR TOTAL COPPER by SW-846 Method 7210

LAB #	Sample Identification	Concentration (mg/L) Total Copper
1	L304	0.5

mg/L - parts per million (ppm)

Method Detection Limit for Copper in Soil: 2 mg/kg Method Detection Limit for Copper in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery: 90%

Duplicate RPD: 3%

Edward R. Morales

1385 FAIRFAX St., Ste. D. • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80623

CLIENT: Decon Environmental Services

CLIENT JOB NO.: L304

DATE RECEIVED: 03/09/90

DATE REPORTED: 03/13/90

ANALYSIS FOR TOTAL NICKEL by SW-846 Method 7520

LAB # 	Sample Identification	Concentration (mg/L) Total Nickel
1	L304	0.5

mg/L - parts per million (ppm)

Method Detection Limit for Nickel in Soil: 10 mg/kg Method Detection Limit for Nickel in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery : 109%

Duplicate RPD: 3%

Edward R. Morales

1385 FAIRFAX St., Ste. D. • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80623

DATE RECEIVED: 03/09/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/13/90

CLIENT JOB NO.: L304

ANALYSIS FOR TOTAL LEAD by SW-846 Method 7420

LAB #	Sample Identification	Concentration (mg/L) Total Lead
1	L304	ND<0.5

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Soil: 10 mg/kg Method Detection Limit for Lead in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery: 111%

Duplicate RPD: 6%

Edward R. Morales

1385 FAIRFAX St., Ste. D. • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80623

DATE RECEIVED: 03/09/90

CLIENT: Decon Environmental Services

DATE REPORTED: 03/13/90

CLIENT JOB NO.: L304

ANALYSIS FOR TOTAL ZINC by SW-846 Method 7950

LAB #	Sample Identification	Concentration (mg/L) Total Zinc
1	L304	0.08

mg/L - parts per million (ppm)

Method Detection Limit for Zinc in Soil: 0.2 mg/kg Method Detection Limit for Zinc in Water: 0.01 mg/L

QAQC Summary: MS/MSD Average Recovery: 116%

Duplicate RPD: 5%

Edward R. Morales

DSRSD WASTEWATER TREATMENT FACILITY LABORATORY INORGANIC/ORGANIC/WET CHEMISTRY ANALYSIS REPORT

Sample Code: DM-P4036 Sample Date: 3-9-90

migestion Date: 3-9-90

Date Reported: 3-13-90

Pate of N nalysis	1ethod #	Parameter	Concentration in MG/L (unless otherwise noted)	Detection Limit in MG/L
0/13/90	218.1	Chromium	<0.05	0.05
/13/90	220.1	Copper	0.14	0.02
3/13/90	239.1	Lead	<0.10	0.10
/13/90	249.1	Nickel	0.38	0.04
3/13/90	289.1	Zinc	0.089	0.005
/13/90	335.2	Cyanide	<0.01	0.01

Thordelige U. Disco Flordeliza A. Misra Laboratory Supervisor

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	SAMPLER BA	RS. 15-00 Well	um) Jacoli	re	-:/	Peter Saboen				15						San	35 Fairlax, Sulta Francisco, CA 9 (415) 847-2081	1124
	SAMPLE	DATE	TIME	GO .	ORAE	SAIGHE LOCATION		HEDIA	Z.	Z	_	_	_	_	DETECT LIMIT	LION	TURN-AROUND TIME	SUSPECTED CONTAMINAL
	P4066 A				1			Water	\checkmark					<u> </u>				
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SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80709

DATE RECEIVED: 04/04/90

CLIENT: Decon Environmental Services

DATE REPORTED: 04/11/90

CLIENT JOB NO.: DUBLIN MULTILAYER

ANALYSIS FOR TOTAL CHROMIUM by SW-846 Method 7190

LAB		Concentration(mg/L)
÷	Sample Identification	Total Chromium
	48	(8)
1	P4066A	<u>2</u> .7
2	P4066B	2.5

mg/L - parts per million (ppm)

Method Detection Limit for Chromium in Soil: 2 mg/Kg Method Detection Limit for Chromium in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery: 94%

Duplicate RPD : 13%

Edward R. Morales

Laboratory Manager

other results via

54-10 13:10

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80801

CLIENT: Decon Environmental Services

CLIENT JOB NO.: NA

DATE RECEIVED:05/02/90 DATE REPORTED:05/04/90

ANALYSIS FOR TOTAL ZING by SW-346 Method 7950

LAB # 	Sample Identification	Concentration(mg,L) Total Linc
1	p4056- pt;DUBLIN, MULTILAYER	3.4

mg/L - parts per million (ppm)

Method Detection Limit for Zino in Water: 0.01 mg/1

QAQC Summary: MS/MSD Average Recovery : 112%

Duplicate RPD : 0

Richard Srna, Ph.D.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 30801

DATE RECEIVED: 05/02/90

CLIENT: Decon Environmental Services

DATE REPORTED: 05/04/90

CLIENT JOB NO.: NA

ANALYSIS FOR TOTAL CHROMIUM by SW-846 Method 7190

LA3
Sample Identification

Ocnoentration (mg/L) Total Chromium

1 p4066- pb;DUBLIN, MULTILAYER

4.5

mg/L - parts per million (ppm)

Method Detection Limit for Chronium in Water: 0.1 mg/L

🗽 QAGC Summany: MS/MSD Average Recovery : 110%

Duplicate RPD : 3

Richard Grna. Ph.D.

Dearth Raile

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80801

CLIENT: Decon Environmental Services

CLIENT JOB NO.: NA

DATE RECEIVED:05/02/90 DATE REPORTED:05/04/90

ANALYSIS FOR TOTAL LEAD by SW-846 Method 7420

LAB		Concentration(mg/L)
#	Sample Identification	Total Lead
1	p4066- pb;DUBLIN, MULTILAYER	2.0

mg/L - pants per million (ppm)

Method Detection Limit for Lead in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery : 119%

Duplicate RPD : 8

Richard Srns. Ph.C.

1555 Burke, Unit I · San Francisco, Ca 94124 · Phone (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 30801

CLIENT: Decon Environmental Services

CLIENT JOB NO.: NA

DATE RECEIVED:05/02/90 DATE REPORTED:05/04/90

ANALYSIS FOR TOTAL COPPER by SW-846 Method 7210

LAB
Sample Identification

Concentration(mg/L)
Total Copper

p4066- pb;DUBLIN, MULTILAYER

ND 0.1

mg/L - parts per million (ppm)

Method Detection Limit for Copper in Water: 0.1 mg/L

QAQC Summary: MS/MSD Average Recovery : 34%

Duplicate RPD : 10

Bichard Srns. Ph.D.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80801

CLIENT: Decon Environmental Services

CLIENT JOB NO.: NA

DATE RECEIVED:05/02/90 DATE REPORTED:05/04/90

ANALYSIS FOR TOTAL NICKEL by SW-846 Method 7520

LAB

Sample Identification Total Nickel

1 p4066- pb:DUBLIN, MULTILAYER 15

mg/L - parts per million (pom)

Method Detection Limit for Nickel in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery : 101%

Duplicate RPD : 20

Richard Srna, Ph.D.

Lappratory Manager

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80922

DATE RECEIVED:05/29/90

CLIENT: Decon Environmental Services

DATE REPORTED: 05/30/90

CLIENT JOB NO.: DUBLIN MULT.

ANALYSIS FOR TOTAL NICKEL by SW-846 Method 7520

LAB #	Sample Identification	Concentration(mg/L) Total Nickel
1	707	1.2

mg/L - parts per million (ppm)

Method Detection Limit for Nickel in Water: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery: 98%

Duplicate RPD: 1

Richard Srna, Ph.D.

ce Jackse-	Washington				-		An	alı	tic	al L	aboratoru
	(415) 229-1512							——————————————————————————————————————			
cation	Matrix	Number of Containers	Sample Preservation	TPH as Gasoline	втхе	TPH as Diesel	Oll & Grease	8010	8240	Nickel	
Truk-	1									\checkmark	24hr Rush
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Z 	X	メ	***	*	*		IT MU	N	IF TOTALS EXCRUS STLC. FOR ANY GIVEN METAL, PLEMAR RUN WETTEST FOR MS WELL.
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CHAIN OF CUSTODY

Laboratory
BROWN + CALD WELL

MARK FRYE

See expl 1

50

Sample

Type

1255 POWELL ST, EMENYVILLE, LA, 94608

Preservative

1600 SI

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54

26

Date / Time 3.27.90 11:46

Received By

Sample Description

PUBLIN MULTILAYER

Project Name

Container

Type See expl 2

GLASS

JAR

Address

Project No.

Sampler(s)

Lab Sample Number

26-273.01

Date

Sampled

3.2190

Sample Relinquished By

WESTERN GEOLOGIC RESOURCES, INC.

Fax: 415/457-8521

2169 E. Francisco Boulevard, Suite B

San Rafael, California 94901

1873-609

415/457-7595

ED BUCKINK / STEVE WILLIAMS

Project Mgr / Contact

General Remarks

White / Project File

Canary / Sampler

III-C

LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

Mr. Ed Buskirk Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273.01

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION,	SOIL SAMPLE	ES		DA	TE SAMPLED
03-859-1 03-859-2 03-859-3 03-859-4 03-859-5	S4					27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90
PARAMETER		03-859-1	03-859-2	03-859-3	03-859-4	03-859-5
Fourteen CA	M Metals by ICAP					
Silver, mg	•			-		<0.4
Barium, mg	_					190
Beryllium,	·					<0.2
Cadmium, m						4.5
Cobalt, mg	• -					11
Chromium,	· · · · · · · · · · · · · · · · · · ·					680
Copper, mg						270
Molybdenum						<2
Nickel, mg	· · · · · · · · · · · · · · · · · · ·					52
Lead, mg/k	•		-			<6
Antimony,	_					5.2
Thallium,	- -					. <4
Vanadium,			- - -			54
Zinc, mg/k	- -			- 		66
Arsenic, mg	-			-		3.4
Mercury, mg		-				<0.001
Selenium, m						<0.4
	l Digestion, Date					04.06.90
	Hexavalent, mg/kg	<5	<5	<5	<5	_<5
pH, Units						7.0
Cyanide, mg	g/kg	- 				1.4
Chromium, n		46	250	79	59	

1255 Powell Street Emeryville, CA 94608



LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

Mr. Ed Buskirk Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273.01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, S	SOIL SAMPLE	ES .		DA	TE SAMPLED
03-859-1 03-859-2 03-859-3 03-859-4 03-859-5	S1 S2 S3 S4 S6					27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90
PARAMETER	:	03-859-1	03-859-2	03-859-3	03-859-4	03-859-5
B/N, A Ext.P Date Analy Date Extra Dilution F 1,2.4-Tric 1,2-Dichlo 1,2-Diphen 1,3-Dichlo 1,4-Dichlo 2,4,5-Tric 2,4,6-Tric 2,4-Dichlo 2,4-Dimeth 2,4-Dinitr 2,6-Dinitr 2,6-Dinitr 2,6-Dinitr 2-Chloroph 2-Nethyl-4 2-Methylph	cted actor, Times hlorobenzene, mg/kg robenzene, mg/kg ylhydrazine, mg/kg robenzene, mg/kg robenzene, mg/kg hlorophenol, mg/kg hlorophenol, mg/kg ylphenol, mg/kg ylphenol, mg/kg otoluene, mg/kg otoluene, mg/kg phthalene, mg/kg enol, mg/kg					04.05.90 04.04.90 1 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03
	line, mg/kg nol, mg/kg					<0.03



LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

Mr. Ed Buskirk Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273.01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, S	SOIL SAMPLE	3S		DA	TE SAMPLED
03-859-1 03-859-2 03-859-3 03-859-4 03-859-5	S1 S2 S3 S4 S6					27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90
PARAMETER		03-859-1	03-859-2	03-859-3	03-859-4	03-859-5
3,3'-Dichl 3-Nitroani 4-Bromophe 4-Chloroan 4-Chloroph 4-Methylph 4-Nitroani 4-Nitrophe Acenaphthe Acenaphthe Aniline, i Anthracene Benzo(a)ai Benzo(b)f Benzo(g,h	e, mg/kg	g				<pre><0.03</pre>
Benzyl al Benzoic a	cohol, mg/kg cid, mg/kg			 		<0.2 <0.2
Butylbenz Chrysene,	ylphthalate, mg/kg mg/kg					<0.03 <0.03



LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

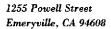
Mr. Ed Buskirk Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273.01

REPORT OF ANALYTICAL RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION, S	SOIL SAMPLE	2S		DA'	re sampled
03-859-1 03-859-2 03-859-3 03-859-4 03-859-5	S1 S2 S3 S4 S6					27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90
PARAMETER		03-859-1	03-859-2	03-859-3	03-859-4	03-859-5
	Lphthalate, mg/kg					<0.03 <0.03
Dibenzofu	•					<0.03
	thalate, mg/kg					<0.03
	thalate, mg/kg					<0.03
	nthalate, mg/kg					<0.03
	ene, mg/kg					<0.03
Fluorene,	mg/kg					<0.03
Hexachlor	obenzene, mg/kg				- 	<0.03
Hexachlor	obutadiene, mg/kg					<0.03
Hexachlor	ocyclopentadiene, mg/k	g				<0.03
Hexachlore	oethane, mg/kg					<0.03 <0.03
Indeno(1,	2,3-c,d)pyrene, mg/kg					<0.03
Isophoron	e, mg/kg					<0.03 <0.03
	dimethylamine, mg/kg					<0.03
	diphenylamine, mg/kg	-				<0.03
	di-n-propylamine, mg/k	g				<0.03
	ene, mg/kg					<0.03
Naphthale						<0.03
	ene, mg/kg	- 				<0.03
Phenol, m	• -					<0.03
	rophenol, mg/kg					<0.03
Pyrene, m	g/kg					





LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

Mr. Ed Buskirk Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273.01

REPORT OF ANALYTICAL RESULTS

Page 6

LOG NO	SAMPLE DESCRIPTION, SOIL	SAMPLE	ES		DA'	re sampled
03-859-1 03-859-2 03-859-3 03-859-4 03-859-5	\$1 \$2 \$3 \$4 \$6					27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90
PARAMETER	03-	859-1	03-859-2	03-859-3	03-859-4	03-859-5
Bis(2-chlo Bis(2-chlo	oroethoxy)methane, mg/kg oroethyl)ether, mg/kg oroisopropyl)ether, mg/kg ylhexyl)phthalate, mg/kg					<0.03 <0.03 <0.03 <3
C8-C35 H	tified Results ** ydrocarbon Matrix, mg/kg r Sulfur, mg/kg					100 1

 $\star\star$ Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.



LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

Mr. Ed Buskirk Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

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03-859-1 S1 27 MAR 90 03-859-2 S2 27 MAR 90 03-859-3 S3 27 MAR 90 03-859-4 S4 27 MAR 90 03-859-5 S6 27 MAR 90
02.050 1 02.050 0 02.050 0 02.050 0 03.959-5
PARAMETER 03-859-1 03-859-2 03-859-3 03-859-4 03-859-5
Purgeable Priority Pollutants
Date Extracted 04.06.90
1,1,1-Trichloroethane, mg/kg <0.2
1 1 2 2-Tetrachloroethane, mg/kg CU.Z
1 1 2 Trichloroethane mg/kg CU.2
1 1-Dichloroethane mg/kg
1 1-Dichloroethene mg/kg CV.2
1 2-Dichloroethane, mg/kg
1 2-Dichloropropage mg/kg <0.2
1 3-Dichloropropene, mg/kg <0.2
2-Chloroethylvinylether, mg/kg CO.2
2-Hexanone, mg/kg <2
Acetone, mg/kg
Acrolein, mg/kg <2
Acrylonitrile, mg/kg <2
Bromodichloromethane, mg/kg <0.2
Bromomethane, mg/kg <0.2
Benzene, mg/kg
Bromoform, mg/kg
Chlorobenzene, mg/kg
Caroon letrachiolide, mg/kg
Chloroethane, mg/kg
Chloroform, mg/kg 00.2

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LOG NO: E90-03-859

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LOG NO	SAMPLE DESCRIPTION,	SOIL SAMPL	ES		DA	TE SAMPLED
03-859-1 03-859-2 03-859-3 03-859-4 03-859-5	\$1 \$2 \$3 \$4 \$6				••••	27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90 27 MAR 90
PARAMETER		03-859-1	03-859-2	03-859-3	03-859-4	03-859-5
Chlamamath	ane, mg/kg					<0.2
	ulfide, mg/kg					<0.2
	oromethane, mg/kg					<0.2
Ethylbenze				-		<0.2
Freon 113,						0.4
	yl ketone, mg/kg					<2
	butyl ketone, mg/kg					<2
•	chloride, mg/kg					0.6
Styrene, m						<0.2
	ethene, mg/kg					2.9
	luoromethane, mg/kg					<0.2
Toluene, π						<0.2
	coethene, mg/kg					0.3
	ate, mg/kg					<0.2
	oride, mg/kg					<0.2
	ene Isomers, mg/kg					0.2
	ichloroethene, mg/kg	- 				0.3
	-Dichloroethene, mg/kg	g				<0.2
trans-1,3-	Dichloropropene, mg/l	cg				<0.2

Sim D. Lessley, Ph.D., Laboratory Director

1255 Powell Street Emeryville, CA 94608



LOG NO: E90-03-859

Received: 27 MAR 90 Reported: 18 APR 90

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03-859-5 S6 27 MAR 90 PARAMETER 03-859-1 03-859-2 03-859-3 03-859-4 03-859-5 Chloromethane, mg/kg	LOG NO	SAMPLE DESCRIPTION,	SOIL SAMPL	ES		DA	TE SAMPLED
Chloromethane, mg/kg	03-859-2 03-859-3 03-859-4	\$2 \$3 \$4					27 MAR 90
Carbon Disulfide, mg/kg Carbon Disulfide, mg/kg Dibromochloromethane, mg/kg Ethylbenzene, mg/kg Freon 113, mg/kg Methyl ethyl ketone, mg/kg Methyl isobutyl ketone, mg/kg Methylene chloride, mg/kg Trichloroethene, mg/kg Trichlorofluoromethane, mg/kg Toluene, mg/kg Tetrachloroethene, mg/kg Vinyl acetate, mg/kg Total Xylene Isomers, mg/kg Co.2 Carbon Disulfide, mg/kg	PARAMETER		03-859-1	03-859-2	03-859-3	03-859-4	03-859-5
Total Xylene Isomers, mg/kg 0.2 cis-1,2-Dichloroethene, mg/kg 0.3 trans-1,2-Dichloroethene, mg/kg 0.2	Chlorometh Carbon Dis Dibromochl Ethylbenze Freon 113, Methyl eth Methyl iso Methylene Styrene, m Trichloroe Trichlorof Toluene, m Tetrachlor Vinyl acet	ulfide, mg/kg oromethane, mg/kg ne, mg/kg mg/kg yl ketone, mg/kg butyl ketone, mg/kg chloride, mg/kg g/kg thene, mg/kg luoromethane, mg/kg oethene, mg/kg ate, mg/kg					<pre><0.2 <0.2 <0.2 <0.2 0.4 <2 <2 0.6 <0.2 2.9 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2</pre>
TTAUN=T. >=DICHIOLODIODENE, MY/XX ====	Total Xyle cis-1,2-Di trans-1,2-	ne Isomers, mg/kg chloroethene, mg/kg Dichloroethene, mg/kg			 		0.2 0.3 <0.2 <0.2

Sim D. Lessley, Ph.D., Labora

Laboratory Director

1255 Powell Street Emeryville, CA 94608



LOG NO: E90-04-437

Received: 17 APR 90 Reported: 04 MAY 90

Mr. Mark Frye Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273.01

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, CALIF WASTE EXTRACT	SAMPLES	D#	ATE SAMPLED
04-437-1 04-437-2	S3 (Relog of 9003859-3) S6 (Relog of 9003859-5)			27 MAR 90 27 MAR 90
PARAMETER		04-437-1	04-437-2	
Chromium, m Copper, mg/ Lead, mg/L CAM WET Ext		31 17 04.25.90	11 1.1 04.25.90	

Sim D. Lessley, Ph.D., Laboratory Director

B C A

LOG NO: E90-05-565

Received: 17 MAY 90 Reported: 21 MAY 90

Mr. Steve Williams Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273-01

REPORT OF ANALYTICAL RESULTS

LOG NO SAMPLE DESCRIPTION, SOIL SAMPLES		DATE SAMPLED
05-565-1 B1-A,B,C,D,E Composite 05-565-2 B3-A,B,C,D,E Composite 05-565-3 T-1 A,B,C Composite 05-565-4 S-1 A,B Composite 05-565-5 S-1 AW,BW Composite		17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER 05-565-1 05	- 565-2 05-565 - 3	05-565-4 05-565-5
Chromium, mg/kg Copper, mg/kg Lead, mg/kg Nickel, mg/kg Nitric Acid Digestion, Date Chromium, mg/kg 26 05.17.90 05	22 50 <6 <6 30 .17.90 05.17.90	



LOG NO: E90-05-565

Received: 17 MAY 90 Reported: 21 MAY 90

Mr. Steve Williams Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, S	SOIL SAMPL	3S		DA	TE SAMPLED
05-565-1 05-565-2 05-565-3 05-565-4 05-565-5	B1-A,B,C,D,E Composit B3-A,B,C,D,E Composit T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite					17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER		05-565-1	05-565-2	05-565-3	05-565-4	05-565-5
B/N Δ Fv+	Pri.Poll. (EPA-8270)					
Date Anal		- 			05.18.90	05.18.90
Date Extr	•	- 			05.18.90	05.18.90
	Factor, Times				1	1
	chlorobenzene, mg/kg				<0.03	<0.03
	orobenzene, mg/kg				<0.03	<0.03
	nylhydrazine, mg/kg				<0.03	<0.03
	orobenzene, mg/kg				<0.03	<0.03
1,4-Dichl	orobenzene, mg/kg				<0.03	<0.03
2,4,5-Tri	chlorophenol, mg/kg				<0.03	<0.03
2,4,6-Tri	chlorophenol, mg/kg				<0.03	<0.03
2,4-Dichl	orophenol, mg/kg			- 	<0.03	<0.03
2,4-Dimet	hylphenol, mg/kg				<0.03	<0.03 <0.3
2,4-Dinit	rophenol, mg/kg				<0.3	<0.03
2,4-Dinit	rotoluene, mg/kg				<0.03	<0.03
•	rotoluene, mg/kg				<0.03 <0.03	<0.03
	aphthalene, mg/kg				<0.03	<0.03
•	henol, mg/kg				<0.03	<0.03
_	4,6-dinitrophenol, mg/	kg			<0.03	<0.03
	aphthalene, mg/kg				<0.03	<0.03
	henol, mg/kg				<0.03	<0.2
	iline, mg/kg				<0.03	<0.03
2-Nitroph	enol, mg/kg				70.03	

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, S	SOIL SAMPL	ES		DA	TE SAMPLED
05-565-1 05-565-2 05-565-3 05-565-4 05-565-5	B1-A,B,C,D,E Composit B3-A,B,C,D,E Composit T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite					17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER		05-565-1	05-565-2	05-565-3	05-565-4	05-565-5
3.3'-Dichl	orobenzidine, mg/kg			+	<0.03	<0.03
	line, mg/kg				<0.2	<0.2
	enylphenylether, mg/kg				<0.03	<0.03
•	3-methylphenol, mg/kg				<0.03	<0.03
	niline, mg/kg		·		<0.2	<0.2
	nenylphenylether, mg/kg	ζ	·		<0.03	<0.03
	nenol, mg/kg				<0.03	<0.03
	line, mg/kg				<0.2	<0.2
	enol, mg/kg				<0.7	<0.7
Acenaphthe					<0.03	<0.03
-	vlene, mg/kg				<0.03	<0.03
Aniline, m					<0.03	<0.03
Anthracene	- -				<0.03	<0.03
Benzidine,	· · · · · · · · · · · · · · · · · · ·				<1	<1
•	nthracene, mg/kg				<0.03	<0.03
	rene, mg/kg				<0.03	<0.03
	luoranthene, mg/kg				<0.03	<0.03
	i)perylene, mg/kg				<0.03	<0.03
	Luoranthene, mg/kg	-			<0.03	<0.03
Benzyl alo	ohol, mg/kg				<0.2	<0.2
Benzoic ac	eid, mg/kg	- 			<0.2	<0.2
Butylbenzy	/lphthalate, mg/kg				<0.03	<0.03
Chrysene,					<0.03	<0.03

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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, S	SOIL SAMPL	ES		DA	TE SAMPLED
	B1-A,B,C,D,E Composit B3-A,B,C,D,E Composit T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite					17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER		05-565-1	05-565-2	05-565-3	05-565-4	05-565-5
Dibenzo(a, Dibenzofur Dibutylpht Diethylpht Dimethylph Fluoranthe Fluorene, Hexachloro Hexachloro	halate, mg/kg halate, mg/kg thalate, mg/kg ne, mg/kg				<0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03	<0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03
Isophorone N-Nitrosod N-Nitrosod N-Nitrosod Nitrobenze	imethylamine, mg/kg liphenylamine, mg/kg li-n-propylamine, mg/kg ene, mg/kg	 g			<0.03 <0.03 <0.03 <0.03 <0.03 <0.03 <0.03	<0.03 <0.03 <0.03 <0.03 <0.03 <0.03
Naphthalen Phenanthre Phenol, mg Pentachlor Pyrene, mg	ene, mg/kg g/kg cophenol, mg/kg				<0.03 <0.03 <0.03 <0.03	<0.03 <0.03 <0.03 <0.03

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LOG NO: E90-05-565

Received: 17 MAY 90 Reported: 21 MAY 90

Mr. Steve Williams Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL	SAMPLE	S		DA'	TE SAMPLED
05-565-1 05-565-2 05-565-3 05-565-4 05-565-5	B1-A,B,C,D,E Composite B3-A,B,C,D,E Composite T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite					17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER	05-	565-1	05-565-2	05-565-3	05-565-4	05-565-5
Bis(2-chlo Bis(2-chlo	roethoxy)methane, mg/kg roethyl)ether, mg/kg roisopropyl)ether, mg/kg lhexyl)phthalate, mg/kg				<0.03 <0.03 <0.03 <3	<0.03 <0.03 <0.03 <3



Analytical Report

LOG NO: E90-05-565

Received: 17 MAY 90 Reported: 21 MAY 90

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REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION,	SOIL SAMPL	ES		DA	TE SAMPLED
05-565-1 05-565-2 05-565-3 05-565-4 05-565-5	B1-A,B,C,D,E Composit B3-A,B,C,D,E Composit T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite					17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER		05-565-1	05-565-2	05-565-3	05-565-4	05-565-5
Vol.Pri.Pol	ll. (EPA-8240)					
Date Analy	·				05.18.90	
Date Extra					05.17.90	05.17.90
Dilution I	Factor, Times	 -			1	I
1,1,1-Tric	chloroethane, mg/kg				<0.2	<0.2
1,1,2,2-Te	etrachloroethane, mg/k	g 			<0.2	<0.2
1,1,2-Tric	hloroethane, mg/kg				<0.2	<0.2
1,1-Dichlo	proethane, mg/kg				<0.2	<0.2
1,1-Dichlo	oroethene, mg/kg		- 		<0.2	<0.2
1,2-Dichlo	oroethane, mg/kg				<0.2	<0.2
1,2-Dichlo	orobenzene, mg/kg				<0.2	<0.2
	oropropane, mg/kg				<0.2	<0.2
*	orobenzene, mg/kg				<0.2	<0.2 <0.2
	oropropene, mg/kg				<0.2	<0.2
•	orobenzene, mg/kg				<0.2	<0.2
	thylvinylether, mg/kg				<0.2	<0.2
2-Hexanone		- 			<0.2 <0.2	<0.2
•	2-Pentanone, mg/kg				<0.2 <5	<5
Acetone, I					< 5	<5
Acrolein,					<2 <2	<2
•	rile, mg/kg				<0.2	<0.2
	loromethane, mg/kg				<0.2	<0.2
Bromometha	ane, mg/kg				10.2	

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Analytical Report

LOG NO: E90-05-565

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LOG NO	SAMPLE DESCRIPTION,	SOIL SAMPLE	ES		DA ^r	re sampled
05-565-1 05-565-2 05-565-3 05-565-4	B1-A,B,C,D,E Composi B3-A,B,C,D,E Composi T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite	te te	· • • • • • • • • • • • • • • • • • • •			17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER		05-565-1	05-565-2	05-565-3	05-565-4	05-565-5
Pongono					<0.2	<0.2
Benzene, m Bromoform,					<0.2	<0.2
,	zene, mg/kg		-		<0.2	<0.2
	trachloride, mg/kg		-		<0.2	<0.2
Chloroetha					<0.2	<0.2
Chlorofor					<0.2	<0.2
	nane, mg/kg				<0.2	<0.2
	sulfide, mg/kg				<0.2	<0.2
	loromethane, mg/kg				<0.2	<0.2
	ene, mg/kg				<0.2	<0.2
Freon 113	· -				<0.2	<0.2
	nyl ketone, mg/kg				<2	<2
	chloride, mg/kg				<0.2	<0.2
Styrene, I					<0.2	<0.2
•	mg/kg ethene, mg/kg	 -	 -		36	0.3
	fluoromethane, mg/kg				<0.2	<0.2
Toluene,					<0.2	<0.2
· ·	roethene, mg/kg				1.3	<0.2
	tate, mg/kg				<0.2	<0.2
	oride, mg/kg				<0.2	<0.2
	ene Isomers, mg/kg				<0.2	<0.2
	ichloroethene, mg/kg				3.0	0.2
trong 1 2	-Dichloroethene, mg/kg	·			<0.2	<0.2
trans-1,2	-Dichioroe diche, mg, w					

| Analytical Report

LOG NO: E90-05-565

Received: 17 MAY 90 Reported: 21 MAY 90

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Project: 26-273-01

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, S	SOIL S	SAMPLE	S		DA'	re sampled
05-565-1 05-565-2 05-565-3 05-565-4 05-565-5	B1-A,B,C,D,E Composit B3-A,B,C,D,E Composit T-1 A,B,C Composite S-1 A,B Composite S-1 AW,BW Composite		 -				17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
PARAMETER		05-56	65-1	05-565-2	05-565-3	05-565-4	05-565-5
trans-1,3-	Dichloropropene, mg/kg	g				<0.2	<0.2

Sim D. Lessley, Ph.D., Laboratory Director

BCA

Analytical Report

LOG NO: E90-05-771

Received: 25 MAY 90 Reported: 30 MAY 90

Mr. Randy Smith Western Geologic Resources, Inc. 2169 East Francisco, Suite B San Rafael, California 94901

Project: 26-273-01

REPORT OF ANALYTICAL RESULTS

Page 1

pH, Units			8.2	8.2	8.2	7.9	7.5
PARAMETER		05-1	771-1	05-771-2	05-771-3	05-771-4	05-771-5
05-771-1 05-771-2 05-771-3 05-771-4 05-771-5	B1-A,B,C,D,E, B3-A,B,C,D,E T-1 A,B,C S-1 A,B S-1 AW,BW						17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90 17 MAY 90
LOG NO	SAMPLE DESCRIPTION,	SOIL	SAMPLES			DA	ATE SAMPLED

Sim D. Lessley, Ph.D., Laboratory Director



PROJECT NO. 225	l l	CT NAM		TILI	14ER	f —						PARAMETERS				INDUSTRIAL HYGIENE SAMPLE
SAMPLERS: (Signate Peter Set—	ure)		,		(Printed) PETER SCHOEN	-	Sol Company		War.	* /	/,	/,		//	//	REMARKS
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	/\$	40/3					\angle		\angle		
55-225-823-1	8/23/20	9100		×	HEAP OF STABILIZED SOIL	1	7	>							72 hr	ue tunaround
٠																
· · · · · · · · · · · · · · · · · · ·																
					·											
15						1										
*			T .		·											
•	<u> </u>															· ·
	1					1										
	 		 			1					-					
	 		 			1										
Relinquished by: 154		8/:	Date 23/40	1 11	i i	Rel	inqui	hed b	ι γ: <i>(S4</i>	pneture	J		Dat	ie / Ti	ime Rece	lved by: (Signature)

Peter below	8/22/90 11:00		,	
(Printed name) & Company ;		(Printed name) & Company	(Printed name) & Company	(Printed name) & Company
PETER SCHOEL / DECON				
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time Remarks	 · .

Kristin K Galves Superialab

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

WET EXTRACT REPORT

Kennedy/Jenks/Chilton, Laboratory Division 303 Second Street, Tenth Floor North San Francisco, CA 94107

415-362-6065

For:

DECON Environmental Services

Attention:

Peter Schoen

Address:

26102 Eden Landing Road, Suite 4

Hayward, CA 94545

Received 08/23/90 Reported 08/28/90

Quality Control Page

Source:

Decon Marketing

Lab. No.:

905350

Sample I.D.:

SS-225-823-1

Matrix:

Stabilized Soil

Depth:

Date Collected: Time Collected: 08/23/90 0900

Collected by:

DECON

Date Extracted: Date Analyzed:

08/25 - 27/9008/25 - 26/90

Analytical Method:

Calif. Admin. Code Title 22, Paragraph 66700

Contaminant	Units	Replicate	Concentration in extract	Det. Lim.
Chromium(Cr)	mg/L	0.60 0.61 S	Spike Recovery 93%	<0.1
Nickel(Ni)	mg/L	0.91 0.61 \$	Spike Recovery 88%	<0.1

Final pH of extract was 5.9

Comments: Analysis by atomic absorption spectrophotometry. Results reported in milligrams per liter.

Reference: "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods," SW-846, 1984 and 1986, U.S. EPA, and "California Administrative Code Title 22, Div. 4, Chapter 30, Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes". 1985.

Analyst

Tracy Kirkpatrick

Manager

This report applies only to the sample investigated and is not necessarily indicative of the quality of apparently identical or similar samples. The liability of the laboratory is limited to the amount paid for the report by the issues. The issues assumes all liability for the further distribution of this report or its contents, and by making such distribution agrees to hold the laboratory harmless against all claims of persons so informed of the contents hereof.

WET EXTRACT REPORT

Kennedy/Jenks/Chilton, Laboratory Division 303 Second Street, Tenth Floor North San Francisco, CA 94107

415-362-6065

For:

DECON Environmental Services

Attention:

Peter Schoen

Address:

26102 Eden Landing Road, Suite 4

Hayward, CA 94545

Received

Reported 08/28/90

Quality Control Page

Source:

Lab. No.:

Method Control

Sample I.D.:

Citrate Buffer

Matrix:

Water

Depth:

Date Collected:

Time Collected: Collected by:

K/J/C

Date Extracted:

Date Analyzed:

08/25 - 26/90

Analytical Method:

Calif. Admin. Code Title 22, Paragraph 66700

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Contaminant	Units		Concentration in extract	Det. Lim.
Chromium(Cr)	mg/L	0.60		<0.1
Nickel(Ni)	mg/L	0.76		<0.1

Final pH of control was 5.4

Comments: Analysis by atomic absorption spectrophotometry. Results reported in milligrams per liter.

Reference: "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods," SW-846, 1984 and 1986, U.S. EPA, and "California Administrative Code Title 22, Div. 4, Chapter 30, Minimum Standards for Management of Hazardous and Extremely Hazardous Waytes", 1985.

contents and by making such distribution agrees to hold the laboratory harmless against all claims of persons so informed of the contents hereof.

Analyst

Tracy Kirkpatrick

Manager

This report applies only to the sample investigated and is not necessarily indicative of the quality of apparently identical or similar samples. The liability of the laboratory is limited to the amount paid for the report by the issuee. The issuee assumes all liability for the further distribution of this report or its

WET EXTRACT REPORT

Kennedy/Jenks/Chilton, Laboratory Division 303 Second Street, Tenth Floor North San Francisco, CA 94107

415-362-6065

For:

DECON Environmental Services

Attention:

Peter Schoen

Address:

26102 Eden Landing Road, Suite 4

Hayward, CA 94545

Received

Reported 08/28/90

Quality Control Page

Source:

Lab. No.:

Sample I.D.:

Method Blank Reagent Water

Matrix:

Water

Depth:

Date Collected:

Time Collected:

Collected by:

K/F/C

Date Extracted: Date Analyzed:

08/25 - 26/90

Analytical Method:

Calif. Admin. Code Title 22, Paragraph 66700

7 interproduction of the		—		
Contaminant	Units		Concentration in extract	Det. Lim.
Chromium(Cr)	mg/L	<0.01		0.01
Nickel(Ni)	mg/L	<0.01		0.01

Comments: Analysis by atomic absorption spectrophotometry. Results reported in milligrams per liter.

Reference: "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods," SW-848, 1984 and 1986, U.S. EPA, and "California Administrative Code Title 22, Div. 4, Chapter 30, Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes*, 1985

Analyst

Tracy Kirkpatrick

Manager

This report applies only to the sample investigated and is not necessarily indicative of the quality of apparently identical or similar samples. The liability of the laboratory is limited to the amount paid for the report by the issuee. The issuee assumes all liability for the further distribution of this report or its contents, and by making such distribution agrees to hold the laboratory harmless against all claims of persons so informed of the contents hereof.



DECON Environmental Services Client Project ID: 225 / Dublin Multilayer Sampled: Aug 28, 199

Aug 28, 1990

26102 Eden Landing Road, Suite 4 Sample Descript: Solid, SS-225-828-1

Received: Extracted:

Aug 29, 1990 Aug 30, 1990

Hayward, CA 94545

Attention: Chris Kwoka

Lab Number:

008-4888

Analyzed:

Aug 31, 1990

Reported: Sep 4, 1990

LABORATORY ANALYSIS - E.P. TOXICITY EXTRACTION

Analyte

Detection Limit ma/L

Sample Results mg/L

Hexayalem Chromium

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Cynthia H. Camba Freject Manager

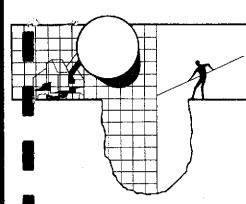
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IV. FIELD LOGS, NOTES AND SAMPLING

INFORMATION

ATTACHMENTS

- IV-A. Wipe Sample Report/Method, Blaine Tech Services (03/08/90)
- IV-B. Soil Sampling/IM-TECH Process, Decon Environmental information sheet
- IV-C. Soil Sampling Field Report, Western Geologic Resources (03-27-90)
- IV-D. Hydroblast Field Report, Delta Technical report(03-02-90 through 03-07-90)



BLAINE TECH SERVICES INC.

1370 TULLY RD., SUITE 505 SAN JOSE, CA 95122 (408) 995-5535

March 29, 1990

Dublin Multi-Layer 6341 Scarlett Court Dublin, CA 94568

Attn: Steve Williams

stre: 6341 Scarlett Court Dublin, California

PROJECT: Wipe Sampling

SAMPLED ON: March 8, 1990

SAMPLING REPORT 900308-K-1

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results or become involved with the marketing or installation of remedial systems. The interpretation of results should be performed by representatives of interested regulatory agencies and/or those professionals who are engaged as paid consultants in the business of providing opinions and proposals for further investigation or clean-up activities.

This report describes environmental sampling and documentation performed by our firm on this project. In addition to the Sampling Report text itself, supporting documents are provided as attachments. These include the chain of custody and the certified analytical laboratory report. All these documents should be kept together and preserved as a file of interrelated records which, together, comprise the documentation of the work performed at the site.

Blaine Tech Services, Inc. Report No. 900308-K-1

Dublin Multi-Layer

page 1

Background

Dublin Multi-Layer is a firm that does some metal plating. Following a fire in their plating building, the building was demolished except for the concrete floor. The concrete floor has stains from the plating operation and was sand blasted and acid etched to remove the contaminants. Mr. Steve Williams of Dublin Multi-Layer contacted Blaine Tech Services, Inc. office personnel in order to obtain a wipe sample of the concrete floor after it was etched.

Scope of Requested Services

In accordance with your request, field personnel would be dispatched to the site to collect wipe samples from the concrete floor of the demolished plating building. We would arrange for the proper analyses of the samples and maintain adequate documentation resulting in the issuance of a formal Sampling Report.

Execution of the Work

Personnel were dispatched from our office and arrived at Dublin Multi-Layer on Thursday, March 8, 1990. Our personnel met with Mr. John Crain of Dublin Multi-Layer and Mr. Steve Williams his project manager. Mr. Williams instructed our personnel to collect a total of eight wipe samples from the concrete floor.

Four sets of 100 square centimeter sampling grids were mapped out on the concrete floor. Each set consisted of two adjacent grids. Within each grid, one wipe sample was obtained. One sample was submitted to the laboratory to be analyzed for metals. The other sample was obtained as a duplicate and submitted to the laboratory with instructions to be placed the hold and analyzed only if the adjacent grid sample showed values greater than ten times the STLC.

The location of individual sampling points is shown on the diagram on page three. Additional information on the exact method of sample collection will be found in the SAM-PLING METHODOLOGY section of this report.

After completion of the field work, the samples were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #145.

SAMPLING METHODOLOGIES USED ON THIS PROJECT

Wipe Sample: Each wipe sample is taken from the inside of a standardized sampling area which is usually a square or rectangle "grid" that contains 100 square centimeters. The method used to collect the sample involves using only one side of a filter paper "wipe" which is manually moved back and forth across the interior of the box. The wipe preparation is specific to the analysis that will be performed on the resulting sample. For example,

a wipe that is going to be used to collect material that will be analyzed for metals and pH would be prepared with deionized water. A sample that is to be analyzed for total oil and grease would be prepared with freon.

In the work performed on this project, each sample that was analyzed for metals consisted of four sampling grids that were sampled with four wipes. The wipes were specially prepared. One wipe was used to obtain surface residue from one of four 100 square centimeter sampling grids which were adjacent to each other. The grid was wiped using one side of the wipe and then placed then in a plastic bag. A duplicate sample was obtained from each of the four sampling grids in the same manner as the initial samples.

Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days as jobs and projects often do. This is followed by the sample I.D. number which is usually a simple number such as #1, #2, #3.

Chain of Custody

Samples are continuously maintained in either a chilled ice chest, refrigerator, or freezer from the time of collection until acceptance by the State certified Hazardous Materials Testing Laboratory selected to perform the analytical procedures. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Laboratory Identification Numbers

Following receipt of the samples and completion of the Chain of Custody form, the laboratory then assigns their own identification numbers to the samples. Different laboratories use different numbering systems and, according to their own internal conventions, may or may not assign sequential numbers to samples which are placed on temporary "hold", pending the results of other analyses. Laboratory identification numbers (if assigned and available) are included on the DIAGRAM page, and will be found on the certified analytical report by the analytical laboratory.

Certified Analytical Report

The certified analytical report generated by the laboratory is the official document in which they issue their findings. The certified analytical report is included as an attachment at the close of this report.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/dmp

attachments: chain of custody certified analytical report



DECON Soil & Water Sampling Protocols

Surface Soil Sampling

The methods described in this section are used when collecting soil or sediment samples in the uppermost 2 feet. Surface soil samples for chemical or physical analysis are collected using a soil sampling hammer with a 2 inch diameter, 6 inch long brass liner tube. The sampler is driven into the top 6 to 24 inches of soil and then removed and disassembled to permit the retrieval of the soil sample. The ends of the tube are covered with aluminum foil and then capped. The tube is labelled and immediately placed into a pre-cooled ice chest chilled to less than 4 degrees Centigrade. Labels contain the following information: site name, date and time sampled, sample identification, and analysis to be performed on the sample. samples are transported under chain of custody to a state certified laboratory. The laboratory analyzes soil samples within the prescribed holding time, storing them at temperatures below 4 degrees Centigrade at all times.

DECON uses new sterile brass tubes for sampling. Between each sample collected, the sampling hammer is cleaned with trisodium phosphate (TSP) and rinsed with distilled, deionized water.

Water Sampling

Samples from open surface water will be collected by direct submergence of the sample bottle. The sample bottle is capped with a Teflon lined lid and then wiped dry with a rag and immediately labelled with the following information: site name, date and time sampled, sample identification, and analysis to be performed on the sample. When a sample is suspected to contain volatile constituents, the sample should immediately be placed into an ice chest pre-cooled to 4 degrees Centigrade. Preservative are not added to any sample unless instructed. Under no circumstances are sealed sample containers opened by anyone other than the laboratory personnel who perform the requested analyses.

Water samples are not held for more than 14 days prior to analysis and are kept at 4 degrees Centigrade at all times.

To document and track samples from time of collection, a signed chain of custody record is completed by the sampler and accompanies the samples through the laboratory sample acceptance. The completed chain of custody is included with the analytical report from the laboratory.

DECON's Stabilization Process

DECON provided all labor, materials, and equipment to stabilize the contaminated soil using the IM-TECH process. This section describes the process, processing equipment and operation.

The IM-TECH stabilization process was developed and patented by Mr. Ray Funderburk, the president and founder of IM-TECH (formerly Hazcon, Inc.). It has been evaluated and approved by the EPA under their Superfund Innovative Technology Evaluation (SITE) program.

The IM-TECH (or Hazcon) process was designed to stabilize heavy metals in a wide variety of matrices, including refinery sludges and contaminated soil containing high levels of organic compounds. As shown in Table 1, this process has been proven effective for stabilization of many different heavy metals, PNA's, VOC's and other organic compounds.

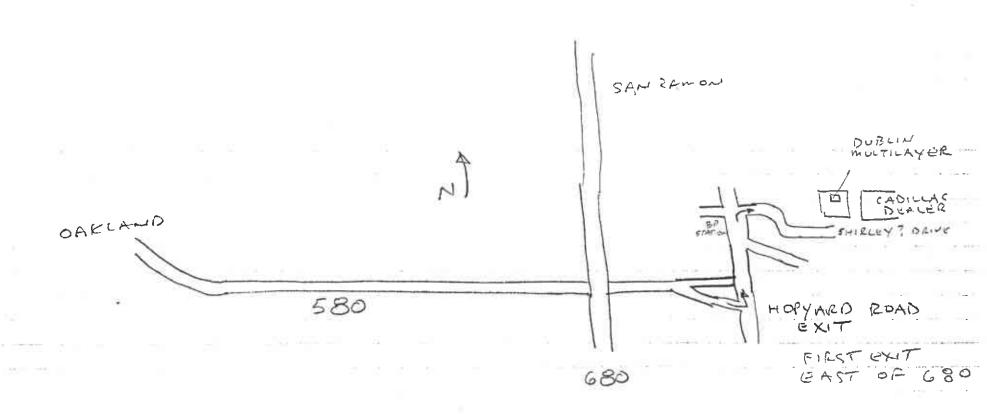
Process Chemistry

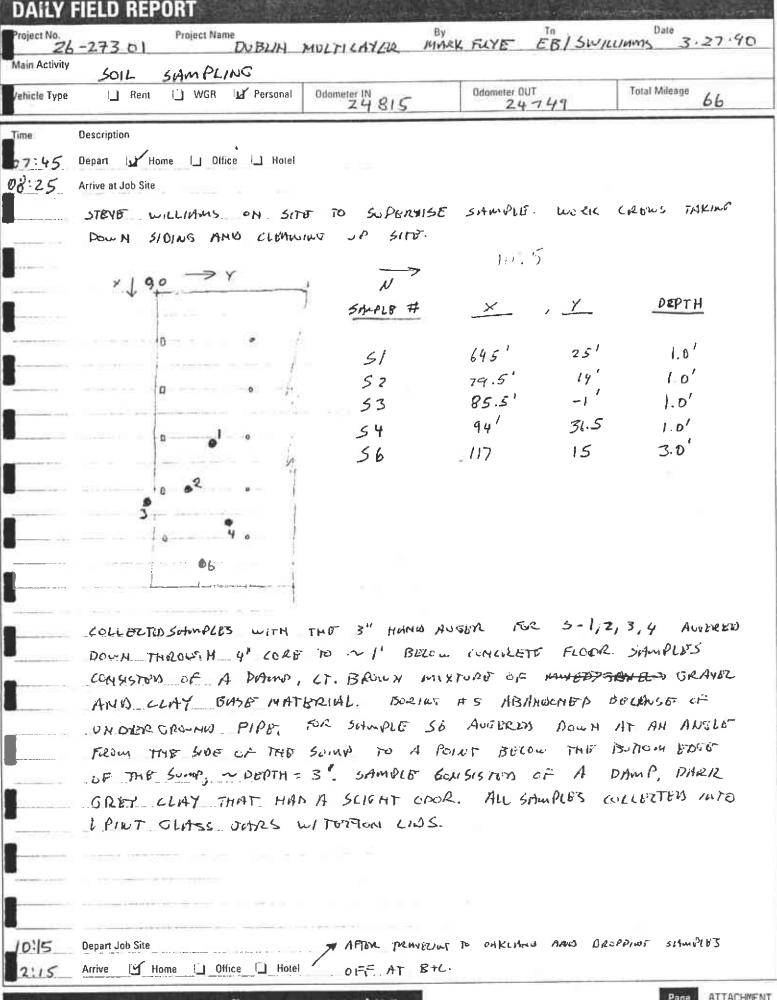
The IM-TECH process is based on chemical fixation of heavy metals and oxidation of organic compounds using the proprietary chemical formulation called Chloranan. In addition, the process uses pozzolanic materials (cement, lime, kiln dust, or fly ash) to stabilize the treated waste material. The resulting product has leachabilities that are below established standards when analyzed by TCLP and Cal WET methods.

Chloranan catalyzes a number of chemical and physical changes to the waste material which reduce the leachability of both organic and inorganic compounds present. Chloranan contains a polymer-based component which acts to prevent the normal inhibition that organic compounds effect in the presence of cement to retard its hydration. The morphology of the cement crystals is altered by Chloranan, turning these into flat, thick platelets with five time the surface area of normal cement crystals. The additional surface area provides more sites for chemical bonding of the insoluble metal hydroxide compounds and residual organic compounds, which are then microencapsulated by subsequent crystal growth.

Processing Equipment

The stabilization process was performed with a portable concrete mixer having a capacity of 1/3 cubic yard. Batches were processed by adding the contaminated soil and Portland cement, mixing briefly, then adding chloranan and water, and mixing for 10 to 15 minutes. Upon completion of the mixing cycle, the treated soil was discharged onto a concrete pad lined with 6-mil visqueen and allowed to cure. Once curing was complete, samples of the treated soil were collected and analyzed for copper, nickel, lead, and zinc.





TO BE DONE PICK UP PO from EB
WEEK OF 085#26-273.01 Dhu 3/20/90 SAUL
BC Labs 1255 Powell St. contact: Chih San Ho
X Doyle 428-2300
security and the security of t
Under the Sump Analyses: - Metals Scan (ICAP)
Hotal Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, TI, V, Zu, Cy
- + Ch, + Hex Chrome. - EPA 8240
- EPA 0270 - PH.
5 other Boring Locations Analyses: total Cu, Pb, Ni, Cr + Hex Cr
total Cu, Pb, Ni, Cr + Hex Cr
Instruct Lab to analyze for total metals. Compare total bevels to the STLC. If any number 15 have a concentration above the STLC, run them for Solnable metals. If total metals exceed TTLC call Standard 10 day turn around work (Ed Buckers) journed in 12 h. Direct Report to Steve Williams (Ed Buskish).

TO BE DONE STUVE WILLIAMS (LAK) 408. 234, 9808
WEEK OF 3/20/50
Sampling Info
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Sixth boring is done dragonly under the sump at the facility. Same boring technique as abone.
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Facility: Contact:
Dublin Multi Layer John Crain 6341 Scarlet Ct. 829-1956
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Dublin, CA Meet Stove Williams and
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DELTA TECH SERVICE, INC.

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DELTA TECH SERVICE, INC. (415) 228-7557 • Martinez, CA

SERVICE LOG

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V. TRAINING CERTIFICATES

ATTACHMENTS

- V-A. Training Certificates CKC, Inc. (9 pages)
- V-B. Training Certificates Decon Environmental (12 pages)
- V-C. Training Certificates Delta Techinical (3 pages)

CERTIFICATE OF TRAINING OSHA-SARA

Eliezer Rodriguez

has met the initial 40 hr. training requirements
under OSHA Standard, 29CFR 1910.120, Hazardous Waste Operations
and Emergency Response

Agknowledgement

Date

CERTIFICATE OF TRAINING OSHA-SARA

Doug Portney

has met the initial 40 hr. training requirements under OSHA Standard, 29CFR 1910-120, Hazardous Waste Operations and Emergency Response

Acknowledgement

SEPT. 24, 1988

Date

CERTIFICATE OF TRAINING OSHA-SARA

Doug Portney

has met the 8 hour Supervisory training requirements
under OSHA Standard, 29CFR 1910.120, Hazardous Waste Operations
and Emergency Response

Acknowledgement

September 27, 1988

Date

CERTIFICATE OF TRAINING OSHA-SARA

JON A. COOK

has met the initial 40 hr. training requirements under OSHA Standard, 29CFR 1910.120, Hazardous Waste Operations and Emergency Response

Agknovledgement

January 26, 1989

CERTIFICATE OF TRAINING OSHA-SARA

Gilbert Claassen

has met the initial 40 hr. training requirements
under OSHA Standard, 29CFR 1910.120, Hazardous Waste Operations
and Emergency Response

Acknowledgement

March 11, 1989

CERTIFICATE OF TRAINING OSHA-SARA

Robert Hiebner

has met the initial 40 hr. training requirements under
OSHA Standard, 29CFR 1910.120, Hazardous Waste Operations
and Emergency Response

Acknowledgement /

November 10, 1988

Date

NES

JENTIFICHTE OF TRANSPORT

STEPHEN R. MUELLER

FOR HAVING SUCCESSFULLY COMPLETED

A TRAINING COURSE IN

40-Hour Hazardous Waste Operations Training

PRESENTED BY

NETWORK ENVIRONMENTAL SYSTEMS, INC.



NES Coordinating Trainer

January 15-19, 1990

gerricilla



CERTIFICATE OF TRAINING PRESENTED TO

RANDY REDBERG

FOR HAVING SUCCESSFULLY COMPLETED A TRAINING COURSE IN

40-Hour Hazardous Waste Operations Training

PRESENTED BY

NETWORK ENVIRONMENTAL SYSTEMS, INC.



NES Coordinating Trainer

January 15-19, 1990

Date

GURISILA



CERTIFICATE OF TRAINING PRESENTED TO

MIKE GOODWIN

FOR HAVING SUCCESSFULLY COMPLETED

A TRAINING COURSE IN

OSHA 40-Hour Hazardous Waste Operations

PRESENTED BY

NETWORK ENVIRONMENTAL SYSTEMS, INC.

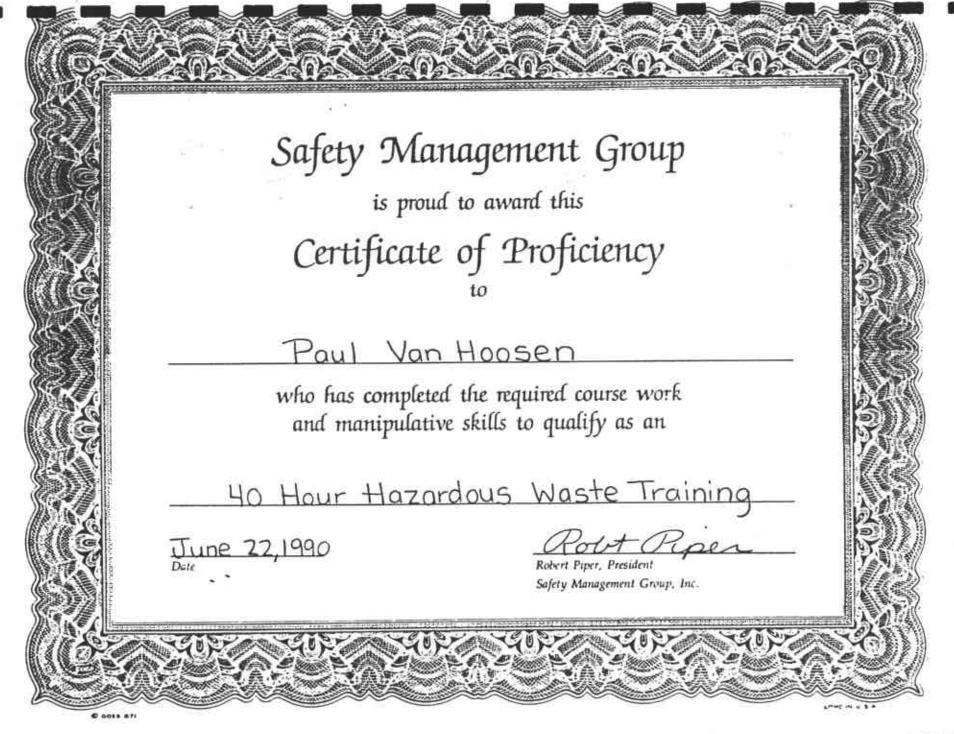


October 16-20, 1989

Date

Druse Lenguise CH

NES Trainer



Safety Management Group

is proud to award this

Certificate of Proficiency

to

Petri Toivonen

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

June 22, 1990

Robert Piper, President

Safety Management Group, Inc.

Safety Management Group

is proud to award this

Certificate of Proficiency

Peter Schoen

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

4-20-90

Robert Piper, President

Safety Management Group, Inc.

Certificate of Attendance

This certifies that

Jane Reuter

has completed forty hours of

Hazardous Waste Site Operations Training in accordance with 29 CFR 1910.120

February 14, 15, 16, 17 of 1990

Pleasanton, California

Presented by: Environmental & Safety Resources

LEAD INSTRUCTOR: JOEL WONG, CIH, CSP

is proud to award this

Certificate of Proficiency

Manuel Petterle

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

April 20, 1990

Robert Piper

Robert Piper, President

Safety Management Group, Inc.

197 - 197 -

LITTED #1 14 5 1

is proud to award this

Certificate of Proficiency

Brian Orr

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

4-20-90

Date

Robert Piper, President

is proud to award this

Certificate of Proficiency

Zanehart K. numazu

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

4-20-90

Date

Robert Piper, President



Certificate of Proficiency

Tom McCarthy

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

June 22, 1990

Robert Piper, President

is proud to award this

Certificate of Proficiency

to

Gene Gibson

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

4-20-90

Date

Robert Piper, President

is proud to award this

Certificate of Proficiency

Robert J. Groze, ST

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

4-20-90

Date

Robert Piper, President



CHARLES GASTON JR.

successfully completed the <u>initial 40 hour</u> requirements listed under OSHA Regulation 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response

this sixteenth day of November 1989

Provided by: Geo Line Safety Services 1940 The Alameda San Jose, CA 95126-1428



Geo Line

Training Genter Dean



is proud to award this

Certificate of Proficiency

Sean T. Delaney

who has completed the required course work and manipulative skills to qualify as an

40 Hour Hazardous Waste Training

4-20-90

Robert Piper, President

CERTIFICATE OF TRAINING OSHA - SARA

LUIS MARTINEZ

Has Met The 8 Hour Refresher Training Requirements Under OSHA Standard, 29 CFR 1910.120 Hazardous Waste Operations And Emergency Response

ACKNOWLEDGEMENT
Occupational Health & Safety Group, Inc

FEBRUARY 13, 1990

DATE

CERTIFICATE OF TRAINING OSHA - SARA

THOMAS HERNANDEZ Jr.

Has Met The INITIAL 40 HR. TRAINING Requirements Under OSHA Standard, 29 CFR 1910.120 Hazardous Waste Operations And Emergency Response

ACKNOWLEDGEMENT
Occupational Health-& Safety-Group, Inc

JANUARY 13, 1990

DATE

CERTIFICATE OF TRAINING OSHA - SARA

PETE TORREZ

Has Met The INITIAL 40 HR. TRAINING Requirements Under OSHA Standard, 29 CFR 1910.120 Hazardous Waste Operations And Emergency Response

ACKNOWLEDGEMENT
Occupational Health & Safety Group, Inc

JANUARY 13,1990

DATE

VI. LICENSES AND PERMITS ATTACHMENTS

VI-A. Dublin San Ramon Services District - Revised Wastewater Discharge VI-B. CKC, Inc - Contractor's License and Hazardous Substances Certification

Additional permit requirements for Dublin Multilayer during the batch discharge phase of the fire clean-up operation: February 26 to March 23, 1990.

- 1. All permit limitations stated in the current discharge permit (#3672-101) as well as all applicable limits and conditions for discharge stated in the District Code shall be followed at all times.
- 2. The District shall be notified immediately of any change in operation, a spill, leak, or other problem which may, in any way, affect the collection system or sewage treatment plant. The number is 846-4565 and the telephone is manned 24 hours per day.
- 3. Discharge of batch loads to the sewer is permitted only after laboratory testing is completed and results are submitted to the District for approval from a State of California certified laboratory. Permission to dump each load shall be obtained from the District staff prior to commencing.
- 4. Split samples shall be collected and documented by District staff on initial and follow-up samples prior to sending those samples to an outside laboratory for testing.
- 5. The District shall be notified at least two hours before each batch discharge is to take place. No discharge shall be allowed until an inspection of the site and pumping operation is completed by District staff.
- 6. Batch discharges shall be allowed in increments not to exceed 6,000 gallons per day. Discharge of the batch shall be spread over the course of an 6 hour day (minimum), or at a rate of 1,000 gallons per hour or 20 gallons per minute.
- 7. The District will grab a sample of the discharge effluent 4 to 6 hours into (or sometime past the mid-point of) the pumping operation.

8. At a minimum, metals to be tested for and reported to the District will include: Copper, Chromium, Lead, Nickel, and Zinc. In addition, all batches shall be tested for Cyanide.

John Crane Dublin Multilayer

Bruce Jacobsen

Decon Environmental Services

Vite Icham FOR BRUKE SACOBSEN



DUBLIN SAN RAMON SERVICES DISTRICT PRETREATMENT PROGRAM WASTEWATER DISCHARGE PERMIT

3672-101

IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THE:
X D.S.R.S.D.CODE (CHAPTER 7 ARTICLE 3)
CITY OF PLEASANTON CODE (CHAPTER 8 ARTICLES 5 & 7)
AND ALSO WITH ANY APPLICABLE PROVISION OF FEDERAL OR STATE
LAWS OR REGULATIONS;
PERMISSION IS HEREBY GRANTED TO:
Dublin Multilayer, Inc.
Name of Company
6341 Scarlett Court, Dublin, CA 94568
Mailing Address
CLASSIFIED BY S.I.C. NO. 3672 (printed circuit boards)
FOR THE CONTRIBUTION OF treated process wastewater INTO
THE DSRSD SEWER LINES AT:
6341 Scarlett Court, Dublin, CA
Address of Discharger
EFFECTIVE: 1 October 1989
EXPIRES ON: 30 September 1991
John Chan
PRINT NAME OF PERMITTEE
18010 July -
DISTRICT ENGINEER SIGNATURE OF PERMITTEE

LIMITATIONS ON WASTEWATER STRENGTH				
METALS	LOCAL MAX MG/L	11	ERAL AVG Mg/L*	
ARSENIC (As)	1.0	NA	NA	
CADMIUM (Cd)	1.0	1.20	.70	
CHROMIUM (Cr)	5.0	NA	NA NA	
COPPER (Cu)	10.0	NA	NA	
LEAD (Pb)	2.0	.60	.40	
MERCURY (Hg)	0.5	NA	NA	
NICKEL (Ni)	5.0	NA	NA	
SILVER (Ag)	2.0	NA	NA	
ZINC (Zn)	10.0	NA	NA	

OTHER LIMITED CONSTITUENTS					
CYANIDE (Total)	1.0	5.00	2.70		
PHENOLS	5.0	NA	NA		
FLUORIDE	5.0	NА	NA		
P.C.B.'s	0.01	NA	NA		
т.і.с.н.	0.02	NA	NA		
TOTAL TOXIC ORGANICS	NA	4.57	NA		
OIL & GREASE	200	NA	NA		
TEMPERATURE	150 Degrees Fahrenheit				
рН	11.0 Max 6.0 Min		Min		

^{*} Average is the average of 4 consecutive samples

BIMONTE	HLY DEMAND LIM	ITS
BIOCHEMICAL OXYGEN DEM	AND N.D.	Pounds per Day
SUSPENDED SOLIDS	N.D.	Pounds per Day
FLOW	N.D.	Million Gallons/Day

INCORPORATED



CONTRACTORS STATE LICENSE BOARD

Building Quality

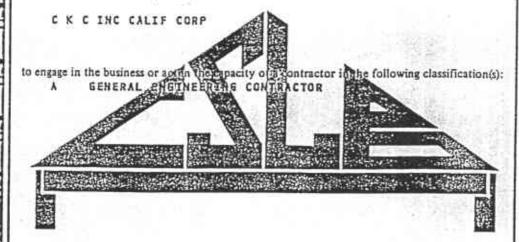
ISSUED 07-06-88

No. 534002

This license is the property of the Registrar of Contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason. It becomes void if not renewed.

Contractor's License

Pursuant to the provisions of Chapter 9 of Division 3 of the Business and Professions Code and the Rules and Regulations of the Contractors State License Board, the Registrar of Contractors does hereby issue this license to:





STATE AND CONSUMER SERVICES AGENCY DEPARTMENT OF CONSUMER AFFAIRS WITNESS my hand and sealed this 13TH day of JULY 1988.

Registrar of Contractors

Signature of Licenses

Signature of person who qualified on behalf of the licenses

ATTACHMENT VI-8 TATE OF CALIFORNIA

STATE AND CONSUMER SERVICES AGENCY CONTRACTORS STATE LICENSE BOARD

Building Quality



HAZARDOUS SUBSTANCES_REMOVAL AND REMEDIAL ACTIONS-CERTIFICATION

Pursuant to the provisions of Section 7058.71 of the Business and Professions Code, the Registrar of Contractors does hereby certify that the following qualifying person has successfully completed the hazardous substances removal and remedial actions examination.



Oualifier: KARL F. WITTSTROM

License No.: 534002

Namestyle: C K C INC A CALIF CORP

WITNESS my hand and official seal this

27 day of OCTOBER, 1988

13L-36 (1/88)

This certification is the property of the Registrar of Contractors, is not transferable, and shall be returned to the Registrar upon demand when suspended, revoked, or invalidated for any reason. DUBLIN MULTILATER INC

FIGURE A2

PLATING ROOM "WET FLOOR"

< NORTH

SCALE: 1" = 7.4"

DRIVEWAY SUMP SHEAR PARKING LOT HALLWAY DRYFILM

ATTACHMENT VII-A2

SCREENING

DUBLIN MULTILAYER INC

FIGURE B

PLATING ROOM "WET FLOOR"

BLAINE TECH SERVICES 3/8/90

< NORTH

SCALE: 1" = 7.4"

WIPE SAMPLES

DRIVEWAY

SHEAR

#7-[][]-#8

SUMP

PARKING LOT

HALLWAY

#1-[] #2-[]

DRYFILM

SCREENING

#3-[] #4-[]

#5-[] #6-[]

> ATTACHMENT VII-8

PLATING ROOM
"WET FLOOR"

BLAINE TE

FIGURE B

BLAINE TECH SERVICES 3/8/90

SCALE: 1" = 7.4"

WIPE SAMPLES

DRIVEWAY

≺ NORTH

SUMP

SHEAR

#7-[][]-#8

PARKING LOT

#5-[] #6-[]

> #3-[] #4-[]

DRYFILM

#1-[] #2-[]

SCREENING

ATTACHMENT VII-B

DUBLIN MULTILAYER INC

PLATING ROOM

FIGURE C

20 g

SUMP

S6-**⊗**

WGR 3/27/90

PARKING LOT

S3-@

NORTH WET FLOOR"

SCALE: 1" = 7.4"

.

DRIVEWAY

.. SHEAR

HALLWAY

:

S4-**⊕**

S2-®

S1-@

DRYFILM

SCREENING

ATTACHMENT VII-C

DUBLIN MULTILAYER INC FIGURE D PLATING ROOM "WET FLOOR" < NORTH SCALE: 1" = 7.4" WGR 5/17/90 **DRIVEWAY** SUMP BW S-1 AW В SHEAR PARKING LOT С В T-1 B-3 E HALLWAY Α C B-1 E В Α ATTACHMENT DRYFILM SCREENING VII-D

VII. FIGURES

FIGURE

- VII-A1. Dublin Multilayer plant/room layout (not to scale)
- VII-A2. Dublin Multilayer "wet floor"
- VII-B. Dublin Multilayer Blaine Tech (03/08/90) wipe sample locations
- VII-C. Dublin Multilayer Western Geologic Resources (03/27/90) core hole locations
- VII-D. Dublin Multilayer Western Geologic Resources (05/17/90) core hole locations