UST # 006893

Received 12-16-93

Car Wash Enterprises 15th W. King # 4938

W-6114-02

Underground Storage Tank Permanent Closure Site Assessment for Brown Bear Car Wash Located at 1800 15th Avenue, Seattle, Washington

November 1993

11/2/93

Car Wash Enterprises
Attn: Mr. Jim Hansen
3977 Leary Way N.W.
P.O. Box 70527
Seattle, Washington 98107-0527

8R 4/11/94 CM

DEPARTMENT OF ECOLOGY
NWRO/TCP TANKS UNIT

INTERIM CLEANUP REPORT	☑
SITE CHARACTERIZATON	☐
FINAL CLEANUP REPORT	☐
OTHER	☐
AFFECTED MEDIA: SOIL	☑
OTHER GW	☐
INSPECTOR (INIT.) DATE 12-16-93	

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
400 N. 34th St. • Suite 100
P.O. Box 300303
Seattle, Washington 98103
206 • 632 • 8020

Independent Action Report Update

Site Name: CAR WASH ENTERPRISES BROWN BEAR CAR WASH

Inc. #: _____ Date of Report: 11-93

County: KING Date Report Rec'd: 12-16-93

Reviewed by: J. Bails

Comments (please include: free prod., tank info., media, contaminant migration, GW conc. trends, PCS treated/fate?):

SITE ASSESSMENT REPORT. SOIL CONTAMINATION REPORTED AT WESTERN END OF EXCAVATION AT APPROXIMALTY 6-11 FEET. EXTENT OF CONTAMINATION UNKNOWN.

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

SEATTLE
EVERETT
HANFORD
FAIRBANKS
ANCHORAGE
SAINT LOUIS
BOSTON

November 2, 1993

Car Wash Enterprises
3977 Leary Way N.W.
P.O. Box 70527
Seattle, Washington 98107-0527

Attn: Mr. Jim Hansen

RE: UNDERGROUND STORAGE TANK PERMANENT CLOSURE SITE ASSESSMENT FOR BROWN BEAR CAR WASH LOCATED AT 1800 15TH AVENUE, SEATTLE, WASHINGTON

The purpose of this letter is to provide you with the results of the soil sampling performed during removal of the underground storage tank (UST) at the Brown Bear Car Wash located at 1800 15th Avenue N.W. in Seattle, Washington. This letter report serves as the permanent tank closure site assessment as required by the Washington Department of Ecology.

This work was authorized by Mr. Jim Hansen of Car Wash Enterprises by signed proposal number TP-8127-1 dated September 9, 1993, with an additional letter notification of activities outside the original scope of work dated October 4, 1993.

On September 15, 1993, Shannon & Wilson (S&W) arrived on site at the request of Mr. Jim Hansen to collect soil samples from the tank excavation. Lee Morse Construction, Inc. was on site to remove the tank. Adjacent land uses to the site are primarily commercial and industrial along the 15th Avenue West corridor. The tank was a steel, single-wall construction, painted yellow. The tank dimensions were approximately 8 feet in diameter by 22 feet long (approximately 8,000 gallons). A gasoline odor was noted in and around the excavation during the removal. The tank was triple-rinsed prior to removal and disposed of properly in accordance with Washington Department of Ecology (Ecology) guidelines.

Soil was reported to be backfill in the upper 4 to 6 feet, grading to a natural silt at approximately 7 feet, turning to gray clay at approximately 11 feet below grade. Five samples were collected at this time, two from the excavation, and three from the stockpile. Sample number 148801 was collected from the silt in the bottom of the excavation at approximately 11 feet and sample number 148802 was collected from the clay at approximately 12 feet. Sample locations are shown on Figure 2. The samples contained 20 and 22 parts per million (ppm) of petroleum hydrocarbons as gasoline (WTPH-G) respectively, below the February 1991 Model Toxics Control Act (MTCA) Method A cleanup level of 100 ppm. Sample 144801 was also analyzed

400 NORTH 34TH STREET • SUITE 100
P.O. BOX 300303
SEATTLE, WASHINGTON 98103
206 • 632 • 8020 FAX 206 • 633 • 6777

for diesel range hydrocarbons (WTPH-D), and a low concentration below the Method A level was detected. Benzene, toluene, ethylbenzene, and xylene components (BTEX) were all below laboratory reporting limits. These samples established a vertical limit to the migration. Sidewall samples were not collected at this time due to the strong smell of gasoline in the excavated materials. The three stockpile samples resulted in WTPH-G concentrations of 190, 230, and 1300 ppm. The soil was subsequently removed from the site and stockpiled at the Ballard Brown Bear Car Wash for treatment. Analytical results are summarized in Table 1.

Mr. Jim Hansen had additional overexcavation performed prior to requesting Shannon & Wilson to sample the sidewalls. On September 30, a field technician responded to a request to be present at the site with a photoionization detector (PID), an air monitoring device. At this time, an excavation approximately 18 feet by 30 feet existed. PID readings indicated the presence of volatile compounds. No laboratory samples were taken, as additional excavation was deemed necessary by the client. Some of the excavated soil was taken off-site,and some was temporarily stored in the excavation.

On October 12, 1993, Shannon & Wilson was requested to perform additional sampling. Two samples were collected, one from the east sidewall at approximately 10 feet depth (No. 148813) and one from the southeast sidewall at approximately 8 feet depth (No. 148812). The southeast sidewall sample contained a WTPH-G concentration of 31 ppm. The east sidewall sample contained a WTPH-G concentration of 410 ppm. This higher concentration may be due to slough from the soils stored in the excavation as this soil collapsed around the trackhoe bucket as the sidewall sample was being collected. Samples number 148812 and 148813 were also analyzed for WTPH-D by mistake. The WTPH-D results were non-detect (ND) for 148812 and 40 ppm for 148813. Based upon analysis of the chromatogram, the 40 ppm result is considered to be the less volatile portion of the gasoline range, and does not reflect the presence of diesel (telephone conversation with Beth Plotkin at laboratory of Friedman & Bruya on 10/21/93). This confirms the earlier result that diesel fuel is not present in the excavation.

PCS still present?

Based upon air monitoring with the PID and olfactory senses, petroleum contamination appears to exist primarily in the western portion of the excavation. The clay layer at 11 feet and/or the presence of ground water at approximately this depth appear to have arrested vertical migration of the gasoline. There appears to be a band of soil in the 8- to 11-foot interval that contains elevated levels of gasoline.

The data presented in this report are based on limited research at the facility and should be considered representative at the time of our observations. Shannon & Wilson, Inc. performed this work within our best judgment to adequately describe site conditions at the facility. Changes in the conditions of the property can occur with time from both natural processes and human

activities. In addition, changes in governmental codes, regulations, or law may occur. Due to such changes, our observations and recommendations applicable to this facility may need to be revised wholly or in part, due to changes beyond our control.

This report was prepared for the exclusive use of Car Wash Enterprises and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. Shannon & Wilson has prepared the attached "Important Information About Your Environmental Site Evaluation" to assist you and others in understanding the use and limitations of our reports.

If you have any questions regarding this letter, please call us at (206) 632-8020.

Respectfully,

SHANNON & WILSON, INC.

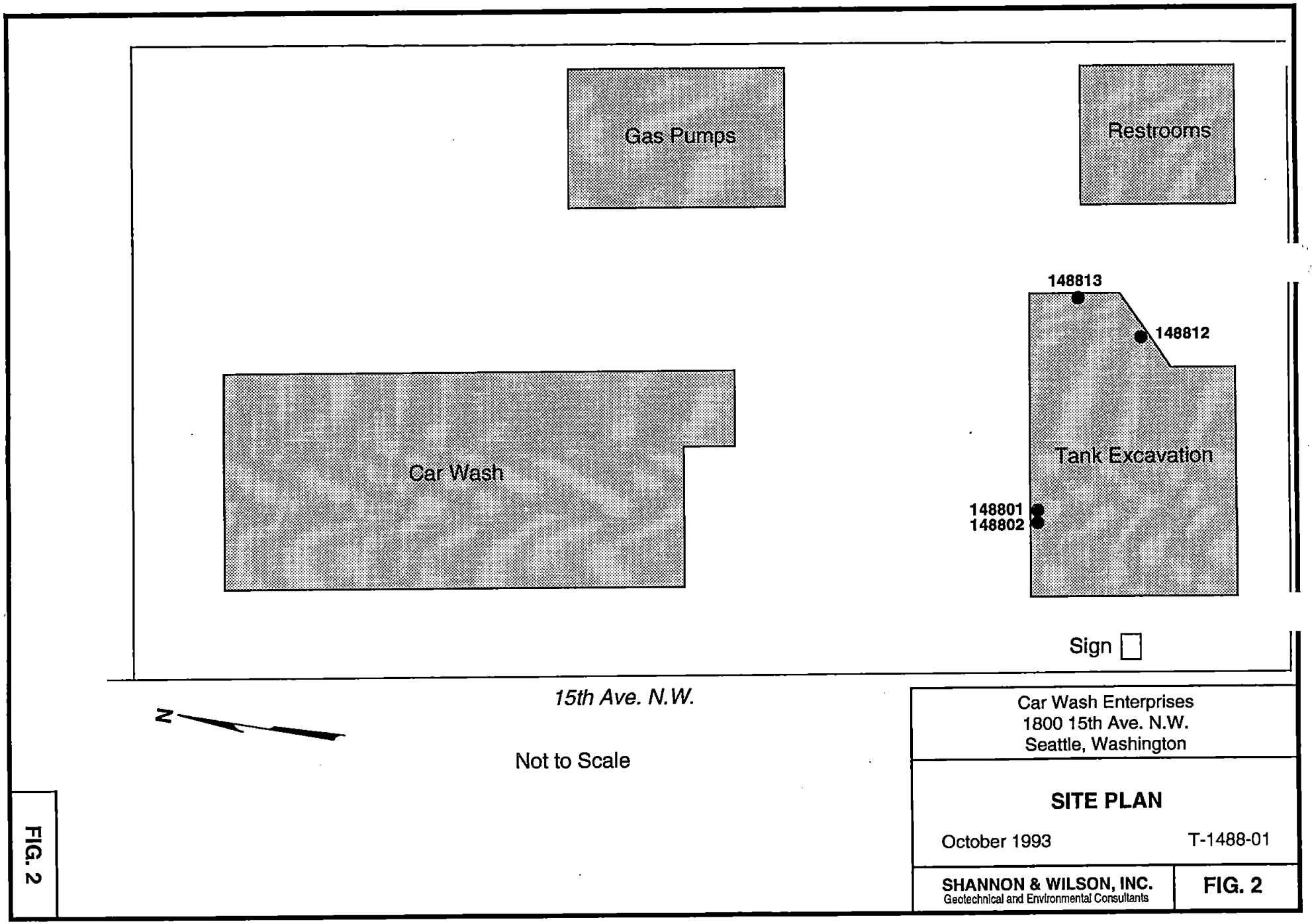
Brian L. Clark
Environmental Engineer

Robert Colombo, P.G.
Associate

BLC:RC/blc

Enclosures: Table 1 - Soil Sample Analyses
Figure 1 - Vicinity Map
Figure 2 - Site Exploration Plan
Copy of Analytical Results
Ecology UST Site Assessment Checklist
Important Information About Your Environmental Site Evaluation/Assessment

T1488-01.LTR/T1488-lkd/lkd



Car Wash Enterprises
1800 15th Ave. N.W.
Seattle, Washington

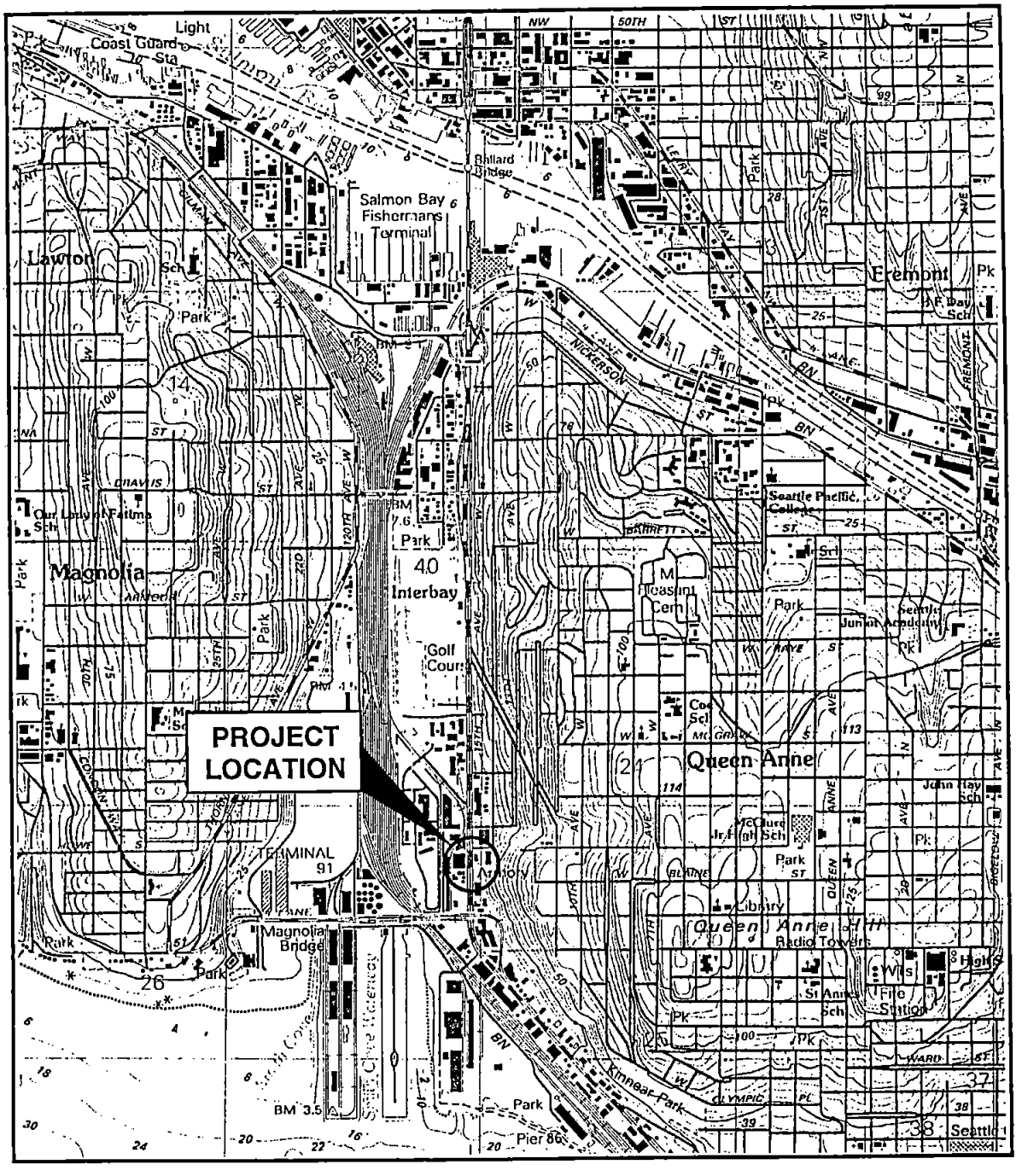
SITE PLAN

October 1993 T-1488-01

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2

FIG. 2



0 1/4 1/2 1

Scale in Miles

NOTE

Map adapted from USGS metric topographic map of Seattle North, WA quadrangle, dated 1983.

Car Wash Enterprises
1800 15th Ave. N.W.
Seattle, Washington

VICINITY MAP

October 1993 T-1488-01

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 1

Table 1. Soil Sample Analyses
Car Wash Enterprises
15th Avenue NW

Sample Number	WTPH-D (8015 Mod.) (ppm)	WTPH-G (8015) (ppm)	BTEX Distinction				Total Lead (EPA 6010) (ppm)	Date Sampled
			Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)		
148801	27	20	< 0.25	< 20	< 10	< 5.0	< 5.0	9/15/93
148802	NP	22	< 0.25	< 20	< 10	< 5.0	< 5.0	9/15/93
148803	NP	190	< 1.3	< 20	< 10	< 5.0	8.4	9/15/93
148804	NP	230	< 1.3	< 20	< 10	< 5.0	12.0	9/15/93
148805	NP	1300	< 25	< 25	< 25	< 25	9.4	9/15/93
148812	NP	31	NP	NP	NP	NP	NP	10/12/93
148813	NP	410	NP	NP	NP	NP	NP	10/12/93
Cleanup Levels for Soil (1)	200	100	0.5	40	20	20	250	

(1) Washington Model Toxics Control Act (MTCA) Method A, February 1991
< = Below detection limit, detection limit reported.
NP = Test Not Performed

Alden Analytical
Laboratories, Inc.

September 29, 1993

Shannon & Wilson
Attn: Brian Clark
P.O. Box 300303
Seattle, WA 98103

RE: ALDEN PROJECT NUMBER 9309025/1
(SHANNON & WILSON PROJECT NUMBER T-1488-01)

Dear Brian:

Enclosed are the analytical results for the soil samples submitted to Alden Labs September 15, 1993. All samples were analyzed for TPH using Method WTPH-G with BTEX Distinction and Lead using Method 6010. Sample 148801 was analyzed for WTPH-D. Since the diesel concentration was insignificant in sample 148801, the remaining samples were not analyzed for WTPH-D per the documentation on the Chain-of-Custody.

All samples met Alden's internal QA/QC criteria.

It is Alden's policy to dispose of all samples and extracts after the expiration of their hold time unless notified otherwise. If you have any questions, please do not hesitate to call me at the number below.

Sincerely,

Carole J. Lee
Project Coordinator

Enclosures

1001 SW Klickitat Way
Seattle, WA 98134
Telephone (206) 623-3660
Facsimile (206) 624-8778

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon & Wilson
Client Sample Number: See Below
Date of Sample Receipt: 09/15/93
Matrix: Soil ✓

Alden Project Number: 9309025/1
Alden Sample Number: See Below
Analysis Method: EPA 6010
Reporting Units: mg/kg

Client Sample ID	*Alden Sample Number*	*Digestion Date*	*Analysis Date*	*Reporting Limit*	*Total Lead*
N/A	Blank	09/17/93	09/17/93	5.0	< RL
148801	4965	09/17/93	09/17/93	5.0	< RL
148802	4966	09/17/93	09/17/93	5.0	< RL
148803	4967	09/17/93	09/17/93	5.0	8.4 ✓
148804	4968	09/17/93	09/17/93	5.0	12 ✓
148805	4969	09/17/93	09/17/93	5.0	9.4 ✓

Note: Results are reported to two significant figures.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Metals Blank Spike/Matrix Spike Recoveries

Client: Shannon & Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148801	*Alden Sample Number: 4965*
Date of Sample Receipt: 09/15/93	*Analysis Method: EPA 6010*
Date of Sample Digestion: 09/17/93	*Matrix: Soil*
Date of Sample Analysis: 09/17/93	*Reporting Units: mg/kg*

Compound	*Spike Added (mg/kg)*	*Blank Spike Concentration (mg/kg)*	*Blank Spike % Rec.*	*QC Limits Rec.*
Lead	50.0	45.3	91	65 - 135

Compound	Duplicate Concentration (mg/kg)	*% RPD*	*Spike Added (mg/kg)*	*Matrix Spike Concentration (mg/kg)*	*Matrix Spike % Recovery*	*QC Limits*	
						RPD	*REC.*
Lead	< RL	0	35.6	31.3	88	33	65 - 135

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: N/A	*Alden Sample Number: Blank*
Date of Sample Receipt: N/A	*Analysis Method: WTPH-D*
Date of Sample Extraction: 09/16/93	*Matrix: Soil*
Date of Sample Analysis: 09/28/93	*Reporting Units: mg/kg*

Compound Name	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	25	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Fluorobiphenyl	108	50 - 150
o-Terphenyl	118	50 - 150

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148801	*Alden Sample Number: 4965*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-D*
Date of Sample Extraction: 09/16/93	*Matrix: Soil*
Date of Sample Analysis: 09/28/93	*Reporting Units: mg/kg*

Compound Name	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	25	27

Surrogates	*Percent Recovery*	*Recovery Limits*
Fluorobiphenyl	91	50 - 150
o-Terphenyl	102	50 - 150

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148801	*Alden Sample Number: 4965 Dup*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-D*
Date of Sample Extraction: 09/16/93	*Matrix: Soil*
Date of Sample Analysis: 09/28/93	*Reporting Units: mg/kg*

Compound Name	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	25	27

Surrogates	*Percent Recovery*	*Recovery Limits*
Fluorobiphenyl	101	50 - 150
o-Terphenyl	116	50 - 150

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: N/A	*Alden Sample Number: Blank*
Date of Sample Receipt: N/A	*Analysis Method: WTPH-G*
Date of Sample Extraction: N/A	*Matrix: Soil*
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	10	< RL
BTEX Distinction			
Benzene	71-43-2	0.25	< RL
Toluene	108-88-3	20	< RL
Ethylbenzene	100-41-4	10	< RL
m,p-Xylene*	1330-20-7	5.0	< RL
o-Xylene	1330-20-7	5.0	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	82	50 - 150
Bromofluorobenzene	89	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148801	*Alden Sample Number: 4965*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-G* ✓
Date of Sample Extraction: N/A	*Matrix: Soil* ✓
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	10	20
BTEX Distinction			
Benzene	71-43-2	0.25	< RL
Toluene	108-88-3	20	< RL
Ethylbenzene	100-41-4	10	< RL
m,p-Xylene*	1330-20-7	5.0	< RL
o-Xylene	1330-20-7	5.0	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	76	50 - 150
Bromofluorobenzene	85	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148801	*Alden Sample Number: 4965 Dup*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-G*
Date of Sample Extraction: N/A	*Matrix: Soil*
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	10	22
BTEX Distinction			
Benzene	71-43-2	0.25	< RL
Toluene	108-88-3	20	< RL
Ethylbenzene	100-41-4	10	< RL
m,p-Xylene*	1330-20-7	5.0	< RL
o-Xylene	1330-20-7	5.0	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	76	50 - 150
Bromofluorobenzene	86	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148802	*Alden Sample Number: 4966*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-G*
Date of Sample Extraction: N/A	*Matrix: Soil*
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	10	22
BTEX Distinction			
Benzene	71-43-2	0.25	< RL
Toluene	108-88-3	20	< RL
Ethylbenzene	100-41-4	10	< RL
m,p-Xylene*	1330-20-7	5.0	< RL
o-Xylene	1330-20-7	5.0	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	80	50 - 150
Bromofluorobenzene	91	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148803	*Alden Sample Number: 4967*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-G*
Date of Sample Extraction: N/A	*Matrix: Soil*
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	50	190
BTEX Distinction			
Benzene	71-43-2	1.3	< RL
Toluene	108-88-3	20	< RL
Ethylbenzene	100-41-4	10	< RL
m,p-Xylene*	1330-20-7	5.0	< RL
o-Xylene	1330-20-7	5.0	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	95	50 - 150
Bromofluorobenzene	109	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148804	*Alden Sample Number: 4968*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-G*
Date of Sample Extraction: N/A	*Matrix: Soil*
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	50	230
BTEX Distinction			
Benzene	71-43-2	1.3	< RL
Toluene	108-88-3	20	< RL
Ethylbenzene	100-41-4	10	< RL
m,p-Xylene*	1330-20-7	5.0	< RL
o-Xylene	1330-20-7	5.0	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	103	50 - 150
Bromofluorobenzene	114	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical
Laboratories, Inc.

REPORT OF ANALYTICAL RESULTS

Client: Shannon and Wilson	*Alden Project Number: 9309025/1*
Client Sample Number: 148805	*Alden Sample Number: 4969*
Date of Sample Receipt: 09/15/93	*Analysis Method: WTPH-G*
Date of Sample Extraction: N/A	*Matrix: Soil*
Date of Sample Analysis: 09/16/93	*Reporting Units: mg/kg*

Compound Name	*CAS No.*	*Reporting Limits(RL)*	*Reporting Results*
Total Petroleum Hydrocarbons	N/A	100	1300
BTEX Distinction			
Benzene	71-43-2	25	<RL
Toluene	108-88-3	25	< RL
Ethylbenzene	100-41-4	25	< RL
m,p-Xylene*	1330-20-7	25	< RL
o-Xylene	1330-20-7	25	< RL

Surrogates	*Percent Recovery*	*Recovery Limits*
Trifluorotoluene	116	50 - 150
Bromofluorobenzene	143	50 - 150

* m-Xylene and p-xylene cannot be separated and are reported here as a total of the two isomers.

Alden Analytical Laboratories, Inc.

1001 S.W. Klickitat way Suite 108 Seattle, WA 98134 (206) 623-3660 Fax (206) 624-8778

Date: 9/15/93 Page 1 of 1

Project/PO Number T-1488-01

Contact: BRIAN CLARK

Company/Address S + W

Phone: _____ Fax: _____

Samplers: _____

Alden Project Number: 9309025|1

Sample Date/Time	Sample ID #	Matrix	# Containers	Analyses Requested: WTPH-G | BTEX	WTPH-D	TOTAL LEAD (6010)	TAT	Lab ID #	Remarks
9/15/93	148801	SOIL	2	X	X	X	C	4965	
	02			X	o	X	I	4966	
	03			X	o	X	A	4967	
	04			X	o	X		4968	
	05			X	o	X	I	4969	

Relinquished By: _____ Signature _____ Date Time _____

Received By: _____ Signature _____ Date Time _____

Relinquished By: _____ Signature _____ Date Time _____

Received By: _____ Signature _____ Date Time _____

Please note that samples received after 3PM are considered received 8AM the following business day.

Special Instructions/Comments:

o RUN WTPH-D ON 148802 - 148805 ONLY IF HITS ON 148801.

TAT Codes

A Standard B 24hr

C 48 hr D 72hr

E 1 Week F Other: _____

Shannon & Wilson, Inc.
400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020
11500 Olive Blvd., Suite 276
St. Louis, MO 63141
(314) 872-8170
2055 Hill Road
Fairbanks, AK 99707
(907) 479-0600
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907) 561-2120

Chain of Custody Record

Laboratory Alden
Attn:

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	2 oz. glass jar WTPH-G and BTEX (8020)	4 oz glass jar Lead WTPH-D					Total Number of Containers	Remarks/Matrix D.B. 9/15 93
148801		1410	9/15/93		X	1	1					2	Iced. ~~24 hr~~ 48 Hr
148802		1430				1	1*					2	~~24 hr~~
148803		1525				1	1*					2	Standard
148804		1530				1	1*					2	
148805		1535				1	1*					2	

B Clark 9/15

Project Information		Sample Receipt	
Project Number:	T-1488-01	Total Number of Containers	
Project Name:	~~Broadway~~ Car Wash Enterprises	COC Seals/Intact? Y/N/NA	
Contact:	B. Clark	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ No ☐	Delivery Method:	
Sampler:	P. Van Horne	(attach shipping bill, if any)	

Instructions

Requested Turn Around Time: 148801 & 148802 → ~~24~~ 48 Hr.

Special Instructions: Others → standard

* Run WTPH-D on 148802 through 148805 only if Diesel is detected in 148801.

Distribution: White - w/shipment - returned to Shannon & Wilson w/ Laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Paul L. Van Horne Time: 4:21	Signature: Time:	Signature: Time:
Printed Name: Paul L. Van Horne Date: 9/15/93	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:
Received By: 1.	**Received By: 2.**	**Received By: 3.**
Signature: DB Time: 4:30 PM	Signature: Time:	Signature: Time:
Printed Name: DAVID BAUMEISTER Date: 9/15/93	Printed Name: Date:	Printed Name: Date:
Company: Alden	Company:	Company:

F-19-91/UR

No. 10267

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman
James E. Bruya, Ph.D.
(206) 285-8282

3008-B 16th Avenue West
Seattle, WA 98119
FAX: (206) 283-5044

TRANSMITTAL

DATE: 10/27/93

TO: Brian Clark

COMPANY: Shannon & Wilson PROJECT NAME/#: T-1988-01

FAX #: 633-6777 PHONE #:

FROM: Beth Plotkin

We are sending you: ☑ Attached ☐ Under separate cover via

# Copies/Pages (including cover sheet)	Description
11	Lab Results

These are transmitted as indicated:

☑ For your use ☐ For review and comment ☐ For your signature and return

☑ As requested ☐ As noted ☐ Other

Remarks:

Original: Will Follow ☑ Will Not Follow ☐

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman
James E. Bruya, Ph.D.
(206) 285-8282

3008-B 16th Avenue West
Seattle, WA 98119
FAX: (206) 283-5044

October 19, 1993

Jim Hansen, Project Leader
Car Wash Enterprises
P.O. Box 70527
Seattle, WA 98107-0527

Dear Mr. Hansen:

Enclosed are the results from the testing of material submitted on October 12, 1993 from Project T-1488-01.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

Beth Plotkin

Beth Plotkin
Chemist

BP/dp

Enclosures

cc: Brian Clark
Shannon & Wilson, Inc.

RIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 19, 1993
Date Received: October 12, 1993
Project: T-1488-01
Date Samples Extracted: October 12, 1993

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR FINGERPRINT CHARACTERIZATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID) AND ELECTRON CAPTURE DETECTOR (ECD)

Sample #	GC Characterization
148810	The GC trace using the flame ionization detector (FID) showed the presence of low boiling compounds. The patterns displayed by these peaks are indicative of gasoline. The low boiling compounds appeared as a ragged pattern of peaks eluting from *n*-C_6 to *n*-C_{13} showing a maximum near *n*-C_9. The GC/FID trace showed the presence of peaks that appeared to be indicative of low levels of benzene, toluene, ethylbenzene, the xylenes and C_3-benzenes. These compounds are characteristic of the constituents commonly found in gasoline. The large peak seen near 25 minutes in the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis.
148811	The GC trace using the flame ionization detector (FID) showed the presence of low boiling compounds. The patterns displayed by these peaks are indicative of gasoline. The low boiling compounds appeared as a ragged pattern of peaks eluting from *n*-C_6 to *n*-C_{13} showing a maximum near *n*-C_9. The GC/FID trace showed the presence of peaks that appeared to be indicative of low levels of benzene, toluene, ethylbenzene, the xylenes and C_3-benzenes. These compounds are characteristic of the constituents commonly found in gasoline. The large peak seen near 25 minutes in the GC/FID trace is pentacosane, added as a quality assurance check for this GC analysis. Samples 14881 and 148810 are weathered due to evaporation. This occurs very quickly when exposed to air and may have occurred during the one week of exposure. The silty clay would prevent much evaporation when it was covered. The samples contained unleaded gasoline and there appears to be 1- and 2-methyl naphthalene which is characteristic of a recent formulation of gasoline. These peaks were found augmented in gasoline as early as 1985, but are more common in gasolines manufactured in the late 1980's and 1990's.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: October 19, 1993
Date Received: October 12, 1993
Project: T-1488-01
Date Samples Extracted: October 19, 1993
Date Samples Analyzed: October 19, 1993

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE BY GC/FID (Modified 8015)

Results Reported as µg/g (ppm)

Sample #	Gasoline	Internal Standard (% Recovery)
148812	31	122%
148813	860[a]	102%
Quality Assurance		
Blank	<0.05	102%
148813 (Duplicate)	2,300[a]	105%
148813 (Matrix Spike) % Recovery	[ai]	112%
148813 (Matrix Spike Duplicate) % Recovery	[ai]	110%
Spike Blank % Recovery	103%	107%
Spike Level	10	

[a] The soil matrix contained many small stones, making duplicate analysis variable.
[ai] The amount spiked was insufficient to give meaningful recovery data.

10. BP.C

10.12.93 12:07

OCT-27-1993 15:40 FROM FRIEDMAN & BRUYA TO 6336777 P.05

Shannon & Wilson, Inc.

400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020

11500 Olive Blvd., Suite 276
St. Louis, MO 63141
(314) 872-8170

2055 Hill Road
Fairbanks, AK 99707
(907) 479-0600

5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907) 561-2120

Chain of Custody Record

Page 1 of 1
Laboratory FBT
Attn:

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	with BC	HCl					Total Number of Containers	Remarks/Matrix
143810	44599	1145	10/12/93		✓		✓					1	SW
143811	44600	1143	"		✓		✓					1	"
143812	44601	1150	"		✓	✓						1	"
143813	44602	1154	"		✓	✓						1	"

Project Information	Sample Receipt
Project Number: 7-1488-01	Total Number of Containers:
Project Name:	COC Seals/Intact? Y/N/NA:
Contact: Brian Clark	Received Good Cond./Cold:
Ongoing Project? Yes ☒ No ☐	Delivery Method:
Sampler: BC	(attach shipping bill, if any)

Instructions

Requested Turn Around Time: STANDARD

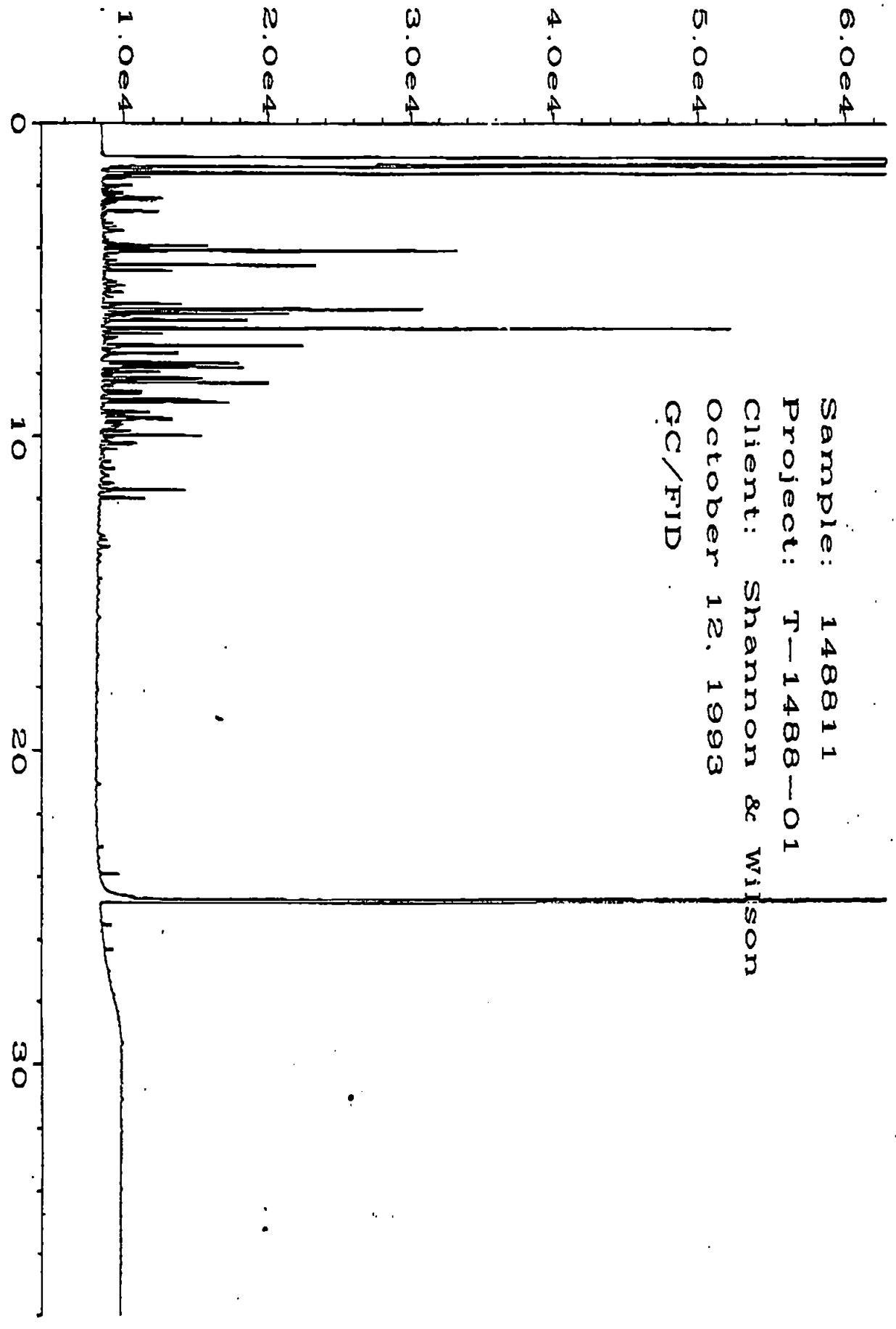
Special Instructions:
Bill car wash expenses.
FAX to Brian Clark 633-6777

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Time: 12:01	Signature: Time:	Signature: Time:
Printed Name: Brian Clark Date: 10/12	Printed Name: Date:	Printed Name: Date:
Company: SW	Company:	Company:
Received By: 1.	**Received By: 2.**	**Received By: 3.**
Signature: Time: 12:01	Signature: Time:	Signature: Time:
Printed Name: Charles Rupp Date: 10-12-93	Printed Name: Date:	Printed Name: Date:
Company: FBT	Company:	Company:

Distribution: White - w/shipment - returned to Shannon & Wilson w/ Laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19 S1/UR

N 12007


1.0e4
2.0e4
3.0e4
4.0e4
5.0e4
6.0e4
0
10
20
30
Sample: 148811
Project: T-1488-01
Client: Shannon & Wilson
October 12, 1993
GC/FID
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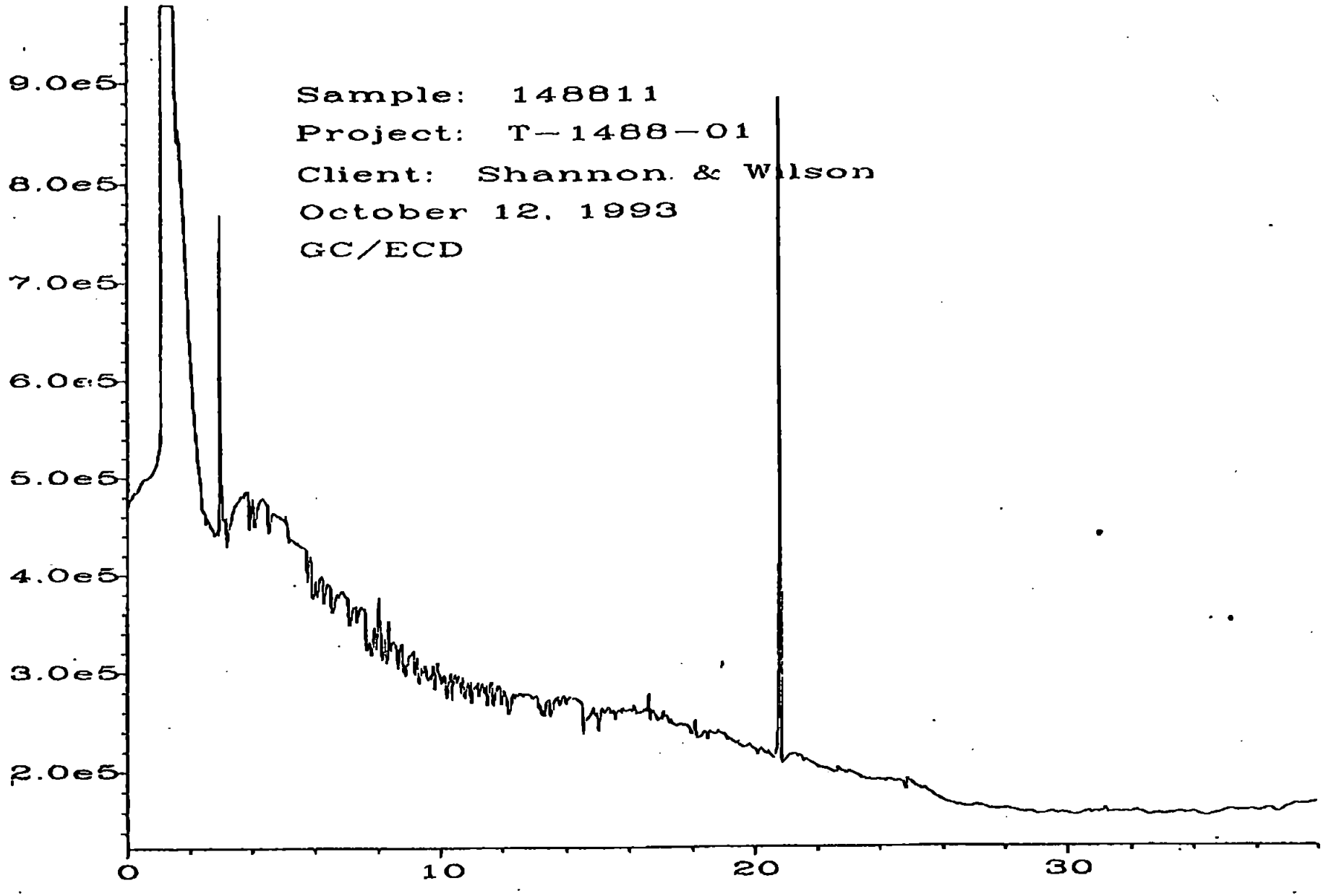
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Project: T-1488-01
Client: Shannon & Wilson
October 12, 1993
GC/ECD
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8.0e5
7.0e5
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5.0e5
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10
20
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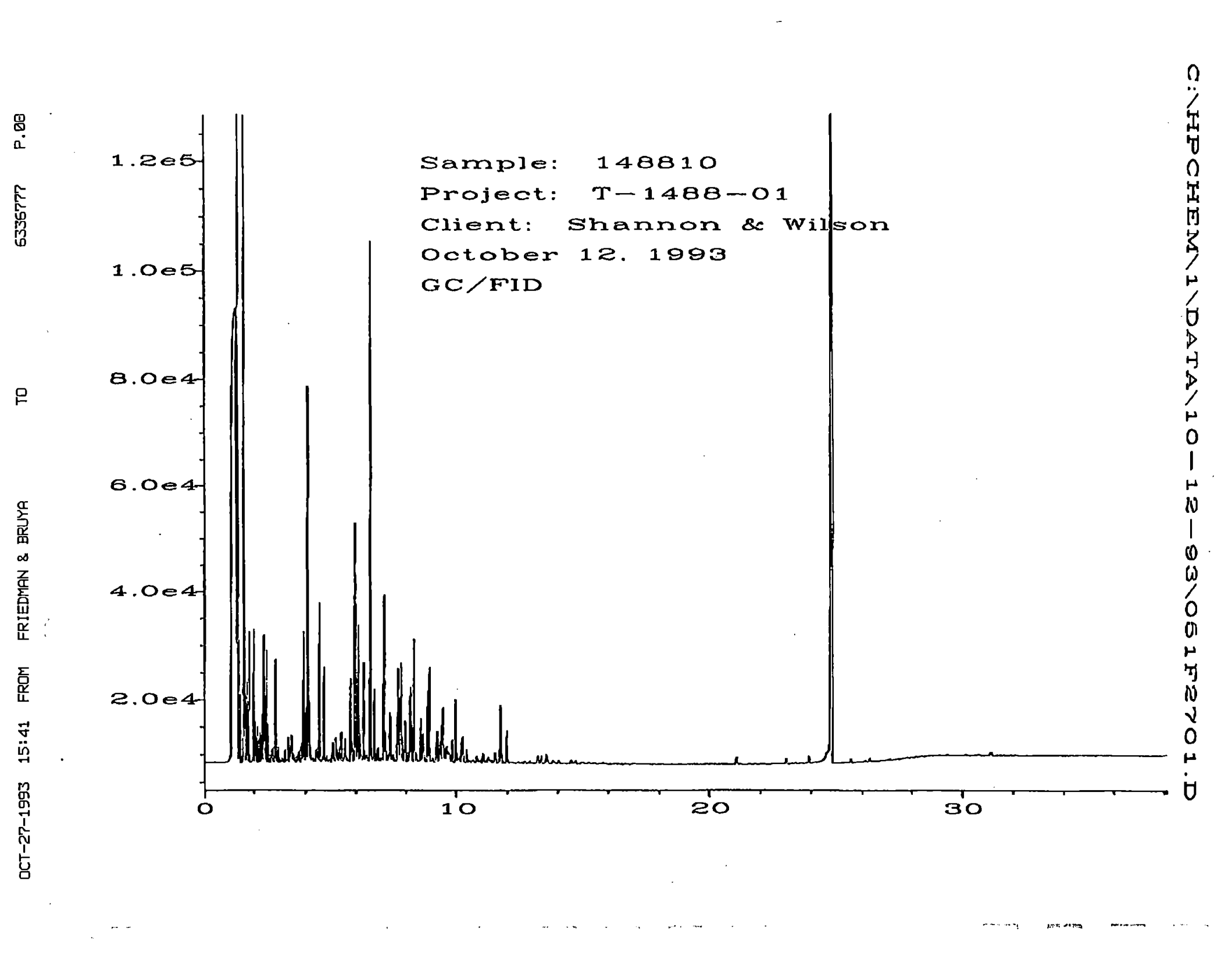
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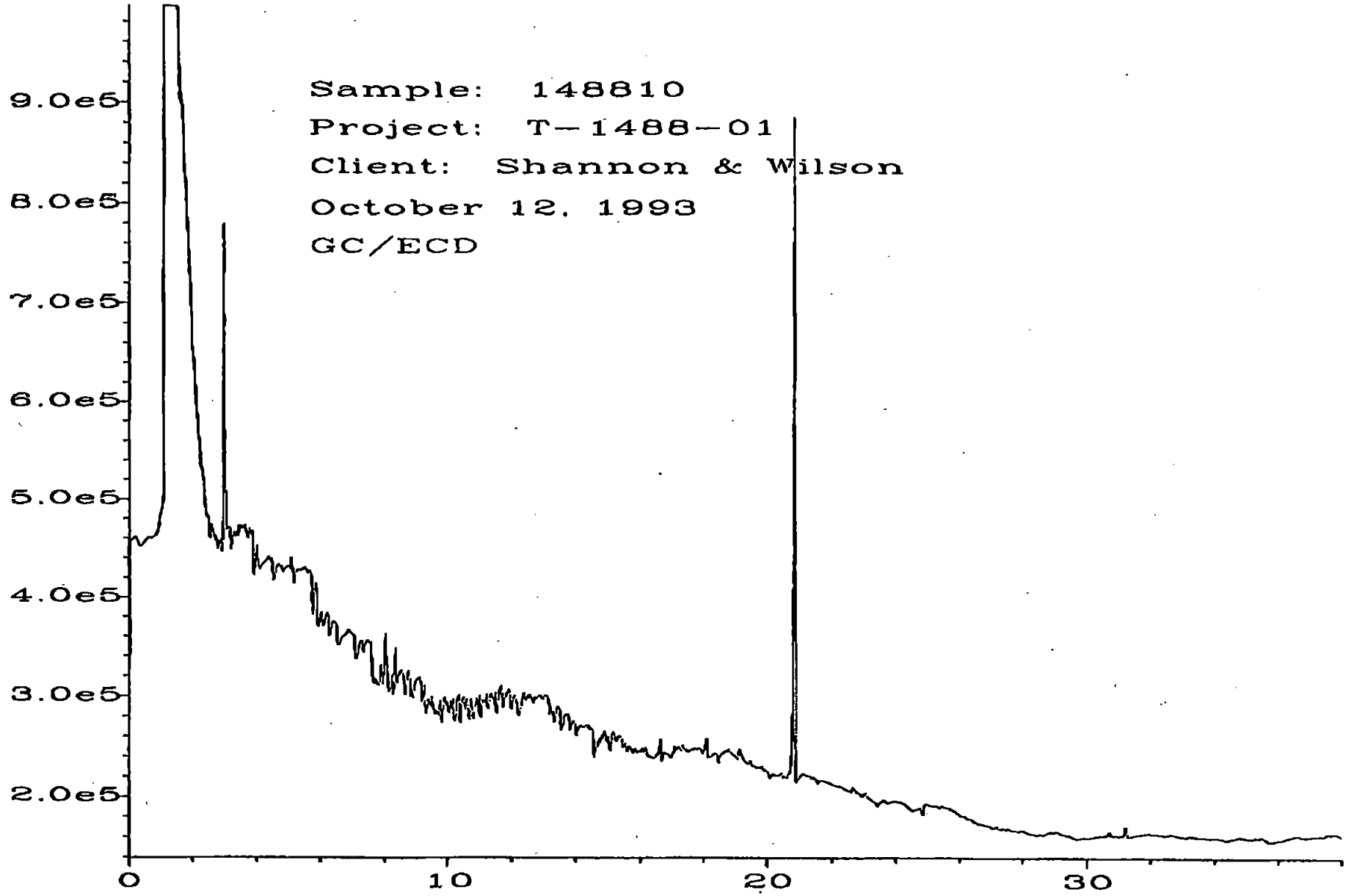
Sample: 148810
Project: T-1488-01
Client: Shannon & Wilson
October 12. 1993
GC/FID
1.2e5
1.0e5
8.0e4
6.0e4
4.0e4
2.0e4
0
10
20
30



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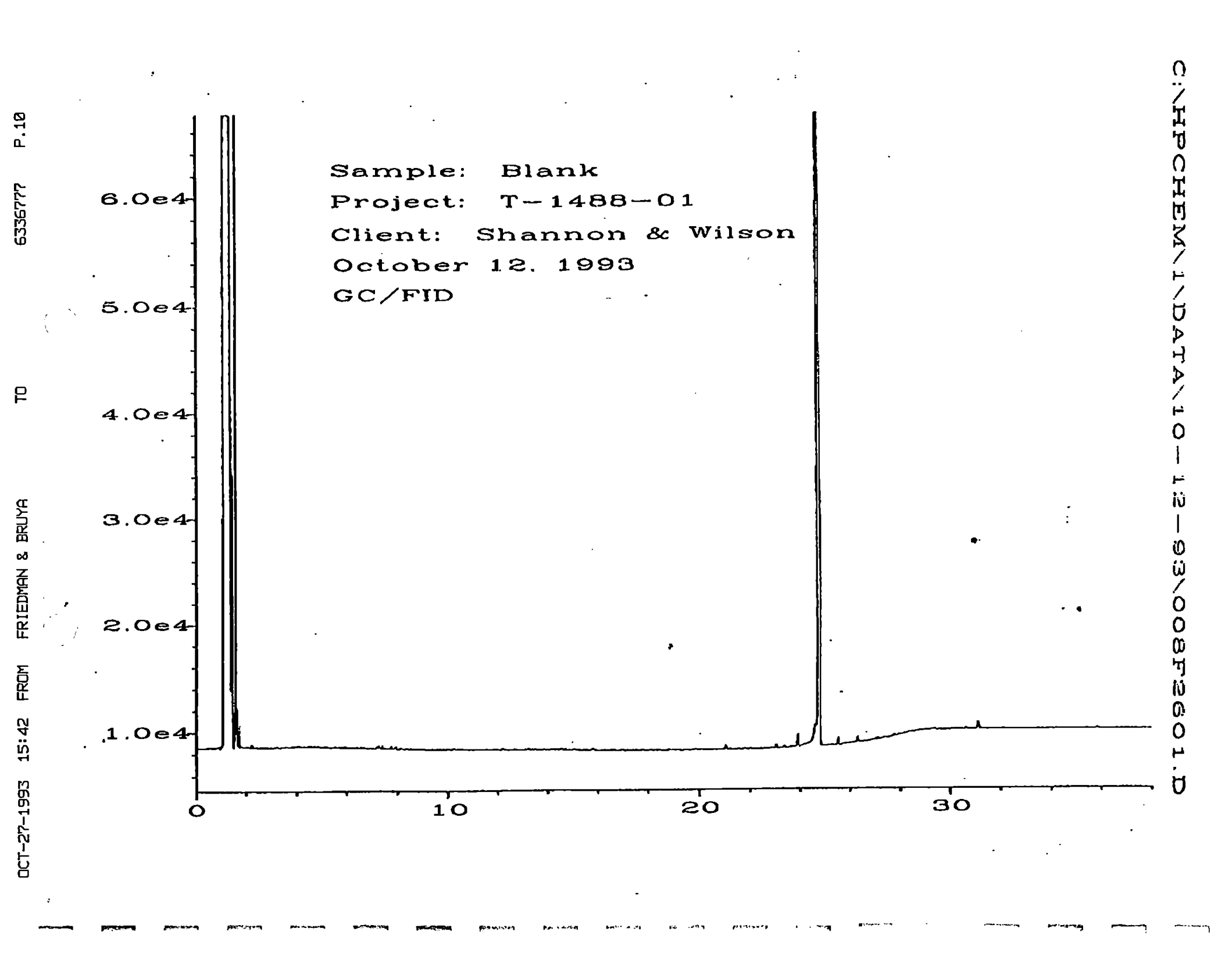
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Sample: Blank
Project: T-1488-01
Client: Shannon & Wilson
October 12, 1993
GC/FID
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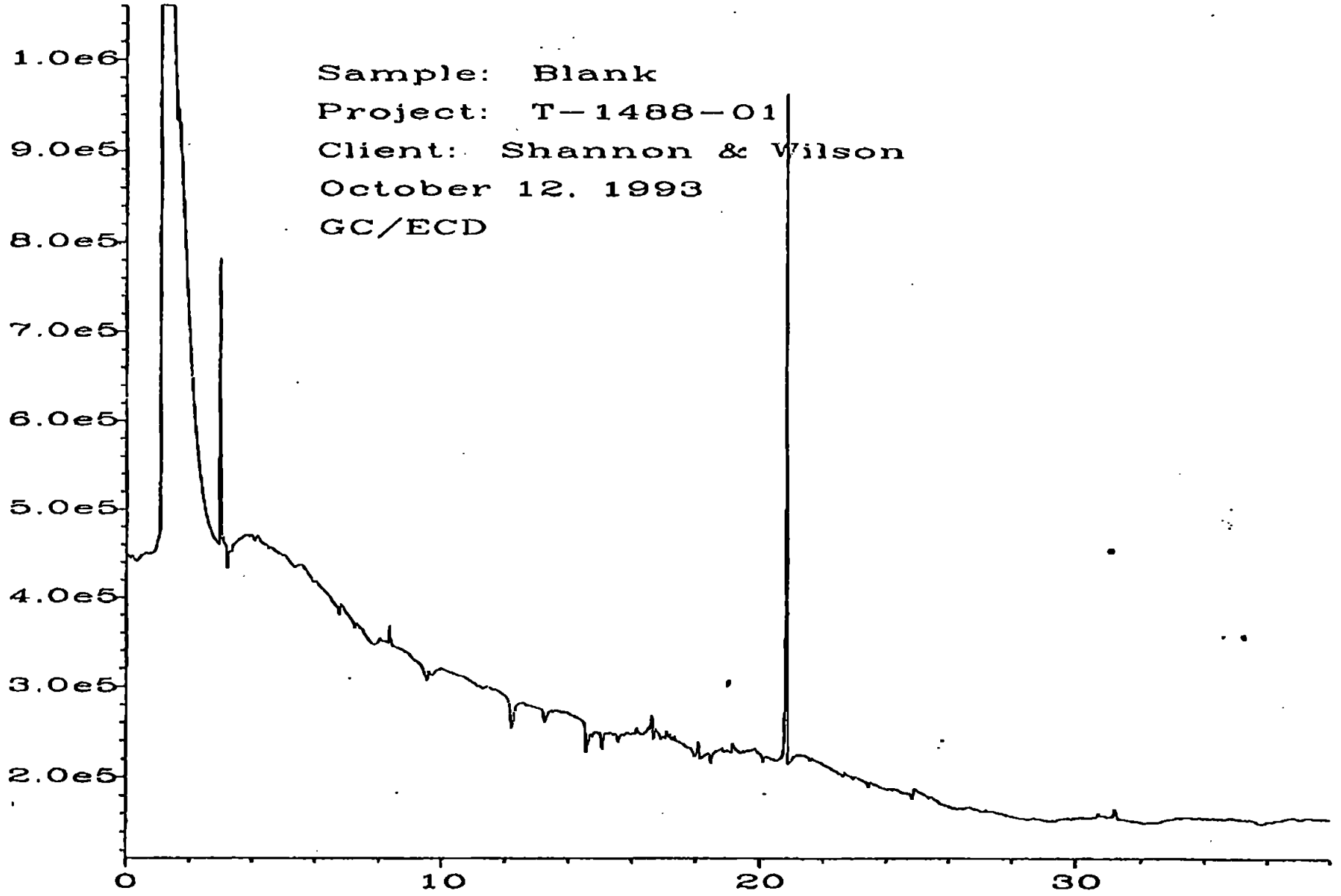
5.0e4
4.0e4
3.0e4
2.0e4
1.0e4
0
10
20
30



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Marine Vacuum Service, Inc.

A WASHINGTON ENVIRONMENTAL COMPANY

MARINE AND INDUSTRIAL CLEANING

TANK REMOVAL

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

UNDERGROUND STORAGE TANK

PUMP AND RINSE CERTIFICATE

Date: September 14, 1993

Attn: Jim Hansen
Car Wash Enterprises

Job Number:

Tank Owner: Brown Bear Car Wash

Tank Location: 1800 15th Avenue West
Seattle, WA

Tank Capacity: 8,000 gallons

Last contents held in tank: gasoline

Marine Vacuum Service, Inc. certifies that the tank mentioned above has been pumped of liquid materials and has been triple rinsed with fresh water and detergent solution.

Thank you,

Tom Myler

Tom Myler
Project Manager

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

For Office Use Only
Owner #
Site #

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with Ecology. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): 006893

Site/Business Name: Brown Bear Car Wash

Site Address: 1800 15th Ave W (Street) Telephone: (206) 789-3700

Seattle (City) WA (State) 98119 (ZIP-Code)

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
Tank # 5	8,000 gallons	gasoline

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ____ Investigate suspected release due to on-site environmental contamination
- ____ Investigate suspected release due to off-site environmental contamination.
- ____ Extend temporary closure of UST system for more than 12 months.
- ____ UST system undergoing change-in-service.
- ____ UST system permanently closed-in-place.
- XX UST system permanently closed with tank removed.
- ____ Abandoned tank containing product.
- ____ Required by Ecology or delegated agency for UST system closed before 12/22/88.
- ____ Other (describe): ____