Committed To *Your* Success

ANALYTICAL REPORT

JOB NUMBER: 912680

Prepared For:

EQM
1310 Kemper Meadow Drive
Cincinnati, Oh 45240

Attention: Mr. Mark Jarski

Date: 11/11/99

Signature

Name: Thomas F. Mroz

Title: Project Manager

11/11/99
Date

Severn Trent Laboratories
2400 Cumberland Drive
Valparaiso, IN 46383

PHONE: 219-464-2389
FAX..: 219-462-2953

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S A M P L E I N F O R M A T I O N
Date: 11/11/99

Job Number.: 912680
Customer...: EQM
Attn.....: Mr. Mark Jarski

Project Number.....: 96000813
Customer Project ID....: INDUSTRIAL HIGHWAY
Project Description....:

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
912680-1	S17	Solid	11/05/1999	08:40	11/05/1999	12:39
912680-2	S18	Solid	11/05/1999	09:45	11/05/1999	12:39

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LABORATORY TEST RESULTS

Job Number: 912680

Date: 11/11/99

CUSTOMER: EQM

PROJECT: INDUSTRIAL HIGHWAY

ATTN: Mr. Mark Jarski

Customer Sample ID: S17
Date Sampled.....: 11/05/1999
Time Sampled.....: 08:40
Sample Matrix.....: Solid

Laboratory Sample ID: 912680-1
Date Received.....: 11/05/1999
Time Received.....: 12:39

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
3550B	Sonication extraction for DRO Ultrasonic Extraction, Solid	Complete			11/06/99	wds
EPA 8015B	Diesel Range Organics (DRO) Diesel Range Organics, Solid	3400	600	mg/Kg	11/07/99	wds
EPA 8015B	Gasoline Range Organics (GRO) Gasoline Range Organics, Solid	1.3	0.05	mg/Kg	11/08/99	*sub

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LABORATORY TEST RESULTS

Job Number: 912680

Date: 11/11/99

CUSTOMER: EQM

PROJECT: INDUSTRIAL HIGHWAY

ATTN: Mr. Mark Jarski

Customer Sample ID: S18
Date Sampled.....: 11/05/1999
Time Sampled.....: 09:45
Sample Matrix.....: Solid

Laboratory Sample ID: 912680-2
Date Received.....: 11/05/1999
Time Received.....: 12:39

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
3550B	Sonication extraction for DRO Ultrasonic Extraction, Solid	Complete			11/06/99	wds
EPA 8015B	Diesel Range Organics (DRO) Diesel Range Organics, Solid	<20.0	20.0	mg/Kg	11/07/99	wds
EPA 8015B	Gasoline Range Organics (GRO) Gasoline Range Organics, Solid	ND	0.05	mg/Kg	11/08/99	*sub

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QUALITY CONTROL RESULTS

Job Number.: 912680

Report Date.: 11/11/99

CUSTOMER: EQM | PROJECT: | ATTN: Mr. Mark Jarski

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

Test Method.....: EPA 8015B
Method Description.: Diesel Range Organics (DRO)
Batch.....: 49036
Units.....: mg/L
Analyst...: wds

MB	Method Blank				11/06/1999	2301

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Diesel Range Organics	ND						

LCS	Laboratory Control Sample	DROSTD			11/06/1999	2343

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Diesel Range Organics	564.69		500		112.9	%	55-131

MS	Matrix Spike	DROSTD	912590-1		11/07/1999	0108

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Diesel Range Organics	1037.0		500	232.31	160.9	%	55-131

MSD	Matrix Spike Duplicate	DROSTD	912590-1		11/07/1999	0151

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Diesel Range Organics	1161.7	1037.0	500	232.31	185.9	%	55-131
					11.3	R	20

Test Method.....: EPA 8015B
Method Description.: Gasoline Range Organics (GRO)
Batch.....: 49234
Units.....: mg/L
Analyst...: *sub

MB	Method Blank				11/08/1999	1759

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Gasoline Range Organics	0.0133						

LCS	Laboratory Control Sample	GROSTD			11/08/1999	1837

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Gasoline Range Organics	436.9		500.000000		87.4	%	70-130

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY CONTROL RESULTS

Job Number.: 912680

Report Date.: 11/11/99

CUSTOMER: EQM | PROJECT: | ATTN: Mr. Mark Jarski

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
MS	Matrix Spike	GROSTD	912716-10		11/09/1999	2130

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Gasoline Range Organics	517.1		500.000000	163.4	70.7	%	55-123

MSD	Matrix Spike Duplicate	GROSTD	912716-10		11/09/1999	2206

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits
Gasoline Range Organics	464	517.1	500.000000	163.4	60.1	%	55-123
					10.8	R	20

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

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QUALITY ASSURANCE FOOTER

METHOD REFERENCES

1. EPA SW-846, Test Methods for Evaluating Solid Waste Update I, IIA, IIB, III
2. Standard Methods for the Examination of Water and Wastewater, 18th Edition
3. EPA 600/4-79-020, Methods of Chemical Analysis for Waters and Wastes, March 1983
4. Federal Register, Friday, October 26, 1984 (40 CFR Part 136)
5. American Society for Testing and Materials, Volumes 5.01, 5.02, 5.03, 11.01,11.02,11.03,11.04
6. EPA Methods for Environmental Samples

COMMENTS

All methods of chemical analysis have a statistical uncertainty associated with the results. Unless otherwise indicated, the data in this report are within the limits of uncertainty as specified in the referenced method. Quality Control acceptance criteria are based either on actual laboratory performance or on limits specified in the referenced method. The date and time of analysis indicated on the QA report may not reflect the actual time of analysis for QC samples. All data are reported on an "as received" basis unless otherwise indicated. Data reported in the QA report may be lower than sample data due to dilution of samples into the calibration range of the analysis. Sample concentration for solid samples are calculated on an as received (wet) basis. Unless otherwise indicated, volatiles by gas chromatography (GC) are reported from a single column. Volatile analysis by GC on low level soil extractions are conducted at room temperature.

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed	ND	=	Not detected at a value greater than the reporting limit
N/A	=	Not applicable	NC	=	Not calculable due to values lower than the reporting limit
ug/L	=	Micrograms per liter	mg/L	=	Milligrams per liter
ug/Kg	=	Micrograms per kilogram	mg/kg	=	Milligrams per kilogram
U	=	Undetected			
J	=	Indicates value is > MDL, but < Reporting Limit			
B	=	Analyte was detected in the method blank analyzed with this sample.			
D	=	Surrogate recoveries are not calculated due to sample dilution.			
X	=	Surrogate recovery is outside quality control limits.			
Y	=	Spike or spike duplicate recovery is outside quality control limits.			
Z	=	Relative percent difference for a spike and spike duplicate is outside quality control limits. The precision of the method was impacted by matrix.			
^	=	Indicates value is above QC acceptance criteria.			

QC SAMPLE IDENTIFICATIONS

MB	=	Method Blank	SB	=	Storage Blank
RB	=	Reagent Blank	EB	=	Extraction Blank
PB	=	Preparation Blank	CALB	=	Calibration Blank
MD	=	Method Duplicate	RS	=	Reference Standard
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank
ICV	=	Initial Calibration Verification	ICB	=	Initial Calibration Blank
PDS	=	Post Digestion Spike	SS	=	Surrogate Spike
ISA	=	Interference Check standard "A"	ISB	=	Interference Check Standard "B"
ISCAB	=	Interference Check Sample AB	MSA	=	Method of Standard Additions
CAL	=	Calibration standard	SD	=	Serial Dilution
MST	=	TCLP Matrix Spike	MSQ	=	TCLP Matrix Spike Duplicate
PST	=	TCLP Post Digestion Spike	LCT	=	TCLP Laboratory Control Sample

rpjsckl

Job Sample Receipt Checklist Report
11/05/99

V2

Job Number.....: 912680 Location.: 57211 Customer Job ID.....:
Project Number.: 96000813 Project Description.:
Customer.....: EQM Contact.: Ms. Sharon Laycock

Job Check List Date.: 11/05/99
Project Manager.....: tfm

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?.....	Y	
Custody seal on shipping container?.....		
...If "yes", custody seal intact?.....		
Custody seals on sample containers?.....		
...If "yes", custody seal intact?.....		
Samples chilled?.....	Y	
Temperature of cooler acceptable? (4 deg C +/- 2).		RECEIVED ON ICE
Samples received intact (good condition)?.....	Y	
Volatile samples acceptable? (no headspace).....		N/A
Correct containers used?.....	Y	
Adequate sample volume provided?.....	Y	
Samples preserved correctly?.....	Y	
Samples received within holding-time?.....	Y	
Agreement between COC and sample labels?.....	Y	
Additional.....		
Comments.....		
Sample Custodian Signature.....LB.....		

EQ Environmental Quality Management, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No. A- 3421 D
Page 1 of 1

91268O

Project Name: INDUSTRIAL HIGHWAY
Project Number: 3141-25
Project Manager: J. RHINEFIELD
Sample Team Leader: T. MURPHY

Lab Destination: SEVERA-TRENT LABS
Lab Contact/Phone: TOM MROZ (800) 688-6522
Lab Purchase Order No.: #8014
Carrier/Waybill No.:

Report to: MARK JARSKI (EQM)
513-825-9728 FAX#
"MAIL FINAL PACKAGE TO:"

Bill to: EQM
1310 KEMPER MEADOW DRIVE
CINCINNATI, OH 45240

ONE CONTAINER PER LINE

Sample Number	Sample Description/Type	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Analytical Method/(Parameters)	Condition on Receipt (Lab)
1 S17	Cell#6 Composite	11/5/99 @ 0840	Glass	8 oz	Ice	TPH	
2 S18	Cell#5 Cleanup Confirmation	11/5/99 @ 0945	Glass	8 oz	Ice	TPH	

Special Instructions: Please hold these samples in storage for possible later analyses.

Possible Hazard Identification: Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Other _____

Sample Disposal: Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required: Normal ☐ Rush ☒ Results Required by _____

QA Requirements: State of Indiana Level III

1. Relinquished by (Signature/Affiliation): Tom Murphy / E-E-START — Date: 11/5/99 Time: 1100
1. Received by (Signature/Affiliation): Fred Bartman — Date: 11/5/99 Time: 11:00
2. Relinquished by (Signature/Affiliation): Fred Bartman — Date: 11/5/99 Time: 11:45
2. Received by (Signature/Affiliation): Tom Bob — Date: 11/5/99 Time: 1145

Comments:

11/02/99 15:21 ☎513 825 9728 EQMI CINCINNATI 003

Severn Trent Laboratories
2400 Cumberland Drive Tel: (219) 464-2389
Valparaiso, IN 46383 Fax: (219) 462-2953

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CHAIN OF CUSTODY RECORD

2 of 2

LAB JOB NO.

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: STL-VALPARAISO	PROJECT NAME/NUMBER:
SEND REPORT TO: TOM MROZ	BILLING INFORMATION
ADDRESS:	BILL TO:
	ADDRESS:
PHONE	PHONE:
FAX:	FAX: PO NO.:

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	ANALYSIS / METHOD REQUEST: GRO 8015M	REMARKS / PRECAUTIONS
	912647-1	11/4/99	1030	SOLID	8oz	NONE	1	X	Per Linda Maddey
	912680-1	11/5/99	0840				1	X	
	-2	11/5/99	0945				1	X	
	912705-1	11/5/99	1210				1	X	LEVEL III

AIRBILL NO.:

SHIPMENT METHOD: STL FIELD

SAMPLER:

REQUIRED TURNAROUND:* ☐ SAME DAY ☒ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☐ 5 DAYS ☐ 10 DAYS ☐ ROUTINE OTHER

1. RELINQUISHED BY: SIGNATURE: Jon Bob	DATE 11/8/99	2. RELINQUISHED BY: SIGNATURE:	DATE 11/9/99	3. RELINQUISHED BY: SIGNATURE: Tiffany A. James	DATE 11-8-
PRINTED NAME/COMPANY: JB STL	TIME 1440	PRINTED NAME/COMPANY: T. MROZ STL-Valpo	TIME 16:08	PRINTED NAME/COMPANY: Tiffany A. James STL	TIME 1630
1. RECEIVED BY: SIGNATURE:	DATE 11/8/99	2. RECEIVED BY: SIGNATURE:	DATE	3. RECEIVED BY: SIGNATURE:	DATE
PRINTED NAME/COMPANY: T. MROZ STL	TIME 14:45	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

* RUSH TURNAROUND MAY REQUIRE SURCHARGE

☐ Anaheim, CA
1250 E. Gene Autry Way
Anaheim, CA 92805
(714) 937-1094 Fax (714) 937-1170

☐ Houston, TX (Env)

☐ Aurora, CO
10703 E. Bethany Drive
Aurora, CO 80014
(303) 751-1780 Fax (303) 751-1784

☐ Houston, TX (Pet)
8210 Mosley Road
Houston, TX 77075

☐ Casper, WY
420 W. First Street
Casper, WY 82601
(307) 235-5741 Fax (307) 266-1676

☐ Lake Charles, LA
3645 Beglis Parkway
Sulphur, LA 70663
(318) 583-4926 Fax (318) 583-4929

☐ Corpus Christi, TX
1733 N. Padre Island Drive
Corpus Christi, TX 78408
(361) 289-2673 Fax (361) 289-2471

☒ Valparaiso, IN
2400 Cumberland Drive
Valparaiso, IN 46383
(219) 464-2389 Fax (219) 462-2953

DRO GC/MS

(SEVERN TRENT-Valparaiso)

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0399\S6500.D
Acq On : 3 Nov 1999 6:37 pm
Sample : DRO STD 500
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 19:38 1999

Vial: 1
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 27 13:48:47 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	15.27	57	72175594m	827.39 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D. d	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

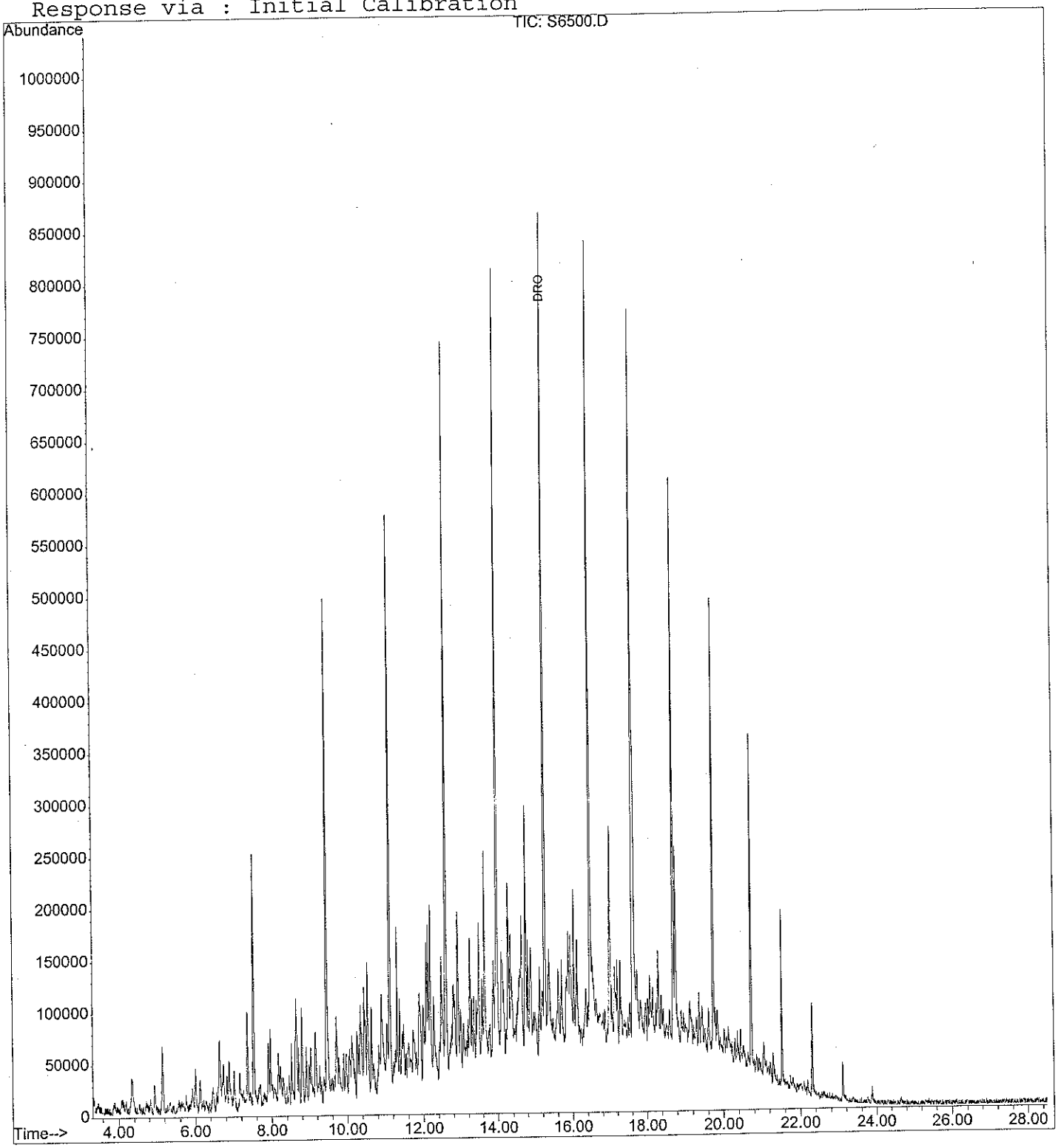
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0399\S6500.D
Acq On : 3 Nov 1999 6:37 pm
Sample : DRO STD 500
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 19:38 1999

Vial: 1
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0399\S6501.D
Acq On : 3 Nov 1999 7:12 pm
Sample : DRO STD 50
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 19:55 1999

Vial: 2
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 27 13:48:47 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	15.27	57	7812270m	73.59 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D. d	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

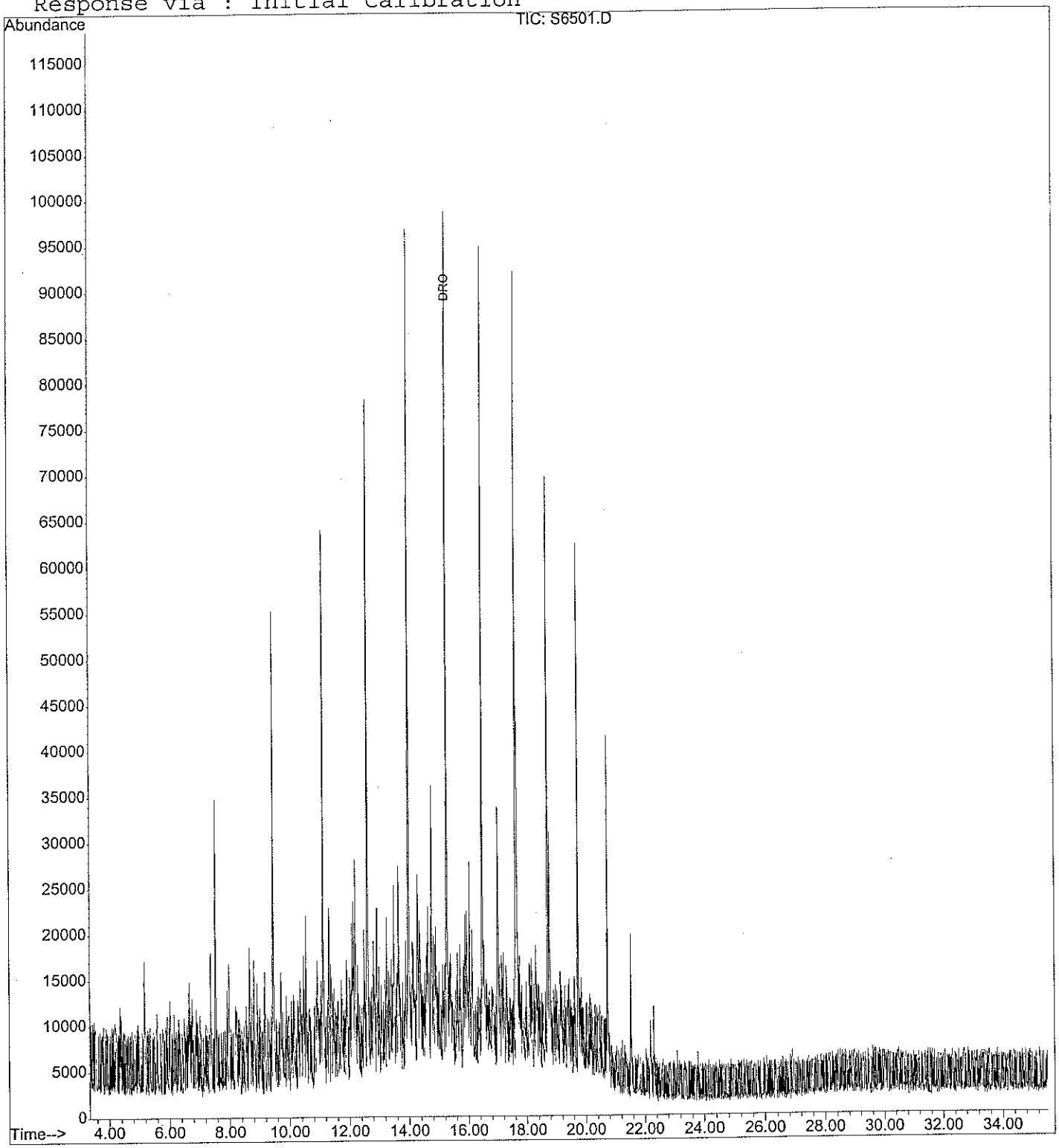
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0399\S6501.D
Acq On : 3 Nov 1999 7:12 pm
Sample : DRO STD 50
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 19:55 1999

Vial: 2
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0399\S6502.D
Acq On : 3 Nov 1999 7:54 pm
Sample : DRO STD 100
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 21:26 1999

Vial: 3
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 27 13:48:47 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	15.27	57	13978124m	144.37 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D. d	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

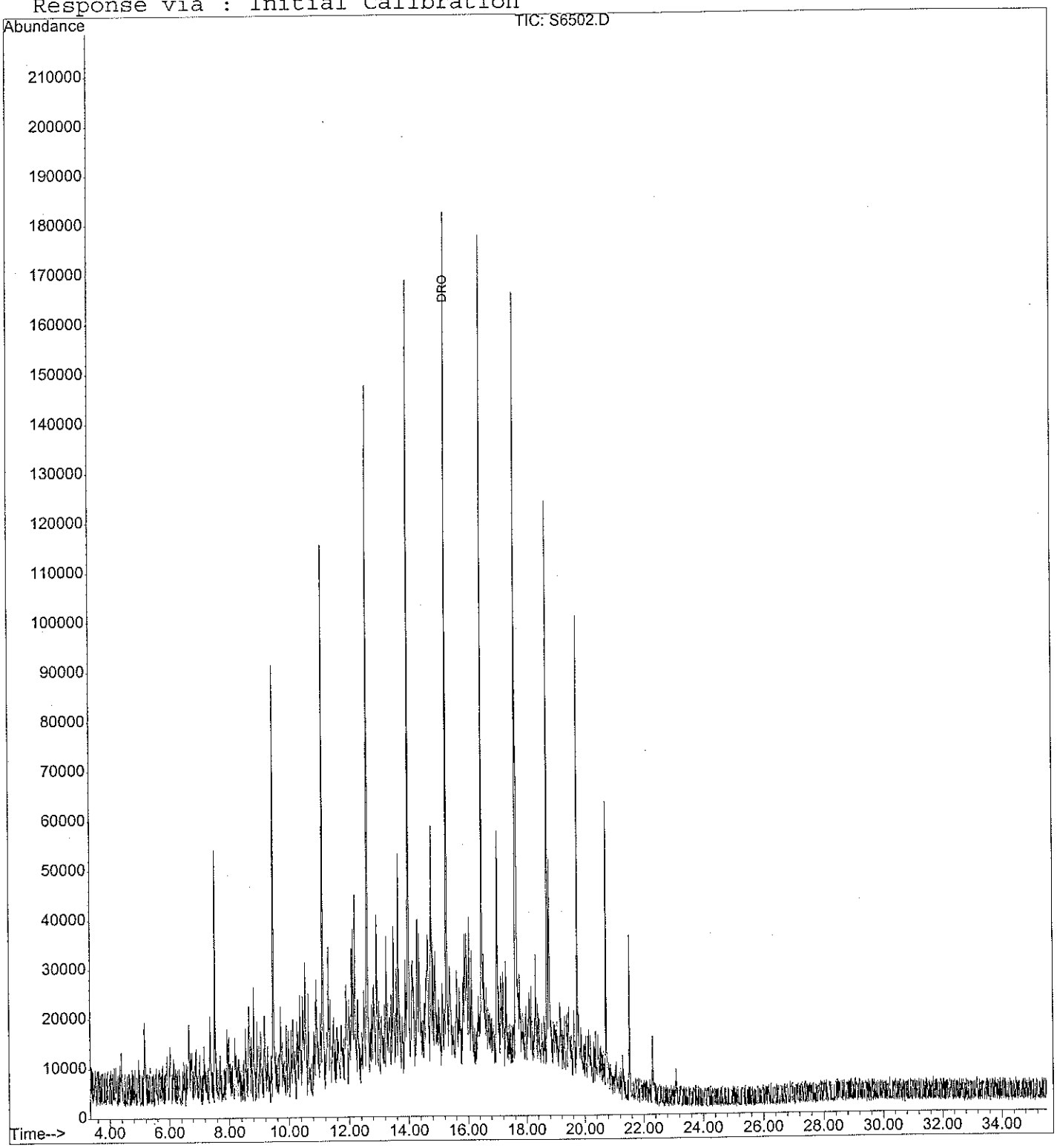
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0399\S6502.D
Acq On : 3 Nov 1999 7:54 pm
Sample : DRO STD 100
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 21:26 1999

Vial: 3
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0399\S6503.D
Acq On : 3 Nov 1999 8:36 pm
Sample : DRO STD 200
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 21:26 1999

Vial: 4
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 27 13:48:47 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	15.27	57	27408387m	299.56 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D. d	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

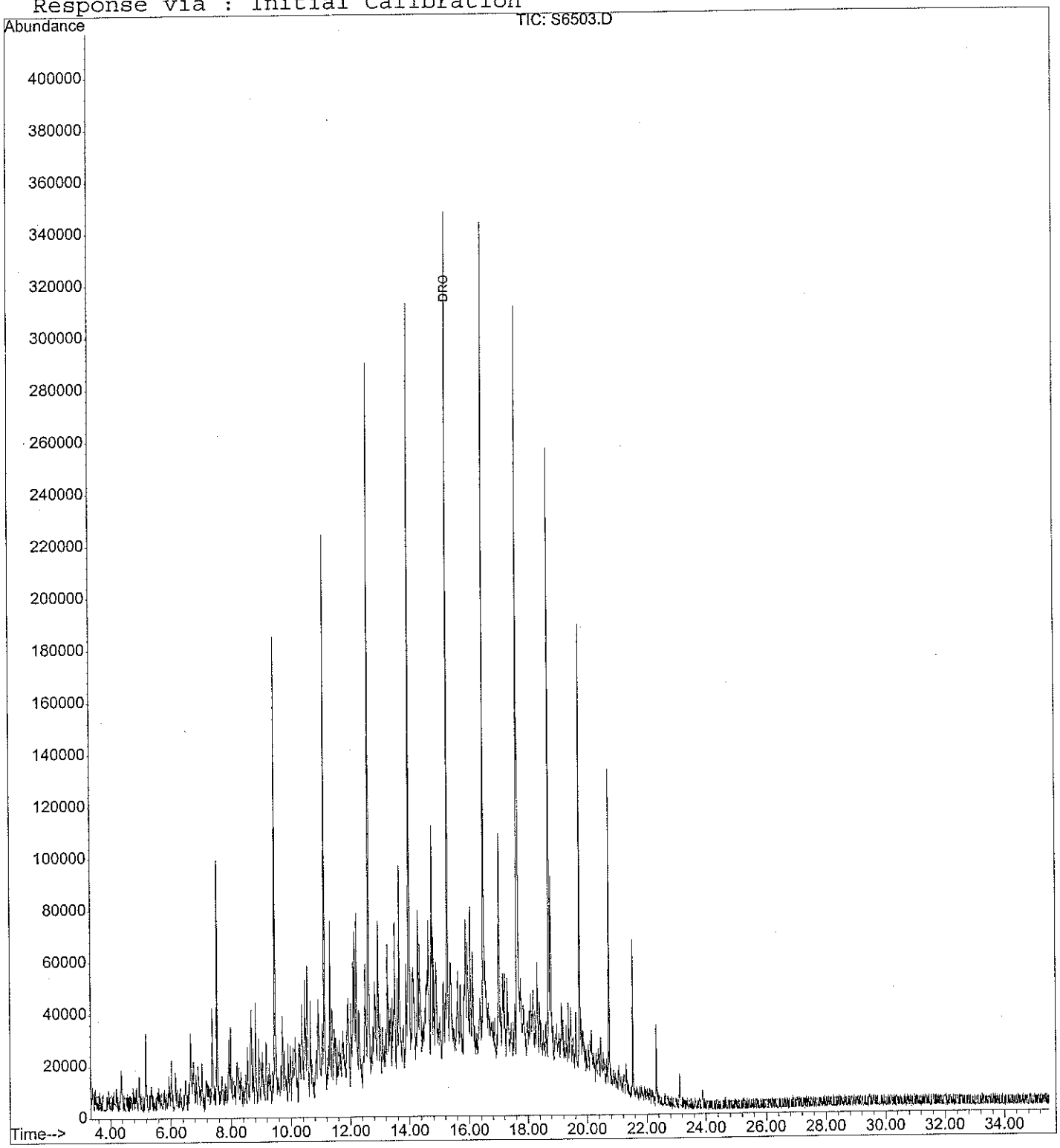
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0399\S6503.D
Acq On : 3 Nov 1999 8:36 pm
Sample : DRO STD 200
Misc :
MS Integration Params: events.e
Quant Time: Nov 3 21:26 1999

Vial: 4
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0399\S6504.D
Acq On : 3 Nov 1999 9:18 pm
Sample : DRO STD 1000
Misc :
MS Integration Params: events.e
Quant Time: Nov 4 9:02 1999

Vial: 5
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 27 13:48:47 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	16.50	57	130124551m	1536.83 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D.	d
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

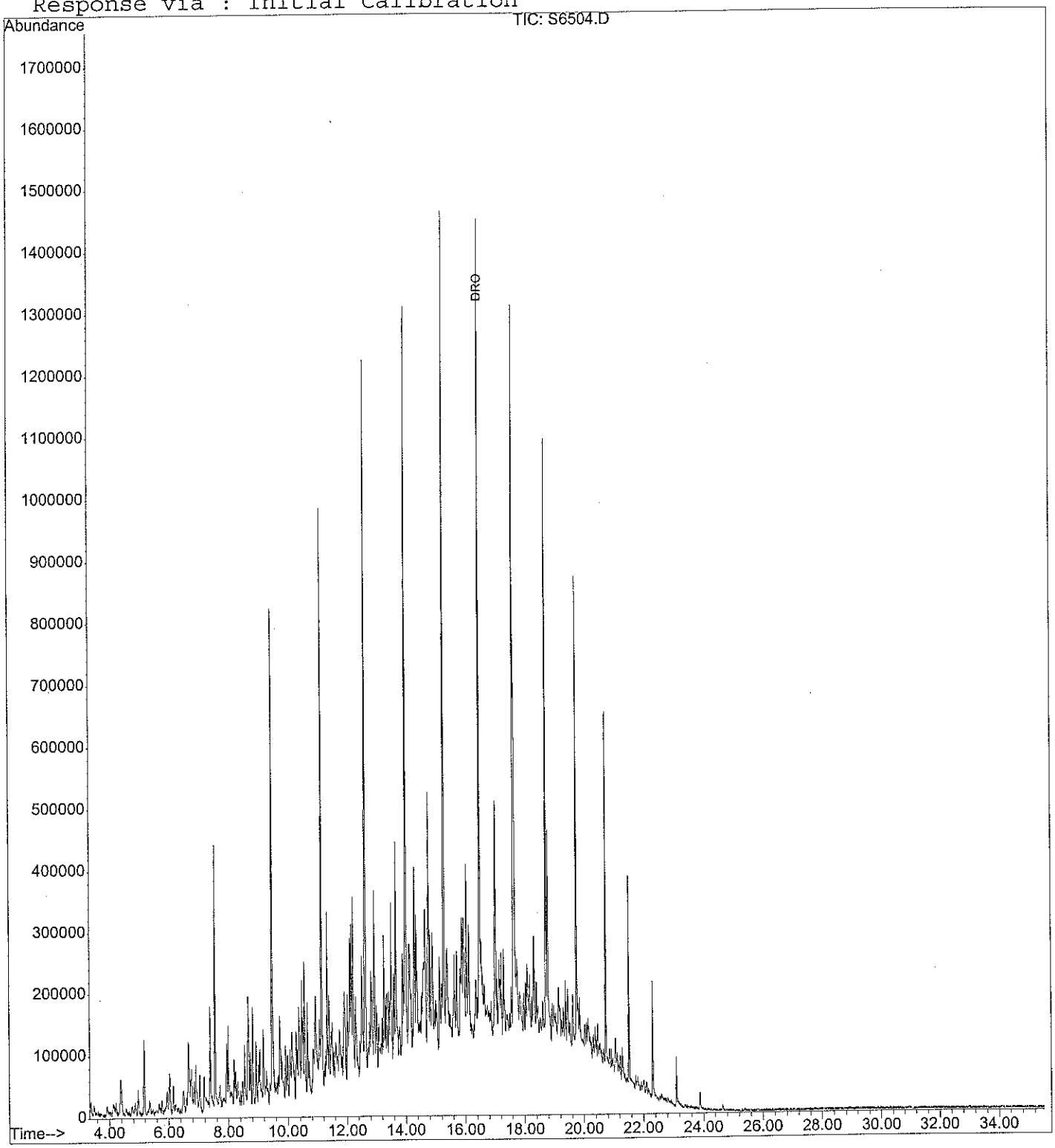
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0399\S6504.D
Acq On : 3 Nov 1999 9:18 pm
Sample : DRO STD 1000
Misc :
MS Integration Params: events.e
Quant Time: Nov 4 9:02 1999

Vial: 5
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0399\S6505.D
Acq On : 3 Nov 1999 10:01 pm
Sample : DRO STD 2000
Misc :
MS Integration Params: events.e
Quant Time: Nov 4 9:03 1999

Vial: 6
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Oct 27 13:48:47 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

Target Compounds						Qvalue
1) DRO	15.29	57	262437608m	3290.44	mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D.		d
3) Motor Oil	0.00	57	0	N.D.		

(#) = qualifier out of range (m) = manual integration

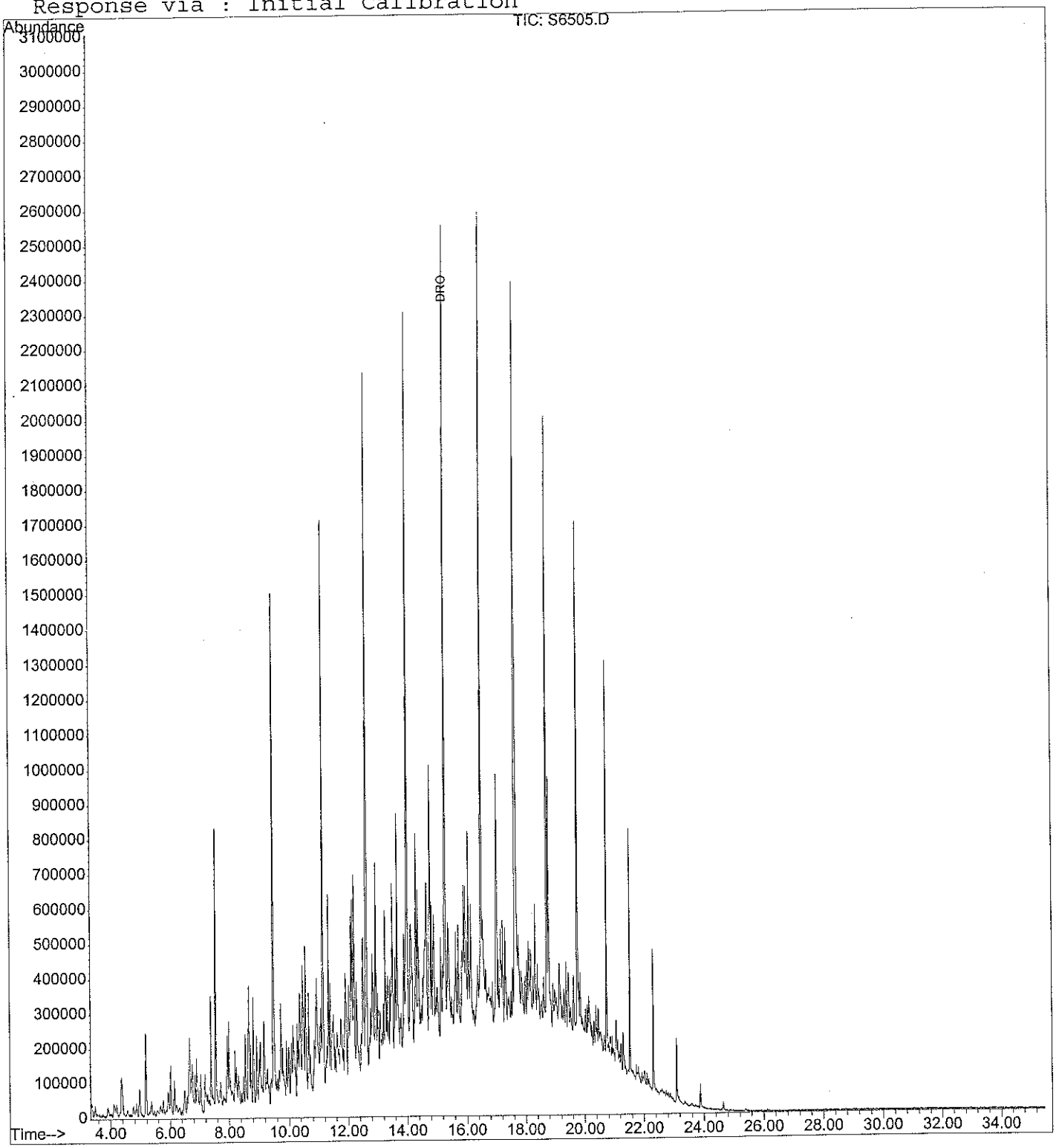
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0399\S6505.D
Acq On : 3 Nov 1999 10:01 pm
Sample : DRO STD 2000
Misc :
MS Integration Params: events.e
Quant Time: Nov 4 9:03 1999

Vial: 6
Operator: wds/jdb
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Wed Dec 08 09:39:18 1999
Response via : Initial Calibration

Calibration Files

50	=S6501.D	100	=S6502.D	200	=S6503.D
500	=S6500.D	1000	=S6504.D	2000	=S6505.D

	Compound	50	100	200	500	1000	2000	Avg	%RSD
1)	DRO	1.562	1.398	1.370	1.444	1.301	1.312	1.398 E5	6.9
2)	Jet Fuel (type A)							0.000	-1.00
3)	Motor Oil							0.000	-1.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6550.D
Acq On : 6 Nov 1999 10:18 pm
Sample : DRO STD 500
Misc :
MS Integration Params: events.e
Quant Time: Nov 8 10:10 1999

Vial: 1
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	15.27	57	73881096m	528.50 mg/L	
2) Jet Fuel (type A)	11.12	57	2283642	No Calib	#
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

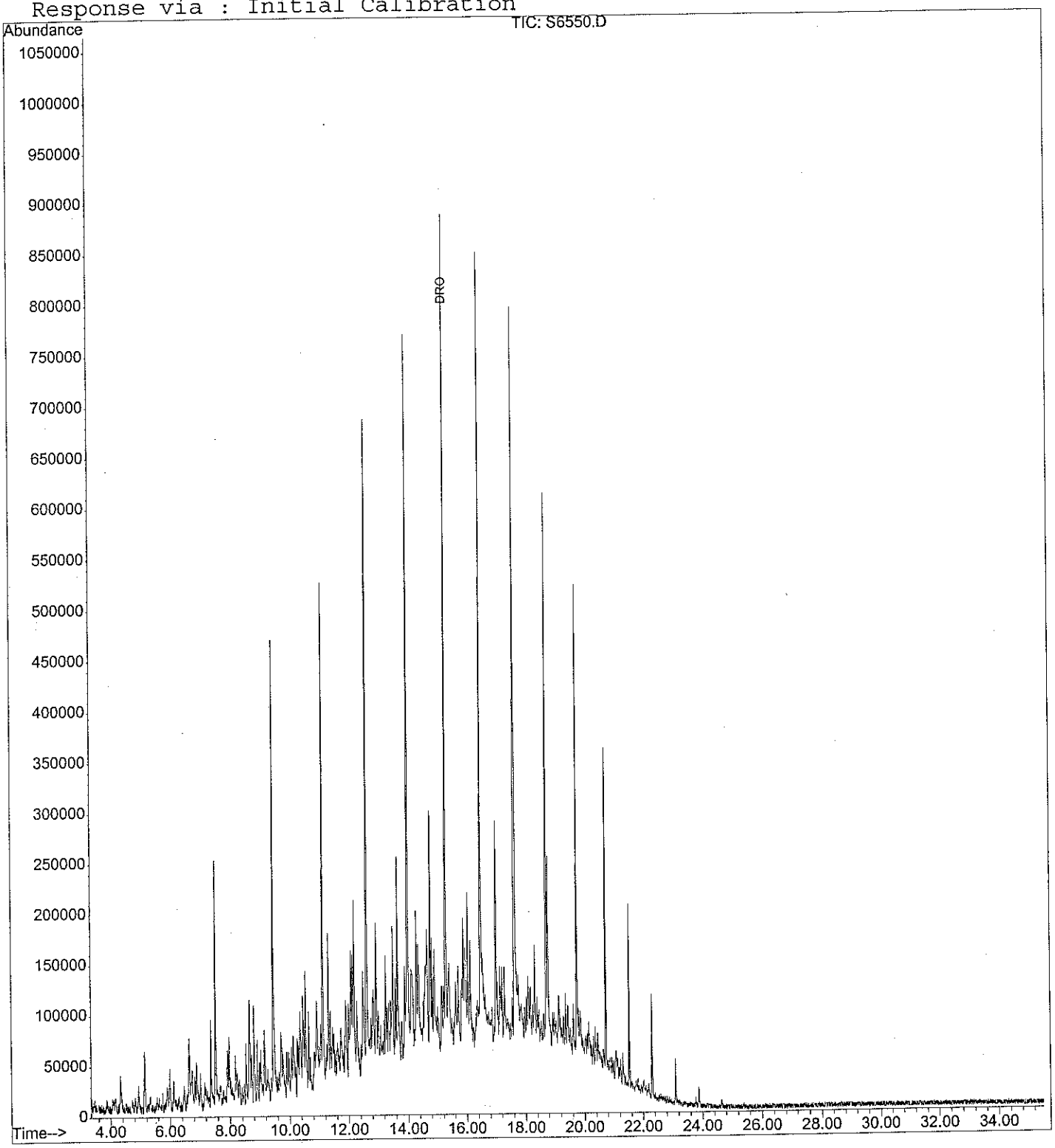
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6550.D
Acq On : 6 Nov 1999 10:18 pm
Sample : DRO STD 500
Misc :
MS Integration Params: events.e
Quant Time: Nov 8 10:10 1999

Vial: 1
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6551.D
Acq On : 6 Nov 1999 11:01 pm
Sample : MB DROS031
Misc :
MS Integration Params: events.e
Quant Time: Nov 6 23:36 1999

Vial: 2
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Target Compounds					Qvalue
1) DRO	0.00	57	0	N.D.	
2) Jet Fuel (type A)	0.00	57	0	N.D.	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

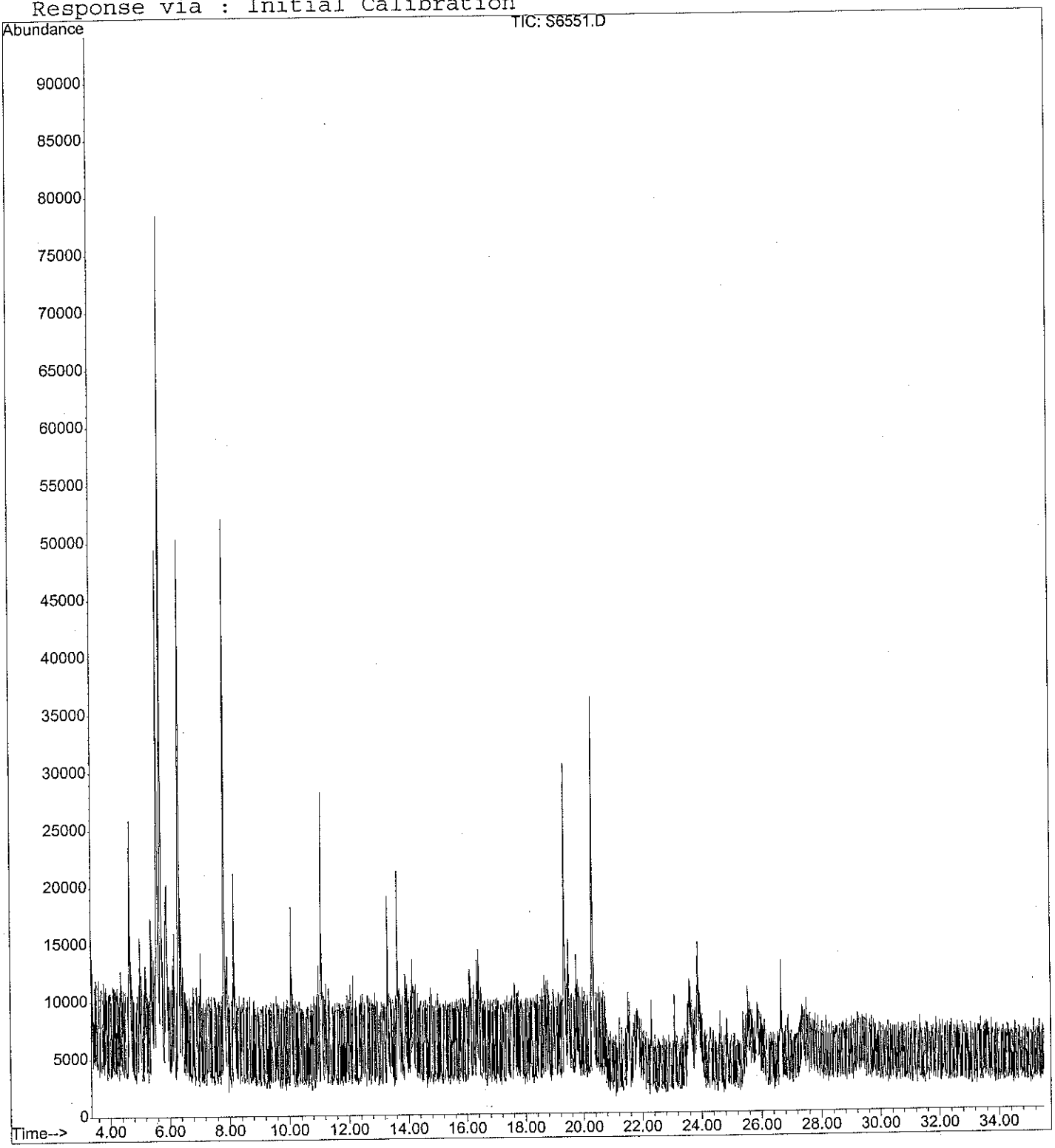
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6551.D
Acq On : 6 Nov 1999 11:01 pm
Sample : MB DROS031
Misc :
MS Integration Params: events.e
Quant Time: Nov 6 23:36 1999

Vial: 2
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6552.D
Acq On : 6 Nov 1999 11:43 pm
Sample : LCS DROS031
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:46 1999

Vial: 3
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Target Compounds					Qvalue
1) DRO	16.49	57	78939594m	564.69 mg/L	
2) Jet Fuel (type A)	11.13	57	2099955	No Calib	#
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

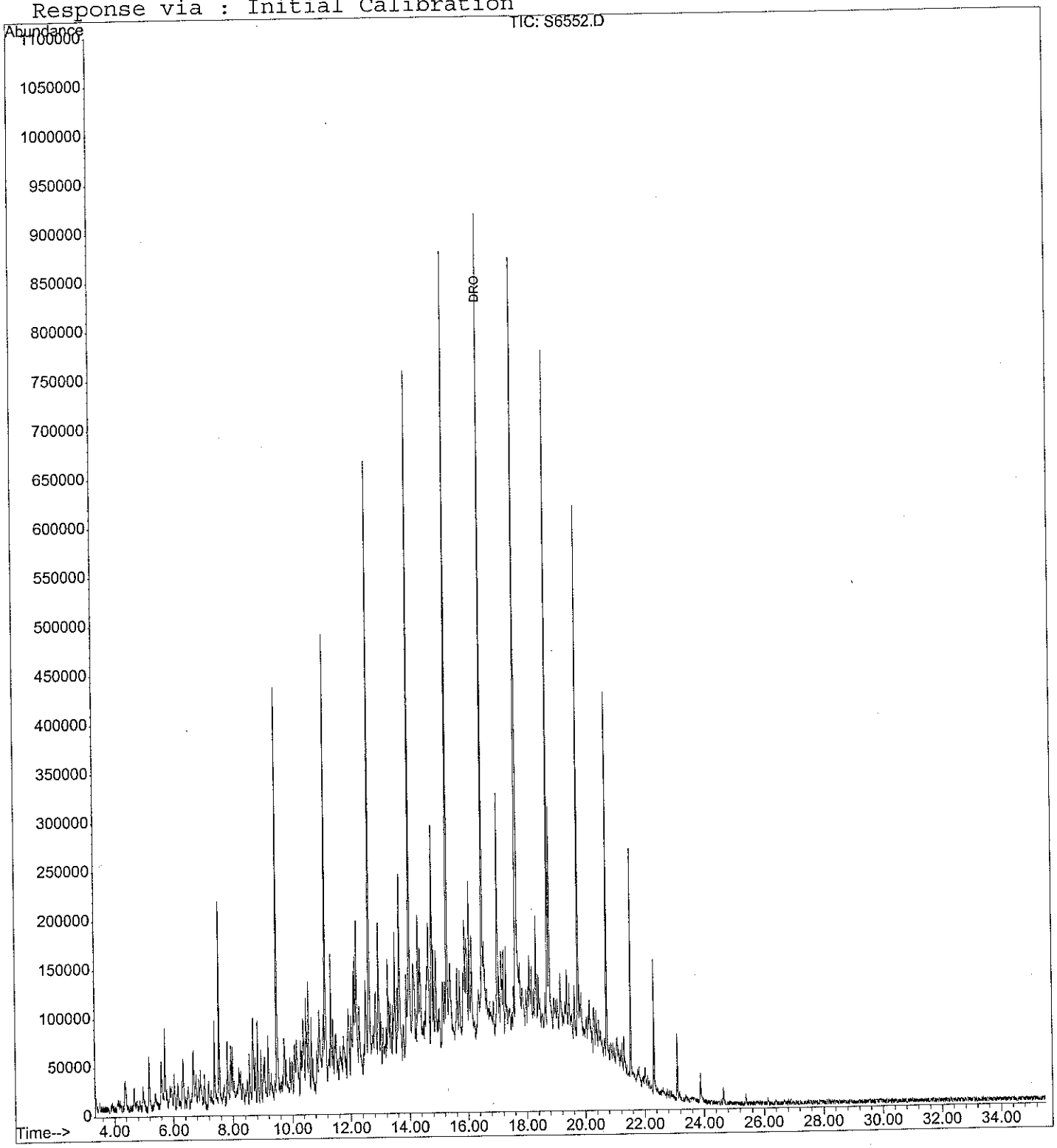
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6552.D
Acq On : 6 Nov 1999 11:43 pm
Sample : LCS DROS031
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:46 1999

Vial: 3
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6553.D
Acq On : 7 Nov 1999 12:26 am
Sample : 912590 1
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:47 1999

Vial: 4
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Target Compounds					Qvalue
1) DRO	18.78	57	32476128m	232.31 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D.	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

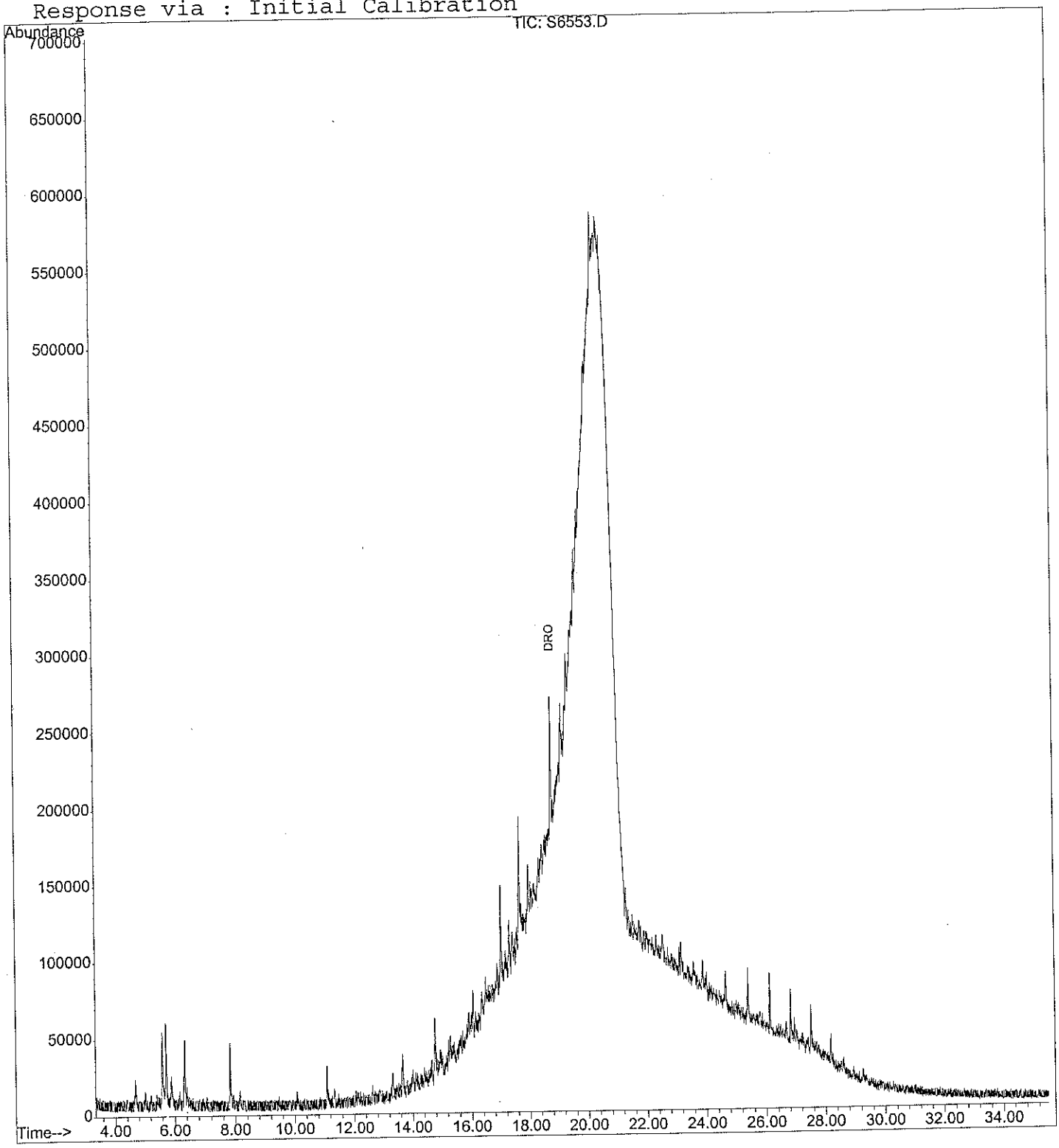
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6553.D
Acq On : 7 Nov 1999 12:26 am
Sample : 912590 1
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:47 1999

Vial: 4
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6554.D
Acq On : 7 Nov 1999 1:08 am
Sample : 912590 1 MS
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:47 1999

Vial: 5
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Target Compounds					Qvalue
1) DRO	15.29	57	144969972m	1037.03 mg/L	
2) Jet Fuel (type A)	11.14	57	2229531	No Calib	#
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

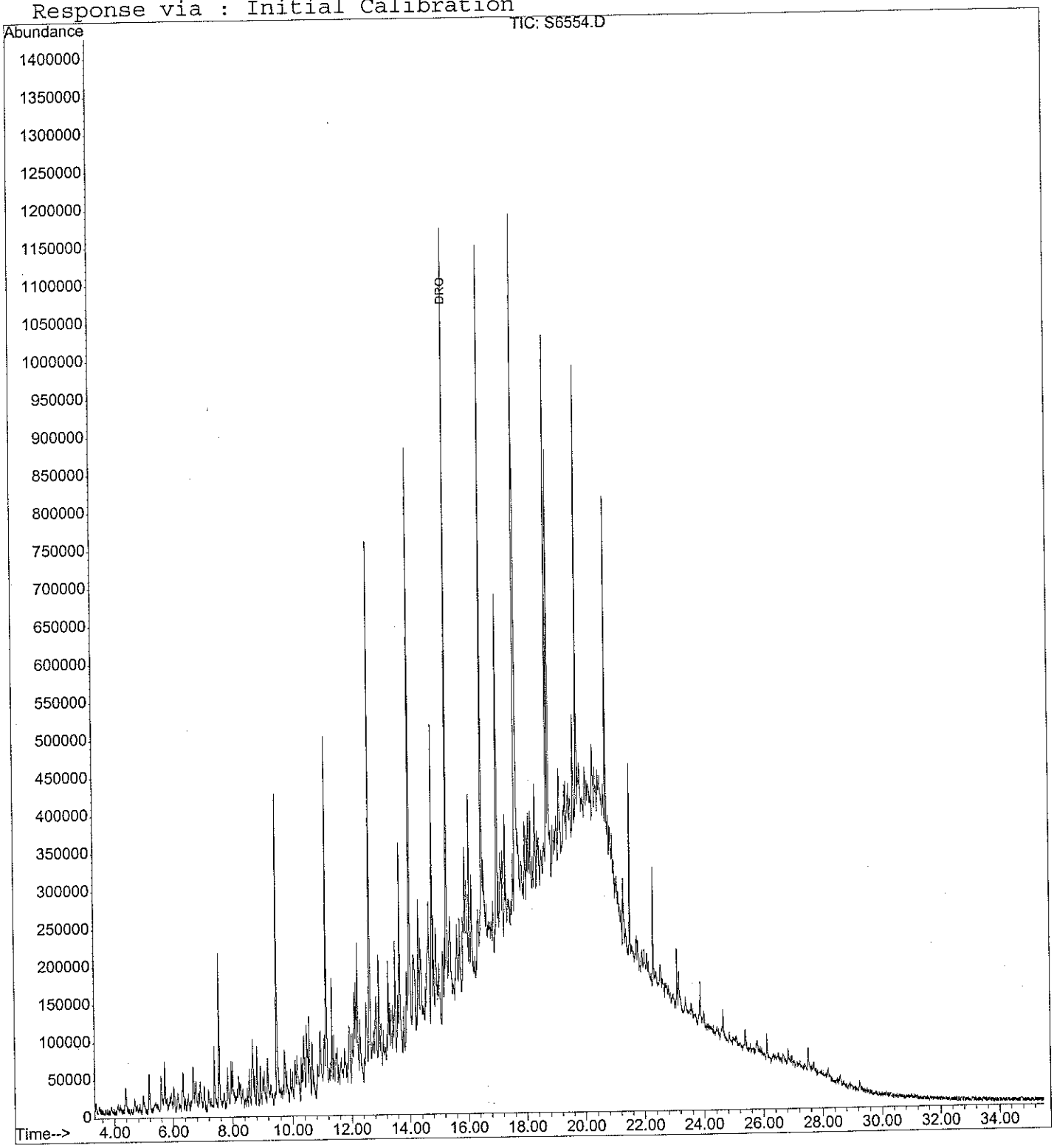
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6554.D
Acq On : 7 Nov 1999 1:08 am
Sample : 912590 1 MS
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:47 1999

Vial: 5
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6555.D
Acq On : 7 Nov 1999 1:51 am
Sample : 912590 1 MSD
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:47 1999

Vial: 6
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Target Compounds					Qvalue
1) DRO	15.29	57	162405206m	1161.75 mg/L	
2) Jet Fuel (type A)	11.14	57	2458097	No Calib	#
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

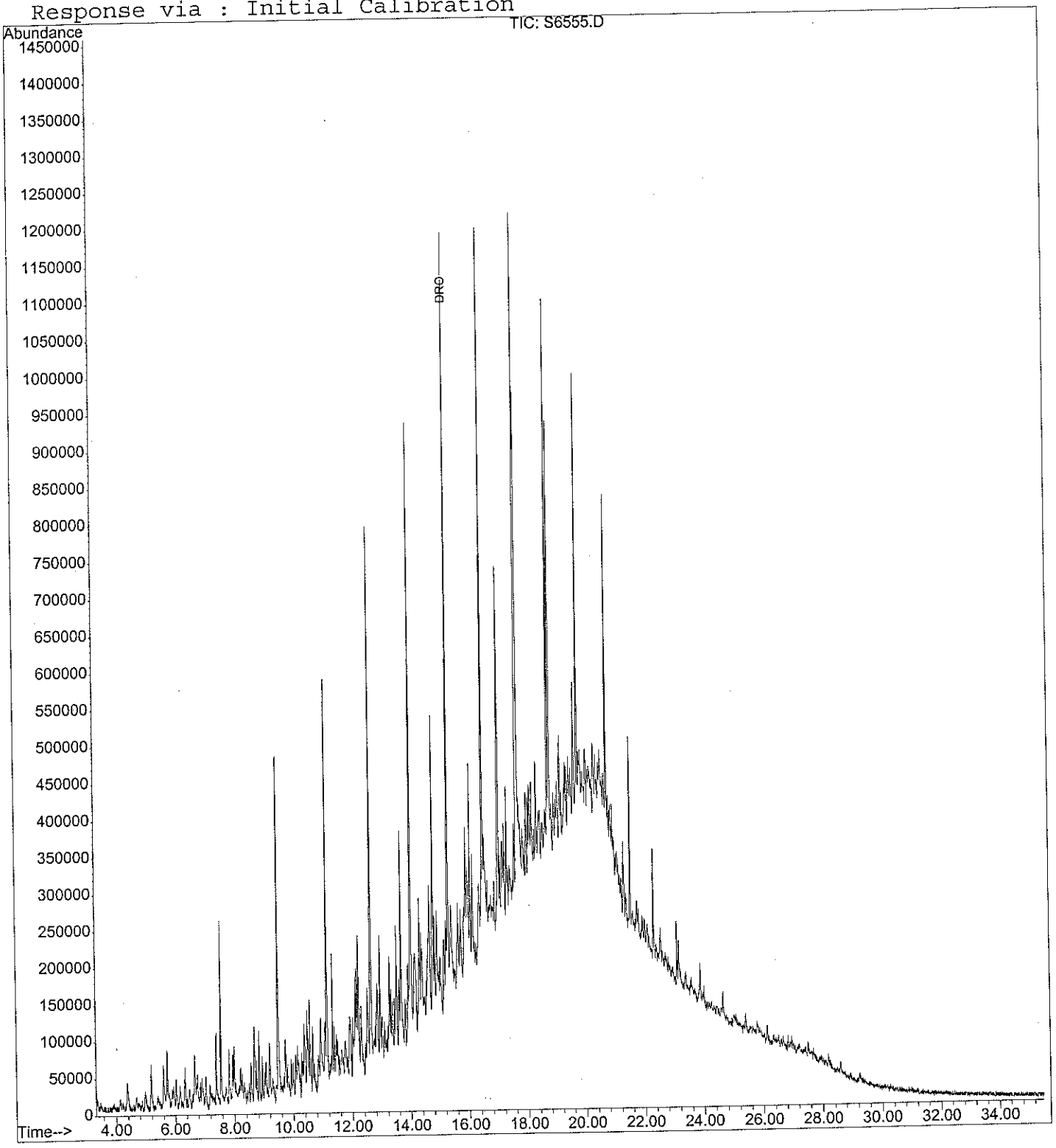
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6555.D
Acq On : 7 Nov 1999 1:51 am
Sample : 912590 1 MSD
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:47 1999

Vial: 6
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6557.D
Acq On : 7 Nov 1999 3:16 am
Sample : 912680 2
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:48 1999

Vial: 8
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	5.60	57	15146657m	108.35 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D.	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

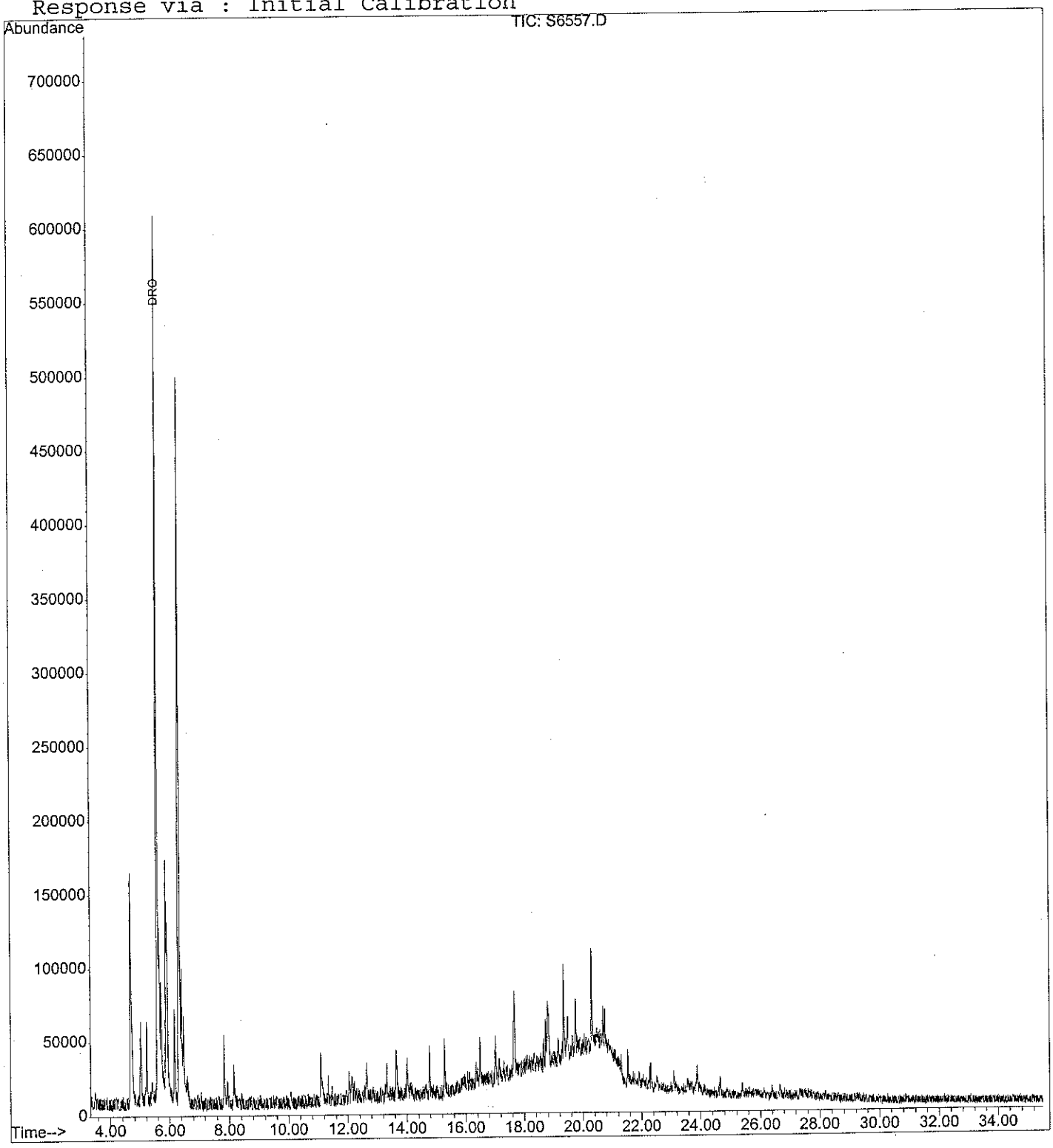
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6557.D
Acq On : 7 Nov 1999 3:16 am
Sample : 912680 2
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:48 1999

Vial: 8
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6560.D
Acq On : 7 Nov 1999 5:23 am
Sample : 912680 1 X10
Misc : 10
MS Integration Params: events.e
Quant Time: Nov 7 19:48 1999

Vial: 11
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	19.14	57	95676110m	684.41 mg/L	
2) Jet Fuel (type A)	0.00	57	0	N.D.	
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

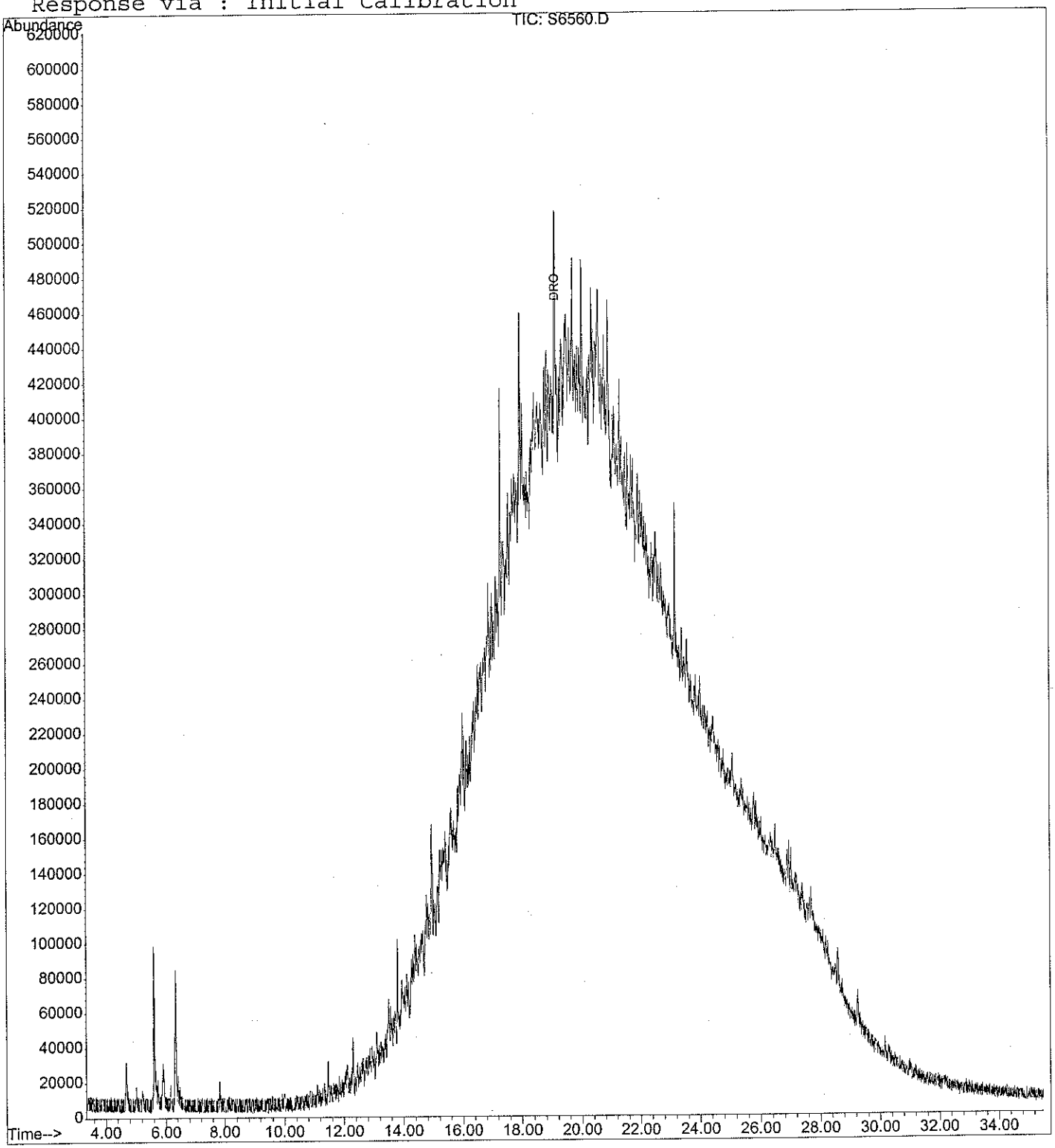
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6560.D
Acq On : 7 Nov 1999 5:23 am
Sample : 912680 1 X10
Misc : 10
MS Integration Params: events.e
Quant Time: Nov 7 19:48 1999

Vial: 11
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\NOV0699\S6562.D
Acq On : 7 Nov 1999 6:48 am
Sample : 500 STD DRO
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:46 1999

Vial: 1
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Quant Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration
DataAcq Meth : DROMS

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)

Target Compounds					Qvalue
1) DRO	16.49	57	75546942m	540.42 mg/L	
2) Jet Fuel (type A)	11.14	57	2224436	No Calib	#
3) Motor Oil	0.00	57	0	N.D.	

(#) = qualifier out of range (m) = manual integration

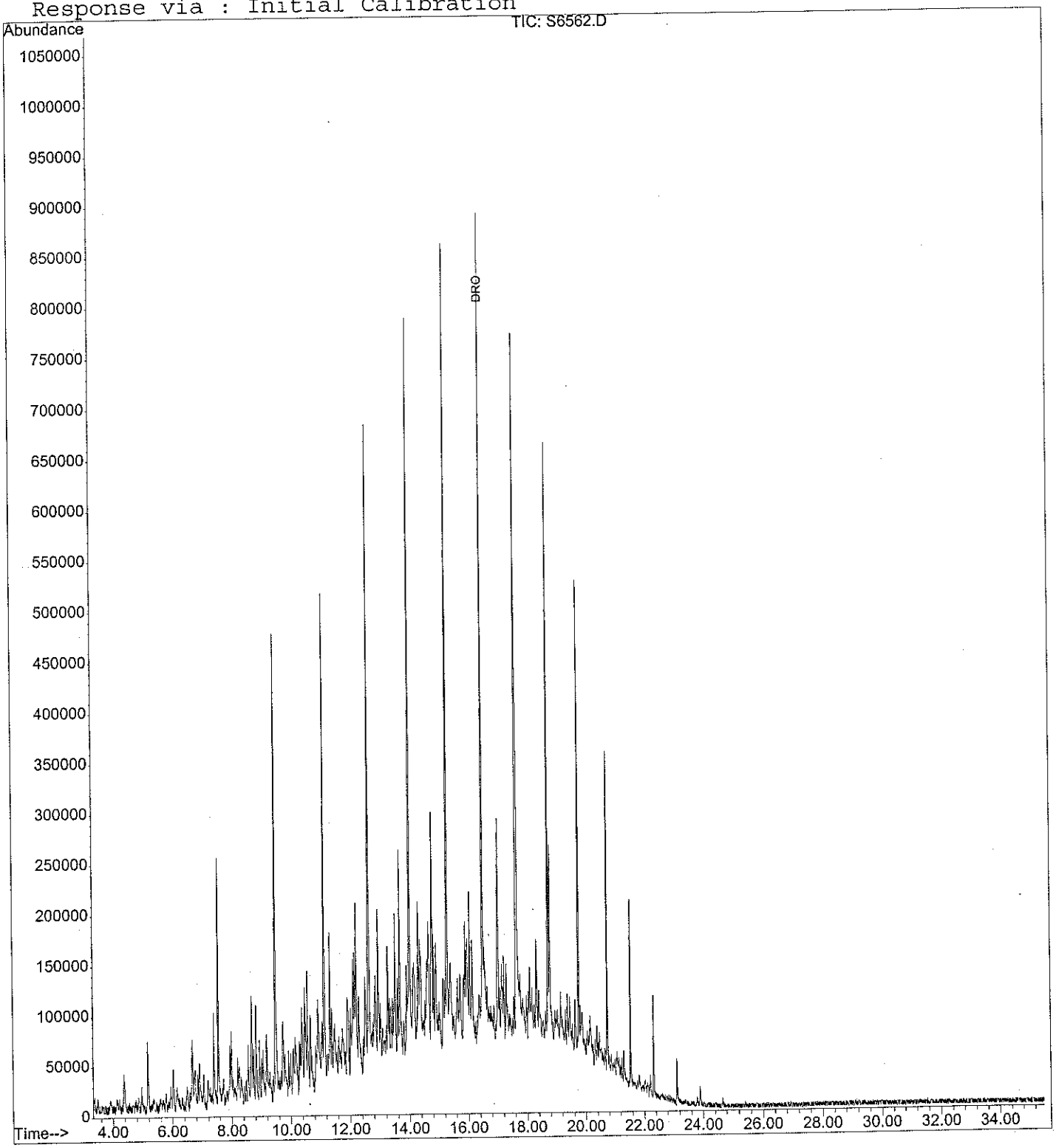
Quantitation Report

Data File : C:\HPCHEM\1\DATA\NOV0699\S6562.D
Acq On : 7 Nov 1999 6:48 am
Sample : 500 STD DRO
Misc :
MS Integration Params: events.e
Quant Time: Nov 7 19:46 1999

Vial: 1
Operator: WDS
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: DROMS.RES

Method : C:\HPCHEM\1\METHODS\DROMS.M (Chemstation Integrator)
Title :
Last Update : Thu Nov 04 09:04:31 1999
Response via : Initial Calibration



GRO GC

(SEVERN TRENT-University Park)

STL Chicago (Gulf Coast) 11/08/99 20:09:30

EXTERNAL STANDARD

SAMPLE: 11089911 .06
TEST : OGRO
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID: 912680-1
CLIENT: STL-Valparaiso
LAB ID: 9911G746-012
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:006
DATE-TIME INJECTED : 11/08/99 19:42:00
DATE-TIME PROCESSED : 11/08/99 20:09:30
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K8907432
DILUTION FACTOR : 1.0000

1.06

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	~~2924065~~	481668	LP	3.071			
002	75276	10769	T	3.561	1	MTBE	0.000
003	688271	17786	LP	5.849			
004	527321	100418	T	8.290	1	a,a,a-TRIFLUOROTOLUE	31.720 /40
005	1744917	32964	LP	11.807			
006	389526	99887	T	15.368	1	4-BROMOFLUOROBENZENE	31.098 /40
007	72672	18469	T	15.461			
008	3161193	39942	LP	19.622			
009	45228	8835	T	23.889	1	NAPHTHALENE	0.000
010	~~838811~~	16767	LP	25.452			

5787557 269.64 * at 1.06 (Y)

269.64 x5 = 1348. (Y)

11/8/99

STL Chicago (Gulf Coast) 11/08/99 21:02:15

EXTERNAL STANDARD

SAMPLE: 11089911 .07
TEST : OGRO
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID: 912680-2
CLIENT: STL-Valparaiso
LAB ID: 9911G746-013
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:007
DATE-TIME INJECTED : 11/08/99 20:34:49
DATE-TIME PROCESSED : 11/08/99 21:02:15
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K8907448
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	242739	24467	LP	3.071			
				3.479	1	MTBE	
002	126111	11926	LP	5.849			
003	558004	108873	T	8.268	1	a,a,a-TRIFLUOROTOLUE	33.565 /40
004	147151	16069	LP	11.807			
005	383205	109068	T	15.360	1	4-BROMOFLUOROBENZENE	30.594 /40
006	132750	3365	LP	19.622			
007	19616	4858	T	23.734			
008	2296	406	V	23.888	1	NAPHTHALENE	0.000
009	~~22470~~	2082	LP	25.452			

427929 ~~19.9~~ BLL.

11/8/99

STL Chicago (Gulf Coast) 11/09/99 19:14:44

EXTERNAL STANDARD

SAMPLE: 11089911 .23 INST:11 VIAL:F0 SEQ NUMBER:023
TEST : GRO DATE-TIME INJECTED : 11/09/99 18:47:18
COLLECTION TIME : 27.00 DATE-TIME PROCESSED : 11/09/99 19:14:44
METHOD: 110AH / 110AH REV #: 00109 ANALYST: LEWISM SAMP RATE: 3.13
CLIENT ID: SAMPLE VOL: 5 ML
CLIENT: COLUMN TYPE: DB-VRX 30M
LAB ID: MB 99GV0324-MB1 RAW FILE: RAW2:K9942649
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	3112	714	LP	3.071			
002	6310	1213	T	3.447	1	MTBE	0.000
003	3101	678	V	3.553			
004	31079	802	LP	5.849			
005	619587	122032	V	8.279	1	a,a,a-TRIFLUOROTOLUE	37.270 /40
006	45905	1681	LP	11.807			
007	457759	131349	T	15.352	1	4-BROMOFLUOROBENZENE	36.546 /40
008	72725	3164	LP	19.622			
009	14946	3692	T	23.716			
010	1999	350	V	23.870	1	NAPHTHALENE	0.000
011	13280	1086	LP	25.452			

176065 ~~8.2~~ BCL.

11/9/99

STL Chicago (Gulf Coast) 11/09/99 19:50:32

EXTERNAL STANDARD

SAMPLE: 11089911 .24
TEST : o GRO
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID:
CLIENT:
LAB ID: SB 99GV0324-MBLS
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:024
DATE-TIME INJECTED : 11/09/99 19:23:07
DATE-TIME PROCESSED : 11/09/99 19:50:32
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K9942668
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	~~107040~~	22267	LP	3.071			
002	628906	118665	T	3.489	1	MTBE	0.000
003	3070167	71411	LP	5.849			
004	699192	133699	T	8.217	1	a,a,a-TRIFLUOROTOLUE	42.058 /40
005	4415639	269302	LP	11.807			
006	525587	142069	T	15.316	1	4-BROMOFLUOROBENZENE	41.961 /40
007	1838635	72909	LP	19.622			
008	40655	7273	V	23.820	1	NAPHTHALENE	0.000
009	~~68556~~	2646	LP	25.452			

9994002 = 465.6/500

= 93.1% ok.

4/9/99

STL Chicago (Gulf Coast) 11/09/99 22:34:16

EXTERNAL STANDARD

SAMPLE: 11089911 .28
TEST : OGRO
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID: 912716-10
CLIENT: STL-Valparaiso
LAB ID: 9911G746-010MSD
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:028
DATE-TIME INJECTED : 11/09/99 22:06:38
DATE-TIME PROCESSED : 11/09/99 22:34:16
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K9942752
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	~~228634~~	29823	LP	3.071			
002	853025	139503	T	3.500	1	MTBE	0.000
003	3643347	87527	LP	5.849			
004	655073	125482	T	8.202	1	a,a,a-TRIFLUOROTOLUE	39.404/40
005	3629761	245701	LP	11.807			
006	523811	136089	T	15.295	1	4-BROMOFLUOROBENZENE	41.819/40
007	1802213	68149	LP	19.622			
008	38184	6815	T	23.804	1	NAPHTHALENE	0.000
009	~~367918~~	5949	LP	25.452			

996530

= ~~464 − 163.4~~

= 464 − 163.4 /500

= 300.94/500

= 60.1% ok.

11/10/99

STL Chicago (Gulf Coast) 11/08/99 18:27:11

EXTERNAL STANDARD

SAMPLE: 11089911 .03
TEST : 0680
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID:
CLIENT:
LAB ID: MB 99 GW 0322-MB1
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:003
DATE-TIME INJECTED : 11/08/99 17:59:43
DATE-TIME PROCESSED : 11/08/99 18:27:11
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K8907392
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	43234	4465	LP	3.071			
				3.479	1	MTBE	
002	25000	956	LP	5.849			
003	633711	121571	T	8.269	1	a,a,a-TRIFLUOROTOLUE	38.119 /40
004	98547	9099	LP	11.807			
005	458135	129847	T	15.360	1	4-BROMOFLUOROBENZENE	36.576 /40
006	140651	6604	LP	19.622			
007	16676	4205	T	23.715			
008	4550	886	T	23.870	1	NAPHTHALENE	0.000
009	27614	2344	LP	25.452			

285424 ~~13.3~~ BRL.

11/8/99

STL Chicago (Gulf Coast) 11/08/99 19:04:32

EXTERNAL STANDARD

SAMPLE: 11089911 .04
TEST : 08AD
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID:
CLIENT:
LAB ID: SB 99 GW0322-MD15
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:004
DATE-TIME INJECTED : 11/08/99 18:37:06
DATE-TIME PROCESSED : 11/08/99 19:04:32
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K8907403
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	~~146906~~	25747	LP	3.071			
002	~~686855~~	113171	T	3.498	1	MTBE	0.000
003	3030847	65564	LP	5.849			
004	27370	5402	T	8.082			
005	~~681786~~	125410	T	8.256	1	a,a,a-TRIFLUOROTOLUE	~~41.011~~ /40
006	4010521	246132	LP	11.807			
007	~~477875~~	128996	T	15.372	1	4-BROMOFLUOROBENZENE	38.152 /40
008	1590981	65481	LP	19.622			
009	32215	5056	T	23.748	1	NAPHTHALENE	0.000
010	~~135438~~	7285	LP	25.452			

9378789 : 936.9 /500

= 37.4% AK.

11/8/99

STL Chicago (Gulf Coast) 11/09/99 21:57:53

EXTERNAL STANDARD

SAMPLE: 11089911 .27
TEST : OGRO
COLLECTION TIME : 27.00
METHOD: 110AH / 110AH REV #: 00109
CLIENT ID: 912716-10
CLIENT: STL-Valparaiso
LAB ID: 9911G746-010MS
SAMPLE WT : % MOISTURE :

INST:11 VIAL:F0 SEQ NUMBER:027
DATE-TIME INJECTED : 11/09/99 21:30:28
DATE-TIME PROCESSED : 11/09/99 21:57:53
ANALYST: LEWISM SAMP RATE: 3.13
SAMPLE VOL: 5 ML
COLUMN TYPE: DB-VRX 30M
RAW FILE: RAW2:K9942735
DILUTION FACTOR : 1.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	1	GASOLINE (GRO)	
001	~~210528~~	27403	LP	3.071			
002	1035362	166704	T	3.477	1	MTBE	0.000
003	4058171	105431	LP	5.849			
004	~~593876~~	113131	V	8.198	1	a,a,a-TRIFLUOROTOLUE	35.723 /40
005	3670227	222850	LP	11.807			
006	~~509413~~	123916	T	15.301	1	4-BROMOFLUOROBENZENE	40.670 /40
007	2280311	56142	LP	19.622			
008	54860	11051	T	23.768	1	NAPHTHALENE	0.000
009	~~17622~~	2769	T	23.891			
010	~~684631~~	12016	LP	25.452			

11098931 = 517.1 − 163.4 /500

= 353.7/500

= 70.7% ok.

11/11/99

STL Chicago
GASOLINE RANGE ORGANICS

RFW Batch Number: 9911G746 Client: STL-Valparaiso Work Order: 00000-000-000-0 Report Date: 11/10/99 15:48
Page: 1

	Cust ID:	912716-1	912716-3	912716-4	912716-6	912716-10	912716-10
Sample Information	RFW#:	001	003	004	006	010	010 MS
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.0	1.0	1.0	1.0	1.0	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate	a,a,a-Trifluorotoluene	76 %	85 %	84 %	67 %	93 %	89 %
	4-Bromofluorobenzene	74 %	93 %	88 %	60 %	107 %	102 %
Gasoline Range Organics		1000 Y	1000 Y	3200 Y	50 U	160 Y	71 * %

	Cust ID:	912716-10	912647-1	912680-1	912680-2	912705-1	BLK
Sample Information	RFW#:	010 MSD	011	012	013	014	99GVD324-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.0	1.0	1.0	1.0	1.0	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate	a,a,a-Trifluorotoluene	98 %	96 %	79 %	84 %	73 %	93 %
	4-Bromofluorobenzene	104 %	86 %	78 %	76 %	67 %	91 %
Gasoline Range Organics		60 * %	50 U	1300 Y	50 U	34 JY	50 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

STL Chicago
GASOLINE RANGE ORGANICS

RFW Batch Number: 9911G746 Client: STL-Valparaiso Work Order: 00000-000-000-0 Report Date: 11/10/99 15:48 Page: 2

	Cust ID:	BLK BS	BLK	BLK BS
Sample Information	RFW#:	99GVD324-MB1	99GVD322-MB1	99GVD322-MB1
	Matrix:	SOIL	SOIL	SOIL
	D.F.:	1.0	1.0	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg
Surrogate	a,a,a-Trifluorotoluene	105 %	95 %	102 %
	4-Bromofluorobenzene	105 %	91 %	95 %
Gasoline Range Organics		93 %	50 U	87 %

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

STL Chicago (Gulf Coast) 11/10/99 15:24:14

EXTERNAL STANDARD

SAMPLE: 11099914 .10 INST:14 VIAL:F0 SEQ NUMBER:010
TEST : 06RO DATE-TIME INJECTED : 11/10/99 14:50:55
COLLECTION TIME : 32.97 DATE-TIME PROCESSED : 11/10/99 15:24:14
METHOD: 14AM / 14AM REV #: 00101 ANALYST: LEWISM SAMP RATE: 3.13
CLIENT ID: SAMPLE VOL: 5 mL
CLIENT: COLUMN TYPE: DB-624
LAB ID: MB 996V0326-MB1 RAW FILE: RAW2:KA943109
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 50.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	2	GASOLINE (GRO)	
001	619	78	LP	7.888	1	MTBE	0.000
002	17529	452	LP	11.224			
003	508393	87037	T	14.517	2	a,a,a-TRIFLUOROTOLUE	1930.090/50 = 38.60 / 40 ppb
004	61408	1040	LP	18.402			
005	337414	75957	T	22.234	2	4-BROMOFLUOROBENZENE	1894.865/50 = 37.897 / 40 ppb
006	160888	7033	LP	26.696			
007	3312	555	T	31.146	1	NAPHTHALENE	0.000
008	16898	731	LP	32.150			

243750

~~15.9~~ DRL.

11/11/99

STL Chicago (Gulf Coast) 11/10/99 16:25:40

EXTERNAL STANDARD

SAMPLE: 11099914 .11 INST:14 VIAL:F0 SEQ NUMBER:011
TEST : OGU DATE-TIME INJECTED : 11/10/99 15:52:14
COLLECTION TIME : 32.97 DATE-TIME PROCESSED : 11/10/99 16:25:40
METHOD: 14AM / 14AM REV #: 00101 ANALYST: LEWISM SAMP RATE: 3.13
CLIENT ID: SAMPLE VOL: 5 mL
CLIENT: COLUMN TYPE: DB-624
LAB ID: SB 99GU0326-MB15M1 RAW FILE: RAW2:KA943128
SAMPLE WT : % MOISTURE : DILUTION FACTOR : 50.0000

PK NO	PEAK AREA	PEAK HEIGHT	BL	RT MINUTES	GR #	COMPONENT NAME	AREA CONC PPB
				0.001	2	GASOLINE (GRO)	
001	~~341840~~	24550	LP	7.115			
002	157009	13926	T	7.878	1	MTBE	0.000
003	2023745	28540	LP	11.224			
004	~~570686~~	94545	T	14.526	2	a,a,a-TRIFLUOROTOLUE	2166.580 /50 = 43.332 /40 ppb
005	3162065	158630	LP	18.402			
006	~~397624~~	88125	T	22.245	2	4-BROMOFLUOROBENZENE	2232.999 /50 = 44.660 /40 ppb
007	1858805	76147	LP	26.696			
008	16488	2679	T	31.156	1	NAPHTHALENE	0.000
009	~~40717~~	1175	LP	32.150			

7218112 = 471.12 /500

= 94.2% K

11/11/99

STL Chicago
GASOLINE RANGE ORGANICS

RFW Batch Number: 9911G746 Client: STL-Valparaiso Work Order: 00000-000-000-0 Report Date: 11/11/99 15:17 Page: 1

	Cust ID:	912716-1	912716-2	912716-3	912716-4	912716-5	912716-6
Sample Information	RFW#:	001	002	003	004	005	006
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.0	50	1.0	1.0	100	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	Level:	LOW	MED	LOW	LOW	MED	LOW
Surrogate	a,a,a-Trifluorotoluene	76 %	89 %	85 %	84 %	94 %	67 %
	4-Bromofluorobenzene	74 %	92 %	93 %	88 %	97 %	60 %
Gasoline Range Organics		1000 Y	5300 Y	1000 Y	3200 Y	70000 Y	50 U

	Cust ID:	912716-7	912716-8	912716-9	912716-10	912716-10	912716-10
Sample Information	RFW#:	007	008	009	010	010 MS	010 MSD
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	50	50	100	1.0	1.0	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	Level:	MED	MED	MED	LOW	LOW	LOW
Surrogate	a,a,a-Trifluorotoluene	95 %	88 %	90 %	93 %	89 %	98 %
	4-Bromofluorobenzene	95 %	86 %	94 %	107 %	102 %	104 %
Gasoline Range Organics		9200 Y	14000 Y	23000 Y	160 Y	71 * %	60 * %

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

STL Chicago
GASOLINE RANGE ORGANICS

RFW Batch Number: 9911G746 Client: STL-Valparaiso Work Order: 00000-000-000-0 Report Date: 11/11/99 15:17 Page: 2

	Cust ID:	912647-1	912680-1	912680-2	912705-1	BLK	BLK BS
Sample Information	RFW#:	011	012	013	014	99GVD324-MB1	99GVD324-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.0	1.0	1.0	1.0	1.0	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	Level:	LOW	LOW	LOW	LOW	LOW	LOW
Surrogate	a,a,a-Trifluorotoluene	96 %	79 %	84 %	73 %	93 %	105 %
	4-Bromofluorobenzene	86 %	78 %	76 %	67 %	91 %	105 %
Gasoline Range Organics		50 U	1300 Y	50 U	34 JY	50 U	93 %

	Cust ID:	BLK	BLK BS	BLK	BLK BS
Sample Information	RFW#:	99GVD326-MB1	99GVD326-MB1	99GVD322-MB1	99GVD322-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL
	D.F.:	50	50	1.0	1.0
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg
	Level:	MED	MED	LOW	LOW
Surrogate	a,a,a-Trifluorotoluene	96 %	108 %	95 %	102 %
	4-Bromofluorobenzene	95 %	112 %	91 %	95 %
Gasoline Range Organics		2500 U	94 %	50 U	87 %

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked. %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

ENVIRONMENTAL QUALITY MANAGEMENT, INC.
1310 Kemper Me... Drive • Suite 100
...nati, Ohio 45240
(513) 825-7500
513) 825-7495

January 12, 2000

Mr. Paul Steadman
U.S. Environme
77 W. Jackson
Chicago, IL. 60
Mail Code SE-5J

CHRIS BILODEAU
EXT. 256
800 500 0575

Re: EPA Contract
Delivery Order
Industrial Highw
COC # A-3421E

Dear Mr. Steadman:

Enclosed please find the ...mple *S19* taken at the above referenced site. The sam... ...rn Trent Laboratories in Valparaiso, Indiana on November 5, 1999 and ... ...sel Range Organics (DRO) by Method 3550B/8015 modified B. The Gasoline F... ...rganics (GRO) by Method 3550A/8015 modified B were analyzed at Severn Trent Laboratories in Chicago, Illinois. The final data package was sent to Environmental Quality Management, Inc. upon completion of the analyses. It appears that all information in the data package has been provided and the following quality control exception was noted:

- Both the Matrix Spike and Matrix Spike Duplicate for the DRO analysis recovered above the limit. The relative percent difference was within acceptable limits. The data is qualified as estimated, biased high.

All other data is excepted. The enclosed data has been reviewed based upon method requirements and the OSWER Directive. If you have any questions regarding this report, please feel free to contact me at 800-500-0575.

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

Mark Jarski

Mark Jarski
QA/QC Chemist