

APPENDIX E

Historical Leachate Data and Aerial Photographs

CERTIFICATE OF AUTHENTICITY

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MICROFILM INDEX

START ENUMCLAW LEACHATE DATE REPORTED FROM
5/1/86 — 3/31/89

END _____

JOB IDENTIFICATION

MICROFILMED FOR: KING CO. SOLID WASTE

MICROFILMED AT: ALPHA

REMARKS

FRAME COUNT: _____



START OF ROLL

NO1.....

LEACHATE

DATA REPORTED FROM:
5/1/86-3/31/89



King County
Solid Waste Division
Department of Public Works
Wester Building
400 Yesler Way, Room 600
Seattle, WA 98104-2637
(206) 296-6542

ENGINEERING SERVICES SECTION

FAX TRANSMITTAL COVER SHEET

FAX NO. 296-8431

DATE: 7-30-93

TIME: 2:45 P.M.

NO. OF PAGES
INCLUDING COVER

10

TO: JIM KELLEY

HEALTH RISK ASSOC. INC.

FAX # 324-8439

FM: SENDA JIMENEZ / JEFF BURETEL. NO.: 296-4364

RE: ENVIRONMENTAL LEACHATE DATA (KENTH PARD)

Non-Metals --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Erasmia Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Alkalinity (HCO ₃) (mg/L)	Alkalinity Total (CaCO ₃) (mg/L)	Ammonia -N (mg/L)	Chloride (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Nitrate -N (mg/L)	Nitrite -N (mg/L)
LS-POND	LEP-86514	05/14/86			22.6	436.2		< 0.05		
LS-POND	LEP-86016	12/16/86					< 0.01			
LS-POND	LEP-89310	03/10/89			7.2	20	< 0.005	< 0.2	1.5	0.016

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
Erumclaw Landfill --- LEACHATE
CONTACT PERSON: Sandy Jimenez, (206) 296-4411

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Indicator Parameters --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enunclew Landfill --- LEACHATE

CONTACT PERSON: Sindy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	pH (Lab) std units	Conduct- ance (Lab) umhos/cm	Total Solids (TS) (mg/L)	Total Dissolved Solids (TDS) (mg/L)	Total Suspended Solids (mg/L)	Chemical Oxygen Demand (COD) (mg/L)	Total Organic Carbon (TOC) (mg/L)	Total Organic Halogens (TOX) (mg/L)	Biological Oxygen Demand (BOD) (mg/L)	Oxygen, Dissolved (mg/L)
LS-POND	LEP-86514	05/14/86	7.7	1644	1342	1341	0.3	714				
LS-POND	LEP-86N05	11/05/86	6.3				370	1300				
LS-POND	LEP-89310	03/10/89	7.1	490	300		23	28	9	0.05	6	

Indicator Parameters --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enclave Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Coliform, Total	Coliforms Total	Coliform, Fecal	Hardness	Turbidity	Polar Fats, Oils, & Grease (mg/L)	Non-Polar Fats, Oils, & Grease (mg/L)	Total Fats, Oils, & Grease (mg/L)
			MPN/ 100 mLs	CFU/ 100 mLs	MPN/ 100 mLs	(mg/L)	NTU			
LS-POND	LEP-86514	05/14/86					490			
LS-POND	LEP-86016	12/16/86	180							
LS-POND	LEP-87505	05/05/87	1600							
LS-POND	LEP-89310	03/10/89	1600		2					

Total Metals --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enclave Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (Total) (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)
LS-POND	LEP-86514	05/14/86		0.122	< 0.004	< 0.02	< 0.02	45.2	0.04	4.05
LS-POND	LEP-86405	11/05/86			< 0.002	0.022	0.03	46	0.02	
LS-POND	LEP-86016	12/16/86	0.005		< 0.01	< 0.01	0.02	129	< 0.005	7.4
LS-POND	LEP-87505	05/05/87	< 0.002	0.46	< 0.01	< 0.02		286	< 0.002	19.3
LS-POND	LEP-89310	03/10/89	< 0.005	0.06	< 0.002	< 0.005	0.014	3	< 0.01	1

Total Metals --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
Ermaclaw Landfill --- LEACHATE
CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Mercury (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Zinc (mg/L)
LS-POND	LEP-86514	05/14/86	0.0003	< 0.02		< 0.004	1.181
LS-POND	LEP-86N05	11/05/86		0.02			0.16
LS-POND	LEP-86D16	12/16/86	< 0.0005	< 0.04	< 0.005	< 0.005	0.02
LS-POND	LEP-87505	05/05/87	< 0.0002		< 0.002	< 0.01	0.02
LS-POND	LEP-89310	03/10/89	< 0.001	0.02	< 0.005	< 0.002	0.02

Herbicides, Pesticides, and Radioactivity

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
Erasmacaw Landfill --- LEACHATE
CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	2,4-D (ug/L)	2,4,5-TP (Silvex) (ug/L)	Endrin (ug/L)	Lindane (ug/L)	Methoxy- chlor (ug/L)	Texa- phene (ug/L)	Gross Alpha Activity pCi/L	Gross Beta pCi/L	Radium 226 pCi/L	Radium 228 pCi/L
LS-POND	LEP-86016	12/16/86			< 0.10	< 0.05	< 0.50	< 1.0				
LS-POND	LEP-87505	05/05/87	< 1		< 1	< 1	< 1	< 4				
LS-POND	LEP-89310	03/10/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1

Volatiles --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Erumcaw Landfill --- LEACHATE
 CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone (ug/L)	Benzene (ug/L)	Bromo- dichloro- methane (ug/L)	Bromoform (ug/L)	Bromo- methane (ug/L)	2-Butanone (ug/L)	Carbon Disulfide (ug/L)	Carbon Tetra- chloride (ug/L)	Chloro- benzene (ug/L)	Chloro- ethane (ug/L)
LS-POND	LEP-86016	12/16/86	6200	< 2	< 1	< 2	< 4	4400	< 2	< 2	< 1	15
LS-POND	LEP-87505	05/05/87	5050	24	< 1.3	< 1.9	< 4.2	4560	< 2.0	< 1.7	< 1.3	16
LS-POND	LEP-89310	03/10/89	12	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3

Volatiles --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Enuncleau Landfill --- LEACHATE
 CONTACT PERSON: Sency Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Chloroform (ug/L)	Dibromo- chloro- methane (ug/L)	p-Dichloro benzene (ug/L)	1,1-Dichlo ethane (ug/L)	1,2-Dichlo ethane (ug/L)	1,2-Dichlo ethene, total (ug/L)	1,1-Dichlo ethene (ug/L)	1,2-Dichlo propene (ug/L)	cis-1,3- Dichloro- propene (ug/L)	trans-1,3- Dichloro- propene (ug/L)
LS-POND	LEP-86016	12/16/86	< 3	< 2		19	< 2	50	< 5	< 2	< 2	< 2
LS-POND	LEP-87505	05/05/87	< 2.5	< 1.6		62	< 2.3	90	< 4.5	< 1.6	< 1.7	< 1.7
LS-POND	LEP-89310	03/10/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3

Volatiles --- Part 3

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Eramclaw Landfill --- LEACHATE
 CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Ethyl Benzene (ug/L)	2-Hexanone (ug/L)	Methylene Chloride (ug/L)	4-Methyl- 2-Pentanone (ug/L)	Styrene (ug/L)	1,1,2,2- Tetra- chloro- ethane (ug/L)	Tetra- chloro- ethylene (ug/L)	Toluene (ug/L)	1,1,1-Tri- chloro- ethane (ug/L)	1,1,2-Tri- chloro- ethane (ug/L)
LS-POM	LEP-86016	12/16/86	38	118	208	309	< 3	< 2	< 1	534	< 1	< 2
LS-POM	LEP-87505	05/05/87	35	13	77	150	< 2.7	< 2.1	< 1.2	1100	< 1.6	< 1.6
LS-POM	LEP-89310	03/16/89	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1

Volatiles --- Part 4

DATA REPORTED FROM MAY 1, 1985 TO MARCH 31, 1989
Enuncieau Landfill --- LEACHATE
CONTACT PERSON: Sindy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Trichloro- ethene (ug/L)	Vinyl Acetate (ug/L)	Vinyl Chloride (ug/L)	Total Xylenes (ug/L)	Chloro- methane (ug/L)
LS-POND	LEP-86016	12/16/86	2	< 6	11	129	< 3
LS-POND	LEP-87505	05/05/87	2.2	< 5.8	14	105	< 3.2
LS-POND	LEP-89310	03/10/89	< 1	< 1	< 1	2	< 1

Indicator Parameters --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Enumclaw Landfill --- LEACHATE
 CONTACT PERSON: Sindy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	pH	Conduct- ance	Total Solids (TS)	Total Dissolved Solids (TDS)	Total Suspended Solids	Chemical Oxygen Demand (COD)	Total Organic Carbon (TOC)	Total Organic Halogens (TOX)	Biological Oxygen Demand (BOD)	Oxygen, Dissolved
			(Lab) std units	(Lab) umho/cm	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
LS-POHD	LEP-86514	05/14/86	7.7	1641	1342	1341	0.3	714				
LS-POND	LEP-86N05	11/05/86	6.3				370	1500				
LS-POND	LEP-89310	03/10/89	7.1	490	300		23	28	9	0.05	6	

~~11/05/1986~~
~~11/05/1986~~

Indicator Parameters --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enumclaw Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Coliform, Total MPN/ 100 mLs	Coliforms Total CFU/ 100 mLs	Coliform, Fecal MPN/ 100 mLs	Hardness (mg/L)	Turbidity NTU	Polar Fats, Oils, & Grease (mg/L)	Non-Polar Fats, Oils, & Grease (mg/L)	Total Fats, Oils, & Grease (mg/L)
LS-POND	LEP-86514	05/14/86					490			
LS-POND	LEP-86616	12/16/86	180							
LS-POND	LEP-87505	05/05/87	500							
LS-POND	LEP-89310	03/10/89	1600		2					

Non-Metals --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Erumclaw Landfill --- LEACHATE
 CONTACT PERSON: Sindy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Alkalinity (HCO ₃) (mg/L)	Alkalinity Total (CaCO ₃) (mg/L)	Ammonia -N (mg/L)	Chloride (mg/L)	Cyanide (mg/L)	Fluoride (mg/L)	Nitrate -N (mg/L)	Nitrite -N (mg/L)
LS-POND	LEP-86514	05/14/86			22.6	436.2		< 0.05		
LS-POND	LEP-86016	12/16/86			7.2	20	< 0.01 < 0.005	< 0.2	1.5	0.016
LS-POND	LEP-89310	03/10/89								

Non-Metals --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1987

Enumclaw Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Phosphate, Ortho	Phosphate, Total	Sulfate (SO ₄)	Sulfide, Total	Sulfur, Total	Sulfide, Soluble	Total Kjeldahl N	Total Nitrogen
			(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	
LS-POND	LEP-86514	05/14/86		8.1	36					
LS-POND	LEP-89310	03/10/89	< 0.035	0.054	40		17		37.8	

Total Metals --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Enunclaw Landfill --- LEACHATE
 CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (Total) (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)
LS-POND	LEP-86514	05/14/86		0.122	< 0.004	< 0.02	< 0.02	45.2	0.04	4.05
LS-POND	LEP-86N05	11/05/86			< 0.002	0.022	0.03	46	0.02	
LS-POND	LEP-86016	12/16/86	0.005		< 0.01	< 0.01	0.02	129	< 0.005	7.4
LS-POND	LEP-87505	05/05/87	< 0.002	0.46	< 0.01	< 0.02		286	< 0.002	19.3
LS-POND	LEP-89310	03/10/89	< 0.005	0.06	< 0.002	< 0.005	0.014	3	< 0.01	1

Total Metals --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enclave Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Mercury (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Zinc (mg/L)
LS-POND	LEP-86514	05/14/86	0.0033	< 0.02		< 0.004	1.181
LS-POND	LEP-86N05	11/05/86		0.02			0.16
LS-POND	LEP-86016	12/16/86	< 0.0005	< 0.04	< 0.005	< 0.005	0.02
LS-POND	LEP-87505	05/05/87	< 0.0002		< 0.002	< 0.01	0.02
LS-POND	LEP-89310	03/10/89	< 0.001	0.02	< 0.005	< 0.002	0.02

Herbicides, Pesticides, and Radioactivity

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enunclaw Landfill --- LEACHATE

CONTACT PERSON: Sindy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	2,4-D	2,4,5-TP (Silvex)	Endrin	Lindane	Methoxy- chlor	Toxa- phene	Gross Alpha Activity	Gross Beta	Radium 226	Radium 228
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	pCi/L	pCi/L	pCi/L	pCi/L
LS-POND	LEP-86016	12/16/86			< 0.10	< 0.05	< 0.50	< 1.0				
LS-POND	LEP-87505	05/05/87	< 1		< 1	< 1	< 1	< 4				
LS-POND	LEP-89310	03/10/89	< 0.50	< 0.50	< 0.10	< 0.05	< 0.50	< 1.00	< 2		< 0.6	< 1

Volatiles --- Part 1

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989

Enclave Landfill --- LEACHATE

CONTACT PERSON: Sandy Jimenez, (206) 296-111

SITE ID	SAMPLE ID	SAMPLE DATE	Acetone (ug/L)	Benzene (ug/L)	Bromo- dichloro- methane (ug/L)	Bromoform (ug/L)	Bromo- methane (ug/L)	2-Butanone (ug/L)	Carbon Disulfide (ug/L)	Carbon Tetra- chloride (ug/L)	Chloro- benzene (ug/L)	Chloro- ethane (ug/L)
LS-POND	LEP-86016	12/16/86	6200	< 2	< 1	< 2	< 4	4400	< 2	< 2	< 1	15
LS-POND	LEP-87505	05/05/87	5050	24	< 1.3	< 1.9	< 4.2	4560	< 2.0	< 1.7	< 1.3	16
LS-POND	LEP-89310	03/10/89	12	< 1	< 1	< 1	< 1	< 3	< 1	< 1	< 3	< 3

Volatiles --- Part 2

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Enumclaw Landfill --- LEACHATE
 CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Chloroform (ug/L)	Dibromo- chloro- methane (ug/L)	p-Dichloro benzene (ug/L)	1,1-Dichlo ethane (ug/L)	1,2-Dichlo ethane (ug/L)	1,2-Dichlo ethene, total (ug/L)	1,1-Dichlo ethene (ug/L)	1,2-Dichlo propane (ug/L)	cis-1,3- Dichloro- propene (ug/L)	trans-1,3- Dichloro- propene (ug/L)
LS-POND	LEP-86016	12/16/86	< 3	< 2		19	< 2	50	< 5	< 2	< 2	< 2
LS-POND	LEP-87505	05/05/87	2.5	< 1.6		62	< 2.3	90	< 4.5	< 1.6	< 1.7	< 1.7
LS-POND	LEP-89310	03/10/89	< 1	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 3	< 3

Volatiles --- Part 3

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
 Enunclew Landfill --- LEACHATE
 CONTACT PERSON: Sandy Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Ethyl Benzene (ug/L)	2-Hexanone (ug/L)	Methylene Chloride (ug/L)	4-Methyl- 2-Pentanone (ug/L)	Styrene (ug/L)	1,1,2,2- Tetra- chloro- ethane (ug/L)	Tetra- chlor- ethylene (ug/L)	Toluene (ug/L)	1,1,1-Tri- chloro- ethane (ug/L)	1,1,2-Tri- chloro- ethane (ug/L)
LS-POND	LEP-86016	12/16/86	38	118	208	309	< 3	< 2	< 1	534	< 1	< 2
LS-POND	LEP-87505	05/05/87	35	13	77	140	< 2.7	< 2.1	< 1.2	1100	< 1.6	< 1.6
LS-POND	LEP-89310	03/10/89	< 1	< 3	< 1	< 3	< 1	< 3	< 1	< 1	< 1	< 1

Volatiles --- Part 4

DATA REPORTED FROM MAY 1, 1986 TO MARCH 31, 1989
Enumclaw Landfill --- LEACHATE
CONTACT PERSON: Sergio Jimenez, (206) 296-4411

SITE ID	SAMPLE ID	SAMPLE DATE	Trichloro- ethene (ug/L)	Vinyl Acetate (ug/L)	Vinyl Chloride (ug/L)	Total Xylenes (ug/L)	Chloro- methane (ug/L)
LS-POND	LEP- 00 016	12/16/86	2	< 6	11	129	< 3
LS-POND	LEP- 00 005	05/05/87	2.2	< 5.8	14	105	< 5.2
LS-POND	LEP- 00 010	03/10/89	< 1	< 1	< 1	2	< 1

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 1

Site Number	Zone	Onsite	Sitename	GSE	YOC	Depth	X	Y
S-POND		Y	LEACHATE POND NORTH	0.00	0.00	0.00	0.000	0.000

ENUMCLAW LEACHATE POND (NORTH) DATA

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 1

Site : LS-POND

ID : LEP-86514

Constituent Name	Units	Results	Limit	Qual
Barium, total	mg/L	0.122	0	
Cadmium, total	mg/L	< 6.004	0.004	
Chloride	mg/L	436.2	0	
Chromium, total	mg/L	< 0.02	0.02	
Copper, total	mg/L	< 0.02	0.02	
Fluoride	mg/L	< 0.05	0.05	
Iron, total	mg/L	45.2	0	
Lead, total	mg/L	0.04	0	
Manganese, total	mg/L	4.050	0	
Mercury, total	mg/L	0.0003	0	
Nickel, total	mg/L	< 0.02	0.02	
Potassium	mg/L	43.2	0	
Silver, total	mg/L	< 0.004	0.004	
Zinc, total	mg/L	1.181	0	
Ammonia, (NH3)	mg/L	22.6	0	
Phosphate, total	mg/L	8.10	0	
Sulfate (SO4)	mg/L	36	0	
Chemical Oxygen Demand	mg/L	714	0	
Conductance	mg/L	1644	0	
Suspended Solids	mg/L	0.3	0	
Total Dissolved Solids	mg/L	1341	0	
Hardness	mg/L	490	0	
Total Kjeldahl N	mg/L	37.8	0	
Total Solids	mg/L	1342	0	
pH	std. units	7.70	0	
Biological Oxygen Demand	mg/L	184	0	
Volatile Suspended Solids	mg/L	327	0	
	mg/L	572	0	

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 1

Site : LS-POND

ID : LEP-86N05

Constituent Name	Units	Results	Limit	Qual
Cadmium, total	mg/L	< 0.002	0.002	
Chromium, total	mg/L	0.022	0	
Copper, total	mg/L	0.030	0	
Iron, total	mg/L	46	0	
Lead, total	mg/L	0.02	0	
Nickel, total	mg/L	0.02	0	
Zinc, total	mg/L	0.16	0	
Chemical Oxygen Demand	mg/L	1300	0	
Suspended Solids	mg/L	370	0	
pH	std units	6.3	0	
Biological Oxygen Demand	mg/L	840	0	

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 1

Site : LS-POND

ID : LEP-36016

Constituent Name	Units	Results	Limit	Qual
Antimony, total	mg/L	< 0.005	0.005	
Arsenic, total	mg/L	0.005	0	
Beryllium, total	mg/L	< 0.005	0.005	
Cadmium, total	mg/L	< 0.01	0.01	
Chromium, total	mg/L	< 0.01	0.01	
Copper, total	mg/L	0.02	0	
Cyanide	mg/L	< 0.01	0.01	
Iron, total	mg/L	129	0	
Lead, total	mg/L	< 0.005	0.005	
Manganese, total	mg/L	7.4	0	
Mercury, total	mg/L	< 0.0005	0.0005	
Nickel, total	mg/L	< 0.04	0.04	
Selenium, total	mg/L	< 0.005	0.005	
Silver, total	mg/L	< 0.005	0.005	
Thallium, total	mg/L	< 0.002	0.002	
Zinc, total	mg/L	0.02	0	
Coliform, total	MPN/100 mL	180	0	
Aldrin	ug/L	< 0.05	0.05	
Aroclor 1016	ug/L	< 0.50	0.50	
Aroclor 1221	ug/L	< 0.50	0.50	
Aroclor 1232	ug/L	< 0.50	0.50	
Aroclor 1242	ug/L	< 0.50	0.50	
Aroclor 1248	ug/L	< 0.50	0.50	
Aroclor 1254	ug/L	< 0.50	0.50	
Aroclor 1260	ug/L	< 1.0	1.0	
Chlordane	ug/L	< 0.50	0.50	
Dieldrin	ug/L	< 0.10	0.10	
Endosulfen Sulfate	ug/L	< 0.10	0.10	
Endrin	ug/L	< 0.10	0.10	
Endrin Ketone	ug/L	< 0.10	0.10	
Heptachlor Epoxide	ug/L	< 0.05	0.05	
Heptachlor	ug/L	< 0.05	0.05	
Methoxychlor	ug/L	< 0.50	0.50	
4,4' DDD	ug/L	< 0.10	0.10	
4,4' DDE	ug/L	< 0.10	0.10	
4,4' DDT	ug/L	< 0.10	0.10	
Toxaphene	ug/L	< 1.0	1.0	
Alpha BHC	ug/L	< 0.05	0.05	
Beta BHC	ug/L	< 0.05	0.05	
Delta BHC	ug/L	< 0.05	0.05	
Endosulfen	ug/L	< 0.05	0.05	

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 2

Site : LS-POND

ID : LEP-86016

Constituent Name	Units	Results	Limit	Qual
Endosulfan II	ug/L	< 0.10	0.10	
Lindane	ug/L	< 0.05	0.05	
1,1,1-Trichloroethane	ug/L	< 1	1	
1,1,2,2-Tetrachloroethane	ug/L	< 2	2	
1,1,2-Trichloroethane	ug/L	< 2	2	
1,1-Dichloroethene	ug/L	19	0	
1,1-Dichloroethene	ug/L	< 5	5	
1,2-Dichloroethane	ug/L	< 2	2	
1,2-Dichloropropane	ug/L	< 2	2	
2-Butanone	ug/L	4400	0	
4-Methyl-2-Pentanone	ug/L	309	0	
Benzene	ug/L	< 2	2	
Bromodichloromethane	ug/L	< 1	1	
Bromofors	ug/L	< 2	2	
Bromomethane	ug/L	< 4	4	
Carbon Disulfide	ug/L	< 2	2	
Carbon Tetrachloride	ug/L	< 2	2	
Chlorobenzene	ug/L	< 1	1	
Chloroethane	ug/L	15	0	
Chloroform	ug/L	< 3	3	
Chloromethane	ug/L	< 3	3	
cis-1,3-Dichloropropene	ug/L	< 2	2	
Dibromochloromethane	ug/L	< 2	2	
Ethylbenzene	ug/L	38	0	
Methylene Chloride	ug/L	208	0	
Styrene	ug/L	< 3	3	
Tetrachloroethylene	ug/L	< 1	1	
Toluene	ug/L	534	0	
trans-1,3-Dichloropropene	ug/L	< 2	2	
Trichloroethene	ug/L	2	0	
Vinyl Acetate	ug/L	< 6	6	
Vinyl Chloride	ug/L	11	0	
total Xylenes	ug/L	129	0	
1,2-dichloroethene, total	ug/L	50	0	
2-Chloroethylvinylether	ug/L	< 3	3	
2-Hexanone	ug/L	112	0	
2-Methylphenol	ug/L	100	0	
4-Methylphenol	ug/L	3700	0	
bis(2-ethyl Phthalate	ug/L	130	0	
Phenol	ug/L	55	0	
Acetone	ug/L	6200	0	

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 1

Site : LS-POWD

ID : LEP-87505

Constituent Name	Units	Results	Limit	Qual
Arsenic, total	mg/L	< 0.002	0.002	
Barium, total	mg/L	0.46	0	
Cadmium, total	mg/L	< 0.01	0.01	
Chromium, total	mg/L	< 0.02	0.02	
Iron, total	mg/L	286	0	
Lead, total	mg/L	< 0.002	0.002	
Manganese, total	mg/L	19.3	0	
Mercury, total	mg/L	< 0.0002	0.0002	
Selenium, total	mg/L	< 0.002	0.002	
Silver, total	mg/L	< 0.01	0.01	
Zinc, total	mg/L	0.02	0	
Coliform, total	MPN/100 mL	1600	0	
2,4,5-T Methyl Ester	ug/L	< 1	1	
2,4-D	ug/L	< 1	1	
Endrin	ug/L	< 1	1	
Methoxychlor	ug/L	< 1	1	
Toxaphene	ug/L	< 4	4	
Lindane	ug/L	< 1	1	
1,1,1-Trichloroethane	ug/L	< 1.6	1.6	
1,1,2,2-Tetrachloroethane	ug/L	< 2.1	2.1	
1,1,2-Trichloroethane	ug/L	< 1.6	1.6	
1,1-Dichloroethane	ug/L	62	0	
1,1-Dichloroethene	ug/L	< 4.5	4.5	
1,2-Dichloroethane	ug/L	< 2.3	2.3	
1,2-Dichloropropene	ug/L	< 1.6	1.6	
2-Butanone	ug/L	4560	0	
4-Methyl-2-Pentanone	ug/L	140	0	
Benzene	ug/L	24	0	
Bromodichloromethane	ug/L	< 1.3	1.3	
Bromoform	ug/L	< 1.9	1.9	
Bromomethane	ug/L	< 4.2	4.2	
Carbon Disulfide	ug/L	< 2.0	2.0	
Carbon Tetrachloride	ug/L	< 1.7	1.7	
Chlorobenzene	ug/L	< 1.3	1.3	
Chloroethane	ug/L	16	0	
Chloroform	ug/L	< 2.5	2.5	
Chloromethane	ug/L	< 3.2	3.2	
cis-1,3-Dichloropropene	ug/L	< 1.7	1.7	
Dibromochloromethane	ug/L	< 1.6	1.6	
Ethylbenzene	ug/L	35	0	
Methylene Chloride	ug/L	77	0	

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 2

Site : LS-POMU

ID : LEP-87505

Constituent Name	Units	Results	Limit	Qual
Styrene	ug/L	< 2.7	2.7	
Tetrachloroethylene	ug/L	< 1.2	1.2	
Toluene	ug/L	1100	0	
trans-1,3-Dichloropropene	ug/L	< 1.7	1.7	
Trichloroethene	ug/L	2.2	0	
Vinyl Acetate	ug/L	< 5.8	5.8	
Vinyl Chloride	ug/L	14	0	
Total Xylenes	ug/L	105	0	
1,2-Dichloroethene, total	ug/L	90	0	
2-Chloroethylvinylether	ug/L	< 2.6	2.6	
2-Hexanone	ug/L	13	0	
Acetone	ug/L	5050	0	

1 E00 0000 0000

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 1

Site : LS-POND

ID : LEP-89310

Constituent Name	Units	Results	Limit	Qual
Arsenic, total	mg/L	< 0.005	0.005	
Barium, total	mg/L	0.06	0	
Cadmium, total	mg/L	< 0.002	0.002	
Chloride	mg/L	20	0	
Chromium, total	mg/L	< 0.005	0.005	
Copper, total	mg/L	0.014	0	
Cyanide	mg/L	< 0.005	0.005	
Fluoride	mg/L	< 0.2	0.2	
Iron, total	mg/L	3.0	0	
Lead, total	mg/L	< 0.01	0.01	
Manganese, total	mg/L	1.0	0	
Mercury, total	mg/L	< 0.001	0.001	
Nickel, total	mg/L	0.02	0	
Selenium, total	mg/L	< 0.005	0.005	
Silver, total	mg/L	< 0.002	0.002	
Sulfide	mg/L	0.1	0.1	
Zinc, total	mg/L	0.020	0	
Ammonia, (NH3)	mg/L	7.2	0	
Nitrate, (NO3)	mg/L	1.5	0	
Nitrite, (NO2)	mg/L	0.016	0	
Phosphate, ortho	mg/L	< 0.005	0.005	
Phosphate, total	mg/L	0.054	0	
Sulfate (SO4)	mg/L	40	0	
Sulfur, total	mg/L	17	0	
Sulfate (S)	mg/L	13	0	
Chemical Oxygen Demand	mg/L	23	0	
Coliform, total	MPN/100 mL	> 1500	0	
Coliform, fecal	MPN/100 mL	2	0	
Conductance	umhos/cm	490	0	
Suspended Solids	mg/L	23	0	
Total Organic Carbon	mg/L	9.0	0	
Total Solids	mg/L	300	0	
Total Organic Halogens	mg/L	0.05	0	
pH	std. units	7.1	0	
Radium 228	pCi/L	< 1	1	
Radium 226	pCi/L	< 0.6	0.6	
Gross Alpha Activity	pCi/L	< 2	2	
Biological Oxygen Demand - 5 day	mg/L	6	0	
2,4,5-TC Methyl Ester	ug/L	< 0.50	0.50	
2,4-D	ug/L	< 0.50	0.50	
Endrin	ug/L	< 0.10	0.10	

04/30/93

KING COUNTY SOLID WASTE DIVISION

Page 2

Site : LS-POND

ID : LEP-69310

Constituent Name	Units	Results	Limit	Qual
methoxychlor	ug/L	< 0.50	0.50	
toxaphene	ug/L	< 1.00	1.00	
indane	ug/L	< 0.05	0.05	
1,1,1-Trichloroethane	ug/L	< 1	1	
1,1,2,2-Tetrachloroethane	ug/L	< 3	3	
1,1,2-Trichloroethane	ug/L	< 1	1	
1,1-Dichloroethane	ug/L	< 1	1	
1,1-Dichloroethene	ug/L	< 1	1	
1,2-Dichloroethane	ug/L	< 1	1	
1,2-Dichloropropane	ug/L	< 1	1	
o-Dichlorobenzene	ug/L	< 1	1	
2-Butanone	ug/L	< 3	3	
4-Methyl-2-Pentanone	ug/L	< 3	3	
Benzene	ug/L	< 1	1	
Bromodichloromethane	ug/L	< 1	1	
Bromoform	ug/L	< 1	1	
Bromomethane	ug/L	< 1	1	
Carbon Disulfide	ug/L	< 1	1	
Carbon Tetrachloride	ug/L	< 1	1	
Chlorobenzene	ug/L	< 3	3	
Chloroethane	ug/L	< 3	3	
Chloroform	ug/L	< 1	1	
Chloromethane	ug/L	< 1	1	
cis-1,3-Dichloropropene	ug/L	< 3	3	
Dibromochloromethane	ug/L	< 3	3	
Ethylbenzene	ug/L	< 1	1	
Methylene Chloride	ug/L	< 1	1	
Styrene	ug/L	< 1	1	
Tetrachloroethene	ug/L	< 1	1	
Toluene	ug/L	< 1	1	
trans-1,2-Dichloroethene	ug/L	< 1	1	
trans-1,3-Dichloropropene	ug/L	< 3	3	
Trichloroethene	ug/L	< 1	1	
Vinyl Acetate	ug/L	< 1	1	
Vinyl Chloride	ug/L	< 1	1	
Total Xylenes	ug/L	< 1	1	
cis-1,2-Dichloroethene	ug/L	< 2	0	
1,2-Dichloroethene, total	ug/L	< 1	1	
2-Hexanone	ug/L	< 1	1	
Acetone	ug/L	< 3	3	
		12	0	

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GUIDESHEET TARGET

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 DATE 02/16/99 FILM TYPE: KODAK

MICROFILM INDEX

START ENUMCLAW LEACHATE DATE REPORTED FROM
5/1/86 — 3/31/89
 END 5/1/86 — 3/31/89

JOB IDENTIFICATION

MICROFILMED FOR: KING Co. SOLID WASTE
 MICROFILMED AT: ALPHA

REMARKS

FRAME COUNT: 43

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MICROFILM INDEX

START ENUMCLAW - LEACHATE
05-14-86

END ENUMCLAW - LEACHATE
11-05-86

JOB IDENTIFICATION

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MICROFILMED AT: ALPHA

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AUG 28 '90 14:41 LAUCKS TESTING

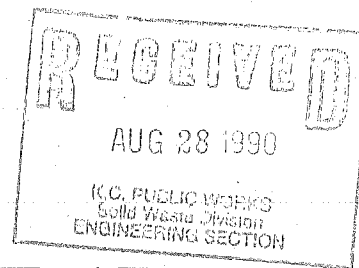
P.1

Laucks⁸¹

Testing Laboratories, Inc.

940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry Microbiology and Technical Services



FAX TRANSMISSION COVER SHEET

To the attention of:

Anne Holmes

From:

Vera Groom

Date:

8-28-90

RE: Your File

Our File

99-713

Please regard this information as _____ preliminary.

_____ final.

For the transmission to be complete, you should have received 3 pages, including this cover page.

If you wish to respond by FAX, our number is 1-206-767-5063.

Thank You.

Amazing but true, I found it!

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Chemistry Microbiology and Technical Services

Entered



Certificate

CLIENT: King County Division of Solid Waste
419 Occidental Ave. South
601 F.X. McRory Building
Seattle, WA 98104
ATTN: Barbara Zaroff

LABORATORY NO. 99713

DATE: Dec. 11, 1986

PO #B22769B

REPORT ON: WATER

SAMPLE

IDENTIFICATION: Submitted 11/5/86 and identified as shown:

E: Leachate Enumclaw Pond (from Trailer) D. Nyblom
11-5-86 2:00 pm G. Anabele

TESTS PERFORMED AND RESULTS:

pH, glass electrode @ 25 degrees C 6.3

parts per million (mg/L)

Total Cadmium	L/0.002
Total Chromium	0.022
Total Copper	0.030
Total Lead	0.02
Total Iron	46.
Total Zinc	0.16
Total Nickel	0.02

Chemical Oxygen Demand	1300.
5-day Biochemical Oxygen Demand	840.
Total Suspended Solids	370.



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P.2



Certificate

CLIENT: King County Division of Solid Waste
419 Occidental Ave. South
601 F.X. McRory Building
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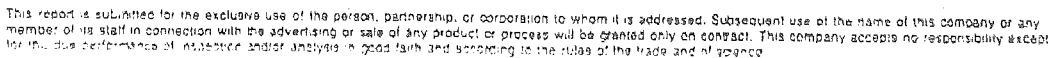
Total Cadmium	L/0.002
Total Chromium	0.022
Total Copper	0.030
Total Lead	0.02
Total Iron	46.
Total Zinc	0.15
Total Nickel	0.02

Chemical Oxygen Demand	1300.
5-day Biochemical Oxygen Demand	840.
Total Suspended Solids	270.



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Chemistry, Microbiology and Technical Services



Certificate

PAGE NO. 2

King County Division of Solid Waste

LABORATORY NO. 99713

Key

L/ = less than

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J. M. Owens
J. M. Owens

JMO:veg



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ENUMCLAW

LEACHATE

684-2300

KING COUNTY SOLID WASTE

ANALYTICAL DATA Heavy Metals

Month May Year 86

Sample Date	5/12	5/13	5/13	5/14	5/14/	5/19	5/20
Sample Location	DMW#2	EMW#1	EMW#3	HMW#2	Leachate	CFMW#3	STA CHS-E
Ag dissolved?	<.004	<.004	<.004	<.004	<.004	<.004	<.004
As							
Ba	.021	.051	.011	<.005	.122	.009	.009
Cd	<.004	<.004	<.004	<.004	<.004	<.004	<.004
Cr	.03	<.02	<.02	<.02	<.02	.003	<.001
Cu	<.02	<.02	<.02	<.02	<.02	<.01	<.01
Fe	<.02	18.0	<.02	.16	45.2	<.02	.11
Hg	.0003	<.0002	.0002	.0004	.0003	.0002	.0002
Mn	<.005	48.40	.023	1.350	4.050	<.005	<.005
Ni	<.02	<.02	<.02	<.02	<.02	.03	<.02
Pb	<.02	.05	<.02	<.02	.04	<.001	<.001
Se							
Zn	<.010	.012	<.010	.013	1.181	<.006	<.005
K	.55	4.72	.70	.35	43.2	.30	.29

Note: All parameters are expressed as mg/l.
1340-1 (7/84)

REF:hh 6/84

Ray Pulley 684-2323



KING COUNTY SOLID WASTE

ANALYTICAL DATA Conventional Parameters Month May Year 86

Sample Date	5/12	5/13	5/13	5/14	5/14	5/19	5/20
Sample Location	DMW#2	EMW#1	EMW#3	HMW#2	Leachate	CFMW#3	STA CHS-E
pH	7.40	6.97	6.72	6.02	7.70	7.69	6.85
COD	12	740	14	12	714	9	11
BOD ₅	<.1	560	2.9	<.1	184	<.1	2.2
S.S.	<.1	20.5	1.7	.3	.3	0.9	.09
V.S.S.	<.1	9.7	1.7	498	327	0.2	.09
T.S.	90	1920	68	55.8	1342	91	100
T.V.S.	26	1199	36	18.7	572	26	32
Total Dissolved Solids	90	1900	66	56	1341	90	100
Total Kjeldahl Nitrogen	.33	.97	.40	.42	37.8	<.20	.31
Total PO ₄ -P	.18	.11	.04	.03	8.10	.02	.02
SO ₄	<5	<5	<5	<5	36	<5	11
(CaCO ₃) T. Hardness	spilled lost	1390	39	26.5	490	52	32
Specific Conduct.	spilled	2541	113	89	1644	151	112
NH ₃ -N	.19	.07	.19	.06	22.6	.02	.23
Fluoride	<.05	<.05	<.05	<.05	<.05	<.05	<.05
Chloride	1.8	161.5	4.8	4.6	436.2	4.9	6.9

Note: All parameters are expressed as mg/l except for pH which is unitless.

1340 (7/84)

REF:hh 6/84

June 1980





Date Unknown

Phase I
Leachate
Pond

