N60200.AR.004678
NAS CECIL FIELD, FL
5090.3a

SITE REHABILITATION COMPLETION LETTER REPORT FOR OIL-WATER SEPARATOR 312-OW NAS CECIL FIELD FL

12/20/2006

TETRA TECH NUS INC

TETRA TECH NUS, INC.
8640 Philips Highway, Suite 16 • Jacksonville, FL 32256
Tel 904.636.6125 • Fax 904.636.6165 • www.tetratech.com

Document Tracking Number 06JAX0126

December 20, 2006

Project Number 112GN3996

Mr. David Grabka
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Reference: CLEAN III Contract Number N62467-94-D-0888
Contract Task Order Number 0168

Subject: Site Rehabilitation Completion Letter Report
Oil-Water Separator 312-OWS
Naval Air Station Cecil Field
Jacksonville, Florida

Dear Mr. Grabka:

Tetra Tech NUS, Inc. (TtNUS) is pleased to submit this revised Site Rehabilitation Completion Letter Report for the subject site. This revision is included to address the FDEP comments to the report dated November 9, 2006. Comments (verbal and written) include the following:

- Table 1 has been revised.
- Figure 1, Site Map, has been added.
- A copy of the comments is included in Appendix A.
- Remaining appendices have been renumbered.
- Laboratory analytical data has been included in Appendix C.

This report has been prepared for the United States Navy, Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order (CTO) 0168 of Comprehensive Long-term Environmental Action Navy (CLEAN) III Contract Number N62467-94-D-0888. This Site Rehabilitation Completion Letter Report addresses the final source removal of petroleum-impacted soils associated with oil-water separator (OWS) 312-OWS in the vicinity of Building 312.

BACKGROUND

OWS 312-OWS is located on the northern side of Building 312, which was formerly used as a corrosion control hangar for Naval Air Station (NAS) Cecil Field. A site map is provided as Figure 1. The 312-OWS was installed in 1988 and has a 900-gallon capacity. The floor of Building 312 appears to have been sloped to allow wastewater generated during operations to drain to a spill collection system (basically a long floor drain) that runs the length of the eastern side of the building. The wastewater traveled to the OWS through a 10-inch polyvinyl chloride (PVC) line. A 6-inch PVC line connects the OWS to the OWS tank, and both are accessible by manhole covers. However, information on how the OWS was constructed and how it is connected to the lift station is not available. The site is surrounded by grass; however, there is concrete paving to the north and east, and Building 312 is about 10 feet (ft) to the

south. There are no surface water bodies within 1,000 ft of the site. A ditch that is normally dry exists on the northern side of the site. Currently, the OWS remains in place.

Harding Lawson Associates performed confirmatory sampling events beginning in July 1998. A Confirmatory Sampling Report (CSR) was submitted for this site in June 1999. The CSR indicated that petroleum-impacted soil was present at the site and recommended that a source removal be conducted to remove the petroleum-impacted soil. A groundwater sample collected from CEF-312-12S, a downgradient well, indicated that no groundwater contamination was present at the site.

A source removal was performed by CH2M Hill Constructors, Inc. in January 2000, and a Source Removal Report (SRR) was submitted in November 2000. The SRR indicated that a total of 99.7 tons of petroleum-contaminated soil was removed from the site. A temporary well sampled during the source removal indicated that contaminated groundwater was present at the site at concentrations below Natural Attenuation Default Concentrations (NADCs). As a result, the SRR recommended that a Natural Attenuation Monitoring Plan be prepared for the site. The Florida Department of Environmental Protection (FDEP) issued a response to the SRR on April 5, 2001, requesting that a site assessment be conducted.

Site assessment activities were initiated in September 2001. A Site Assessment Report (SAR) was submitted in April 2002. The SAR indicated that concentrations of contaminants of concern (COCs) in soil exceeded the Soil Cleanup Target Levels (SCTLs) specified in Chapter 62-770, Florida Administrative Code (FAC). The SAR also indicated that concentrations of COCs in groundwater samples collected from permanent monitoring wells were less than the Groundwater Cleanup Target Levels (GCTLs) specified in Chapter 62-770, FAC. The SAR recommended that a supplemental source removal be conducted to remove additional contaminated soil identified during the site assessment. In addition, the SAR recommended that the groundwater be resampled after the source removal was completed to verify that the concentrations of COCs in groundwater remained below GCTLs. A SAR review letter was issued by the FDEP on August 26, 2002. The FDEP letter requested further assessment and clarification of some of the information provided in the SAR.

A Site Assessment Report Addendum (SARA) was submitted in September 2005 that addressed each of the comments from the FDEP review letter. The SARA indicated that concentrations of COCs from all closure soil samples collected from within the area excavated during the source removal were less than SCTLs. However, concentrations of COCs exceeded the SCTLs specified in Chapter 62-770, FAC, in several locations outside the original excavation area. The SARA also indicated that concentrations of COCs in groundwater samples collected during the supplemental assessment were less than GCTLs. The SARA recommended that supplemental source removal be conducted to remove the remaining petroleum-impacted soil from the site. The proposed limits of the supplemental soil excavation were defined based on soil results less than residential SCTLs. During the July 2003 NAS Cecil Field Partnering Team meeting, the Base Realignment and Closure Cleanup Team (BCT) agreed to the proposed limits pending approval from the FDEP. In addition, the SARA recommended no further action for groundwater. On July 30, 2003, TtNUS received e-mail confirmation from the FDEP indicating that the proposed excavation limits were acceptable.

SUPPLEMENTAL SOURCE REMOVAL

WRS Infrastructure & Environmental, Inc. (WRS) conducted supplemental source removal activities at two areas in the vicinity of 312-OWS designated as North and South. The results of these removal activities are documented in the WRS Final SRR. A copy of this report is provided in Appendix B. On September 23, 2003, WRS personnel mobilized to the site and began site preparatory activities. These activities included establishment of decontamination areas, work zones, designated haul routes, and stockpile and debris staging areas. A limited site survey was conducted to establish existing land surface and grade prior to excavation. Grade stakes were placed to guide excavation activities and to ensure that the appropriate volume of material was removed.

A total of 640.37 tons of polynuclear aromatic hydrocarbon (PAH)- and total recoverable petroleum hydrocarbon (TRPH)-impacted soil was excavated and disposed off site as non-hazardous waste. The excavation limits for the North and South areas were provided by TtNUS based on prior sample results that were less than SCTLs. Excavation activities were conducted in accordance with Chapter 62-761 and Chapter 62-777, FAC, and FDEP Standard Operating Procedures FDEP-SOP-001/01. Excavated soils were screened visually; however, confirmatory samples (organic vapor analyzer data) were not required under the Statement of Work (SOW) and were not collected from the excavations. Confirmatory samples for laboratory analysis were not required in accordance with Addendum 1 of the SOW.

WRS personnel excavated the North area to 5 ft below land surface (bls), as required by the SOW, and discovered visually stained soil that appeared to extend beyond 5 ft bls. A change order was issued by the Naval Air Station Jacksonville Resident Officer in Charge of Construction allowing excavation in the North area to 7 ft bls in the area adjacent to the OWS, the point at which the water table was intersected. The excavation area was also extended to include an approximate 70 ft by 15 ft area of the ditch to the west of the original excavation area north of the parking lot. This area was excavated to approximately 5 ft bls. The North excavation area covered approximately 1,269 square feet and extended to a maximum depth of 7 ft bls. Visually stained soils were observed in the northeastern corner of the excavation on the eastern wall and appeared to continue beyond the limits of excavation as delineated by TtNUS at approximately 5 to 7 ft bls. During excavation of the North area, it became necessary to abandon three monitoring wells (CEF-312LS-5S, CEF-312-02 and CEF-312LS-6S). The monitoring wells were abandoned in accordance with Chapter 40C-3, FAC (rules of the St. Johns Water Management District), and all necessary permits were obtained prior to abandonment.

WRS personnel excavated the South area to 3 ft bls as measured from the bottom of the ditch. The excavation continued horizontally until the limits of excavation established by TtNUS were achieved. The resultant excavation measured approximately 46 ft long (north-south) by 24 ft wide (east-west) by 3 ft deep. No visually stained soils were observed at the limits of the excavation prior to backfilling of the South excavation area.

Excavated PAH- and TRPH-impacted soils were transported offsite for disposal at Republic Services, Broadhurst Environmental Landfill in Screven, Georgia (Georgia Identification Number 151-014D) as non-hazardous waste. Waste Transportation and Disposal, Inc. coordinated the disposal and transportation activities. A total of 504 cubic yards of certified clean backfill was installed and compacted to match the pre-remedial grade. The North and South excavation areas were restored to pre-remedial activity conditions. For further information, a copy of the WRS Final Source Removal Report is provided as Appendix A.

TtNUS personnel mobilized to the site on March 29, 2004, to collect a soil sample from the northeastern portion of the North excavation area where WRS noted stained soils beyond the excavation limits. The sample was collected from 6 ft bls along the eastern wall of the northeastern portion of the excavation area. Soil sample CEF-312-B020-06 was analyzed by Accutest Laboratories for volatile organic compounds, semivolatile organic compounds, TRPH, and select metals. Contaminants analyzed by the specified parameters were either not detected or detected below their respective SCTLs, as specified in Chapter 62-770, FAC; however, for two contaminants, benzidine and n-nitrosodimethylamine, the method detection limits exceeded their respective SCTLs, as specified in Chapter 62-770, FAC. Based on the laboratory results, these contaminants are considered to be “not-detect,” and therefore are not considered to be present at the site. The laboratory results are summarized on Table 1, and a copy of the laboratory report for the March 2004 sampling event is included in Appendix C.

CONCLUSIONS AND RECOMMENDATIONS

Activities conducted during the supplemental source removal indicated that the petroleum-impacted soil has been removed from the site and disposed off site as non-hazardous waste. The North and South areas in the vicinity of 312-OWS have been backfilled and restored to match pre-remedial conditions. An additional soil sample collected by TtNUS personnel indicated that concentrations for the COCs in the soil

outside the limits of the North excavation area were less than SCTLs. Post-remediation groundwater monitoring was not performed based on the consensus of the BCT because groundwater results collected from the excavation area were less than GCTLs and the 312-OWS site lies within the boundaries of Installation Restoration Program Site 58 where groundwater monitoring activities are ongoing.

Based on the results of the supplemental source removal, TtNUS recommends that a Site Rehabilitation Completion Order be issued for the site.

If you have any questions regarding the information presented in this document, please contact Mark Peterson by phone at (904)636-6125, or via e-mail at Mark.Peterson@ttnus.com.

Sincerely,

Terry Cottenoir
Geologist

MAP/tc

Enclosures (5)

c: M. Davidson, NAVFAC SE (CD only)
M. Perry, TtNUS (unbound and CD)
D. Humbert, TtNUS (cover letter only)
J. Logan, TtNUS
R. Simcik, TtNUS (Bookcase File)
J. Johnson, TtNUS (Information Repository) (CD)
CTO 0168 Project File

CERTIFICATION

The information contained is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the information described in this report. This Site Rehabilitation Completion Letter Report was developed for Building 312, Oil-Water Separator 312-OWS at the Naval Air Station Cecil Field, Jacksonville, Florida, and should not be construed to apply to any other site.

December 20, 2006
Mark A. Peterson, P.G.
Florida License Number PG-0001852

TABLE

TABLE 1
Summary of Laboratory Soil Analytical Detections

Site Rehabilitation Completion Report
Building 312-OWS
NAS Cecil Field
Jacksonville, Florida
March 29, 2004

Constituent	FDEP SCTL	CEF-312-B020-06
VOLATILE ORGANICS (µg/kg)		
1,1,1-TRICHLOROETHANE	730,000	<2.3
1,1,2,2-TETRACHLOROETHANE	2,900	<2.3
1,1,2-TRICHLOROETHANE	1,400	<2.3
1,1-DICHLOROETHANE	390,000	<2.3
1,1-DICHLOROETHENE	95,000	<3.4
1,2-DICHLOROBENZENE	880,000	<2.3
1,2-DICHLOROETHANE	500	<2.3
1,2-DICHLOROPROPANE	600	<2.3
1,3-DICHLOROBENZENE	380,000	<2.3
1,4-DICHLOROBENZENE	6,400	<2.3
2-CHLOROETHYL VINYL ETHER	*	<11
ACROLEIN	50	<14
ACRYLONITRILE	300	<14
BENZENE	1,200	<2.3
BROMODICHLOROMETHANE	1,500	<2.3
BROMOFORM	48,000	<2.3
BROMOMETHANE	3,100	<2.3
CARBON TETRACHLORIDE	500	<2.3
CHLOROBENZENE	120,000	<2.3
CHLORODIBROMOMETHANE	1,500	<2.3
CHLOROETHANE	3,900	<2.3
CHLOROFORM	400	<2.3
CHLOROMETHANE	4,000	<2.3
CIS-1,2-DICHLOROETHENE	33,000	<2.3
CIS-1,3-DICHLOROPROPENE	1,400	<2.3
DICHLORODIFLUOROMETHANE	77,000	<3.4
ETHYLBENZENE	1,500,000	<2.3
METHYL TERT-BUTYL ETHER	4,400,000	<2.3
METHYLENE CHLORIDE	17,000	<5.7
TETRACHLOROETHENE	8,800	<2.3
TOLUENE	7,500,000	<2.3
TOTAL XYLENES	130,000	<5.1
TRANS-1,2-DICHLOROETHENE	53,000	<2.3
TRANS-1,3-DICHLOROPROPENE	*	<2.3
TRICHLOROETHENE	6,400	<2.3
TRICHLOROFLUOROMETHANE	270,000	<2.8
VINYL CHLORIDE	200	<2.8
SEMI-VOLATILE ORGANICS (µg/kg)		
1,2,4-TRICHLOROBENZENE	660,000	<40
1,2-DICHLOROBENZENE	880,000	<40
1,2-DIPHENYLHYDRAZINE	1,100	<40
1,3-DICHLOROBENZENE	380,000	<40

1,4-DICHLOROBENZENE	6,400	<40
1-METHYLNAPHTHALENE	200,000	<40
2,2'-OXYBIS(1-CHLOROPROPANE)	*	<40
2,4,6-TRICHLOROPHENOL	70,000	<40
2,4-DICHLOROPHENOL	190,000	<40
2,4-DIMETHYLPHENOL	1,300,000	<40
2,4-DINITROPHENOL	110,000	<400
2,4-DINITROTOLUENE	1,200	<79
2,6-DINITROTOLUENE	1,200	<79
2-CHLORONAPHTHALENE	5,000,000	<40
2-CHLOROPHENOL	130,000	<40
2-METHYLNAPHTHALENE	210,000	<40
2-NITROPHENOL	560,000	<40
3,3'-DICHLOROBENZIDINE	2,100	<200
4,6-DINITRO-2-METHYLPHENOL	8,400	<79
4-BROMOPHENYL PHENYL ETHER	*	<40
4-CHLORO-3-METHYLPHENOL	600,000	<40
4-CHLOROANILINE	270,000	<300
4-CHLOROPHENYL PHENYL ETHER	*	<40
4-NITROPHENOL	560,000	<400
ACENAPHTHENE	2,400,000	<40
ACENAPHTHYLENE	1,800,000	<40
ANTHRACENE	21,000,000	<40
BAP EQUIVALENT	100	<20
BENZIDINE	4	**<990**
BENZO(A)ANTHRACENE	800	<40
BENZO(A)PYRENE	100	<40
BENZO(B)FLUORANTHENE	2,400	<40
BENZO(G,H,I)PERYLENE	2,500,000	<40
BENZO(K)FLUORANTHENE	24,000	<40
BIS(2-CHLOROETHOXY)METHANE	250,000	<40
BIS(2-CHLOROETHYL)ETHER	300	<79
BIS(2-ETHYLHEXYL)PHTHALATE	72,000	<200
BUTYL BENZYL PHTHALATE	17,000,000	<99
CHRYSENE	77,000	<40
DI-N-BUTYL PHTHALATE	8,200,000	<99
DI-N-OCTYL PHTHALATE	1,700,000	<200
DIBENZO(A,H)ANTHRACENE	700	<79
DIETHYL PHTHALATE	130,000,000	<99
DIMETHYL PHTHALATE	690,000,000	<99
FLUORANTHENE	3,200,000	<40
FLUORENE	2,600,000	<40
HEXACHLOROBENZENE	400	<40
HEXACHLOROBUTADIENE	6,200	<79
HEXACHLOROCYCLOPENTADIENE	9,500	<79
HEXACHLOROETHANE	38,000	<79
INDENO(1,2,3-CD)PYRENE	6,600	<79
ISOPHORONE	540,000	<40
N-NITROSO-DI-N-PROPYLAMINE	80	<79
N-NITROSODIMETHYLAMINE	9	**<99**
N-NITROSODIPHENYLAMINE	180,000	<40
NAPHTHALENE	55,000	<40

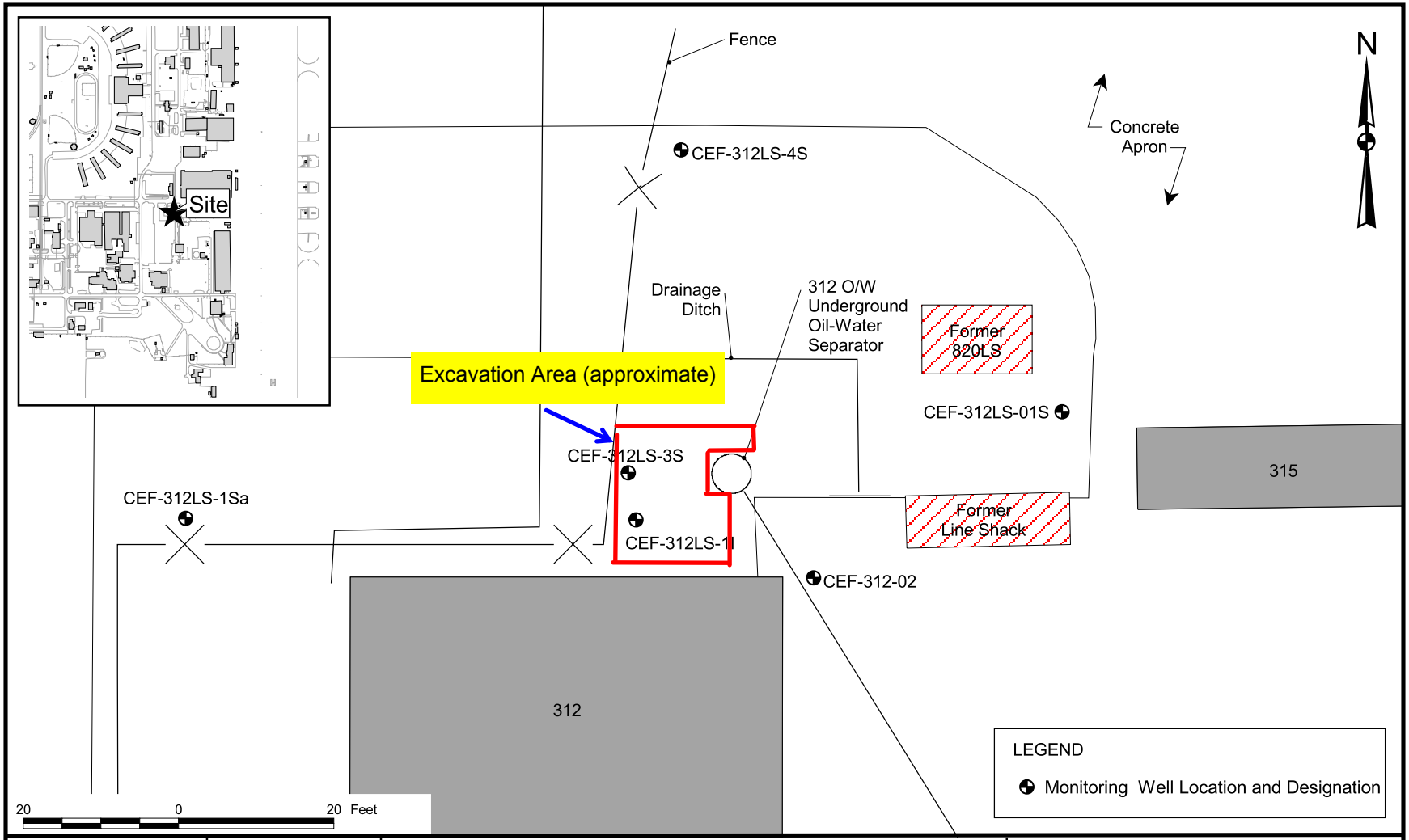
NITROBENZENE	18,000	<40
PENTACHLOROPHENOL	7,200	<400
PHENANTHRENE	2,200,000	<40
PHENOL	500,000	<40
PYRENE	2,400,000	<79
INORGANICS (mg/kg)		
ARSENIC	2	0.46 B
CADMIUM (µg/kg)	82,000	<0.035
CHROMIUM	210	5
LEAD	400	5.5 B
MISCELLANEOUS PARAMETERS		
PERCENT SOLIDS (%)	*	<81.9
TOTAL PETROLEUM HYDROCARBONS (µg/kg)	460,000	<6.8

Notes:

* Indicates that no value was listed in 2005 version of SCTLs for Chapter 62-777, FAC.

B = results is > the instrument detection limit but is < the Reporting Limit

FIGURE



DRAWN BY MJJ	DATE 11Oct01	**SITE MAP** BUILDING 312, OWS 312-OW NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 168
CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV 0

P:\GIS\NAS_CecilField\bldg0312-ows03.apr 10Jan02 MJJ Layout2

APPENDIX A

FDEP COMMENT LETTER

November 20, 2006
OFFICIAL CORRESPONDENCE

BRAC PMO SE
Attn: Mr. Mark Davidson
4130 Faber Place Drive
Suite 202
North Charleston, SC 29405

Dear Mr. Davidson:

I have completed my review of the Site Rehabilitation Completion Letter Report, Oil-Water Separator 312-OWS, Naval Air Station Cecil Field, dated November 9, 2006 (received November 13, 2006), prepared and submitted by Tetra Tech NUS, Inc. Please submit the laboratory analytical sheets from Accutest Laboratories. The data, as presented in Table 1, is highly suspicious. The number of volatile organic compounds and semi-volatile organic compounds detected at the same concentration seem unlikely, if not impossible. Also, there would seem no reason to believe that benzidine and n-nitrosodimethylamine would be detected at this site at levels above their soil cleanup target levels.

This electronic message is being sent in lieu of regular mail. If you have any questions concerning this review, please contact me at (850)245-8997.

Sincerely,

David P. Grabka, P.G.
Remedial Project Manager
MS4535
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Office: 850.245.8927
Direct: 850.245.8997
david.grabka@dep.state.fl.us

APPENDIX B

WRS DECEMBER 2003 FINAL SOURCE REMOVAL REPORT

FINAL SOURCE REMOVAL REPORT

Source Removal 312 Oil Water Separator Areas

Naval Air Station Cecil Field
Jacksonville, Florida
Construction Contract # N62467-02-D-0480

Prepared For:
Naval Facilities Engineering Command
Southern Division
2155 Eagle Drive
North Charleston, South Carolina 29406

Prepared by:

WRS Infrastructure & Environment, Inc.
625 East Tennessee Street, Suite 100
Tallahassee, Florida 32308
(850) 531-9860

WRS Project No.: 303607
Revision No. 2
December 2003

Final Source Removal Report

for

Source Removal 312 Oil Water Separator Areas

Submittal Date:	**December 17, 2003**
Project Name:	**NAS Cecil Field**
Project Location:	**NAS Cecil Field – Jacksonville, Duval County, Florida**
Contract Number	**N62467-02-D-0480**
Reference	**Statement of Work, Section 2.3.1.2**

Prepared by:

_____ Date: _____

Brian Garner
Staff Scientist
WRS Infrastructure & Environment, Inc.

This document, Final Source Removal Report for the Naval Air Station (NAS) Cecil Field Building 312 Oil Water Separator (OWS) Areas, has been prepared under the direction of a Florida Registered Professional Engineer. The work and professional opinions rendered in this report were developed and conducted in accordance with commonly accepted protocols and procedures.

If conditions are discovered or determined to exist that differ from those described, the undersigned engineer should be notified to evaluate the effects of any additional information on the assessment and recommendations in this document. This document was prepared to provide a Source Removal Report for the Building 312 OWS Areas, Jacksonville, Duval County, Florida. It should not be construed to apply to any other site.

Reviewed by:

_____ Date: _____

Brent W. Anderson, P.E., P.G.
Project Manager
WRS Infrastructure & Environment, Inc.

CONTENTS

Section	Page
1.0 INTRODUCTION	**1**
1.1 Site Background	1
1.2 Project Objectives	1
2.0 SOURCE REMOVAL ACTIVITIES	**3**
2.1 Site Preparation	3
2.2 Soil Excavation and Disposal	3
2.2.1 Excavation Activities	3
2.2.2 Excavated Soil Transport and Disposal	5
2.2.3 Backfilling and Site Restoration	5
2.3 Sampling and Analysis	6
3.0 SUMMARY AND CONCLUSIONS	**7**
4.0 REFERENCES	**8**

Table

Table 1 Summary of Non-Hazardous Waste Manifests

Figures

Figure 1 Site Vicinity Map
Figure 2 Site Map

Appendices

Appendix A Site Photographs
Appendix B Contractor Production Reports
Appendix C Non-Hazardous Waste Manifests, Landfill Receipts, Truck Tracking Log
Appendix D Laboratory Analytical Results, Field Density Test Results, Proctor Compaction Reports

ACRONYMS

ASTM	American Society of Testing and Measurement
bls	Below Land Surface
CCI	CH2M Hill Constructors, Inc.
CO	Contract Officer
CSE	Confirmatory Sampling Event
CTO	Contract Task Order
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Petroleum Residual Organics
ft^2	Square Feet
KAG	Kerosene Analytical Group
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
OWS	Oil Water Separator
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbon
ppm	Parts Per Million
PVC	Polyvinyl Chloride
ROICC	Resident Officer in Charge of Construction
SCTL	Soil Cleanup Target Level
SJRWMD	St. John's River Water Management District
SOP	Standard Operating Procedures
SOW	Statement of Work
TRPH	Total Recoverable Petroleum Hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency
WRS	WRS Infrastructure & Environment, Inc.
WTDI	Waste Transportation and Disposal, Inc.
yd^3	Cubic Yards

1.0 Introduction

WRS Infrastructure & Environment, Inc. (WRS) has prepared this Final Source Removal Report for Statement of Work (SOW) N62467-03-R-X0004 to specifically address the required remedial activities for the Source Removal 312 Oil Water Separator (OWS) Areas located at Naval Air Station (NAS) Cecil Field, Jacksonville, Florida (**Figure-1**). This Final Source Removal Report has been prepared pursuant to the SOW, comments made during the April 22, 2003 pre-bid site walk and Addendum Number 1 to the solicitation. Work associated with the source removal activities was authorized under Construction Contract Number N62467-02-D-0480, Contract Task Order (CTO) Number 0002.

WRS was contracted by the Southern Division Naval Facilities Engineering Command (NAVFAC) to excavate petroleum impacted soil from two (2) areas in the vicinity of Building 312 OWS, designated as North and South (**Figure-2**). The excavation activities required the removal of approximately 235 cubic yards (yd^3) of polynuclear aromatic hydrocarbon (PAH) and total recoverable petroleum hydrocarbon (TRPH) impacted soils from the North area and approximately 135 yd^3 from the South area. All source removal activities were conducted in accordance with Chapters 62-160, 62-761 and 62-770, Florida Administrative Code (FAC).

1.1 Site Background

Building 312 is an aircraft corrosion control facility that used an aircraft wash rack located east of the building. Wastewater from Building 312 and rinse water from the wash rack were routed through a 900-gallon OWS to the northeast of Building 312. ABB Environmental Services conducted a confirmatory sampling event (CSE) in June 1998. Four subsurface soil samples were collected and analyzed by an organic vapor analyzer (OVA), one shallow monitoring well was installed, and one groundwater sample was collected and analyzed for Kerosene Analytical Group (KAG) parameters. The results of the CSE were summarized in a Confirmatory Sampling Report dated June 1999. The report documented maximum OVA headspace concentrations in the subsurface around the OWS of 1,350 parts per million (ppm). The groundwater sample collected from monitoring well CEF-312-1S was below the regulatory standards specified in Chapter 62-770, FAC for all KAG constituents (CH2M HILL Constructors, Inc [CCI], 2000).

On March 30, 2000, CCI conducted a source removal of petroleum-contaminated soils from the area around the OWS. A total of 99.7 tons of petroleum-contaminated soil were excavated and disposed off-site. The OWS and associated underground storage tank and piping were left in place (CCI, 2000). A Source Removal Report was submitted to NAVFAC by CCI in November, 2000.

1.2 Project Objectives

The primary objective of the source removal activities was to excavate PAH and TRPH impacted soils from the North and South areas in the vicinity of Building 312. Per Addendum 1 to the SOW, the North area was to be excavated to a depth of five feet below land surface (bls) and three feet bls referenced from the bottom of the ditch in the South area. The horizontal and vertical limits of the excavation had been established previously by Tetra Tech NUS, Inc (TtNUS) and were provided in the SOW and solicitation addenda. Based on the excavation

limits established by TtNUS, the total volume of soil (per the SOW) to be excavated from the North and South areas was 235 yd^3 and 135 yd^3, respectively.

Following excavation to the limits established by TtNUS, WRS personnel were to backfill the excavations with certified clean fill and restore the site to pre-remedial conditions.

2.0 Source Removal Activities

Source removals were conducted at Building 312 North and South areas beginning on September 23, 2003 and ending on October 1, 2003. A total of 640.37 tons of PAH and TRPH impacted soil was excavated and disposed off-site as non-hazardous waste. A total of 504 yd^3 of clean fill were used for backfill and compaction of the excavation areas. Confirmatory soil samples were not required per Addendum 1 to the SOW; therefore no confirmation sampling was performed following excavation. WRS was required to "dig to clean" boundary established by TtNUS. WRS coordinated with J.A. Jones, Inc., JAA Facilities, Cecil Commerce Center, Boeing, Inc., NAS Jacksonville Resident Officer in Charge of Construction (ROICC) concerning all demolition and excavation activities. Photographs of the site before, during and following excavation activities are included in **Appendix A**. Copies of Contractor Production Reports are included in **Appendix B**.

2.1 Site Preparation

Site preparation activities were conducted in accordance with Section C.1.2.2 of the approved Work Plan (WRS, 2003). WRS personnel coordinated with J.A. Jones, Inc. and Sunshine One Call Locates to ensure all underground utilities had been properly located.

On September 23, 2003 WRS personnel mobilized to the site and immediately began site preparatory activities. These activities included establishment of decontamination areas, work zones, designated haul routes, stockpile and debris staging areas. A limited site survey was performed in order to establish the existing land surface elevation and grade at the site prior to excavation. Grade stakes were placed to guide the horizontal and vertical extent of the excavation activities and to ensure that the appropriate volume of material was removed from the excavated areas **(Appendix A)**.

2.2 Soil Excavation and Disposal

As stated previously, PAH and TRPH impacted soil was excavated from the North and South areas in the area of Building 312. The excavation limits for both areas were provided by TtNUS. PAH and TRPH impacted soil was excavated utilizing a tracked excavator, backhoe and hand-tools. Excavated soil was stockpiled in a designated contaminated soil stockpile area to the west of Building 312 **(Appendix A)** for later transport and disposal.

The stockpile area was constructed by constructing a bermed storage area lined with 6-mil plastic sheeting. Stockpiled soil was deposited within the plastic lined bermed area and covered with additional plastic sheeting at the end of each work day and during inclement weather to prevent runoff. A rubber tired loader transferred the contaminated media from the contaminated soil stockpile area directly to dump trucks for off-site disposal at Republic Services-Broadhurst Environmental Landfill in Screven, Georgia (Georgia ID #151-014D) as non-hazardous waste. Laboratory analytical data collected by and CCI were used for characterization of the excavated soil to obtain disposal approval from the landfill.

2.2.1 Excavation Activities

Excavation activities were conducted in accordance with Chapter 62-761 and 62-777, FAC and the Florida Department of Environmental Protections (FDEP) Standard Operating Proceedures

(SOP) FDEP-SOP-001/01. Excavated soils were screened visually. Confirmatory soil screening samples (OVA data) were not required under the SOW and were not collected from the excavations. Confirmatory soil samples for laboratory analysis were not collected in accordance with Addendum 1 to the SOW.

Northern Excavation

Excavation activities commenced in the North excavation area on September 24, 2003 and excavation was completed on September 26, 2003. The section of chain link fence within the proposed excavation limits was dismantled and removal of two (2) 24-inch inside diameter corrugated steel culverts began. The culverts were removed by first excavating overburden soil and inserting slings lengthwise through the culverts. The culverts were lifted out of the excavation area and staged for later use. Soil was excavated to a maximum of seven (7) feet bls and horizontally to the excavation limits established by TtNUS.

Several undetected and unsuspected utilities were encountered during excavation, which necessitated extensive hand excavation of impacted soil. WRS personnel discovered one damaged sanitary sewer line during excavation. The damage to the sanitary sewer line appeared to have been caused by a conventional hollow stem auger drill rig at some point in the past **(Appendix A)**. WRS personnel consulted the Contract Officer (CO) about the damaged line. The repair of the damaged line was delegated to J.A. Jones.

The SOW required that the North excavation be completed to five (5) feet bls. WRS personnel excavated the North area to five (5) feet bls and discovered visually stained soil that appeared to extend beyond five (5) feet bls. WRS personnel consulted with the ROICC and a change order was issued allowing excavation in the North area to seven (7) feet bls in the area adjacent to the OWS at which point the water table was intersected. The excavation area was also extended to include an approximate 70 foot by 15 foot area of the ditch to the west of the original excavation area north of the parking lot. This area was excavated to approximately 5 feet bls.

The resulting North excavation adjacent to Building 312 measured approximately 95 feet long (east-west) and extended approximately 37 feet to the north from the northeast corner of Building 312 and roughly following the outline of the drainage ditch north of Building 312. The excavation area covered an approximate 1269 square feet (ft^2) area and was a maximum of seven (7) feet deep.

Visually stained soils were observed in the northeast corner of the excavation on the east wall and appeared to continue beyond the limits of excavation as delineated by TtNUS at approximately five to seven feet bls.

South Excavation

Excavation in the South area was begun on September 27, 2003 and was completed on September 29, 2003. Soil in the South area was excavated to a maximum depth of three (3) feet bls as measured from the bottom of the ditch. The excavation continued horizontally until the limits of excavation established by TtNUS were achieved. The resultant excavation measured approximately 46 feet long (north-south) by 24 feet wide (east-west) by 3 feet deep.

Replacement of the approximately 50 feet of concrete retaining wall in the South excavation area was not necessary, as WRS was able to maintain the integrity of this structure **(Appendix A).**

No visually stained soils were observed at the limits of the excavation prior to backfilling of the South excavation area.

A combined total of 640.37 tons of PAH and TRPH impacted soil was excavated and stockpiled for transport and disposal from the North and South excavation areas.

Monitor Well Abandonment

During excavation of the North area, it became necessary to abandon three (3) monitor wells (CEF-312LS-5S, CEF-312-02 and CEF-312LS-6S). WRS personnel consulted the CO prior to abandoning the monitor wells.

The monitor wells were abandoned in accordance with Chapter 40C-3, FAC (Rules of the St. Johns Water management District [SJRWMD]) and all necessary permits were obtained prior to abandonment. The aforementioned wells were abandoned by filling the well casing with a cement grout. The grout was placed in the well casing utilizing a one-inch diameter polyvinyl chloride (PVC) tremie pipe. This pipe extended to the bottom of the monitor well to ensure that the monitor well was grouted from the bottom to land surface. The grout level in the well was inspected for settling 24 hours following grout emplacement. If settling occurred, the space was filled to land surface with additional grout.

2.2.2 Excavated Soil Transport and Disposal

Excavated PAH and TRPH impacted soils were transported off-site for disposal at Republic Services-Broadhurst Environmental Landfill in Screven, Georgia (Georgia ID #151-014D) as non-hazardous waste. Waste Transportation and Disposal, Inc. (WTDI) coordinated the disposal and transportation activities. Laboratory analytical data collected by TtNUS and CCI were used for characterization of the excavated soil to obtain disposal approval from the landfill. Dump trucks were weighed on site following load out to ensure they did not leave the site overloaded and as a means of reconciling disposal facility weight tickets. A comparison of on-site weights to landfill weights and a summary of non-hazardous waste manifests are provided in **Table 1**. Copies of the Truck Tracking Log, non-hazardous manifests and landfill disposal receipts are contained in **Appendix C**. A total of 640.37 tons of PAH and TRPH impacted media were accounted for by the landfill disposal reciepts and non-hazardous waste manifests.

2.2.3 Backfilling and Site Restoration

Backfilling of excavation areas began immediately following the completion of PAH and TRPH impacted soil excavation in each area. The delivery of certified clean fill began prior to the completion of excavation activities to ensure project continuity. Ray Gunter Trucking, Inc. of Jacksonville, Florida supplied the certified clean backfill from their Oakhurst pit. The backfill was sampled by WRS personnel on September 17, 2003. The sample was shipped to Environmental Conservation Laboratories of Jacksonville, Florida for analysis by United States Environmental Protection Agency (USEPA) Method 8260, USEPA Method 8270, USEPA Method 8081, USEPA Method 8082, USEPA Method 8151, USEPA Method 6010 and 7471, and Florida-Petroleum Residual Organics (FL-PRO). No analytes of concern were reported

above the Soil Cleanup Target Levels (SCTL) specified in Chapter 62-777, FAC for the soil sample collected from the backfill source. Laboratory analytical results for the backfill confirmatory sample (SS001) are provided in **Appendix D**.

Backfill material was placed within the excavation areas in lifts and compacted with a vibratory plate compactor. The final lift was graded to match the respective areas original configuration. The final density of each lift was verified by Atlantic Geotechnical & Environmental Sevices, Inc. of Jacksonville, Florida in accordance with the American Society of Testing and Materials (ASTM) methods D698-91 and D2216-98. Final compaction of no less than 96 percent was achieved in each excavation area. A copy of the Field Density Test Reports and Proctor Compaction Reports are included in **Appendix D**.

The backfilled areas were sodded utilizing pins to hold the sod in place. The section of fence removed during excavation activities was replaced. All staging areas were returned to pre-remedial conditions.

2.3 Sampling and Analysis

Per the SOW, OVA screening of soils excavated in the North and South areas at Building 312 was not required. Per Addendum 1 to the SOW, no confirmation sampling was required at either the North or South excavation areas located at Building 312. Addendum 1 required that WRS "dig to clean" boundary established by TtNUS.

3.0 Summary and Conclusions

The following summarize the remedial activities conducted at Building 312:

- Over the course of the source removal at the North and South areas at Building 312 OWS, a total of 640.37 tons of PAH and TRPH impacted soil was excavated and disposed. The excavated soil was disposed at Republic Services-Broadhurst Environmental Landfill in Screven, Georgia as non-hazardous waste.

- Three existing site monitor wells (CEF-312LS-5S, CEF-312-02 and CEF-312LS-6S) were abandoned.

- One mid-project change order was authorized by the ROICC. The change order authorized excavation to seven (7) feet bls in the North excavation area adjacent to the OWS and extension of the excavation area to the west in the ditch north of the parking area.

- Visually stained soils remained outside the limits of excavation in the North excavation area in the northeast corner along the east wall at approximately five to seven feet bls.

- No visually stained soils were observed at the limits of the excavation prior to backfilling of the South excavation area.

- No confirmatory soil samples and no soil screening samples were collected from the limits of the excavation per the SOW and relevant addenda.

- A total of 504 yd^3 of certified clean backfill was installed and compacted to match the pre-remedial grade. The North and South excavation areas were restored to pre-remedial activity conditions.

4.0 References

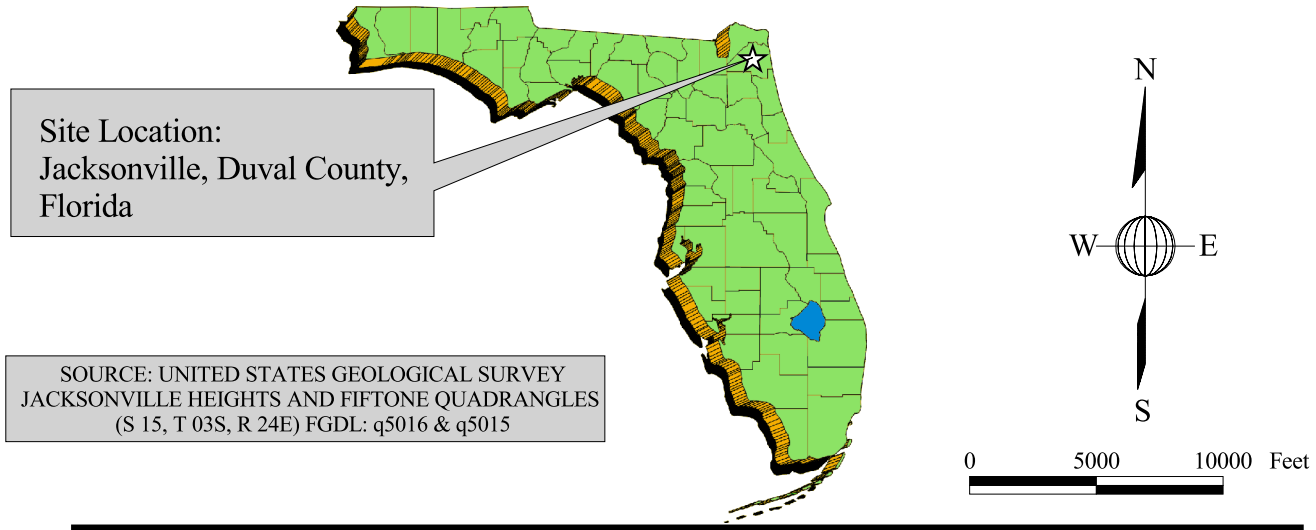
CH2M Hill Constructors, Inc., Source Removal Report, Soil Excavation Adjacent to Oil/Water Separator at Building 312, NAS Cecil Field, Jacksonville, Florida, November 2000.

CH2M Hill Constructors, Inc., Source Removal Report, Contaminated Soil Removal at Building 190, NAS Cecil Field, Jacksonville, Florida, November 2001.

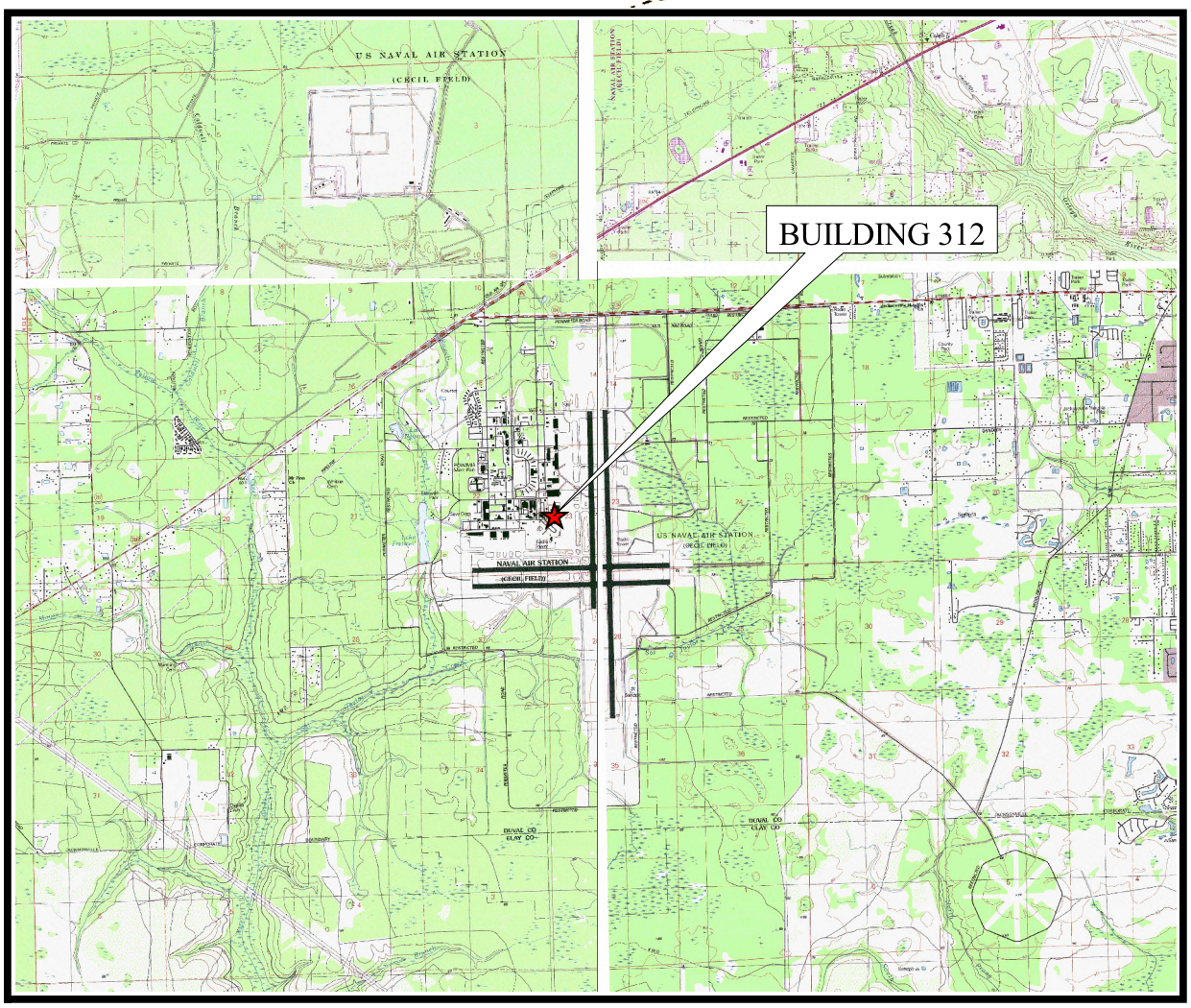
Florida Department of Environmental Protection, Petroleum Contamination Site Cleanup Criteria, Chapter 62-770, FAC, August 1999.

WRS, Workplan, Tank Removal Site 220 and Source Removal 312 OWS Areas, NAS Cecil Field, Jacksonville, Florida, July 2003.

Figures



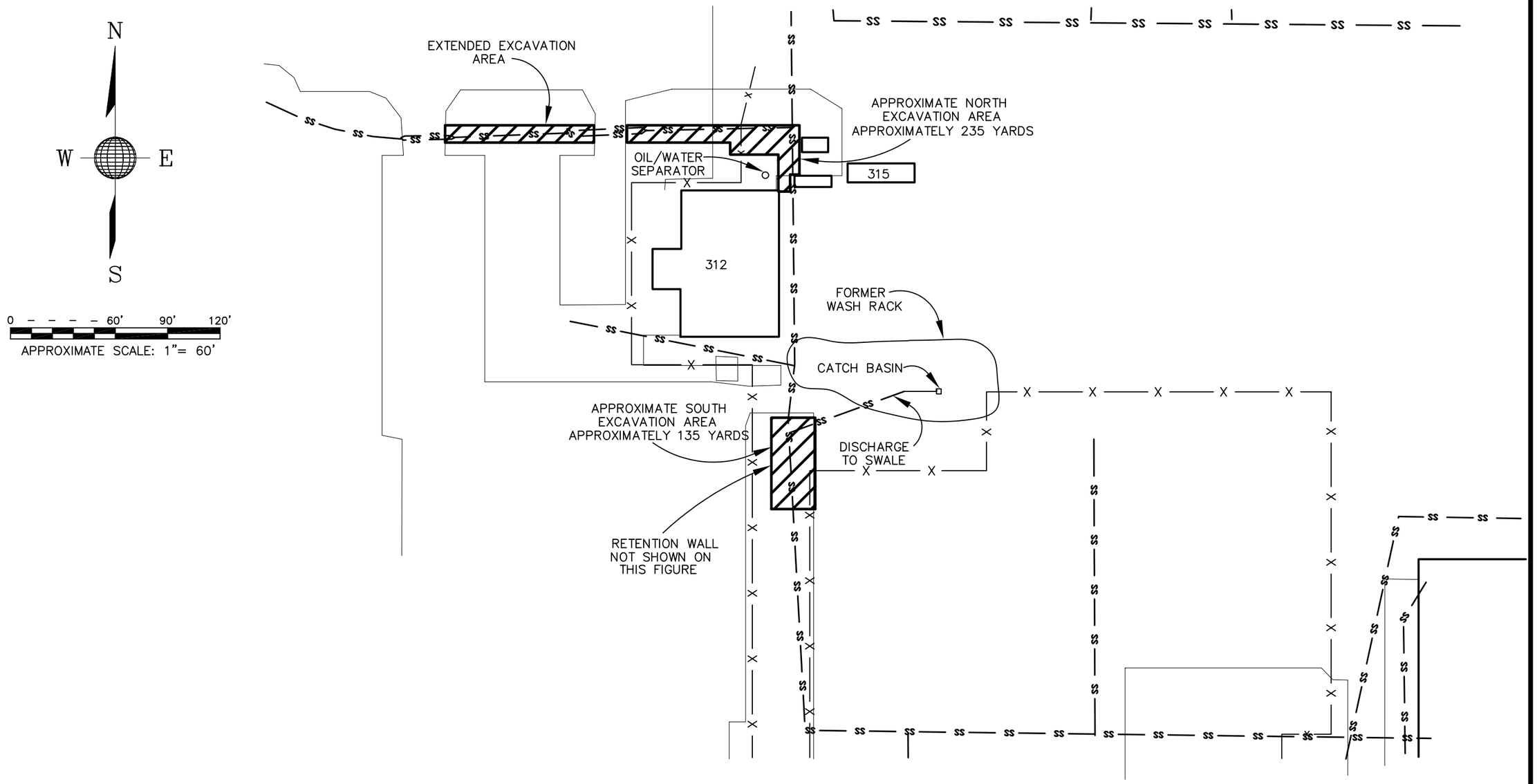
SOURCE: UNITED STATES GEOLOGICAL SURVEY
JACKSONVILLE HEIGHTS AND FIFTONE QUADRANGLES
(S 15, T 03S, R 24E) FGDL: q5016 & q5015



DRAWING STATUS	DRAFT		FINAL	☒
PROJECT NO.: 303607		PROJECT MANAGER: BRENT ANDERSON		
SCALE: AS SHOWN		CADD ID: 303607C001SVM	PLOT DATE: 10/7/03	CHK BY: D.F.	CHK DATE: 10/7/03
REVISION NO.:	REVISION DATE:	DRN BY: J.R.L.	DRN DATE: 10/7/03	APPVD BY: B.A.	APPVD DATE: 10/7/03

WRS Infrastructure & Environment, Inc.
625 EAST TENNESSEE STREET, SUITE 100, TALLAHASSEE, FLORIDA 32308
PH:(850) 531-9860 FAX:(850) 531-9866

FIGURE 1
SITE VICINITY MAP
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480



LEGEND:

—— X ——	FENCELINE
—— ss ——	STORM SEWER
▭	APPROXIMATE EXCAVATION BOUNDARY

DRAWING STATUS	DRAFT	FINAL ☒
PROJECT NO. : 303607		
PROJECT MANAGER: BRENT ANDERSON		
SCALE: AS SHOWN		
REVISION NO.: 0	REV DATE:	
CADD ID: 303607C001	PLOT DATE:	10/7/03
DRN BY: J.R.L.	DRN DATE:	10/7/03
CHK BY: C.N.	CHK DATE:	10/7/03
APPVD BY: B.A.	APPVD DATE:	10/7/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108, TAMPA, FLORIDA 33619
PH: (813) 684-4400 FAX: (813) 684-9177

FIGURE 2
SITE MAP
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

Table

TABLE 1
Summary of Non-Hazardous Waste Manifests

Source Removal Report
NAS Cecil Field, Building 312 OWS Excavation Areas
NAS Cecil Field, Jacksonville, Duval County, Florida
WRS Project Number: 303607

Date	Truck Number	Company	Manifest Number	Gross Weight (lbs)	Tare Weight (lbs)	Net Weight (lbs)	Net Weight (tons)	Landfill Net Weight (tons)
9/26/2003	L134	Republic	22041	84020	31200	52820	26.41	26.49
9/26/2003	L104	Republic	22040	82220	31920	50300	25.15	25.39
9/26/2003	L14	Republic	22039	89080	31620	57460	28.73	29.07
9/26/2003	L234	Republic	22038	88960	30440	58520	29.26	29.3
9/26/2003	L246	Republic	22037	85240	31660	53580	26.79	26.84
9/26/2003	L16	Republic	22035	82160	32880	49280	24.64	24.9
9/26/2003	L200	Republic	22036	81520	31380	50140	25.07	25.17
9/26/2003	L204	Republic	22034	79180	30680	48500	24.25	24.33
9/29/2003	L104	Republic	22033	82800	31920	50880	25.44	25.54
9/29/2003	L266	Republic	22032	83240	33040	50200	25.10	25.59
9/29/2003	L14	Republic	22027	82420	31440	50980	25.49	25.69
9/29/2003	L280	Republic	22028	82680	31980	50700	25.35	25.75
9/29/2003	L136	Republic	22029	82560	32880	49680	24.84	24.94
9/29/2003	L252	Republic	22030	80700	32440	48260	24.13	24.21
9/29/2003	W111	Republic	22031	80580	30780	49800	24.90	24.92
9/29/2003	W101	Republic	22026	81360	28500	52860	26.43	26.54
9/29/2003	L178	Republic	22025	81500	29500	52000	26.00	25.47
9/29/2003	L118	Republic	22024	78660	30600	48060	24.03	23.8
9/29/2003	L136	Republic	22015	78980	32880	46100	23.05	23.27
9/29/2003	L252	Republic	22012	80720	32440	48280	24.13	24.31
9/29/2003	L14	Republic	22013	82700	31000	51700	25.85	26.06
9/29/2003	L266	Republic	22014	81760	33040	48720	24.36	24.5
9/29/2003	W109	Republic	22016	74280	28160	46120	23.06	23.15
9/29/2003	W111	Republic	22017	87300	30780	56520	28.26	28.21
9/29/2003	W101	Republic	22023	82760	28500	54260	27.13	26.93
						Totals =	637.85	640.37

Notes:
lbs = pounds
Net Weight = as calculated from on-site scale.
Landfill Net Weight = as calculated from landfill scale.

Appendix A

Site Photographs

View of North area prior to excavation showing the limits of excavation. View from West.

View of North area and excavation limits from NE corner of Building 312. The culverts in the photo were removed and reinstalled following excavation.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 1 & 2
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

PAH and TRPH impacted soil stockpile area.

North excavation in progress.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 3 & 4
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

View of utilities in North area adjacent to OWS and sanitary sewer.

Ruptured sanitary sewer line next to monitor well.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 5 & 6
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

OWS system, sanitary sewer and other utilities in North area. View from South.

Stained soil in North area at approximately 5 feet bls.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 7 & 8
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

South excavation in progress. View from the South.

North area backfill and compaction in progress.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 9 & 10
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

Backfilling and compaction in North area adjacent to OWS system.

Load-out of PAH and TRPH impacted soil.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.

221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 11 & 12
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

View of South area following restoration activities.

View of North area and reinstalled culverts following restoration activities from the East.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.
221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 13 & 14
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

View of North area and reinstalled culverts following restoration activities from the West.

View of North area adjacent to OWS system following restoration activities.

PROJECT No: 303607	ID: 303400A001.PPT	DATE: 10/14/03

WRS Infrastructure & Environment, Inc.

221 HOBBS STREET, SUITE 108,, TAMPA, FLORIDA 33619
PH:(813) 684-4400 FAX:(813) 684-9177

SITE PHOTOGRAPHS 15 & 16
SOURCE REMOVAL REPORT
NAS CECIL FIELD, BUILDING 312 OWS AREAS
JACKSONVILLE, DUVAL COUNTY, FLORIDA
EMAC, REGION 4, FLORIDA ONLY
CONTRACT NUMBER N62467-02-D-0480

APPENDIX C

LABORATORY REPORT FROM MARCH 29, 2004 SAMPLING EVENT

Southeast ACCUTEST Laboratories

04/14/04

Technical Report for

Tetra Tech, NUS

CTO 78: Bldg. 312-OWS

N3965-WR#395(MOD 7)

Accutest Job Number: F23117

Report to:

Tetra-Tech, NUS
661 Andersen Drive
Pittsburgh, PA 15220

ATTN: Amy Thomson

Total number of pages in report: 539

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

SECTION 2

TABLE OF CONTENTS
FULL LABORATORY DATA DELIVERABLES

1. **TITLE / COVER PAGE**

2. **TABLE OF CONTENTS**

3. **CASE NARRATIVE**

4. **SAMPLE RECEIPT FORM**

5. **CUSTODY DOCUMENTATION**

6. **RESULTS SUMMARY**

7. **GC/MS SUPPORT DATA (SW846- METHOD 8260)**

7.1	Sample Result Report of Analysis	VOC.01
7.2	Surrogate Recoveries Summary	VOC.02
7.3	Method Blank Summary	VOC.03
7.4	Blank Spike Summary	VOC.04
7.5	Matrix Spike / Matrix Spike Duplicate Summary	VOC.05
7.6	Sample Duplicate Summary	VOC.06
7.7	Instrument Performance Check (BFB)	VOC.07
7.8	Initial Calibration Summary	VOC.08
7.9	Continuing Calibration Summary	VOC.09
7.10	Internal Standard Summary	VOC.10
7.11	Sequence Logs and Bench Sheets	VOC.11

8. **GC/MS SUPPORT DATA (SW846- METHOD 8270)**

8.1	Sample Result Report of Analysis	SVOC.01
8.2	Surrogate Recoveries Summary	SVOC.02
8.3	Method Blank Summary	SVOC.03
8.4	Blank Spike Summary	SVOC.04
8.5	Matrix Spike / Matrix Spike Duplicate Summary	SVOC.05
8.6	Sample Duplicate Summary	SVOC.06
8.7	Instrument Performance Check (DFTPP)	SVOC.07
8.8	Initial Calibration Summary	SVOC.08
8.9	Continuing Calibration Summary	SVOC.09
8.10	Internal Standard Summary	SVOC.10
8.11	Sequence Logs and Bench Sheets	SVOC.11
8.12	Sample Prep Report	SVOC.12

9. **GC SUPPORT DATA (METHOD FL PRO)**

9.1	Sample Result Report of Analysis	SGC.01
9.2	Surrogate Recoveries Summary	SGC.02
9.3	GC Surrogate Retention Time Summary	SGC.03
9.4	Method Blank Summary	SGC.04
9.5	Blank Spike Summary	SGC.05
9.6	Matrix Spike / Matrix Spike Duplicate Summary	SGC.06
9.7	Sample Duplicate Summary	SGC.07

9.8	Initial Calibration Summary	SGC.08
9.9	Continuing Calibration Summary	SGC.09
9.10	Sequence Log and Bench Sheets	SGC.10
9.11	Sample Prep Report	SGC.11

10. METALS SUPPORT DATA

10.1	Sample Result Report of Analysis	MET.01
10.2	Initial & Continuing Calibration Blank Summary	MET.02
10.3	Calibration Check Standards Summary	MET.03
10.4	Low Calibration Check Standards Summary	MET.04
10.5	Interfering Element Check Standards Summary	MET.05
10.6	Method Blank Summary	MET.06
10.7	Matrix Spike/Duplicate Results Summary	MET.07
10.8	Spike Blank/Lab Control Sample Summary	MET.08
10.9	Serial Dilution Results Summary	MET.09
10.10	Instrument Run Log Summary	MET.10
10.11	Metals Digestion Log	MET.11
10.12	Mercury Digestion Log	MET.12
10.13	Mercury Analysis Sheet	MET.13
10.14	Metals Raw Data	MET.14
10.15	IDL Table	MET.15

11. GEN. CHEM. SUPPORT DATA

11.1	Sample Result Report of Analysis	GEN.01
11.2	Method Blank & Spike Results Summary	GEN.02
11.3	Matrix Spike Results Summary	GEN.03
11.4	Duplicate Results Summary	GEN.04
11.5	Analytical Run	GEN.05

SECTION 3

Accutest Laboratories Southeast, Inc.
Analytical Narrative

Client:	Tetra Tech, NUS	**Job No:**	F23117
Site:	CTO 78: Bldg. 312-OWS	**Report Date**	4/12/2004 12:03:33 PM

1 Sample was collected on 03/29/2004 and were received at Accutest on 03/30/2004 properly preserved, at 1 Deg. C and intact. These Samples received an Accutest job number of F23117.A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified holding times, calibrations and quality control performance criteria were met.

Volatiles by GCMS By Method SW846 8260B

Matrix: SO **Batch ID:** VH917

All samples were run within holding times.

Sample(s) F23080-2MS, F23080-2MSD were used as the QC samples indicated.

All method blanks for this batch passed with no positive results

Extractables by GCMS By Method SW846 8270C

Matrix: SO **Batch ID:** OP10121

All samples were extracted within holding time for method

All samples were run within holding times.

Sample F23117-1 had a TIC reported that is considered to be from solvent impurity and is flagged accordingly.

All method blanks for this batch passed with no positive results.

The Blank Spike associated with prep batch OP10121 had one compound with a recovery 1% below acceptance limits. The associated samples were non-detect for this compound. This compound was within limits in the associated MS/MSD. Data not adversely affected.

Sample(s) F23033-1MS, F23033-1MSD were used as the QC samples indicated.

Recovery for 4-Chloroaniline was outside of control limits. Probable cause due to matrix interference.

Extractables by GC By Method FLORIDA-PRO

Matrix: SO **Batch ID:** OP10118

All samples were extracted within holding time for method

All samples were run within holding times.

All method blanks for this batch passed with no positive results

Sample(s) F23038-1MS, F23038-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix: SO **Batch ID:** MP6539

All samples were run within holding times.

All samples were digested within holding time for method

All method blanks for this batch passed with no positive results

Sample(s) F23041-1DUP, F23041-1MS, F23041-1MSD, F23041-1SDL were used as the QC samples for metals.

RPD(s) for Serial Dilution for Cadmium, Lead are outside control limits for sample MP6539-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Wet Chemistry By Method EPA 160.3 M

Matrix: SO **Batch ID:** GN14153

Sample(s) F23011-14DUP were used as the QC samples for Solids, Percent.

Accutest Laboratories Southeast, Inc. certifies that this report meets the project requirements for analytical data produced for the samples as received at the Accutest Laboratories Southeast location as stated in the Analytical Task Order and the COC. In addition, Accutest Laboratories Southeast, Inc. certifies that data as reported meet the Data Quality Objectives for precision, accuracy and completeness as specified in the Accutest Laboratories Southeast, Inc. Quality Manual for other that conditions detailed above. It is recommended by Accutest Laboratories Southeast, Inc. that this report is to be used in its entirety. Accutest Laboratories Southeast, Inc. is not responsible for any assumptions of data quality if partial data packages are used to interpret data. The Accutest Laboratories Southeast, Inc. Laboratory Director as verified by the signature on the front page has authorized release of this report.

Narrative prepared by:

Date: April 12, 2004

Sue O. Bell, Project Manager (signature on file)

SECTION 4

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F23117

Client: Tetra Tech NUS Project: N0039 CTO 78

Date Received: 3/30/04 Time Received: 09:00

# of Coolers Received: 1 Cooler Temperatures: 1.0°C

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number:

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	(Yes)	No	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	Yes	(No)	
Trip Blank on COC ?	Yes	(No)	
Trip Blank Intact ?	Yes	No	(N/A)
Trip Blank Matrix ?	Soil	Water	(N/A)

Number of Encores ? Ø

Number of Soil Field Kits ? 1

Summary of Comments:

Signature: Jeff Mistraff Date: 3/30/04

Review Signature:

ASBD 12/30/03

0008

SECTION 5

TETRA TECH NUS, INC. F23117 CHAIN OF CUSTODY | NUMBER 312-032904 | PAGE 1 OF 1

PROJECT NO: N0039 CTO 78	FACILITY: Bldg. 312 - OWS	PROJECT MANAGER: PAUL CALLIGAN	PHONE NUMBER: 813 906 0202
SAMPLERS (SIGNATURE): Melvin W. Dale		FIELD OPERATIONS LEADER: MELV DALE	PHONE NUMBER: 904 636 6125
		CARRIER/WAYBILL NUMBER: Fedex 8427 1834 7440	

LABORATORY NAME AND CONTACT: ACCUTEST Joe Bell
ADDRESS: 4405 Vineland Rd C-15
CITY, STATE: ORLANDO, FL 32811

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2004)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	VOCs w/TICs 8260B	SVOCs w/TICs 8270C	TRPH FL-PRO	Select Metals 6010B	VOC w/TICs 8260B				COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	G	G				
PRESERVATIVE USED									H_2O	None	None	None	None CH_3OH				
3/29/	1530	CEF-312-B020-06		5	6	SO	G	5	✓	✓	✓	✓	✓				Cool to 4°C

See work release N3965-395 Mod 7 for list of metals.

1. RELINQUISHED BY: Melvin W. Dale	DATE: 3/29/04	TIME: 1900	1. RECEIVED BY: Fedex	DATE	TIME
2. RELINQUISHED BY: FED EX	DATE: 3/30/04	TIME: 09:00	2. RECEIVED BY: Jill Mistroff	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

SECTION 6

Accutest Laboratories

Sample Summary

Tetra Tech, NUS

Job No: F23117

CTO 78: Bldg. 312-OWS
Project No: N3965-WR#395(MOD 7)

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
F23117-1	03/29/04	15:30	MD	03/30/04	SO	Soil	CEF-312-B020-06

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8260B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H024677.D	1	04/05/04	NAF	n/a	n/a	VH917
Run #2							

	Initial Weight
Run #1	5.37 g
Run #2	

VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	28	14	ug/kg	
107-13-1	Acrylonitrile	ND	28	14	ug/kg	
71-43-2	Benzene	ND	5.7	2.3	ug/kg	
75-27-4	Bromodichloromethane	ND	5.7	2.3	ug/kg	
75-25-2	Bromoform	ND	5.7	2.3	ug/kg	
108-90-7	Chlorobenzene	ND	5.7	2.3	ug/kg	
75-00-3	Chloroethane	ND	5.7	2.3	ug/kg	
67-66-3	Chloroform	ND	5.7	2.3	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	28	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.7	2.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.7	2.3	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.7	3.4	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.7	2.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.7	2.3	ug/kg	
124-48-1	Dibromochloromethane	ND	5.7	2.3	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.7	3.4	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.7	2.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.7	2.3	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.7	2.3	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.7	2.3	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.7	2.3	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.7	2.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.7	2.3	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	2.3	ug/kg	
74-83-9	Methyl bromide	ND	5.7	2.3	ug/kg	
74-87-3	Methyl chloride	ND	5.7	2.3	ug/kg	
75-09-2	Methylene chloride	ND	11	5.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.7	2.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.7	2.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.7	2.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.7	2.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.7	2.3	ug/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8260B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	ND	5.7	2.3	ug/kg	
79-01-6	Trichloroethylene	ND	5.7	2.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.7	2.8	ug/kg	
75-01-4	Vinyl chloride	ND	5.7	2.8	ug/kg	
1330-20-7	Xylene (total)	ND	17	5.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		78-123%
2037-26-5	Toluene-D8	97%		71-137%
460-00-4	4-Bromofluorobenzene	96%		61-157%
17060-07-0	1,2-Dichloroethane-D4	109%		74-125%

CAS No.	Tentatively Identified Compounds [a]	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

(a) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W019456.D	1	04/02/04	ME	04/02/04	OP10121	SW1018
Run #2							

	Initial Weight	Final Volume
Run #1	30.8 g	1.0 ml
Run #2		

ABN PPL List + 1&2 Methyl Naphthalene

CAS No.	Compound	Result	RL	MDL	Units	Q
95-57-8	2-Chlorophenol	ND	200	40	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	200	40	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	40	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	200	40	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	990	400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	400	79	ug/kg	
88-75-5	2-Nitrophenol	ND	200	40	ug/kg	
100-02-7	4-Nitrophenol	ND	990	400	ug/kg	
87-86-5	Pentachlorophenol	ND	990	400	ug/kg	
108-95-2	Phenol	ND	200	40	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	200	40	ug/kg	
83-32-9	Acenaphthene	ND	200	40	ug/kg	
208-96-8	Acenaphthylene	ND	200	40	ug/kg	
120-12-7	Anthracene	ND	200	40	ug/kg	
92-87-5	Benzidine	ND	2000	990	ug/kg	
56-55-3	Benzo(a)anthracene	ND	200	40	ug/kg	
50-32-8	Benzo(a)pyrene	ND	200	40	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	200	40	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	200	79	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	200	40	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	200	40	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	400	99	ug/kg	
91-58-7	2-Chloronaphthalene	ND	200	40	ug/kg	
106-47-8	4-Chloroaniline	ND	790	300	ug/kg	
218-01-9	Chrysene	ND	200	40	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	200	40	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	200	79	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	200	40	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	200	40	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	200	40	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	200	40	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	200	40	ug/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

ABN PPL List + 1&2 Methyl Naphthalene

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	200	40	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	200	79	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	200	79	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	400	200	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	200	79	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	400	99	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	400	200	ug/kg	
84-66-2	Diethyl phthalate	ND	400	99	ug/kg	
131-11-3	Dimethyl phthalate	ND	400	99	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	400	200	ug/kg	
206-44-0	Fluoranthene	ND	200	40	ug/kg	
86-73-7	Fluorene	ND	200	40	ug/kg	
118-74-1	Hexachlorobenzene	ND	200	40	ug/kg	
87-68-3	Hexachlorobutadiene	ND	200	79	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	200	79	ug/kg	
67-72-1	Hexachloroethane	ND	200	79	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	200	79	ug/kg	
78-59-1	Isophorone	ND	200	40	ug/kg	
90-12-0	1-Methylnaphthalene	ND	200	40	ug/kg	
91-57-6	2-Methylnaphthalene	ND	200	40	ug/kg	
91-20-3	Naphthalene	ND	200	40	ug/kg	
98-95-3	Nitrobenzene	ND	200	40	ug/kg	
62-75-9	N-Nitrosodimethylamine	ND	400	99	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	200	79	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	200	40	ug/kg	
85-01-8	Phenanthrene	ND	200	40	ug/kg	
129-00-0	Pyrene	ND	200	79	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	200	40	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		45-114%
4165-62-2	Phenol-d5	83%		44-124%
118-79-6	2,4,6-Tribromophenol	81%		50-128%
4165-60-0	Nitrobenzene-d5	79%		41-123%
321-60-8	2-Fluorobiphenyl	76%		46-122%
1718-51-0	Terphenyl-d14	96%		45-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

ABN PPL List + 1&2 Methyl Naphthalene

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
123-42-2	2-Pentanone, 4-hydroxy-4-methyl- [a]	3.70	24000	ug/kg	JN
	Total TIC, Semi-Volatile		24000	ug/kg	J

(a) Extraction solvent impurity

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	FLORIDA-PRO SW846 3550B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP36853.D	1	04/03/04	SM	04/02/04	OP10118	GOP1194
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	10	6.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		59-121%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
		Percent Solids:	81.9
Project:	CTO 78: Bldg. 312-OWS		

Metals Analysis

Analyte	Result	RL	IDL	Units	DF	Prep	Analyzed By		Method	Prep Method
Arsenic	0.46 B	0.58	0.32	mg/kg	1	04/01/04	04/02/04	DM	SW846 6010B [1]	SW846 3050B [2]
Cadmium	0.035 U	0.46	0.035	mg/kg	1	04/01/04	04/02/04	DM	SW846 6010B [1]	SW846 3050B [2]
Chromium	5.0	1.2	0.046	mg/kg	1	04/01/04	04/02/04	DM	SW846 6010B [1]	SW846 3050B [2]
Lead	5.5 B	12	0.14	mg/kg	1	04/01/04	04/02/04	DM	SW846 6010B [1]	SW846 3050B [2]

(1) Instrument QC Batch: MA3750
(2) Prep QC Batch: MP6539

RL = Reporting Limit
IDL = Instrument Detection Limit

U = Indicates a result < IDL
B = Indicates a result >= IDL but < RL

SECTION 7

SAMPLE RESULT REPORT OF ANALYSIS

VOC.01

Accutest Laboratories

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8260B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H024677.D	1	04/05/04	NAF	n/a	n/a	VH917
Run #2							

	Initial Weight
Run #1	5.37 g
Run #2	

VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	28	14	ug/kg	
107-13-1	Acrylonitrile	ND	28	14	ug/kg	
71-43-2	Benzene	ND	5.7	2.3	ug/kg	
75-27-4	Bromodichloromethane	ND	5.7	2.3	ug/kg	
75-25-2	Bromoform	ND	5.7	2.3	ug/kg	
108-90-7	Chlorobenzene	ND	5.7	2.3	ug/kg	
75-00-3	Chloroethane	ND	5.7	2.3	ug/kg	
67-66-3	Chloroform	ND	5.7	2.3	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	28	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.7	2.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.7	2.3	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.7	3.4	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.7	2.3	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.7	2.3	ug/kg	
124-48-1	Dibromochloromethane	ND	5.7	2.3	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.7	3.4	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.7	2.3	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.7	2.3	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.7	2.3	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.7	2.3	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.7	2.3	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.7	2.3	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.7	2.3	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	2.3	ug/kg	
74-83-9	Methyl bromide	ND	5.7	2.3	ug/kg	
74-87-3	Methyl chloride	ND	5.7	2.3	ug/kg	
75-09-2	Methylene chloride	ND	11	5.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.7	2.3	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.7	2.3	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.7	2.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.7	2.3	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.7	2.3	ug/kg	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CEF-312-B020-06		
Lab Sample ID:	F23117-1	**Date Sampled:**	03/29/04
Matrix:	SO - Soil	**Date Received:**	03/30/04
Method:	SW846 8260B	**Percent Solids:**	81.9
Project:	CTO 78: Bldg. 312-OWS		

VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	ND	5.7	2.3	ug/kg	
79-01-6	Trichloroethylene	ND	5.7	2.3	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.7	2.8	ug/kg	
75-01-4	Vinyl chloride	ND	5.7	2.8	ug/kg	
1330-20-7	Xylene (total)	ND	17	5.1	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		78-123%
2037-26-5	Toluene-D8	97%		71-137%
460-00-4	4-Bromofluorobenzene	96%		61-157%
17060-07-0	1,2-Dichloroethane-D4	109%		74-125%

CAS No.	Tentatively Identified Compounds [a]	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

(a) No TICs detected.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024677.D
Acq On : 5 Apr 2004 5:07 pm
Sample : f23117-1
Misc : ms3084,vh917,5.37,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:22 2004

Vial: 14
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.02	96	491145	50.00 ug/Kg	0.02
50) Chlorobenzene-d5	13.11	117	373508	50.00 ug/Kg	0.01
68) 1,4-Dichlorobenzene-d4	15.52	152	189333	50.00 ug/Kg	0.01
94) Tert Butyl Alcohol-d10	7.30	65	72182	250.00 ug/Kg	0.03

System Monitoring Compounds

32) Dibromofluoromethane	9.29	113	137984	55.30 ug/Kg	0.02
Spiked Amount 50.000	Range 78 - 123		Recovery = 110.60%		
37) 1,2-Dichloroethane-d4	9.67	65	185109	54.51 ug/Kg	0.02
Spiked Amount 50.000	Range 74 - 125		Recovery = 109.02%		
51) Toluene-d8	11.61	98	467998	48.53 ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 137		Recovery = 97.06%		
71) 4-Bromofluorobenzene	14.30	95	207311	48.13 ug/Kg	0.01
Spiked Amount 50.000	Range 61 - 157		Recovery = 96.26%		

Target Compounds Qvalue

NMC 04-06-04

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

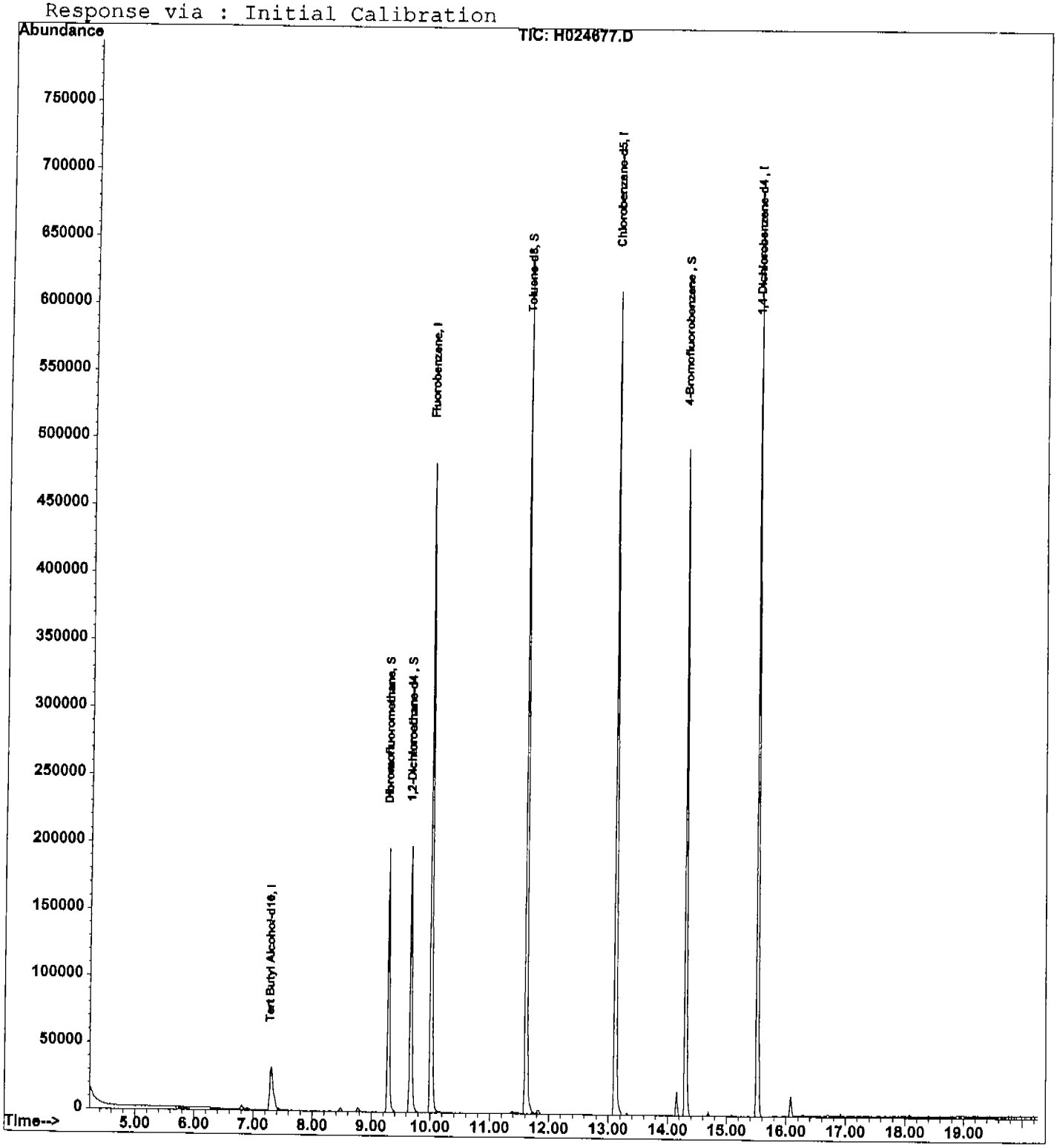
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040504\H024677.D
Acq On : 5 Apr 2004 5:07 pm
Sample : f23117-1
Misc : ms3084,vh917,5.37,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:22 2004

Vial: 14
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\040504\H024677.D
Acq On : 5 Apr 2004 5:07 pm
Sample : f23117-1
Misc : ms3084,vh917,5.37,,,,,
MS Integration Params: LSCINT.P
Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Library : C:\DATABASE\NIST98.L

Vial: 14
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

No Library Search Compounds Detected

****
H024677.D 0324SOIL.M Wed Apr 07 14:37:11 2004 RPT1

NW-04-01-04

SURROGATE RECOVERIES SUMMARY

VOC.02

Volatile Surrogate Recovery Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F23117-1	H024677.D	111.0	97.0	96.0	109.0
F23080-2MS	H024671.D	104.0	98.0	99.0	93.0
F23080-2MSD	H024672.D	103.0	99.0	99.0	92.0
VH917-BS	H024665.D	103.0	92.0	91.0	101.0
VH917-MB	H024666.D	99.0	95.0	98.0	97.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	78-123%
S2 = Toluene-D8	71-137%
S3 = 4-Bromofluorobenzene	61-157%
S4 = 1,2-Dichloroethane-D4	74-125%

METHOD BLANK SUMMARY

VOC.03

Method Blank Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH917-MB	H024666.D	1	04/05/04	NAF	n/a	n/a	VH917

The QC reported here applies to the following samples: **Method:** SW846 8260B

F23117-1

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	25	13	ug/kg	
107-13-1	Acrylonitrile	ND	25	13	ug/kg	
71-43-2	Benzene	ND	5.0	2.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	2.0	ug/kg	
75-25-2	Bromoform	ND	5.0	2.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	2.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.0	ug/kg	
67-66-3	Chloroform	ND	5.0	2.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	10	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	2.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	2.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	3.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	2.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	2.0	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	2.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	3.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	2.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	2.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	2.0	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	2.0	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	2.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	2.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	2.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	2.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.0	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	ND	10	5.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	2.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	2.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	2.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	2.0	ug/kg	
108-88-3	Toluene	ND	5.0	2.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	2.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	2.5	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	

Method Blank Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH917-MB	H024666.D	1	04/05/04	NAF	n/a	n/a	VH917

The QC reported here applies to the following samples: **Method:** SW846 8260B

F23117-1

CAS No.	Compound	Result	RL	MDL	Units	Q
1330-20-7	Xylene (total)	ND	15	4.5	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	78-123%
2037-26-5	Toluene-D8	95%	71-137%
460-00-4	4-Bromofluorobenzene	98%	61-157%
17060-07-0	1,2-Dichloroethane-D4	97%	74-125%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024666.D
Acq On : 5 Apr 2004 11:43 am
Sample : MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:17 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:03:30 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.00	96	568456	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.11	117	497988	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.52	152	242883	50.00 ug/Kg	0.01
94) Tert Butyl Alcohol-d10	7.29	65	99360	250.00 ug/Kg	0.02
System Monitoring Compounds					
32) Dibromofluoromethane	9.27	113	143001	49.51 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 99.02%		
37) 1,2-Dichloroethane-d4	9.66	65	191067	48.62 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 97.24%		
51) Toluene-d8	11.61	98	612975	47.68 ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 137		Recovery = 95.36%		
71) 4-Bromofluorobenzene	14.30	95	269935	48.85 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 97.70%		

Target Compounds Qvalue

NW 04 06 04

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

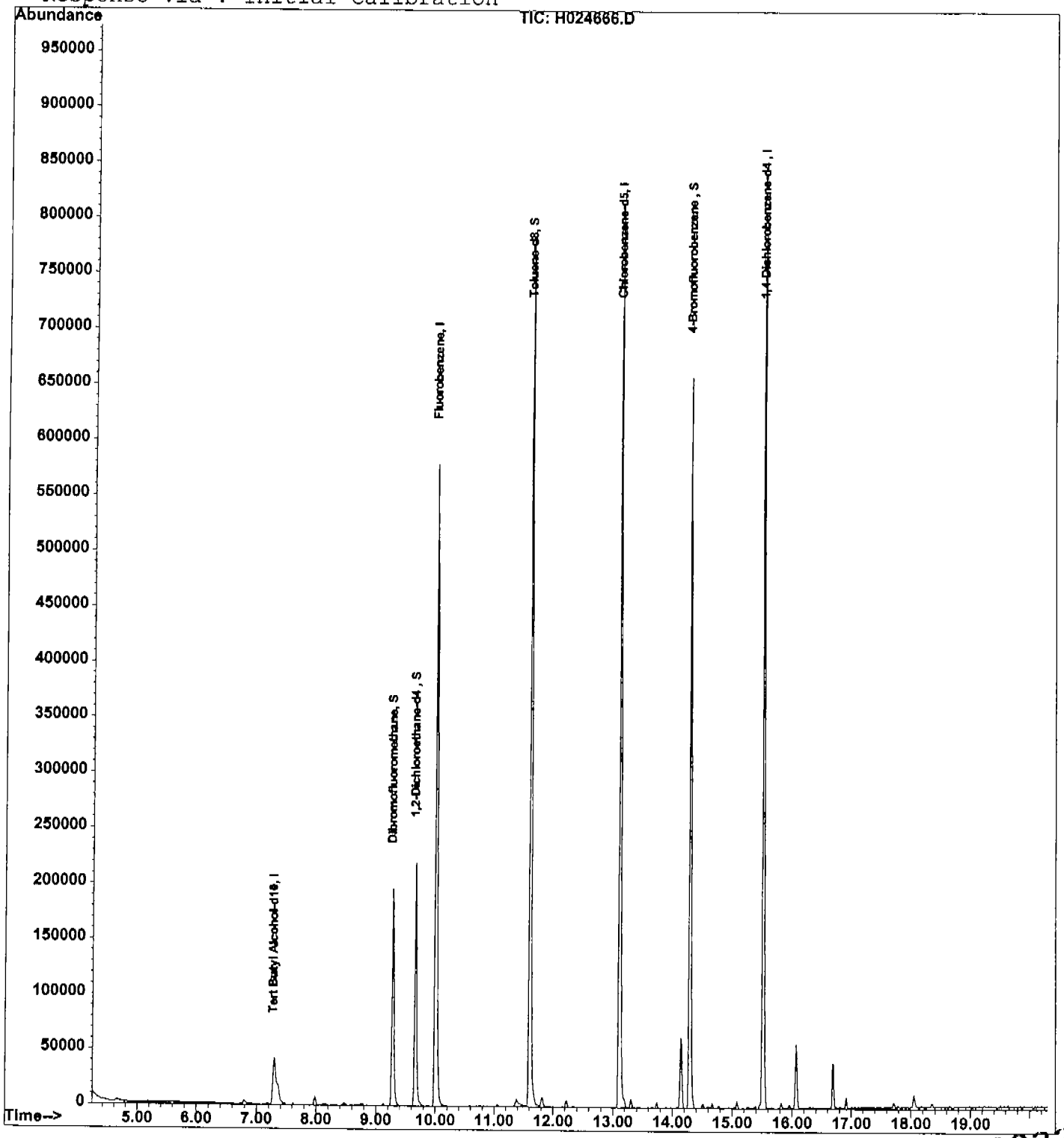
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040504\H024666.D
Acq On : 5 Apr 2004 11:43 am
Sample : MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:17 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



0033

BLANK SPIKE SUMMARY

VOC.04

Blank Spike Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH917-BS	H024665.D	1	04/05/04	NAF	n/a	n/a	VH917

The QC reported here applies to the following samples: **Method:** SW846 8260B

F23117-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
107-02-8	Acrolein	250	443	177	28-180
107-13-1	Acrylonitrile	250	271	108	43-151
71-43-2	Benzene	50	54.9	110	74-124
75-27-4	Bromodichloromethane	50	54.1	108	74-124
75-25-2	Bromoform	50	50.5	101	79-127
108-90-7	Chlorobenzene	50	48.9	98	78-117
75-00-3	Chloroethane	50	42.7	85	63-147
67-66-3	Chloroform	50	53.8	108	75-121
110-75-8	2-Chloroethyl vinyl ether	250	276	110	31-165
56-23-5	Carbon tetrachloride	50	53.2	106	67-131
75-34-3	1,1-Dichloroethane	50	53.7	107	71-118
75-35-4	1,1-Dichloroethylene	50	48.9	98	64-126
107-06-2	1,2-Dichloroethane	50	52.3	105	72-120
78-87-5	1,2-Dichloropropane	50	56.6	113	74-126
124-48-1	Dibromochloromethane	50	48.7	97	78-120
75-71-8	Dichlorodifluoromethane	50	28.8	58	33-172
156-59-2	cis-1,2-Dichloroethylene	50	54.3	109	75-124
10061-01-5	cis-1,3-Dichloropropene	50	56.2	112	72-120
541-73-1	m-Dichlorobenzene	50	47.9	96	79-119
95-50-1	o-Dichlorobenzene	50	49.1	98	78-119
106-46-7	p-Dichlorobenzene	50	47.3	95	78-117
156-60-5	trans-1,2-Dichloroethylene	50	52.3	105	70-122
10061-02-6	trans-1,3-Dichloropropene	50	48.6	97	75-118
100-41-4	Ethylbenzene	50	48.6	97	77-120
74-83-9	Methyl bromide	50	42.1	84	52-156
74-87-3	Methyl chloride	50	44.0	88	63-142
75-09-2	Methylene chloride	50	54.0	108	51-142
1634-04-4	Methyl Tert Butyl Ether	50	63.5	127	77-131
71-55-6	1,1,1-Trichloroethane	50	52.8	106	70-131
79-34-5	1,1,2,2-Tetrachloroethane	50	45.9	92	76-121
79-00-5	1,1,2-Trichloroethane	50	48.1	96	77-118
127-18-4	Tetrachloroethylene	50	48.9	98	68-127
108-88-3	Toluene	50	48.5	97	74-118
79-01-6	Trichloroethylene	50	54.7	109	72-122
75-69-4	Trichlorofluoromethane	50	41.9	84	60-147
75-01-4	Vinyl chloride	50	43.6	87	64-144

Blank Spike Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VH917-BS	H024665.D	1	04/05/04	NAF	n/a	n/a	VH917

The QC reported here applies to the following samples: **Method:** SW846 8260B

F23117-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
1330-20-7	Xylene (total)	150	142	95	78-122

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	78-123%
2037-26-5	Toluene-D8	92%	71-137%
460-00-4	4-Bromofluorobenzene	91%	61-157%
17060-07-0	1,2-Dichloroethane-D4	101%	74-125%

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024665.D
Acq On : 5 Apr 2004 11:16 am
Sample : BS
Misc : ms3035,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:01 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:03:30 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.00	96	566322	50.00	ug/Kg	0.00
50) Chlorobenzene-d5	13.11	117	526291	50.00	ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.51	152	293974	50.00	ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.28	65	128435	250.00	ug/Kg	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	9.28	113	148639	51.66	ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 103.32%			
37) 1,2-Dichloroethane-d4	9.66	65	198135	50.60	ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 101.20%			
51) Toluene-d8	11.60	98	622350	45.81	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 91.62%			
71) 4-Bromofluorobenzene	14.30	95	303657	45.40	ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 90.80%			

AKF-04-0604

Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.36	85	123419	28.79	ug/Kg	100
3) Chloromethane	4.75	50	266477	44.05	ug/Kg	95
4) Vinyl Chloride	4.96	62	212949	43.58	ug/Kg	92
5) Bromomethane	5.58	94	122182	42.10	ug/Kg	98
6) Chloroethane	5.75	64	106153	42.70	ug/Kg	84
7) Trichlorofluoromethane	6.06	101	199975	41.87	ug/Kg	96
8) 1,2-Dichlorotrifluoroethan	6.39	67	220377	44.21	ug/Kg	96
10) Acrolein	6.61	56	57976	443.14	ug/Kg	90
11) Freon 113	6.82	101	161337	45.36	ug/Kg	96
12) 1,1-Dichloroethene	6.79	61	312305	48.89	ug/Kg	96
13) Acetone	6.79	43	493205	263.92	ug/Kg	100
14) Iodomethane	7.03	142	305517	51.86	ug/Kg	97
15) Carbon Disulfide	7.16	76	696070	51.11	ug/Kg	100
16) Methyl acetate	7.18	43	1224530	286.19	ug/Kg	99
17) Methylene Chloride	7.36	49	356167	53.97	ug/Kg	94
18) Acrylonitrile	7.62	53	455707	270.90	ug/Kg	99
19) Methyl Tert Butyl Ether	7.66	73	728467	63.53	ug/Kg	97
20) trans-1,2-Dichloroethene	7.70	61	381455	52.28	ug/Kg	98
21) Hexane	7.98	57	386999	62.23	ug/Kg	98
22) Vinyl acetate	8.14	43	2516431	278.47	ug/Kg	100
23) 1,1-Dichloroethane	8.18	63	465798	53.75	ug/Kg	97
24) Di-isopropyl ether	8.16	45	1071384	59.34	ug/Kg#	74
25) Ethyl tert-butyl Ether	8.56	59	906098	61.16	ug/Kg	97
26) 2-Butanone	8.75	43	791745	290.79	ug/Kg	99
27) cis-1,2-Dichloroethene	8.80	96	246536	54.31	ug/Kg	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024665.D
Acq On : 5 Apr 2004 11:16 am
Sample : BS
Misc : ms3035,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:01 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:03:30 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
28) 2,2-Dichloropropane	8.82	77	267836	53.81 ug/Kg	96
29) Bromochloromethane	9.07	128	121467	63.47 ug/Kg	92
30) Chloroform	9.11	83	430996	53.80 ug/Kg	95
31) Tetrahydrofuran	9.12	42	96616	67.63 ug/Kg	96
33) 1,1,1-Trichloroethane	9.37	97	319288	52.80 ug/Kg	98
34) Cyclohexane	9.46	56	467579	58.58 ug/Kg	88
35) 1,1-Dichloropropene	9.52	75	300933	51.61 ug/Kg	98
36) Carbon Tetrachloride	9.56	117	275503	53.22 ug/Kg	98
38) 1,2-Dichloroethane	9.74	62	358782	52.32 ug/Kg	96
39) Benzene	9.76	78	941457	54.86 ug/Kg	98
40) Tert-Amyl Methyl Ether	9.78	73	746838	54.24 ug/Kg	99
41) Trichloroethene	10.39	95	244943	54.75 ug/Kg	99
42) Methylcyclohexane	10.63	83	399179	59.69 ug/Kg	98
43) 1,2-Dichloropropane	10.62	63	261294	56.55 ug/Kg	98
44) Dibromomethane	10.75	93	144538	54.47 ug/Kg	98
45) Bromodichloromethane	10.86	83	328756	54.08 ug/Kg	99
46) 2-Nitropropane	11.05	41	483007	304.34 ug/Kg	96
47) 2-Chloroethyl vinyl ether	11.07	63	595534	276.24 ug/Kg	92
48) cis-1,3-Dichloropropene	11.30	75	422866	56.19 ug/Kg	99
49) 4-Methyl-2-pentanone	11.39	43	1710157	303.40 ug/Kg	99
52) Toluene	11.68	91	978760	48.47 ug/Kg	98
53) trans-1,3-Dichloropropene	11.83	75	381747	48.59 ug/Kg	96
54) 1,1,2-Trichloroethane	12.05	83	181816	48.06 ug/Kg	96
55) 1,3-Dichloropropane	12.23	76	380463	48.94 ug/Kg	95
56) 2-hexanone	12.21	43	1201425	267.25 ug/Kg	98
57) Tetrachloroethene	12.26	166	258652	48.92 ug/Kg	96
58) Dibromochloromethane	12.50	129	239250	48.74 ug/Kg	96
59) 1,2-Dibromoethane	12.67	107	204713	48.42 ug/Kg	97
60) 1-Chlorohexane	13.00	91	353079	57.60 ug/Kg	97
61) Chlorobenzene	13.14	112	636066	48.93 ug/Kg	97
62) 1,1,1,2-Tetrachloroethane	13.19	131	212354	46.40 ug/Kg	98
63) Ethylbenzene	13.20	91	1087142	48.59 ug/Kg	99
64) m,p-Xylene	13.31	91	1749633	94.69 ug/Kg	100
65) o-Xylene	13.73	91	891294	47.32 ug/Kg	99
66) Styrene	13.74	104	648946	49.87 ug/Kg	98
67) Bromoform	14.00	173	171781	50.51 ug/Kg	97
69) Isopropylbenzene	14.09	105	1033060	46.07 ug/Kg	99
70) Cyclohexanone	14.25	55	49897	230.68 ug/Kg	93
72) 1,1,2,2-Tetrachloroethane	14.36	83	308260	45.91 ug/Kg	100
73) trans-1,4-Dichloro-2-Buten	14.41	53	96257	51.11 ug/Kg	93
74) 1,2,3-Trichloropropane	14.45	110	79279	44.18 ug/Kg	96

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024665.D
Acq On : 5 Apr 2004 11:16 am
Sample : BS
Misc : ms3035,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:01 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:03:30 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
75)	Bromobenzene	14.50	156	263864	44.14 ug/Kg	93
76)	n-Propylbenzene	14.51	91	1254681	44.42 ug/Kg	97
77)	2-Chlorotoluene	14.67	91	888594	44.50 ug/Kg	98
78)	1,3,5-Trimethylbenzene	14.67	105	868893	49.43 ug/Kg	99
79)	4-Chlorotoluene	14.77	91	827940	46.33 ug/Kg	97
80)	tert-Butylbenzene	15.04	91	633580	45.32 ug/Kg	96
81)	1,2,4-Trimethylbenzene	15.08	105	910322	45.80 ug/Kg	98
82)	sec-Butylbenzene	15.26	105	1095895	47.80 ug/Kg	99
83)	4-Isopropyltoluene	15.38	119	925417	50.52 ug/Kg	99
84)	1,3-Dichlorobenzene	15.46	146	518148	47.87 ug/Kg	98
85)	1,4-Dichlorobenzene	15.54	146	515612	47.26 ug/Kg	98
87)	n-Butylbenzene	15.81	91	890974	50.97 ug/Kg	98
88)	1,2-Dichlorobenzene	15.95	146	495136	49.13 ug/Kg	98
89)	1,2-Dibromo-3-Chloropropan	16.76	75	54455	48.82 ug/Kg	96
90)	1,2,4-Trichlorobenzene	17.71	180	321910	50.45 ug/Kg	99
91)	Hexachlorobutadiene	17.87	225	179668	49.34 ug/Kg	94
92)	Naphthalene	18.05	128	714580	50.64 ug/Kg	100
93)	1,2,3-Trichlorobenzene	18.35	180	288310	50.32 ug/Kg	95
95)	Tert Butyl Alcohol	7.38	59	367463	469.72 ug/Kg	96
98)	1,4-Dioxane	10.72	88	54125	941.42 ug/Kg	89

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

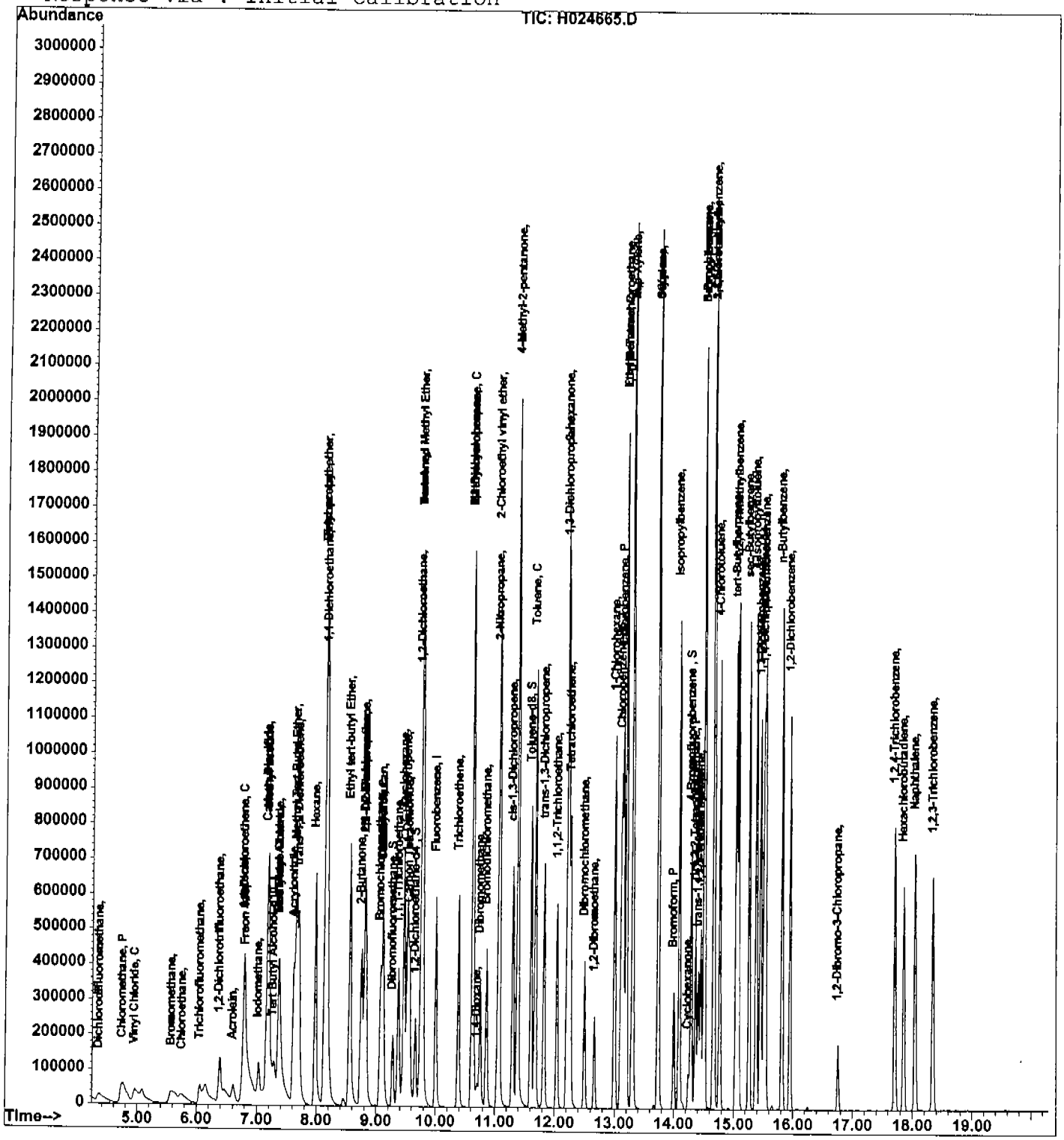
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040504\H024665.D
Acq On : 5 Apr 2004 11:16 am
Sample : BS
Misc : ms3035,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:01 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



0040

MATRIX SPIKE/MATRIX SPIKE DUPLICATE SUMMARY

VOC.05

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F23080-2MS	H024671.D	1	04/05/04	NAF	n/a	n/a	VH917
F23080-2MSD	H024672.D	1	04/05/04	NAF	n/a	n/a	VH917
F23080-2 [a]	H024668.D	1	04/05/04	NAF	n/a	n/a	VH917

The QC reported here applies to the following samples: **Method:** SW846 8260B

F23117-1

CAS No.	Compound	F23080-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	ND		323	413	128	358	110	14	20-144/42
107-13-1	Acrylonitrile	ND		323	242	75	216	66	11	22-116/31
71-43-2	Benzene	ND		64.6	75.7	117	69.7	107	8	63-135/23
75-27-4	Bromodichloromethane	ND		64.6	71.7	111	64.9	100	10	63-126/23
75-25-2	Bromoform	ND		64.6	55.8	86	50.8	78	9	54-109/24
108-90-7	Chlorobenzene	ND		64.6	66.4	103	60.5	93	9	64-130/24
75-00-3	Chloroethane	ND		64.6	62.5	97	59.3	91	5	53-172/28
67-66-3	Chloroform	ND		64.6	76.5	118	71.3	110	7	68-131/24
110-75-8	2-Chloroethyl vinyl ether	ND		323	272	84	240	74	13	16-159/31
56-23-5	Carbon tetrachloride	ND		64.6	82.4	127	75.6	116	9	64-148/24
75-34-3	1,1-Dichloroethane	ND		64.6	75.6	117	70.6	109	7	64-130/25
75-35-4	1,1-Dichloroethylene	ND		64.6	70.3	109	64.8	100	8	55-149/28
107-06-2	1,2-Dichloroethane	ND		64.6	67.9	105	62.9	97	8	60-114/22
78-87-5	1,2-Dichloropropane	ND		64.6	71.6	111	67.1	103	6	65-128/23
124-48-1	Dibromochloromethane	ND		64.6	63.1	98	58.2	90	8	60-119/23
75-71-8	Dichlorodifluoromethane	ND		64.6	44.7	69	41.8	64	7	41-185/30
156-59-2	cis-1,2-Dichloroethylene	ND		64.6	74.2	115	69.0	106	7	66-132/24
10061-01-5	cis-1,3-Dichloropropene	ND		64.6	68.5	106	62.3	96	9	57-118/25
541-73-1	m-Dichlorobenzene	ND		64.6	64.6	100	56.5	87	13	59-138/28
95-50-1	o-Dichlorobenzene	ND		64.6	62.6	97	54.9	84	13	56-128/27
106-46-7	p-Dichlorobenzene	ND		64.6	62.6	97	54.3	84	14	57-134/26
156-60-5	trans-1,2-Dichloroethylene	ND		64.6	72.6	112	68.0	105	7	63-137/27
10061-02-6	trans-1,3-Dichloropropene	ND		64.6	60.9	94	55.9	86	9	58-115/25
100-41-4	Ethylbenzene	ND		64.6	67.4	104	62.4	96	8	63-142/25
74-83-9	Methyl bromide	ND		64.6	66.6	103	62.9	97	6	38-188/27
74-87-3	Methyl chloride	ND		64.6	60.5	94	56.2	86	7	57-160/29
75-09-2	Methylene chloride	ND		64.6	78.6	122	73.6	113	7	40-183/34
1634-04-4	Methyl Tert Butyl Ether	ND		64.6	77.2	119	70.9	109	9	53-122/28
71-55-6	1,1,1-Trichloroethane	ND		64.6	81.4	126	74.5	115	9	70-149/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		64.6	55.9	86	50.0	77	11	45-121/33
79-00-5	1,1,2-Trichloroethane	ND		64.6	59.1	91	55.6	86	6	60-114/25
127-18-4	Tetrachloroethylene	ND		64.6	69.4	107	62.5	96	10	54-154/27
108-88-3	Toluene	ND		64.6	71.6	111	66.6	102	7	62-142/29
79-01-6	Trichloroethylene	ND		64.6	77.4	120	71.2	110	8	59-143/25
75-69-4	Trichlorofluoromethane	ND		64.6	66.1	102	60.6	93	9	59-171/28
75-01-4	Vinyl chloride	ND		64.6	66.4	103	61.8	95	7	64-165/27

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F23080-2MS	H024671.D	1	04/05/04	NAF	n/a	n/a	VH917
F23080-2MSD	H024672.D	1	04/05/04	NAF	n/a	n/a	VH917
F23080-2 [a]	H024668.D	1	04/05/04	NAF	n/a	n/a	VH917

The QC reported here applies to the following samples: **Method:** SW846 8260B

F23117-1

CAS No.	Compound	F23080-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	ND		194	199	103	182	93	9	64-142/24

CAS No.	Surrogate Recoveries	MS	MSD	F23080-2	Limits
1868-53-7	Dibromofluoromethane	104%	103%	103%	78-123%
2037-26-5	Toluene-D8	98%	99%	98%	71-137%
460-00-4	4-Bromofluorobenzene	99%	99%	100%	61-157%
17060-07-0	1,2-Dichloroethane-D4	93%	92%	102%	74-125%

(a) En Core sampler was not properly capped; results are considered minimum values.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024671.D Vial: 8
Acq On : 5 Apr 2004 2:26 pm Operator: NancyF
Sample : f23080-2ms Inst : MSVOA3
Misc : ms3073,vh917,5.03,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004 Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.01	96	544840	50.00 ug/Kg	0.01
50) Chlorobenzene-d5	13.11	117	469384	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.52	152	224084	50.00 ug/Kg	0.01
94) Tert Butyl Alcohol-d10	7.28	65	73230	250.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	9.29	113	143475	51.83 ug/Kg	0.02
Spiked Amount 50.000	Range 78 - 123		Recovery = 103.66%		
37) 1,2-Dichloroethane-d4	9.66	65	176052	46.74 ug/Kg	0.01
Spiked Amount 50.000	Range 74 - 125		Recovery = 93.48%		
51) Toluene-d8	11.61	98	591105	48.78 ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 137		Recovery = 97.56%		
71) 4-Bromofluorobenzene	14.30	95	252529	49.53 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 99.06%		

Target Compounds NAC-04-06-04

					Qvalue
2) Dichlorodifluoromethane	4.34	85	142711	34.60 ug/Kg	97
3) Chloromethane	4.74	50	272507	46.82 ug/Kg	99
4) Vinyl Chloride	4.98	62	241490	51.37 ug/Kg	99
5) Bromomethane	5.59	94	143964	51.56 ug/Kg	99
6) Chloroethane	5.76	64	115742	48.39 ug/Kg	86
7) Trichlorofluoromethane	6.06	101	235035	51.15 ug/Kg	92
8) 1,2-Dichlorotrifluoroethan	6.39	67	243004	50.67 ug/Kg	96
10) Acrolein	6.61	56	40180	319.23 ug/Kg	88
11) Freon 113	6.81	101	165380	48.33 ug/Kg	97
12) 1,1-Dichloroethene	6.79	61	334396	54.41 ug/Kg	99
13) Acetone	6.80	43	334854	186.25 ug/Kg	100
14) Iodomethane	7.04	142	333039	58.76 ug/Kg	97
15) Carbon Disulfide	7.16	76	743998	56.78 ug/Kg	99
16) Methyl acetate	7.18	43	819171	199.00 ug/Kg	100
17) Methylene Chloride	7.36	49	381805	60.83 ug/Kg	97
18) Acrylonitrile	7.62	53	303055	187.25 ug/Kg	98
19) Methyl Tert Butyl Ether	7.66	73	658878	59.73 ug/Kg	98
20) trans-1,2-Dichloroethene	7.70	61	394174	56.16 ug/Kg	98
21) Hexane	7.98	57	256632	40.06 ug/Kg	98
22) Vinyl acetate	8.14	43	1818426	209.16 ug/Kg	98
23) 1,1-Dichloroethane	8.18	63	487488	58.47 ug/Kg	100
24) Di-isopropyl ether	8.16	45	979165	56.37 ug/Kg#	68
25) Ethyl tert-butyl Ether	8.56	59	840945	59.00 ug/Kg	95
26) 2-Butanone	8.75	43	507871	193.88 ug/Kg	98
27) cis-1,2-Dichloroethene	8.80	96	250616	57.39 ug/Kg	96

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

C044

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024671.D Vial: 8
Acq On : 5 Apr 2004 2:26 pm Operator: NancyF
Sample : f23080-2ms Inst : MSVOA3
Misc : ms3073,vh917,5.03,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004 Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
28) 2,2-Dichloropropane	8.83	77	275433	57.52 ug/Kg	99
29) Bromochloromethane	9.08	128	115578	62.77 ug/Kg	87
30) Chloroform	9.11	83	455834	59.15 ug/Kg	95
31) Tetrahydrofuran	9.12	42	60841	44.27 ug/Kg	97
33) 1,1,1-Trichloroethane	9.37	97	366571	63.01 ug/Kg	98
34) Cyclohexane	9.46	56	454692	59.21 ug/Kg	90
35) 1,1-Dichloropropene	9.53	75	318232	56.73 ug/Kg	97
36) Carbon Tetrachloride	9.56	117	317375	63.73 ug/Kg	99
38) 1,2-Dichloroethane	9.74	62	346497	52.52 ug/Kg	99
39) Benzene	9.76	78	966435	58.53 ug/Kg	99
40) Tert-Amyl Methyl Ether	9.78	73	682163	51.50 ug/Kg	96
41) Trichloroethene	10.39	95	257729	59.87 ug/Kg	97
42) Methylcyclohexane	10.63	83	376525	58.52 ug/Kg	99
43) 1,2-Dichloropropane	10.63	63	246247	55.40 ug/Kg	95
44) Dibromomethane	10.75	93	128922	50.50 ug/Kg	94
45) Bromodichloromethane	10.86	83	324321	55.45 ug/Kg	97
46) 2-Nitropropane	11.06	41	345717	226.42 ug/Kg	84
47) 2-Chloroethyl vinyl ether	11.08	63	435951	210.19 ug/Kg	88
48) cis-1,3-Dichloropropene	11.31	75	383423	52.96 ug/Kg	98
49) 4-Methyl-2-pentanone	11.39	43	1167902	215.37 ug/Kg	99
52) Toluene	11.68	91	997649	55.40 ug/Kg	100
53) trans-1,3-Dichloropropene	11.83	75	330059	47.10 ug/Kg	96
54) 1,1,2-Trichloroethane	12.05	83	154147	45.69 ug/Kg	95
55) 1,3-Dichloropropane	12.23	76	316484	45.65 ug/Kg	91
56) 2-hexanone	12.21	43	776419	193.65 ug/Kg	98
57) Tetrachloroethene	12.26	166	252990	53.65 ug/Kg	93
58) Dibromochloromethane	12.50	129	213613	48.80 ug/Kg	95
59) 1,2-Dibromoethane	12.67	107	166187	44.08 ug/Kg	91
60) 1-Chlorohexane	13.00	91	302351	55.31 ug/Kg	97
61) Chlorobenzene	13.14	112	595340	51.35 ug/Kg	97
62) 1,1,1,2-Tetrachloroethane	13.20	131	206650	50.62 ug/Kg	95
63) Ethylbenzene	13.20	91	1040913	52.16 ug/Kg	98
64) m,p-Xylene	13.31	91	1696224	102.93 ug/Kg	100
65) o-Xylene	13.74	91	861753	51.30 ug/Kg	100
66) Styrene	13.74	104	589037	50.75 ug/Kg	95
67) Bromoform	14.01	173	131063	43.21 ug/Kg	98
69) Isopropylbenzene	14.10	105	942137	55.12 ug/Kg	97
70) Cyclohexanone	14.26	55	24896	151.00 ug/Kg	97
72) 1,1,2,2-Tetrachloroethane	14.36	83	221353	43.25 ug/Kg	99
73) trans-1,4-Dichloro-2-Buten	14.41	53	62394	43.46 ug/Kg	97
74) 1,2,3-Trichloropropane	14.45	110	55575	40.63 ug/Kg	96

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024671.D
Acq On : 5 Apr 2004 2:26 pm
Sample : f23080-2ms
Misc : ms3073,vh917,5.03,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004

Vial: 8
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

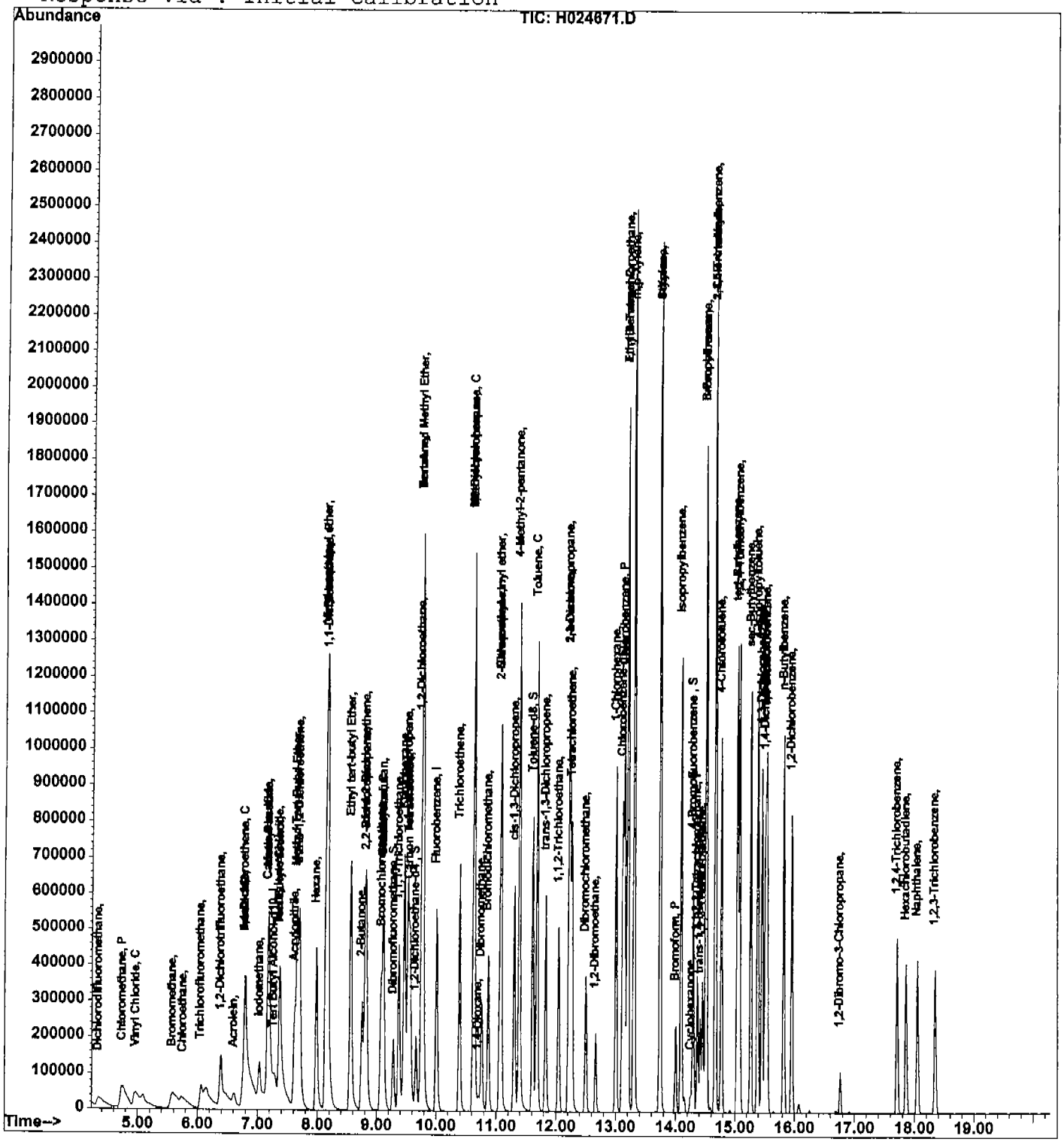
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
75)	Bromobenzene	14.51	156	221780	48.67 ug/Kg	95
76)	n-Propylbenzene	14.52	91	1094725	50.85 ug/Kg	96
77)	2-Chlorotoluene	14.67	91	774013	50.85 ug/Kg	99
78)	1,3,5-Trimethylbenzene	14.67	105	782686	59.62 ug/Kg	100
79)	4-Chlorotoluene	14.77	91	695058	51.03 ug/Kg	99
80)	tert-Butylbenzene	15.05	91	581377	54.55 ug/Kg	95
81)	1,2,4-Trimethylbenzene	15.08	105	780898	51.54 ug/Kg	100
82)	sec-Butylbenzene	15.27	105	931813	53.32 ug/Kg	96
83)	4-Isopropyltoluene	15.39	119	759927	54.43 ug/Kg	97
84)	1,3-Dichlorobenzene	15.46	146	412027	49.94 ug/Kg	99
85)	1,4-Dichlorobenzene	15.54	146	402611	48.41 ug/Kg	98
87)	n-Butylbenzene	15.82	91	661612	49.66 ug/Kg	97
88)	1,2-Dichlorobenzene	15.95	146	372282	48.46 ug/Kg	96
89)	1,2-Dibromo-3-Chloropropan	16.76	75	33869	39.84 ug/Kg	90
90)	1,2,4-Trichlorobenzene	17.72	180	196433	40.39 ug/Kg	98
91)	Hexachlorobutadiene	17.87	225	117306	42.26 ug/Kg	96
92)	Naphthalene	18.05	128	400209	37.21 ug/Kg	100
93)	1,2,3-Trichlorobenzene	18.35	180	162751	37.26 ug/Kg	97
95)	Tert Butyl Alcohol	7.38	59	237550	532.57 ug/Kg	95
98)	1,4-Dioxane	10.72	88	29262	892.66 ug/Kg	93

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\040504\H024671.D Vial: 8
Acq On : 5 Apr 2004 2:26 pm Operator: NancyF
Sample : f23080-2ms Inst : MSVOA3
Misc : ms3073,vh917,5.03,,,,, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004 Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



0017

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024672.D
Acq On : 5 Apr 2004 2:53 pm
Sample : f23080-2msd
Misc : ms3073,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004

Vial: 9
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.00	96	528307	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.11	117	447288	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.52	152	215990	50.00 ug/Kg	0.01
94) Tert Butyl Alcohol-d10	7.28	65	63702	250.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	9.28	113	138316	51.53 ug/Kg	0.02
Spiked Amount 50.000	Range 78 - 123		Recovery = 103.06%		
37) 1,2-Dichloroethane-d4	9.67	65	168646	46.17 ug/Kg	0.02
Spiked Amount 50.000	Range 74 - 125		Recovery = 92.34%		
51) Toluene-d8	11.61	98	572309	49.56 ug/Kg	0.01
Spiked Amount 50.000	Range 71 - 137		Recovery = 99.12%		
71) 4-Bromofluorobenzene	14.29	95	244205	49.70 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 99.40%		

MWC 04-06-04

Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.34	85	128650	32.17 ug/Kg	99
3) Chloromethane	4.74	50	244102	43.25 ug/Kg	100
4) Vinyl Chloride	4.96	62	216646	47.53 ug/Kg	95
5) Bromomethane	5.59	94	130998	48.38 ug/Kg	99
6) Chloroethane	5.74	64	105763	45.60 ug/Kg	92
7) Trichlorofluoromethane	6.06	101	207535	46.58 ug/Kg	96
8) 1,2-Dichlorotrifluoroethan	6.39	67	211684	45.52 ug/Kg	92
10) Acrolein	6.61	56	33613	275.41 ug/Kg	94
11) Freon 113	6.81	101	156813	47.27 ug/Kg	95
12) 1,1-Dichloroethene	6.79	61	297033	49.84 ug/Kg	96
13) Acetone	6.80	43	285231	163.62 ug/Kg	99
14) Iodomethane	7.03	142	295678	53.80 ug/Kg	100
15) Carbon Disulfide	7.16	76	656788	51.69 ug/Kg	97
16) Methyl acetate	7.18	43	701511	175.75 ug/Kg	99
17) Methylene Chloride	7.36	49	346929	56.62 ug/Kg	97
18) Acrylonitrile	7.62	53	260328	165.89 ug/Kg	99
19) Methyl Tert Butyl Ether	7.67	73	583313	54.53 ug/Kg	98
20) trans-1,2-Dichloroethene	7.71	61	356102	52.32 ug/Kg	96
21) Hexane	7.98	57	216415	33.65 ug/Kg	97
22) Vinyl acetate	8.14	43	1447348	171.69 ug/Kg	99
23) 1,1-Dichloroethane	8.18	63	439148	54.32 ug/Kg	100
24) Di-isopropyl ether	8.16	45	884463	52.51 ug/Kg#	66
25) Ethyl tert-butyl Ether	8.56	59	754678	54.61 ug/Kg	98
26) 2-Butanone	8.75	43	435759	171.56 ug/Kg	97
27) cis-1,2-Dichloroethene	8.80	96	224627	53.05 ug/Kg	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024672.D
Acq On : 5 Apr 2004 2:53 pm
Sample : f23080-2msd
Misc : ms3073,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004

Vial: 9
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
28) 2,2-Dichloropropane	8.83	77	251655	54.20 ug/Kg	96
29) Bromochloromethane	9.08	128	102670	57.51 ug/Kg	91
30) Chloroform	9.11	83	409707	54.82 ug/Kg	96
31) Tetrahydrofuran	9.12	42	50138	37.62 ug/Kg	93
33) 1,1,1-Trichloroethane	9.37	97	323097	57.27 ug/Kg	99
34) Cyclohexane	9.47	56	392861	52.76 ug/Kg	89
35) 1,1-Dichloropropene	9.53	75	279108	51.31 ug/Kg	98
36) Carbon Tetrachloride	9.57	117	280771	58.14 ug/Kg	99
38) 1,2-Dichloroethane	9.75	62	309328	48.36 ug/Kg	99
39) Benzene	9.77	78	858435	53.62 ug/Kg	97
40) Tert-Amyl Methyl Ether	9.78	73	604423	47.06 ug/Kg	99
41) Trichloroethene	10.39	95	228380	54.72 ug/Kg	97
42) Methylcyclohexane	10.63	83	318321	51.02 ug/Kg	98
43) 1,2-Dichloropropane	10.63	63	222270	51.57 ug/Kg	98
44) Dibromomethane	10.76	93	113060	45.67 ug/Kg	99
45) Bromodichloromethane	10.87	83	282872	49.88 ug/Kg	97
46) 2-Nitropropane	11.06	41	294553	198.95 ug/Kg	94
47) 2-Chloroethyl vinyl ether	11.08	63	371242	184.60 ug/Kg	89
48) cis-1,3-Dichloropropene	11.31	75	336577	47.94 ug/Kg	96
49) 4-Methyl-2-pentanone	11.39	43	992621	188.77 ug/Kg	99
52) Toluene	11.68	91	878305	51.18 ug/Kg	98
53) trans-1,3-Dichloropropene	11.83	75	286910	42.97 ug/Kg	91
54) 1,1,2-Trichloroethane	12.05	83	137438	42.75 ug/Kg	98
55) 1,3-Dichloropropane	12.23	76	281297	42.58 ug/Kg	89
56) 2-hexanone	12.21	43	667549	174.72 ug/Kg	97
57) Tetrachloroethene	12.27	166	215974	48.07 ug/Kg	96
58) Dibromochloromethane	12.50	129	186586	44.73 ug/Kg	96
59) 1,2-Dibromoethane	12.67	107	147137	40.95 ug/Kg	97
60) 1-Chlorohexane	13.00	91	257546	49.44 ug/Kg	98
61) Chlorobenzene	13.15	112	513613	46.49 ug/Kg	98
62) 1,1,1,2-Tetrachloroethane	13.20	131	182758	46.98 ug/Kg	97
63) Ethylbenzene	13.20	91	912117	47.97 ug/Kg	99
64) m,p-Xylene	13.31	91	1462506	93.13 ug/Kg	100
65) o-Xylene	13.74	91	743877	46.47 ug/Kg	100
66) Styrene	13.74	104	497580	44.99 ug/Kg	95
67) Bromoform	14.01	173	112891	39.05 ug/Kg	97
69) Isopropylbenzene	14.10	105	827461	50.22 ug/Kg	99
70) Cyclohexanone	14.26	55	21012	132.22 ug/Kg	95
72) 1,1,2,2-Tetrachloroethane	14.37	83	189685	38.45 ug/Kg	99
73) trans-1,4-Dichloro-2-Buten	14.41	53	54050	39.06 ug/Kg	90
74) 1,2,3-Trichloropropane	14.46	110	47152	35.77 ug/Kg	94

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\040504\H024672.D
Acq On : 5 Apr 2004 2:53 pm
Sample : f23080-2msd
Misc : ms3073,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004

Vial: 9
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
75)	Bromobenzene	14.51	156	194058	44.18 ug/Kg	99
76)	n-Propylbenzene	14.52	91	941989	45.39 ug/Kg	97
77)	2-Chlorotoluene	14.67	91	665286	45.35 ug/Kg	99
78)	1,3,5-Trimethylbenzene	14.67	105	678979	52.99 ug/Kg	100
79)	4-Chlorotoluene	14.78	91	592596	45.14 ug/Kg	96
80)	tert-Butylbenzene	15.04	91	498702	48.55 ug/Kg	97
81)	1,2,4-Trimethylbenzene	15.08	105	670828	45.93 ug/Kg	99
82)	sec-Butylbenzene	15.27	105	784712	46.58 ug/Kg	97
83)	4-Isopropyltoluene	15.39	119	647151	48.09 ug/Kg	99
84)	1,3-Dichlorobenzene	15.46	146	345293	43.42 ug/Kg	97
85)	1,4-Dichlorobenzene	15.55	146	334955	41.78 ug/Kg	98
87)	n-Butylbenzene	15.82	91	539665	42.02 ug/Kg	95
88)	1,2-Dichlorobenzene	15.96	146	312421	42.19 ug/Kg	95
89)	1,2-Dibromo-3-Chloropropan	16.76	75	26683	32.56 ug/Kg	86
90)	1,2,4-Trichlorobenzene	17.72	180	147606	31.48 ug/Kg	97
91)	Hexachlorobutadiene	17.87	225	90950	34.00 ug/Kg	98
92)	Naphthalene	18.05	128	309969	29.90 ug/Kg	100
93)	1,2,3-Trichlorobenzene	18.35	180	123187	29.26 ug/Kg	97
95)	Tert Butyl Alcohol	7.38	59	191020	492.31 ug/Kg	99
98)	1,4-Dioxane	10.71	88	23526	825.02 ug/Kg	95

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

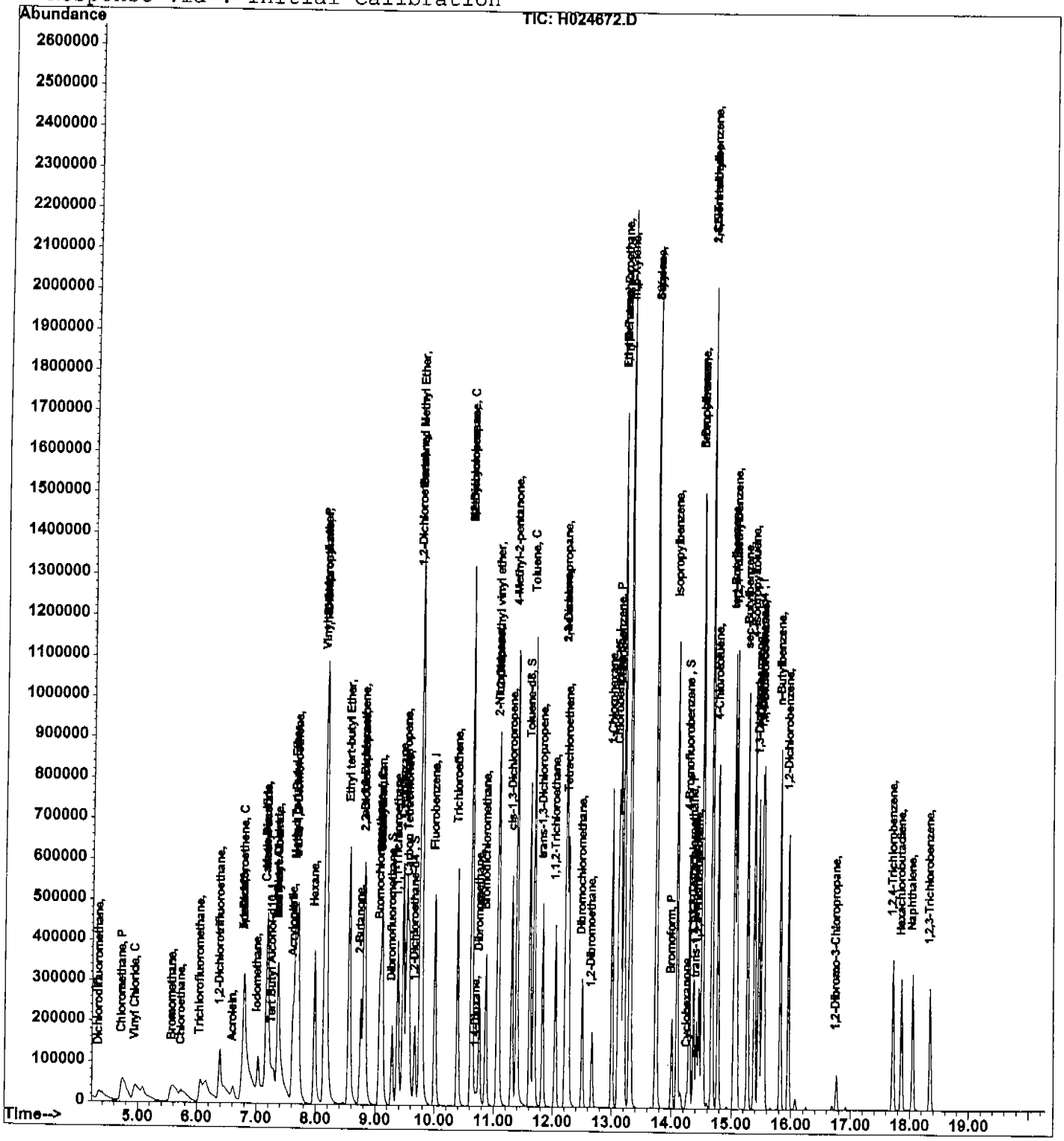
Quantitation Report

Data File : C:\HPCHEM\1\DATA\040504\H024672.D
Acq On : 5 Apr 2004 2:53 pm
Sample : f23080-2msd
Misc : ms3073,vh917,5.00,,,,,
MS Integration Params: RTEINT.P
Quant Time: Apr 6 9:19 2004

Vial: 9
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



SAMPLE DUPLICATE SUMMARY

VOC.06

NOT APPLICABLE TO THIS REPORT

INSTRUMENT PERFORMANCE CHECK (BFB)

VOC.07

Instrument Performance Check (BFB)

Job Number: F23117
Account: TETRPAPT Tetra Tech, NUS
Project: CTO 78: Bldg. 312-OWS

Sample:	VH917-BFB	**Injection Date:**	04/05/04
Lab File ID:	H024663.D	**Injection Time:**	10:23
Instrument ID:	GCMSH		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	21744	21.5	Pass
75	30.0 - 60.0% of mass 95	48267	47.7	Pass
95	Base peak, 100% relative abundance	101277	100.0	Pass
96	5.0 - 9.0% of mass 95	6588	6.5	Pass
173	Less than 2.0% of mass 174	0	0.0 (0.0) [a]	Pass
174	50.0 - 100.0% of mass 95	76309	75.3	Pass
175	5.0 - 9.0% of mass 174	5459	5.4 (7.2) [a]	Pass
176	95.0 - 101.0% of mass 174	73485	72.6 (96.3) [a]	Pass
177	5.0 - 9.0% of mass 176	4410	4.4 (6.0) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

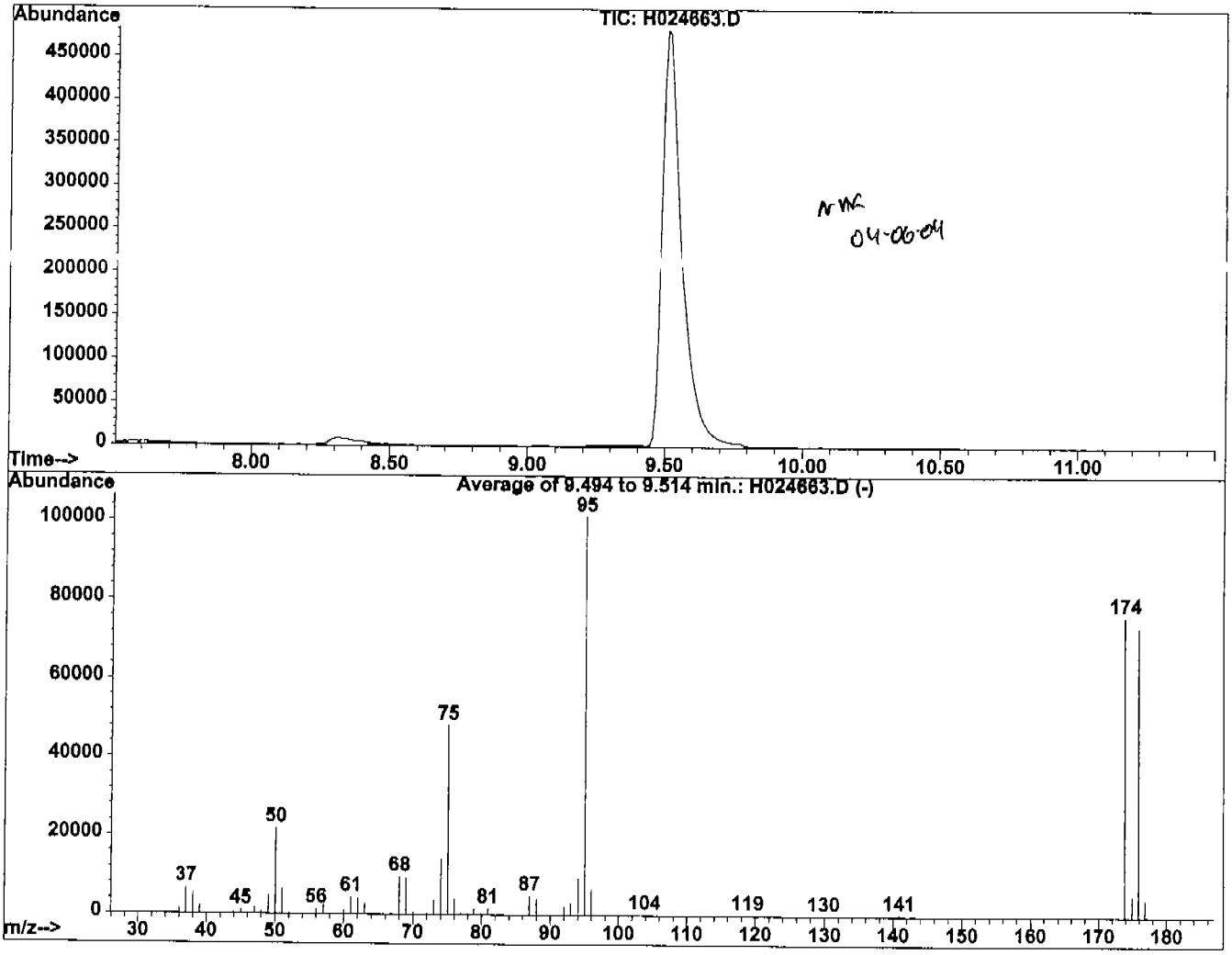
This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VH917-CC909	H024664.D	04/05/04	10:39	00:16	Continuing cal 40
VH917-BS	H024665.D	04/05/04	11:16	00:53	Blank Spike
VH917-MB	H024666.D	04/05/04	11:43	01:20	Method Blank
ZZZZZZ	H024667.D	04/05/04	12:38	02:15	(unrelated sample)
F23080-2	H024668.D	04/05/04	13:05	02:42	(used for QC only; not part of job F23117)
ZZZZZZ	H024669.D	04/05/04	13:32	03:09	(unrelated sample)
ZZZZZZ	H024670.D	04/05/04	13:59	03:36	(unrelated sample)
F23080-2MS	H024671.D	04/05/04	14:26	04:03	Matrix Spike
F23080-2MSD	H024672.D	04/05/04	14:53	04:30	Matrix Spike Duplicate
ZZZZZZ	H024673.D	04/05/04	15:20	04:57	(unrelated sample)
ZZZZZZ	H024674.D	04/05/04	15:47	05:24	(unrelated sample)
ZZZZZZ	H024675.D	04/05/04	16:13	05:50	(unrelated sample)
F23117-1	H024677.D	04/05/04	17:07	06:44	CEF-312-B020-06
ZZZZZZ	H024680.D	04/05/04	18:27	08:04	(unrelated sample)
ZZZZZZ	H024683.D	04/05/04	19:49	09:26	(unrelated sample)
ZZZZZZ	H024685.D	04/05/04	20:43	10:20	(unrelated sample)
ZZZZZZ	H024686.D	04/05/04	21:11	10:48	(unrelated sample)
ZZZZZZ	H024687.D	04/05/04	21:38	11:15	(unrelated sample)

Methods: SW-846 8260B

Data File : C:\HPCHEM\1\DATA\040504\H024663.D
Acq On : 5 Apr 2004 10:23 am
Sample : BFB
Misc :
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\BFB.M (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B

Vial: 100
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00



NMC
04-06-04

AutoFind: Scans 454, 455, 456; Background Corrected with Scan 446

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.5	21744	PASS
75	95	30	60	47.7	48267	PASS
95	95	100	100	100.0	101277	PASS
96	95	5	9	6.5	6588	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	75.3	76309	PASS
175	174	5	9	7.2	5459	PASS
176	174	95	101	96.3	73485	PASS
177	176	5	9	6.0	4410	PASS

INITIAL CALIBRATION

VOC.08

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\032404\H024484.D
Tune Time : 24 Mar 2004 11:52 am

Daily Calibration File : C:\HPCHEM\1\DATA\032404\H024488.D

						495787	403683	210104	90364

File	Sample	Surrogate Recovery %				Internal Standard Responses			
H024485.D	IC909-5	100	103	99	102	628832	497343	241207	124776
H024486.D	IC909-10	101	95	103	111	586802	460707	196128	95902
H024487.D	IC909-20	99	101	98	90	487722	400489	205866	80724
H024488.D	ICC909-40	100	97	100	92	495787	403683	210104	90364
H024489.D	IC909-100	102	100	100	94	487416	400182	210244	96664
H024490.D	IC909-200	98	97	101	98	520524	419446	215856	93183
H024491.D	ICV-40	101	97	101	94	522309	430943	226689	85089
H024492.D	BS	99	97	102	94	610113	475876	210097	111418
H024493.D	MB	98	99	102	99	534022	413977	192612	84405
H024494.D	concrete 5	10*	110	99	94	591750	411081	206378	149444
H024495.D	concrete 5	13*	108	97	96	507551	410459	205672	101696
H024496.D	concrete 1	9*	106	100	95	555716	442852	214850	113133
H024497.D	concrete 1	10*	108	117	96	544157	367905	186872	85836

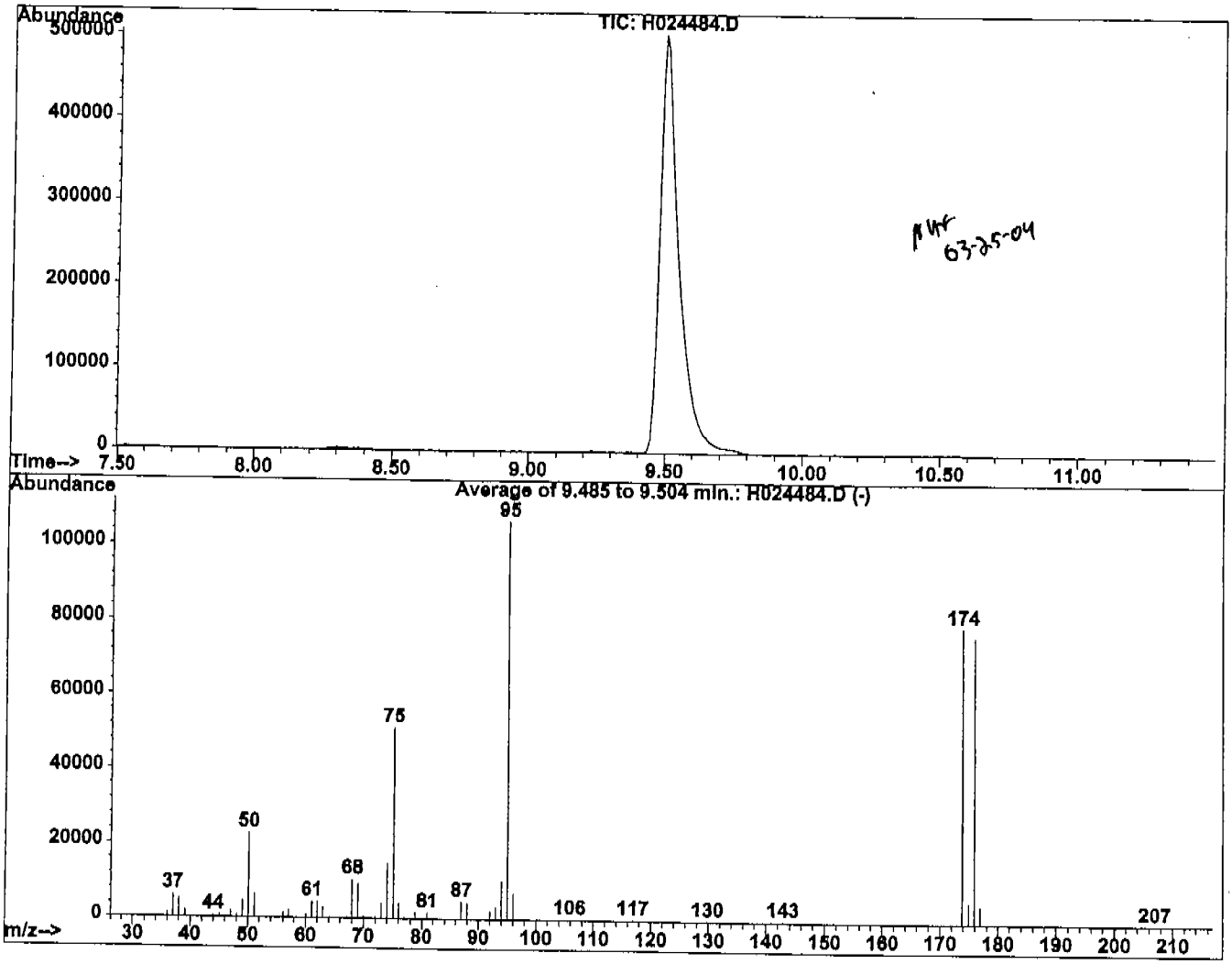
t - fails 12hr time check * - fails criteria

Created: Thu Mar 25 08:00:37 2004 MSVOA3

Methods: SW-846 8260B

Data File : C:\HPCHEM\1\DATA\032404\H024484.D
Acq On : 24 Mar 2004 11:52 am
Sample : BFB
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\BFB.M (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B

Vial: 100
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00



AutoFind: Scans 453, 454, 455; Background Corrected with Scan 445

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	22627	PASS
75	95	30	60	48.0	51208	PASS
95	95	100	100	100.0	106608	PASS
96	95	5	9	6.6	7044	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.4	79291	PASS
175	174	5	9	7.2	5673	PASS
176	174	95	101	96.9	76816	PASS
177	176	5	9	6.5	4955	PASS

Response Factor Report MSVOA3

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

Calibration Files
1 =H024485.D 2 =H024486.D 3 =H024487.D
4 =H024488.D 5 =H024489.D 6 =H024490.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------ISTD----------							
2)		Dichlorodifluoromet		0.380	0.380	0.433	0.364	0.336	0.379	9.41
3)	P	Chloromethane	0.528	0.550	0.551	0.644	0.482	0.450	0.534	12.53
4)	C	Vinyl Chloride	0.404	0.448	0.452	0.517	0.396	0.371	0.431	12.12
5)		Bromomethane	0.211	0.262	0.263	0.312	0.232		0.256	14.93
6)		Chloroethane	0.200	0.221	0.226	0.269	0.210	0.191	0.220	12.56
7)		Trichlorofluorometh		0.392	0.423	0.502	0.404	0.387	0.422	11.19
8)		1,2-Dichlorotrifluo	0.428	0.443	0.428	0.530	0.415	0.396	0.440	10.64
9)		Ethyl Ether	0.351	0.348	0.358	0.410	0.357	0.335	0.360	7.22
10)		Acrolein	0.010	0.010	0.011	0.013	0.014	0.012	0.012	14.37
11)		Freon 113	0.311	0.315	0.326	0.370	0.292	0.271	0.314	10.71
12)	C	1,1-Dichloroethene	0.560	0.588	0.575	0.647	0.529	0.486	0.564	9.69
13)		Acetone	0.189	0.157	0.155	0.173	0.168	0.148	0.165	8.98
14)		Iodomethane	0.481	0.521	0.530	0.599	0.513	0.477	0.520	8.44
15)		Carbon Disulfide	1.179	1.214	1.255	1.375	1.131	1.060	1.203	9.03
16)		Methyl acetate	0.415	0.359	0.361	0.395	0.386	0.350	0.378	6.72
17)		Methylene Chloride	0.831	0.711	0.664	0.688	0.565	0.534	0.666	16.07
		----- Linear regression ----- Coefficient = 0.9977								
		Response Ratio= 0.06375 + 0.52361 *Amt.ratio								
18)		Acrylonitrile	0.157	0.139	0.141	0.159	0.155	0.139	0.149	6.34
19)		Methyl Tert Butyl E	1.001	0.980	1.008	1.130	1.015	0.941	1.012	6.28
20)		trans-1,2-Dichloroe	0.633	0.655	0.662	0.742	0.607	0.565	0.644	9.23
21)		Hexane	0.881	0.753	0.651	0.693	0.549	0.491	0.670	21.00
		----- Linear regression ----- Coefficient = 0.9943								
		Response Ratio= 0.08743 + 0.47882 *Amt.ratio								
22)		Vinyl acetate	0.842	0.779	0.773	0.881	0.778	0.735	0.798	6.66
23)	P	1,1-Dichloroethane	0.777	0.783	0.789	0.873	0.714	0.656	0.765	9.66
24)		Di-isopropyl ether	1.658	1.609	1.609	1.787	1.505	1.396	1.594	8.36
25)		Ethyl tert-butyl Et	1.283	1.272	1.312	1.471	1.291	1.218	1.308	6.57
26)		2-Butanone		0.236	0.241	0.229	0.263	0.234	0.240	5.45
27)		cis-1,2-Dichloroeth	0.410	0.414	0.420	0.406	0.391	0.364	0.401	5.18
28)		2,2-Dichloropropane	0.450	0.450	0.476	0.454	0.426	0.381	0.439	7.50
29)		Bromochloromethane	0.167	0.163	0.174	0.173	0.173	0.163	0.169	3.11
30)	C	Chloroform	0.706	0.722	0.749	0.717	0.699	0.651	0.707	4.59
31)		Tetrahydrofuran		0.123	0.125	0.118	0.139	0.125	0.126	6.30
32)	S	Dibromofluoromethan	0.254	0.256	0.252	0.253	0.260	0.249	0.254	1.44
33)		1,1,1-Trichloroetha	0.536	0.547	0.569	0.552	0.518	0.481	0.534	5.82
34)		Cyclohexane	0.809	0.738	0.727	0.703	0.652	0.599	0.705	10.32
35)		1,1-Dichloropropene	0.551	0.540	0.539	0.522	0.488	0.448	0.515	7.62
36)		Carbon Tetrachlorid	0.448	0.468	0.488	0.482	0.444	0.412	0.457	6.19

(#) = Out of Range

C660

Response Factor Report MSVOA3

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

Calibration Files
1 =H024485.D 2 =H024486.D 3 =H024487.D
4 =H024488.D 5 =H024489.D 6 =H024490.D

		Compound	1	2	3	4	5	6	Avg	%RSD
37)	S	1,2-Dichloroethane-	0.357	0.341	0.353	0.341	0.347	0.337	0.346	2.26
38)		1,2-Dichloroethane	0.601	0.601	0.635	0.617	0.610	0.568	0.605	3.72
39)		Benzene	1.666	1.574	1.611	1.531	1.410	1.298	1.515	9.04
40)		Tert-Amyl Methyl Et	1.245	1.220	1.248	1.229	1.219	1.133	1.216	3.49
41)		Trichloroethene	0.395	0.404	0.417	0.402	0.388	0.364	0.395	4.62
42)		Methylcyclohexane	0.633	0.626	0.634	0.599	0.551	0.499	0.590	9.25
43)	C	1,2-Dichloropropane	0.398	0.411	0.437	0.413	0.407	0.382	0.408	4.44
44)		Dibromomethane	0.222	0.224	0.243	0.236	0.247	0.233	0.234	4.21
45)		Bromodichloromethan	0.495	0.494	0.570	0.557	0.567	0.537	0.537	6.45
46)		2-Nitropropane	0.134	0.121	0.140	0.137	0.163	0.146	0.140	9.80
47)		2-Chloroethyl vinyl	0.188	0.178	0.194	0.186	0.207	0.189	0.190	5.04
48)		cis-1,3-Dichloropro	0.632	0.643	0.694	0.675	0.684	0.658	0.664	3.64
49)		4-Methyl-2-pentanon	0.541	0.461	0.488	0.477	0.540	0.479	0.498	6.91
50)	I	Chlorobenzene-d5	----------ISTD----------							
51)	S	Toluene-d8	1.279	1.316	1.272	1.291	1.289	1.298	1.291	1.20
52)	C	Toluene		2.081	2.039	1.952	1.818	1.701	1.918	8.22
53)		trans-1,3-Dichlorop	0.703	0.709	0.757	0.768	0.783	0.759	0.746	4.38
54)		1,1,2-Trichloroetha	0.355	0.349	0.363	0.367	0.372	0.351	0.359	2.52
55)		1,3-Dichloropropane	0.768	0.737	0.762	0.737	0.745	0.682	0.739	4.11
56)		2-hexanone	0.458	0.388	0.405	0.403	0.480	0.428	0.427	8.32
57)		Tetrachloroethene	0.545	0.533	0.536	0.504	0.465	0.431	0.502	9.05
58)		Dibromochloromethan	0.440	0.427	0.481	0.473	0.496	0.480	0.466	5.71
59)		1,2-Dibromoethane	0.381	0.375	0.410	0.406	0.426	0.412	0.402	4.87
60)		1-Chlorohexane	0.596	0.605	0.617	0.586	0.563	0.528	0.582	5.59
61)	P	Chlorobenzene	1.298	1.281	1.308	1.236	1.175	1.111	1.235	6.31
62)		1,1,1,2-Tetrachloro	0.436	0.440	0.464	0.450	0.424	0.395	0.435	5.43
63)	C	Ethylbenzene	2.402	2.233	2.265	2.137	1.949	1.767	2.126	10.89
64)		m,p-Xylene	2.073	1.854	1.857	1.758	1.583	1.407	1.755	13.30
65)		o-Xylene	1.994	1.839	1.927	1.825	1.654	1.497	1.789	10.26
66)		Styrene	1.212	1.247	1.323	1.296	1.225	1.114	1.236	5.93
67)	P	Bromoform	0.281	0.283	0.327	0.332	0.367	0.349	0.323	10.87
68)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
69)		Isopropylbenzene	4.035	4.498	3.971	3.743	3.396	3.242	3.814	12.00
70)		Cyclohexanone	0.036	0.037	0.033	0.032	0.042	0.041	0.037	11.03
71)	S	4-Bromofluorobenzen	1.158	1.283	1.101	1.082	1.086	1.115	1.138	6.70
72)	P	1,1,2,2-Tetrachloro	1.171	1.236	1.091	1.071	1.150	1.131	1.142	5.17
73)		trans-1,4-Dichloro-	0.296	0.312	0.307	0.301	0.352	0.354	0.320	8.12
74)		1,2,3-Trichloroprop	0.321	0.319	0.303	0.286	0.306	0.297	0.305	4.34
75)		Bromobenzene	1.077	1.165	1.064	0.996	0.934	0.864	1.017	10.63
76)		n-Propylbenzene	5.257	5.690	4.991	4.743	4.254	3.889	4.804	13.71
77)		2-Chlorotoluene	3.769	4.038	3.566	3.323	2.940	2.742	3.396	14.55

(#) = Out of Range

Response Factor Report MSVOA3

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

Calibration Files
1 =H024485.D 2 =H024486.D 3 =H024487.D
4 =H024488.D 5 =H024489.D 6 =H024490.D

	Compound	1	2	3	4	5	6	Avg	%RSD
78)	1,3,5-Trimethylbenz	3.873	4.165	3.525	3.308	2.918	2.689	3.413	16.42
	----- Linear regression ----- Coefficient = 0.9981								
	Response Ratio= 0.34994 + 2.63593 *Amt.ratio								
79)	4-Chlorotoluene	3.301	3.096	3.199	3.076	2.843	2.719	3.039	7.21
80)	tert-Butylbenzene	2.632	2.459	2.531	2.388	2.193	2.066	2.378	8.95
81)	1,2,4-Trimethylbenz		3.697	3.675	3.408	3.177	2.946	3.381	9.57
82)	sec-Butylbenzene	4.173	3.987	4.172	4.012	3.634	3.420	3.900	7.86
83)	4-Isopropyltoluene	3.250	3.231	3.341	3.161	2.988	2.722	3.115	7.25
84)	1,3-Dichlorobenzene	1.950	1.840	1.936	1.861	1.774	1.683	1.841	5.47
85)	1,4-Dichlorobenzene	1.963	1.899	1.970	1.848	1.775	1.679	1.856	6.10
86)	Benzyl chloride	1.530	1.728	1.832	1.837	2.083	1.960	1.828	10.40
87)	n-Butylbenzene	2.765	3.193	3.192	3.086	2.962	2.640	2.973	7.72
88)	1,2-Dichlorobenzene	1.542	1.770	1.830	1.777	1.749	1.615	1.714	6.44
89)	1,2-Dibromo-3-Chlor		0.154	0.175	0.187	0.225	0.208	0.190	14.70
90)	1,2,4-Trichlorobenz		1.072	1.132	1.145	1.095	0.982	1.085	5.95
91)	Hexachlorobutadiene		0.634	0.678	0.665	0.597	0.522	0.619	10.11
92)	Naphthalene	2.182	2.243	2.421	2.481	2.671	2.400	2.400	7.27
93)	1,2,3-Trichlorobenz		0.930	0.991	1.038	1.013	0.902	0.975	5.85
94) I	Tert Butyl Alcohol-d1 ----------ISTD----------								
95)	Tert Butyl Alcohol	1.511	1.515	1.505	1.559	1.536	1.511	1.523	1.35
96)	Isobutyl alcohol	0.949	0.857	0.876	0.786	0.866	0.863	0.866	5.99
97)	Tert Amyl Alcohol	1.242	1.160	1.213	1.108	1.310	1.270	1.217	6.06
98)	1,4-Dioxane		0.093	0.111	0.110	0.121	0.125	0.112	11.16

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024485.D
Acq On : 24 Mar 2004 12:07 pm
Sample : IC909-5
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:47 2004

Vial: 1
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:47:20 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	9.99	96	628832	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.10	117	497343	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.50	152	241207	50.00 ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.28	65	124776	250.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	9.26	113	159615	49.96 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 99.92%		
37) 1,2-Dichloroethane-d4	9.65	65	224260	51.58 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 103.16%		
51) Toluene-d8	11.60	98	635882	49.53 ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 99.06%		
71) 4-Bromofluorobenzene	14.28	95	279374	50.91 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 101.82%		

Target Compounds

NW-03-25-04

					Qvalue
2) Dichlorodifluoromethane	4.35	85	20223	4.55 ug/Kg	99
3) Chloromethane	4.72	50	33191	4.94 ug/Kg	93
4) Vinyl Chloride	4.94	62	25426	4.69 ug/Kg	95
5) Bromomethane	5.55	94	13292	4.12 ug/Kg	84
6) Chloroethane	5.73	64	12578	4.86 ug/Kg	92
7) Trichlorofluoromethane	6.05	101	19613	4.33 ug/Kg	96
8) 1,2-Dichlorotrifluoroethan	6.37	67	26922	5.10 ug/Kg	98
9) Ethyl Ether	6.40	59	22068	4.87 ug/Kg	98
10) Acrolein	6.59	56	2990	19.88 ug/Kg	94
11) Freon 113	6.79	101	19537	5.08 ug/Kg	82
12) 1,1-Dichloroethene	6.78	61	35196	4.99 ug/Kg	95
13) Acetone	6.79	43	59382	28.62 ug/Kg	90
14) Iodomethane	7.01	142	30277	4.63 ug/Kg	98
15) Carbon Disulfide	7.15	76	74136	4.92 ug/Kg	91
16) Methyl acetate	7.17	43	130592	27.49 ug/Kg	97
17) Methylene Chloride	7.35	49	52262	1.85 ug/Kg	90
18) Acrylonitrile	7.59	53	49309	26.40 ug/Kg	98
19) Methyl Tert Butyl Ether	7.64	73	62916	4.94 ug/Kg	99
20) trans-1,2-Dichloroethene	7.68	61	39830	4.92 ug/Kg	98
21) Hexane	7.97	57	55398	0.07 ug/Kg	96
22) Vinyl acetate	8.13	43	264586	26.37 ug/Kg	100
23) 1,1-Dichloroethane	8.16	63	48840	5.08 ug/Kg	98
24) Di-isopropyl ether	8.15	45	104245	5.20 ug/Kg	82
25) Ethyl tert-butyl Ether	8.54	59	80650	4.90 ug/Kg	98
26) 2-Butanone	8.74	43	93379	30.89 ug/Kg	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024485.D
Acq On : 24 Mar 2004 12:07 pm
Sample : IC909-5
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:47 2004

Vial: 1
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:47:20 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) cis-1,2-Dichloroethene	8.79	96	25789	5.12 ug/Kg	97
28) 2,2-Dichloropropane	8.81	77	28314	5.12 ug/Kg	97
29) Bromochloromethane	9.05	128	10489	4.94 ug/Kg	92
30) Chloroform	9.09	83	44381	4.99 ug/Kg	96
31) Tetrahydrofuran	9.11	42	9853	6.21 ug/Kg	91
33) 1,1,1-Trichloroethane	9.36	97	33689	5.02 ug/Kg	96
34) Cyclohexane	9.45	56	50889	5.74 ug/Kg	89
35) 1,1-Dichloropropene	9.51	75	34650	5.35 ug/Kg	95
36) Carbon Tetrachloride	9.55	117	28171	4.90 ug/Kg	96
38) 1,2-Dichloroethane	9.73	62	37804	4.97 ug/Kg	93
39) Benzene	9.74	78	104775	5.50 ug/Kg	97
40) Tert-Amyl Methyl Ether	9.76	73	78302	5.12 ug/Kg	99
41) Trichloroethene	10.38	95	24858	5.00 ug/Kg	95
42) Methylcyclohexane	10.61	83	39830	5.36 ug/Kg	96
43) 1,2-Dichloropropane	10.61	63	25004	4.87 ug/Kg	93
44) Dibromomethane	10.74	93	13988	4.75 ug/Kg	96
45) Bromodichloromethane	10.85	83	31150	4.61 ug/Kg	94
46) 2-Nitropropane	11.05	41	42194	23.94 ug/Kg	84
47) 2-Chloroethyl vinyl ether	11.07	63	58979	24.64 ug/Kg	88
48) cis-1,3-Dichloropropene	11.29	75	39756	4.76 ug/Kg	95
49) 4-Methyl-2-pentanone	11.37	43	170205	27.19 ug/Kg	99
52) Toluene	11.67	91	115941	6.08 ug/Kg	99
53) trans-1,3-Dichloropropene	11.82	75	34957	4.71 ug/Kg	96
54) 1,1,2-Trichloroethane	12.03	83	17649	4.94 ug/Kg	97
55) 1,3-Dichloropropane	12.22	76	38185	5.20 ug/Kg	87
56) 2-hexanone	12.20	43	113864	26.80 ug/Kg	95
57) Tetrachloroethene	12.25	166	27087	5.42 ug/Kg	98
58) Dibromochloromethane	12.49	129	21880	4.72 ug/Kg	85
59) 1,2-Dibromoethane	12.65	107	18958	4.75 ug/Kg	100
60) 1-Chlorohexane	12.99	91	29626	5.11 ug/Kg	95
61) Chlorobenzene	13.13	112	64575	5.26 ug/Kg	98
62) 1,1,1,2-Tetrachloroethane	13.18	131	21682	5.01 ug/Kg	96
63) Ethylbenzene	13.19	91	119486	5.65 ug/Kg	100
64) m,p-Xylene	13.30	91	206231	11.81 ug/Kg	100
65) o-Xylene	13.73	91	99167	5.57 ug/Kg	99
66) Styrene	13.73	104	60285	4.90 ug/Kg	90
67) Bromoform	14.00	173	13966	4.35 ug/Kg	93
69) Isopropylbenzene	14.08	105	97322	5.29 ug/Kg	96
70) Cyclohexanone	14.24	55	4335	24.43 ug/Kg#	80
72) 1,1,2,2-Tetrachloroethane	14.35	83	28253	5.13 ug/Kg	96
73) trans-1,4-Dichloro-2-Buten	14.40	53	7138	4.62 ug/Kg	92

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024485.D
Acq On : 24 Mar 2004 12:07 pm
Sample : IC909-5
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:47 2004

Vial: 1
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:47:20 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) 1,2,3-Trichloropropane	14.45	110	7740	5.26 ug/Kg	97
75) Bromobenzene	14.50	156	25986	5.30 ug/Kg	95
76) n-Propylbenzene	14.51	91	126799	5.47 ug/Kg	96
77) 2-Chlorotoluene	14.66	91	90906	5.55 ug/Kg	98
78) 1,3,5-Trimethylbenzene	14.66	105	93410	5.67 ug/Kg	96
79) 4-Chlorotoluene	14.76	91	79622	2.96 ug/Kg	100
80) tert-Butylbenzene	15.03	91	63493	5.53 ug/Kg	97
81) 1,2,4-Trimethylbenzene	15.07	105	114864	7.04 ug/Kg	99
82) sec-Butylbenzene	15.26	105	100647	5.35 ug/Kg	97
83) 4-Isopropyltoluene	15.38	119	78399	5.22 ug/Kg	100
84) 1,3-Dichlorobenzene	15.45	146	47032	5.30 ug/Kg	96
85) 1,4-Dichlorobenzene	15.53	146	47340	5.29 ug/Kg	97
86) Benzyl chloride	15.64	91	36915	4.19 ug/Kg	98
87) n-Butylbenzene	15.81	91	66687	4.65 ug/Kg	92
88) 1,2-Dichlorobenzene	15.95	146	37206	4.50 ug/Kg	95
89) 1,2-Dibromo-3-Chloropropan	16.75	75	3149	3.44 ug/Kg#	74
90) 1,2,4-Trichlorobenzene	17.70	180	20846	4.12 ug/Kg	90
91) Hexachlorobutadiene	17.85	225	12569	4.32 ug/Kg	91
92) Naphthalene	18.04	128	52641	4.55 ug/Kg	99
93) 1,2,3-Trichlorobenzene	18.34	180	17782	3.94 ug/Kg	92
95) Tert Butyl Alcohol	7.38	59	37702	49.61 ug/Kg	95
96) Isobutyl alcohol	9.44	43	47354	135.90 ug/Kg#	67
97) Tert Amyl Alcohol	9.58	59	31006	51.04 ug/Kg	91
98) 1,4-Dioxane	10.70	88	3490	121.03 ug/Kg	94

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

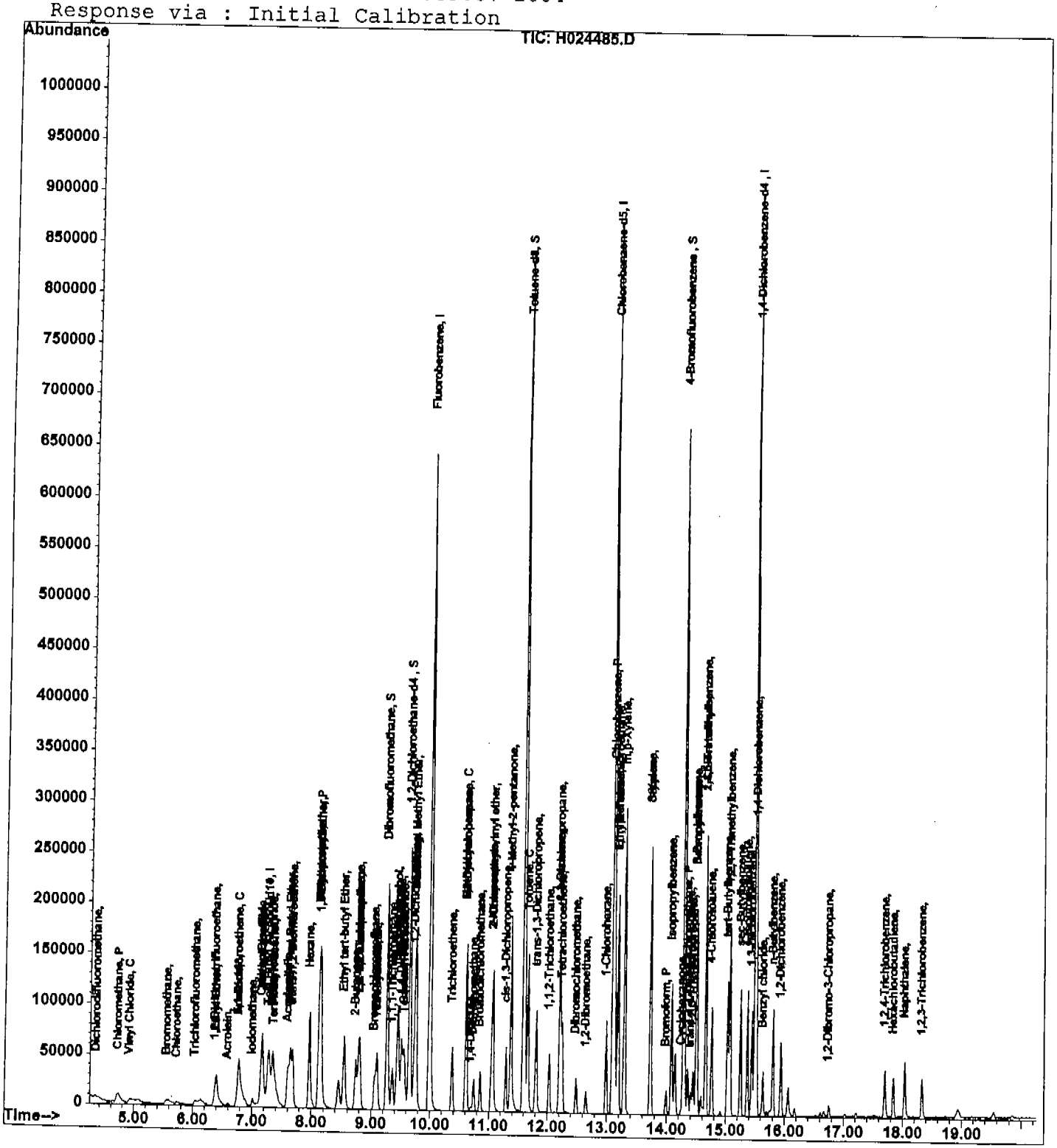
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024485.D
Acq On : 24 Mar 2004 12:07 pm
Sample : IC909-5
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:47 2004

Vial: 1
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024486.D
Acq On : 24 Mar 2004 12:35 pm
Sample : IC909-10
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.00	96	586802	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.10	117	460707	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.50	152	196128	50.00 ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.27	65	95902	250.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	9.27	113	150110	50.39 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 100.78%		
37) 1,2-Dichloroethane-d4	9.65	65	199814	47.74 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 95.48%		
51) Toluene-d8	11.59	98	606417	51.47 ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 102.94%		
71) 4-Bromofluorobenzene	14.29	95	251574	55.37 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 110.74%		

Target Compounds

MM-03-25-04

					Qvalue
2) Dichlorodifluoromethane	4.34	85	44622	11.82 ug/Kg	94
3) Chloromethane	4.72	50	64529	10.42 ug/Kg	94
4) Vinyl Chloride	4.96	62	52584	11.08 ug/Kg	98
5) Bromomethane	5.56	94	30788	12.41 ug/Kg	89
6) Chloroethane	5.75	64	25891	11.03 ug/Kg	94
7) Trichlorofluoromethane	6.04	101	45962m	12.56 ug/Kg	
8) 1,2-Dichlorotrifluoroethan	6.38	67	52007	10.35 ug/Kg	97
9) Ethyl Ether	6.40	59	40839	9.92 ug/Kg	97
10) Acrolein	6.60	56	5945	53.27 ug/Kg	93
11) Freon 113	6.79	101	36965m	10.14 ug/Kg	
12) 1,1-Dichloroethene	6.77	61	69025	10.51 ug/Kg	95
13) Acetone	6.78	43	92320	41.65 ug/Kg	99
14) Iodomethane	7.01	142	61107	10.81 ug/Kg	96
15) Carbon Disulfide	7.15	76	142506	10.30 ug/Kg	97
16) Methyl acetate	7.17	43	210837	43.25 ug/Kg	98
17) Methylene Chloride	7.34	49	83436	8.55 ug/Kg	94
18) Acrylonitrile	7.60	53	81658	44.37 ug/Kg	99
19) Methyl Tert Butyl Ether	7.64	73	115007	9.79 ug/Kg	94
20) trans-1,2-Dichloroethene	7.69	61	76828	10.34 ug/Kg	99
21) Hexane	7.96	57	88416	8.55 ug/Kg	98
22) Vinyl acetate	8.12	43	457059	46.28 ug/Kg	100
23) 1,1-Dichloroethane	8.16	63	91851	10.08 ug/Kg	99
24) Di-isopropyl ether	8.14	45	188804	9.70 ug/Kg	98
25) Ethyl tert-butyl Ether	8.55	59	149334	9.92 ug/Kg	97
26) 2-Butanone	8.74	43	138287	39.67 ug/Kg	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024486.D
Acq On : 24 Mar 2004 12:35 pm
Sample : IC909-10
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) cis-1,2-Dichloroethene	8.78	96	48541	10.09 ug/Kg	98
28) 2,2-Dichloropropane	8.81	77	52858	10.00 ug/Kg	99
29) Bromochloromethane	9.06	128	19154	9.78 ug/Kg	93
30) Chloroform	9.09	83	84691	10.22 ug/Kg	93
31) Tetrahydrofuran	9.11	42	14451	7.86 ug/Kg	92
33) 1,1,1-Trichloroethane	9.36	97	64213	10.21 ug/Kg	97
34) Cyclohexane	9.45	56	86609	9.12 ug/Kg	97
35) 1,1-Dichloropropene	9.51	75	63352	9.80 ug/Kg	94
36) Carbon Tetrachloride	9.55	117	54955	10.45 ug/Kg	95
38) 1,2-Dichloroethane	9.73	62	70507	9.99 ug/Kg	97
39) Benzene	9.75	78	184745	9.45 ug/Kg	97
40) Tert-Amyl Methyl Ether	9.77	73	143138	9.79 ug/Kg	98
41) Trichloroethene	10.37	95	47442	10.23 ug/Kg	96
42) Methylcyclohexane	10.62	83	73459	9.88 ug/Kg	98
43) 1,2-Dichloropropane	10.61	63	48223	10.33 ug/Kg	96
44) Dibromomethane	10.75	93	26328	10.08 ug/Kg	93
45) Bromodichloromethane	10.85	83	57979	9.97 ug/Kg	99
46) 2-Nitropropane	11.04	41	71087	45.14 ug/Kg	96
47) 2-Chloroethyl vinyl ether	11.06	63	104676	47.55 ug/Kg	99
48) cis-1,3-Dichloropropene	11.29	75	75480	10.17 ug/Kg	93
49) 4-Methyl-2-pentanone	11.38	43	270297	42.55 ug/Kg	99
52) Toluene	11.66	91	191731	8.93 ug/Kg	98
53) trans-1,3-Dichloropropene	11.82	75	65345	10.09 ug/Kg	93
54) 1,1,2-Trichloroethane	12.04	83	32165	9.84 ug/Kg	98
55) 1,3-Dichloropropane	12.23	76	67885	9.60 ug/Kg	97
56) 2-hexanone	12.21	43	178891	42.40 ug/Kg	98
57) Tetrachloroethene	12.26	166	49121	9.79 ug/Kg	98
58) Dibromochloromethane	12.49	129	39383	9.72 ug/Kg	96
59) 1,2-Dibromoethane	12.66	107	34546	9.84 ug/Kg	96
60) 1-Chlorohexane	12.99	91	55790	10.16 ug/Kg	96
61) Chlorobenzene	13.13	112	118043	9.87 ug/Kg	97
62) 1,1,1,2-Tetrachloroethane	13.18	131	40543	10.09 ug/Kg	97
63) Ethylbenzene	13.19	91	205779	9.30 ug/Kg	99
64) m,p-Xylene	13.30	91	341674	17.89 ug/Kg	98
65) o-Xylene	13.72	91	169486	9.23 ug/Kg	99
66) Styrene	13.73	104	114882	10.29 ug/Kg	96
67) Bromoform	13.99	173	26041	10.06 ug/Kg	98
69) Isopropylbenzene	14.08	105	176436	11.15 ug/Kg	100
70) Cyclohexanone	14.24	55	7193	51.02 ug/Kg	97
72) 1,1,2,2-Tetrachloroethane	14.36	83	48489	10.55 ug/Kg	97
73) trans-1,4-Dichloro-2-Buten	14.41	53	12232	10.54 ug/Kg	96

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024486.D
Acq On : 24 Mar 2004 12:35 pm
Sample : IC909-10
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) 1,2,3-Trichloropropane	14.44	110	12501	9.93 ug/Kg	93
75) Bromobenzene	14.49	156	45693	10.81 ug/Kg	97
76) n-Propylbenzene	14.50	91	223199	10.82 ug/Kg	100
77) 2-Chlorotoluene	14.66	91	158397	10.71 ug/Kg	98
78) 1,3,5-Trimethylbenzene	14.66	105	163392	10.76 ug/Kg	99
79) 4-Chlorotoluene	14.76	91	121456	9.38 ug/Kg	97
80) tert-Butylbenzene	15.03	91	96452	9.34 ug/Kg	97
81) 1,2,4-Trimethylbenzene	15.07	105	145035	7.76 ug/Kg	97
82) sec-Butylbenzene	15.25	105	156393	9.56 ug/Kg	95
83) 4-Isopropyltoluene	15.37	119	126725	9.94 ug/Kg	97
84) 1,3-Dichlorobenzene	15.45	146	72176	9.44 ug/Kg	97
85) 1,4-Dichlorobenzene	15.53	146	74494	9.68 ug/Kg	98
86) Benzyl chloride	15.64	91	67790	11.29 ug/Kg	97
87) n-Butylbenzene	15.81	91	125229	11.55 ug/Kg	98
88) 1,2-Dichlorobenzene	15.94	146	69440	11.48 ug/Kg	95
89) 1,2-Dibromo-3-Chloropropan	16.75	75	6032	11.78 ug/Kg	89
90) 1,2,4-Trichlorobenzene	17.70	180	42053	12.40 ug/Kg	98
91) Hexachlorobutadiene	17.85	225	24875	12.17 ug/Kg	97
92) Naphthalene	18.03	128	88002	10.28 ug/Kg	100
93) 1,2,3-Trichlorobenzene	18.34	180	36483	12.62 ug/Kg	92
95) Tert Butyl Alcohol	7.37	59	58121	100.29 ug/Kg	97
96) Isobutyl alcohol	9.43	43	65739	180.62 ug/Kg#	67
97) Tert Amyl Alcohol	9.57	59	44499	93.36 ug/Kg	98
98) 1,4-Dioxane	10.70	88	7127	265.70 ug/Kg	94

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

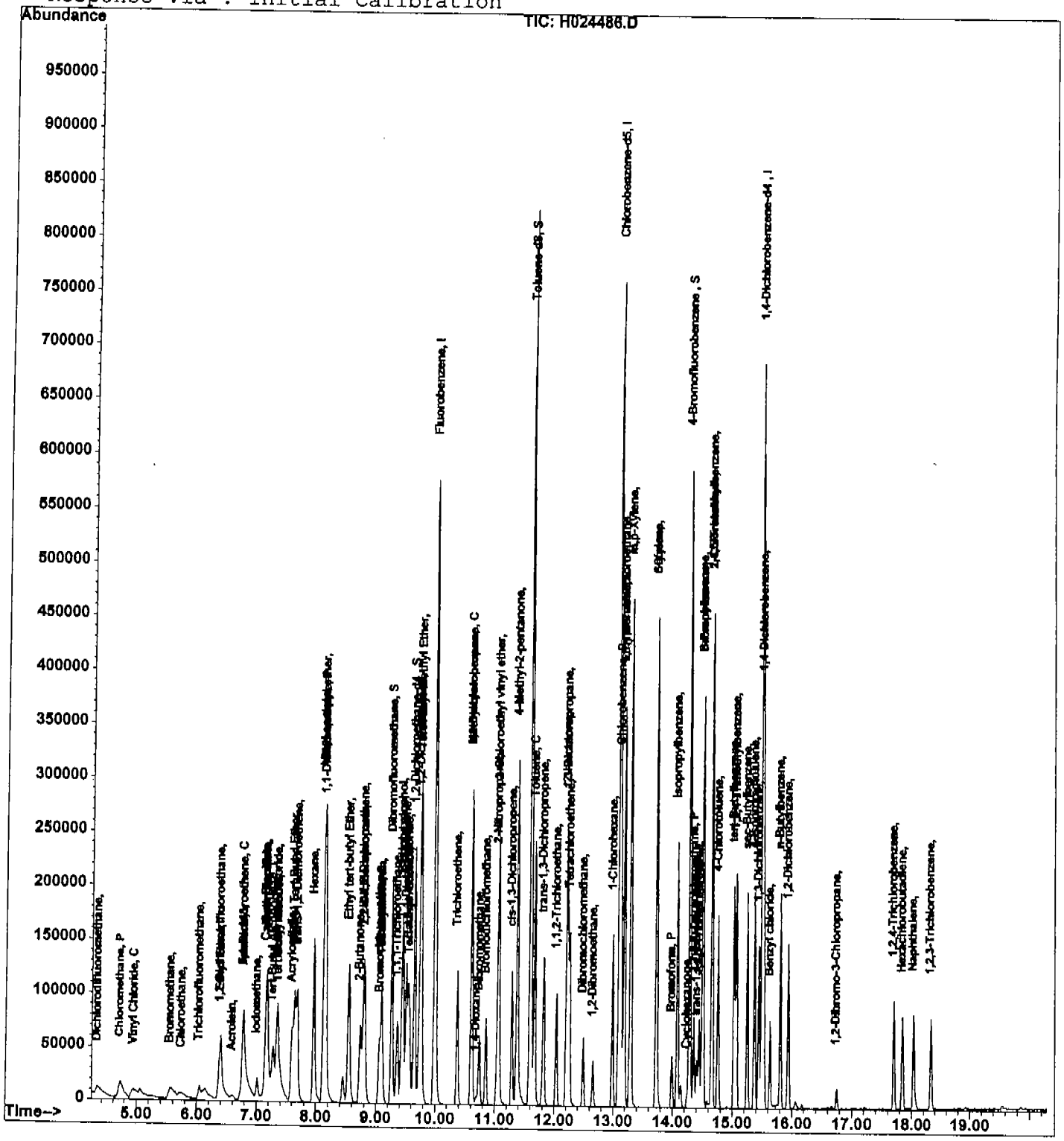
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024486.D
Acq On : 24 Mar 2004 12:35 pm
Sample : IC909-10
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

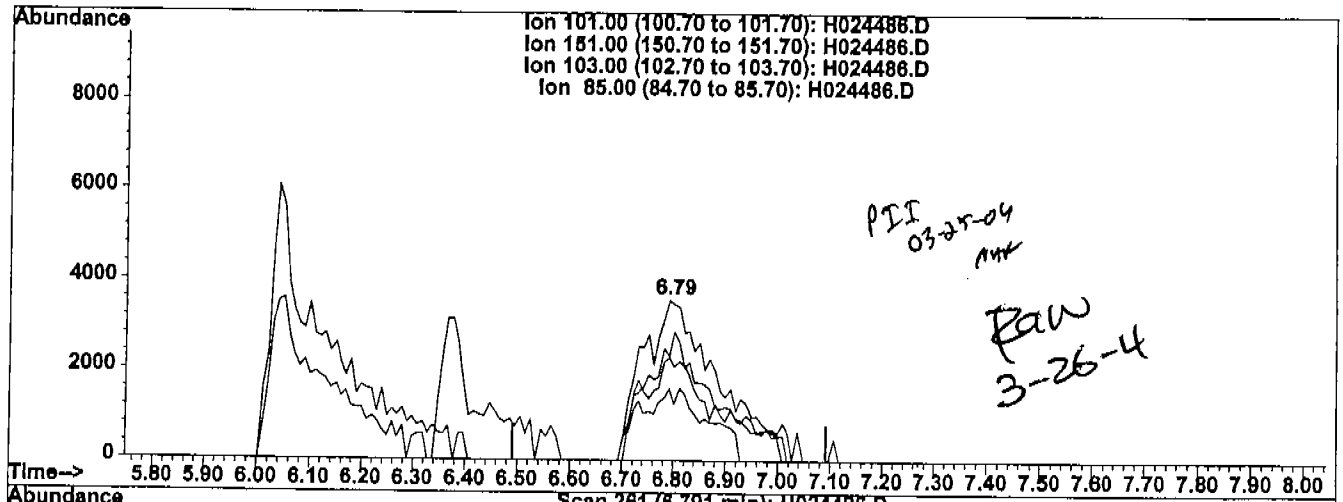


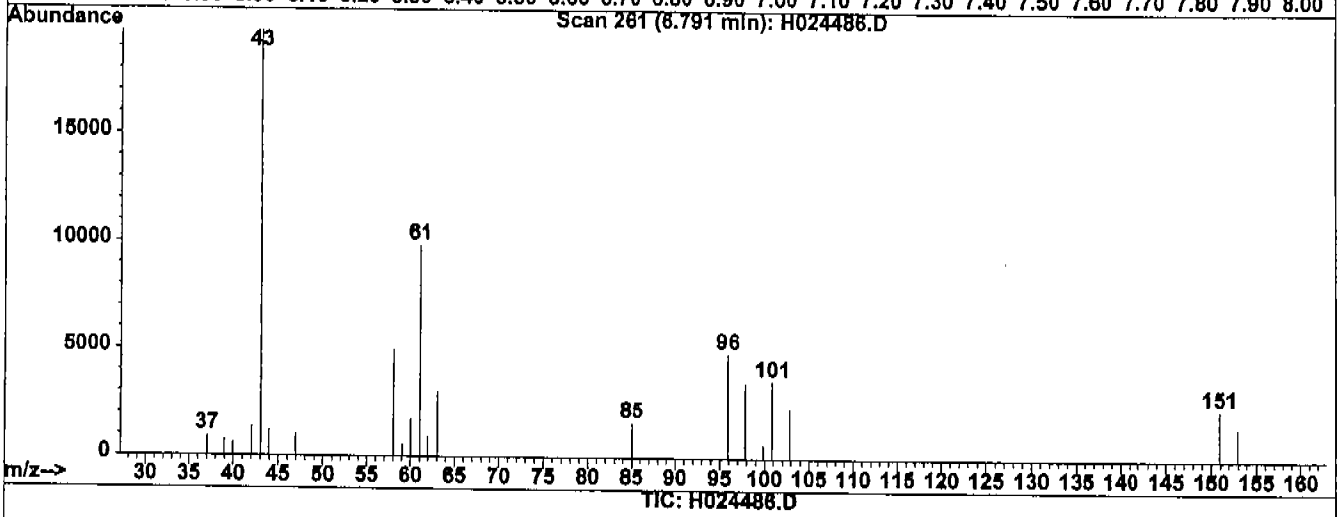
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024486.D
Acq On : 24 Mar 2004 12:35 pm
Sample : IC909-10
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:48 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(11) Freon 113

6.79min 10.14ug/Kg m

response 36965

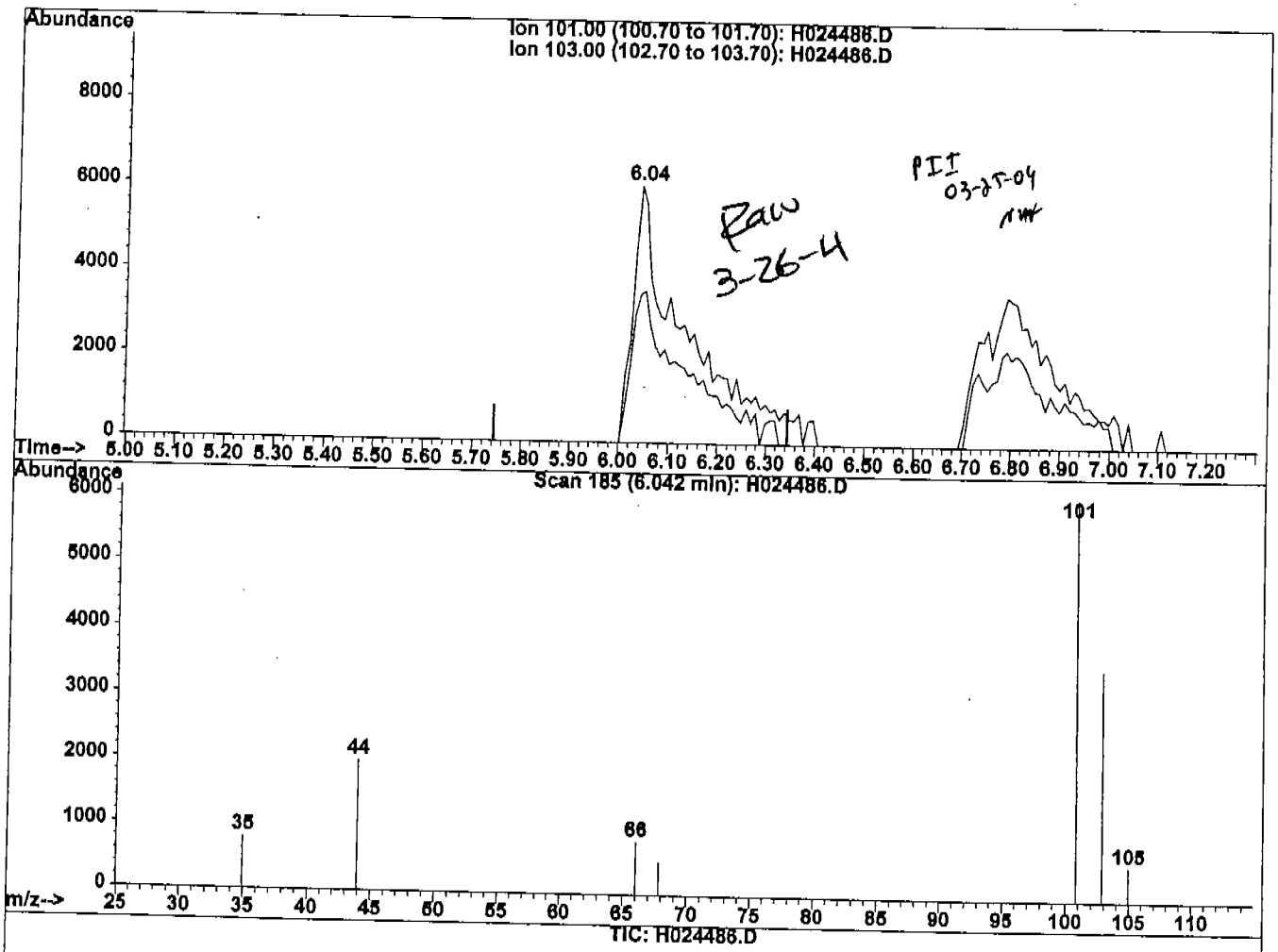
Ion	Exp%	Act%
101.00	100	100
151.00	75.40	64.76
103.00	63.90	64.15
85.00	35.20	44.93

Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024486.D
Acq On : 24 Mar 2004 12:35 pm
Sample : IC909-10
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:49 2004

Vial: 2
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration



(7) Trichlorofluoromethane ( )

6.04min 12.56ug/Kg m

response 45962

Ion	Exp%	Act%
101.00	100	100
103.00	65.90	57.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024487.D
Acq On : 24 Mar 2004 1:01 pm
Sample : IC909-20
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.00	96	487722	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.10	117	400489	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.50	152	205866	50.00 ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.28	65	80724	250.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	9.27	113	123122	49.53 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 99.06%		
37) 1,2-Dichloroethane-d4	9.65	65	172150	50.63 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 101.26%		
51) Toluene-d8	11.60	98	509557	49.03 ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 98.06%		
71) 4-Bromofluorobenzene	14.29	95	226713	45.12 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 90.24%		

NWF 03-25-04

Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.35	85	74055	21.64 ug/Kg	96
3) Chloromethane	4.71	50	107444	20.44 ug/Kg	95
4) Vinyl Chloride	4.95	62	88138	21.20 ug/Kg	98
5) Bromomethane	5.56	94	51365	22.23 ug/Kg	97
6) Chloroethane	5.75	64	44094	21.49 ug/Kg	95
7) Trichlorofluoromethane	6.05	101	82434m	24.02 ug/Kg	
8) 1,2-Dichlorotrifluoroethan	6.38	67	83406	19.63 ug/Kg	95
9) Ethyl Ether	6.40	59	69930	20.51 ug/Kg	96
10) Acrolein	6.60	56	11008	114.91 ug/Kg	94
11) Freon 113	6.80	101	63611m	20.85 ug/Kg	
12) 1,1-Dichloroethene	6.77	61	112247	20.05 ug/Kg	95
13) Acetone	6.77	43	151202	89.55 ug/Kg	100
14) Iodomethane	7.02	142	103328	21.14 ug/Kg	96
15) Carbon Disulfide	7.15	76	244928	20.98 ug/Kg	99
16) Methyl acetate	7.17	43	351773	93.11 ug/Kg	98
17) Methylene Chloride	7.34	49	129517	17.22 ug/Kg	92
18) Acrylonitrile	7.60	53	137889	95.52 ug/Kg	94
19) Methyl Tert Butyl Ether	7.65	73	196599	20.35 ug/Kg	99
20) trans-1,2-Dichloroethene	7.69	61	129205	20.57 ug/Kg	98
21) Hexane	7.97	57	126958	15.93 ug/Kg	98
22) Vinyl acetate	8.12	43	754135	95.42 ug/Kg	100
23) 1,1-Dichloroethane	8.16	63	153929	20.24 ug/Kg	98
24) Di-isopropyl ether	8.14	45	313896	19.70 ug/Kg	93
25) Ethyl tert-butyl Ether	8.55	59	256035	20.55 ug/Kg	98
26) 2-Butanone	8.74	43	234752	90.36 ug/Kg	95

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024487.D
Acq On : 24 Mar 2004 1:01 pm
Sample : IC909-20
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) cis-1,2-Dichloroethene	8.78	96	82005	20.41 ug/Kg	92
28) 2,2-Dichloropropane	8.80	77	92838	21.13 ug/Kg	98
29) Bromochloromethane	9.06	128	33937	21.09 ug/Kg	95
30) Chloroform	9.09	83	146068	20.98 ug/Kg	94
31) Tetrahydrofuran	9.11	42	24426	17.90 ug/Kg	98
33) 1,1,1-Trichloroethane	9.36	97	111091	21.03 ug/Kg	92
34) Cyclohexane	9.45	56	141843	18.80 ug/Kg	88
35) 1,1-Dichloropropene	9.51	75	105152	19.76 ug/Kg	97
36) Carbon Tetrachloride	9.54	117	95147	21.29 ug/Kg	94
38) 1,2-Dichloroethane	9.73	62	123974	21.15 ug/Kg	96
39) Benzene	9.75	78	314369	19.89 ug/Kg	99
40) Tert-Amyl Methyl Ether	9.76	73	243547	20.26 ug/Kg	97
41) Trichloroethene	10.37	95	81419	20.88 ug/Kg	97
42) Methylcyclohexane	10.61	83	123721	20.14 ug/Kg	96
43) 1,2-Dichloropropane	10.61	63	85280	21.63 ug/Kg	97
44) Dibromomethane	10.75	93	47498	21.80 ug/Kg	97
45) Bromodichloromethane	10.86	83	111208	23.05 ug/Kg	98
46) 2-Nitropropane	11.04	41	136118	109.30 ug/Kg	100
47) 2-Chloroethyl vinyl ether	11.06	63	188827	105.79 ug/Kg	96
48) cis-1,3-Dichloropropene	11.29	75	135407	21.77 ug/Kg	96
49) 4-Methyl-2-pentanone	11.38	43	475815	97.37 ug/Kg	100
52) Toluene	11.66	91	326712	18.49 ug/Kg	98
53) trans-1,3-Dichloropropene	11.82	75	121270	21.44 ug/Kg	98
54) 1,1,2-Trichloroethane	12.04	83	58178	20.64 ug/Kg	97
55) 1,3-Dichloropropane	12.23	76	122081	20.26 ug/Kg	95
56) 2-hexanone	12.21	43	324442	95.74 ug/Kg	100
57) Tetrachloroethene	12.26	166	85841	19.89 ug/Kg	94
58) Dibromochloromethane	12.49	129	77030	22.18 ug/Kg	95
59) 1,2-Dibromoethane	12.66	107	65614	21.67 ug/Kg	96
60) 1-Chlorohexane	13.00	91	98823	20.54 ug/Kg	98
61) Chlorobenzene	13.13	112	209483	20.28 ug/Kg	97
62) 1,1,1,2-Tetrachloroethane	13.18	131	74332	21.19 ug/Kg	95
63) Ethylbenzene	13.19	91	362887	19.55 ug/Kg	100
64) m,p-Xylene	13.30	91	594928	37.82 ug/Kg	99
65) o-Xylene	13.73	91	308709	20.11 ug/Kg	99
66) Styrene	13.74	104	211985	21.53 ug/Kg	98
67) Bromoform	13.99	173	52346	23.20 ug/Kg	99
69) Isopropylbenzene	14.08	105	327009	18.62 ug/Kg	100
70) Cyclohexanone	14.24	55	13518	90.42 ug/Kg	96
72) 1,1,2,2-Tetrachloroethane	14.36	83	89872	18.13 ug/Kg	99
73) trans-1,4-Dichloro-2-Buten	14.41	53	25279	20.20 ug/Kg	93

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024487.D
Acq On : 24 Mar 2004 1:01 pm
Sample : IC909-20
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) 1,2,3-Trichloropropane	14.45	110	24964	18.96 ug/Kg	96
75) Bromobenzene	14.50	156	87651	18.99 ug/Kg	99
76) n-Propylbenzene	14.51	91	410953	18.24 ug/Kg	100
77) 2-Chlorotoluene	14.66	91	293677	18.27 ug/Kg	99
78) 1,3,5-Trimethylbenzene	14.66	105	290247	17.54 ug/Kg	99
79) 4-Chlorotoluene	14.76	91	263466	20.01 ug/Kg	98
80) tert-Butylbenzene	15.03	91	208387	19.88 ug/Kg	98
81) 1,2,4-Trimethylbenzene	15.08	105	302631	17.38 ug/Kg	99
82) sec-Butylbenzene	15.25	105	343561	20.45 ug/Kg	100
83) 4-Isopropyltoluene	15.37	119	275127	20.62 ug/Kg	99
84) 1,3-Dichlorobenzene	15.45	146	159450	20.44 ug/Kg	99
85) 1,4-Dichlorobenzene	15.53	146	162227	20.41 ug/Kg	98
86) Benzyl chloride	15.64	91	150876	22.49 ug/Kg	97
87) n-Butylbenzene	15.81	91	262836	21.43 ug/Kg	98
88) 1,2-Dichlorobenzene	15.95	146	150659	22.09 ug/Kg	98
89) 1,2-Dibromo-3-Chloropropan	16.75	75	14387	24.58 ug/Kg	90
90) 1,2,4-Trichlorobenzene	17.70	180	93237	23.39 ug/Kg	99
91) Hexachlorobutadiene	17.85	225	55822	23.47 ug/Kg	97
92) Naphthalene	18.04	128	199398	21.88 ug/Kg	100
93) 1,2,3-Trichlorobenzene	18.33	180	81569	23.76 ug/Kg	98
95) Tert Butyl Alcohol	7.37	59	97185	198.94 ug/Kg	96
96) Isobutyl alcohol	9.44	43	113206	388.34 ug/Kg#	62
97) Tert Amyl Alcohol	9.57	59	78321	201.92 ug/Kg	99
98) 1,4-Dioxane	10.70	88	14328	545.06 ug/Kg	90

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

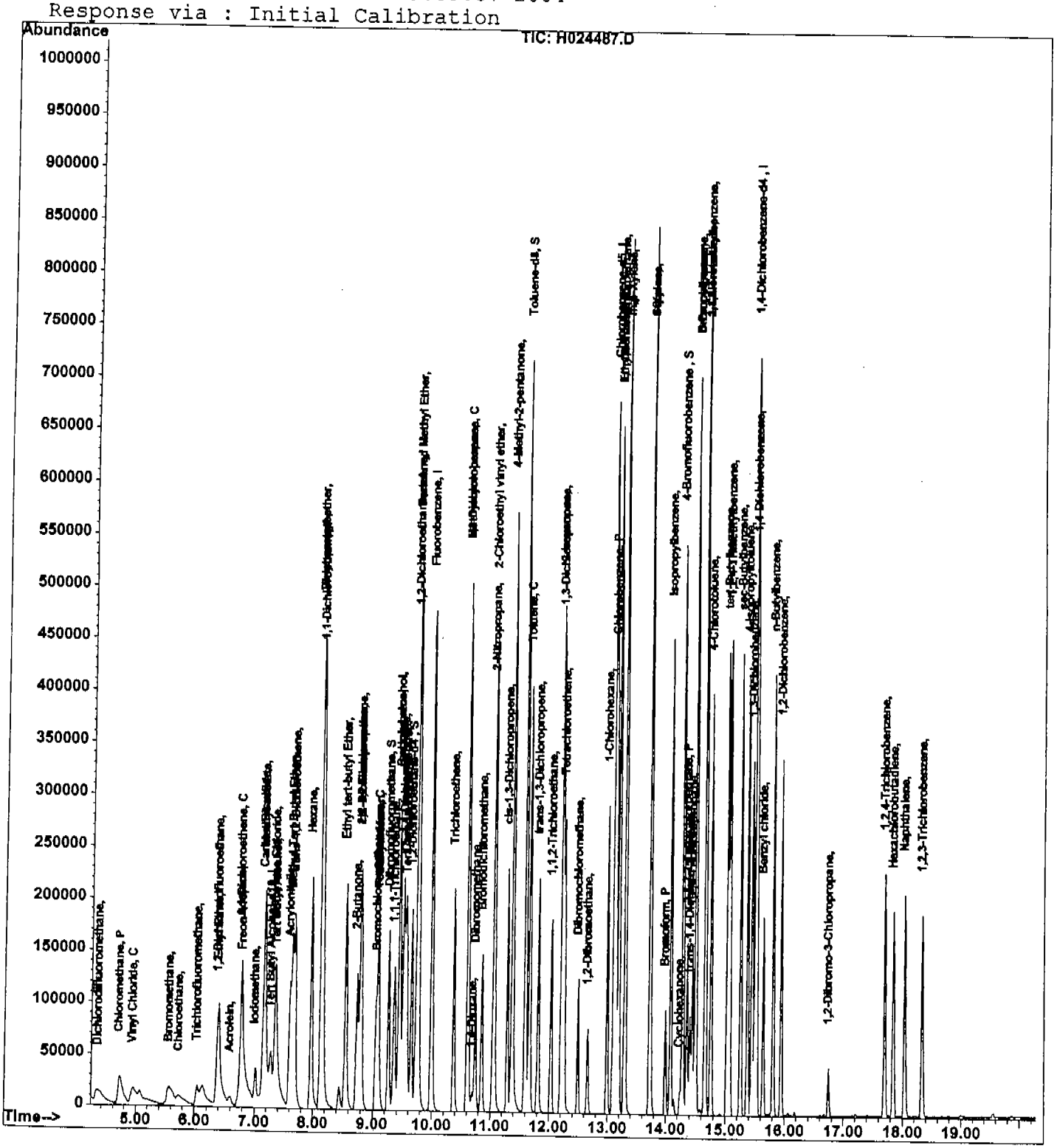
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024487.D
Acq On : 24 Mar 2004 1:01 pm
Sample : IC909-20
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:49 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

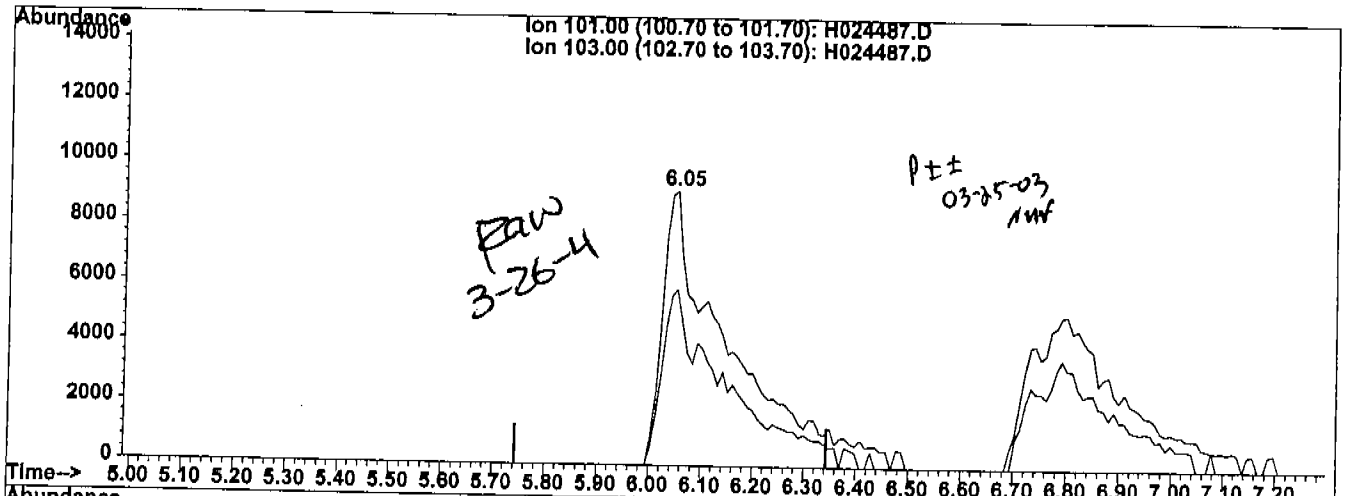


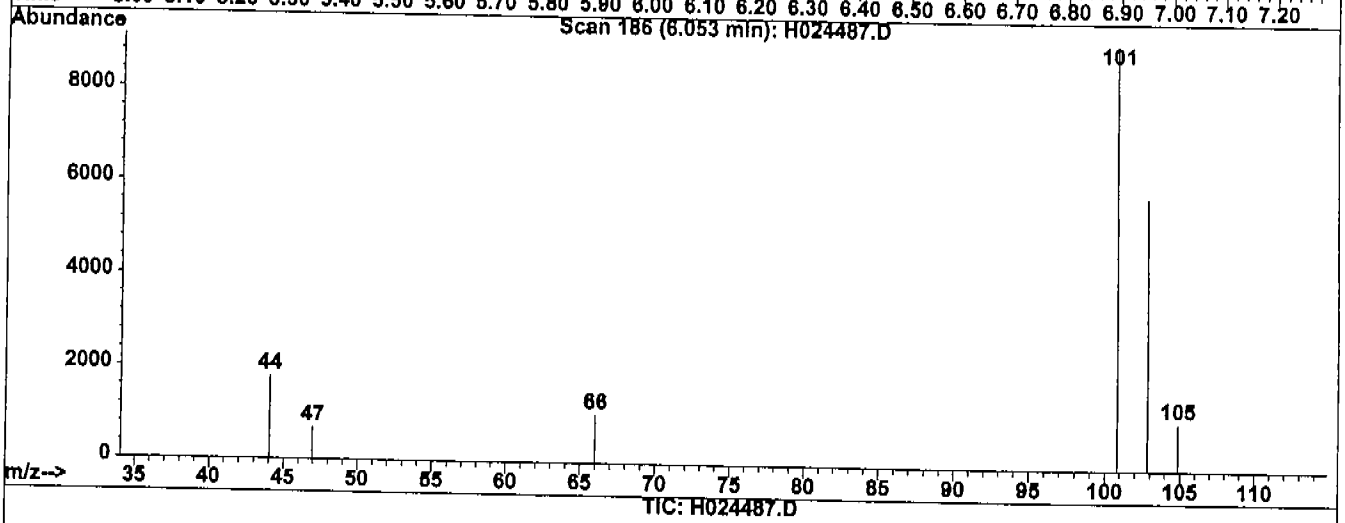
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024487.D
Acq On : 24 Mar 2004 1:01 pm
Sample : IC909-20
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:49 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(7) Trichlorofluoromethane ( )

6.05min 24.02ug/Kg m

response 82434

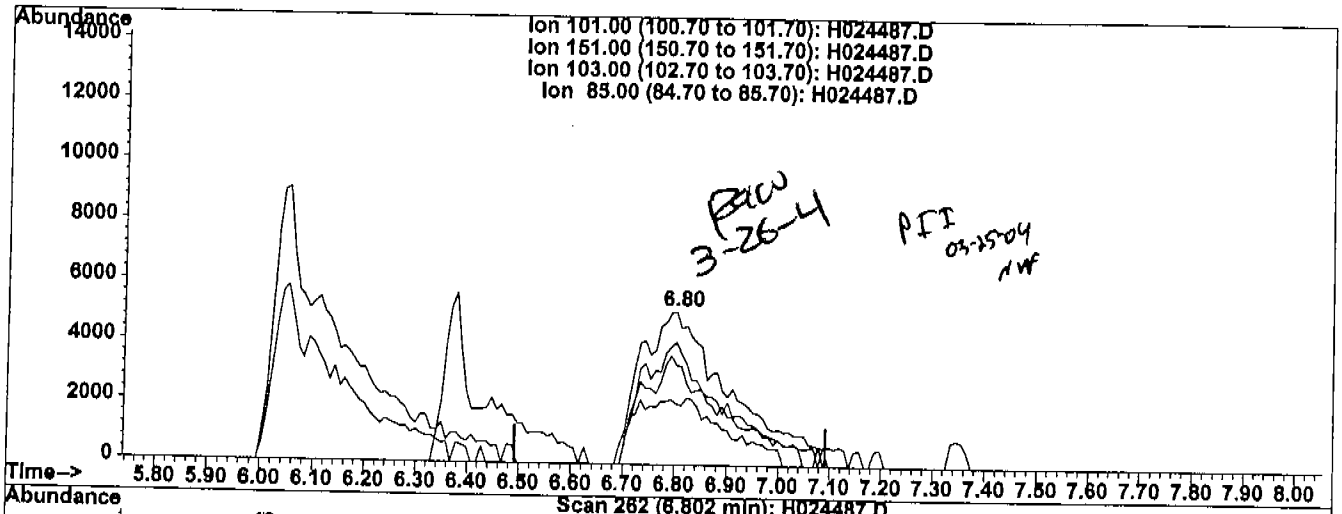
Ion	Exp%	Act%
101.00	100	100
103.00	65.90	64.27
0.00	0.00	0.00
0.00	0.00	0.00

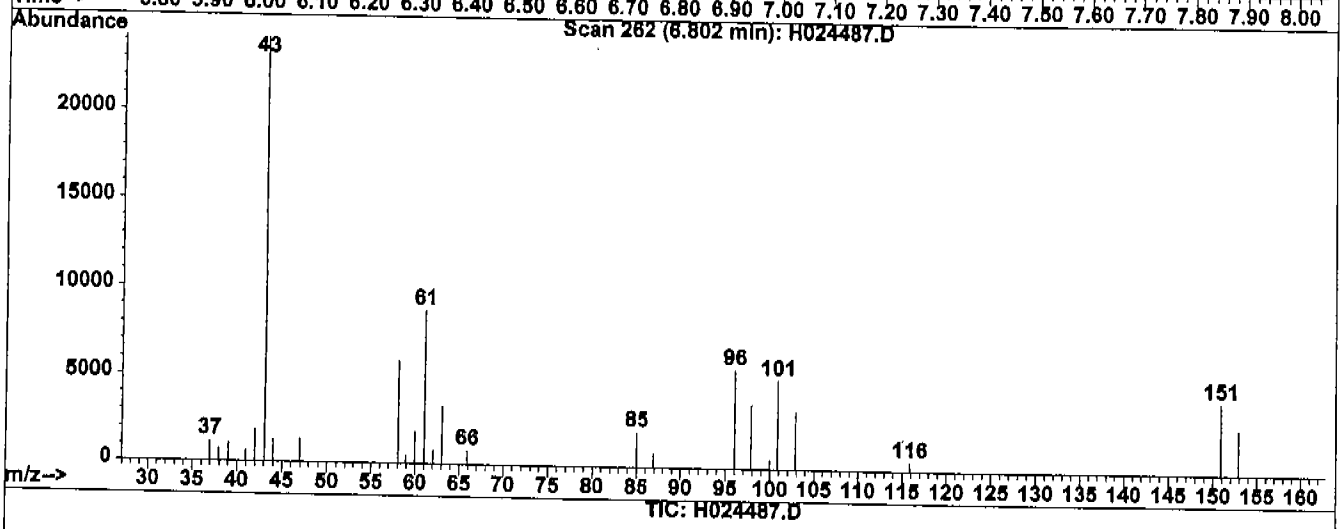
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024487.D
Acq On : 24 Mar 2004 1:01 pm
Sample : IC909-20
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:49 2004

Vial: 3
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(11) Freon 113

6.80min 20.85ug/Kg m

response 63611

Ion	Exp%	Act%
101.00	100	100
151.00	75.40	80.17
103.00	63.90	64.98
85.00	35.20	39.79

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.00	96	495787	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.10	117	403683	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.51	152	210104	50.00 ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.27	65	90364	250.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane	9.27	113	125525	49.83 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 99.66%		
37) 1,2-Dichloroethane-d4	9.65	65	168822	48.64 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 97.28%		
51) Toluene-d8	11.59	98	521188	50.08 ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 100.16%		
71) 4-Bromofluorobenzene	14.29	95	227340	45.82 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 91.64%		

Int 03-25-04

Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.38	85	171905m	48.09 ug/Kg	
3) Chloromethane	4.72	50	255450	47.46 ug/Kg	100
4) Vinyl Chloride	4.95	62	205108	47.58 ug/Kg	100
5) Bromomethane	5.56	94	123916	50.87 ug/Kg	100
6) Chloroethane	5.75	64	106840m	49.99 ug/Kg	
7) Trichlorofluoromethane	6.05	101	199300m	53.55 ug/Kg	
8) 1,2-Dichlorotrifluoroethan	6.37	67	210318m	48.99 ug/Kg	
9) Ethyl Ether	6.41	59	162671	46.55 ug/Kg	100
10) Acrolein	6.59	56	25504	249.51 ug/Kg	100
11) Freon 113	6.79	101	146717m	46.64 ug/Kg	
12) 1,1-Dichloroethene	6.77	61	256448	45.03 ug/Kg	100
13) Acetone	6.78	43	343267	207.21 ug/Kg	100
14) Iodomethane	7.02	142	237448	46.90 ug/Kg	100
15) Carbon Disulfide	7.15	76	545542	45.24 ug/Kg	100
16) Methyl acetate	7.17	43	784286	209.01 ug/Kg	100
17) Methylene Chloride	7.34	49	272787	37.41 ug/Kg	100
18) Acrylonitrile	7.60	53	314907	217.85 ug/Kg	100
19) Methyl Tert Butyl Ether	7.65	73	448196	45.38 ug/Kg	100
20) trans-1,2-Dichloroethene	7.69	61	294271	45.65 ug/Kg	100
21) Hexane	7.97	57	274669	36.37 ug/Kg	100
22) Vinyl acetate	8.12	43	1746196	220.72 ug/Kg	100
23) 1,1-Dichloroethane	8.16	63	346332	44.62 ug/Kg	100
24) Di-isopropyl ether	8.14	45	708885	43.99 ug/Kg	100
25) Ethyl tert-butyl Ether	8.55	59	583556	45.65 ug/Kg	100
26) 2-Butanone	8.73	43	453627	177.48 ug/Kg	100

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) cis-1,2-Dichloroethene	8.78	96	161152	39.19 ug/Kg	100
28) 2,2-Dichloropropane	8.81	77	180071	39.58 ug/Kg	100
29) Bromochloromethane	9.06	128	68750	41.27 ug/Kg	100
30) Chloroform	9.09	83	284558	39.56 ug/Kg	100
31) Tetrahydrofuran	9.11	42	46798	34.96 ug/Kg	100
33) 1,1,1-Trichloroethane	9.36	97	218977	40.10 ug/Kg	100
34) Cyclohexane	9.45	56	278769	37.08 ug/Kg	100
35) 1,1-Dichloropropene	9.51	75	207122	38.45 ug/Kg	100
36) Carbon Tetrachloride	9.55	117	191260	41.22 ug/Kg	100
38) 1,2-Dichloroethane	9.73	62	244809	40.31 ug/Kg	100
39) Benzene	9.75	78	607290	37.87 ug/Kg	100
40) Tert-Amyl Methyl Ether	9.76	73	487287	39.70 ug/Kg	100
41) Trichloroethene	10.37	95	159428	39.64 ug/Kg	100
42) Methylcyclohexane	10.62	83	237489	37.95 ug/Kg	100
43) 1,2-Dichloropropane	10.61	63	163634	39.74 ug/Kg	100
44) Dibromomethane	10.75	93	93617	41.03 ug/Kg	100
45) Bromodichloromethane	10.85	83	221007	42.88 ug/Kg	100
46) 2-Nitropropane	11.04	41	271932	208.35 ug/Kg	100
47) 2-Chloroethyl vinyl ether	11.06	63	369354	199.71 ug/Kg	100
48) cis-1,3-Dichloropropene	11.29	75	267756	41.13 ug/Kg	100
49) 4-Methyl-2-pentanone	11.38	43	946275	192.18 ug/Kg	100
52) Toluene	11.67	91	630435	36.31 ug/Kg	100
53) trans-1,3-Dichloropropene	11.82	75	248024	42.49 ug/Kg	100
54) 1,1,2-Trichloroethane	12.04	83	118443	41.24 ug/Kg	100
55) 1,3-Dichloropropane	12.23	76	237953	39.01 ug/Kg	100
56) 2-hexanone	12.21	43	650993	193.32 ug/Kg	100
57) Tetrachloroethene	12.26	166	162784	37.49 ug/Kg	100
58) Dibromochloromethane	12.49	129	152898	42.14 ug/Kg	100
59) 1,2-Dibromoethane	12.66	107	131179	41.81 ug/Kg	100
60) 1-Chlorohexane	13.00	91	189105	38.65 ug/Kg	100
61) Chlorobenzene	13.13	112	399172	38.16 ug/Kg	100
62) 1,1,1,2-Tetrachloroethane	13.18	131	145229	40.27 ug/Kg	100
63) Ethylbenzene	13.19	91	690009	37.15 ug/Kg	100
64) m,p-Xylene	13.30	91	1135782	72.96 ug/Kg	100
65) o-Xylene	13.72	91	589499	38.03 ug/Kg	100
66) Styrene	13.73	104	418689	41.13 ug/Kg	100
67) Bromoform	13.99	173	107147	44.72 ug/Kg	100
69) Isopropylbenzene	14.08	105	629102	35.92 ug/Kg	100
70) Cyclohexanone	14.25	55	27085	183.37 ug/Kg	100
72) 1,1,2,2-Tetrachloroethane	14.36	83	180095	36.75 ug/Kg	100
73) trans-1,4-Dichloro-2-Buten	14.41	53	50593	39.49 ug/Kg	100

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) 1,2,3-Trichloropropane	14.44	110	48063	36.40 ug/Kg	100
75) Bromobenzene	14.49	156	167336	36.13 ug/Kg	100
76) n-Propylbenzene	14.50	91	797215	35.71 ug/Kg	100
77) 2-Chlorotoluene	14.66	91	558469	35.06 ug/Kg	100
78) 1,3,5-Trimethylbenzene	14.66	105	556033	34.33 ug/Kg	100
79) 4-Chlorotoluene	14.76	91	517102	38.47 ug/Kg	100
80) tert-Butylbenzene	15.03	91	401309	37.59 ug/Kg	100
81) 1,2,4-Trimethylbenzene	15.08	105	572873	33.70 ug/Kg	100
82) sec-Butylbenzene	15.25	105	674385	39.04 ug/Kg	100
83) 4-Isopropyltoluene	15.37	119	531282	38.62 ug/Kg	100
84) 1,3-Dichlorobenzene	15.45	146	312860	39.01 ug/Kg	100
85) 1,4-Dichlorobenzene	15.53	146	310686	38.03 ug/Kg	100
86) Benzyl chloride	15.64	91	308762	43.30 ug/Kg	100
87) n-Butylbenzene	15.81	91	518721	40.48 ug/Kg	100
88) 1,2-Dichlorobenzene	15.94	146	298669	41.47 ug/Kg	100
89) 1,2-Dibromo-3-Chloropropan	16.75	75	31380	48.80 ug/Kg	100
90) 1,2,4-Trichlorobenzene	17.70	180	192411	44.77 ug/Kg	100
91) Hexachlorobutadiene	17.85	225	111820	43.55 ug/Kg	100
92) Naphthalene	18.04	128	417079	43.49 ug/Kg	100
93) 1,2,3-Trichlorobenzene	18.33	180	174444	46.86 ug/Kg	100
95) Tert Butyl Alcohol	7.37	59	225364	412.83 ug/Kg	100
96) Isobutyl alcohol	9.43	43	227289	703.34 ug/Kg#	59
97) Tert Amyl Alcohol	9.56	59	160228	367.84 ug/Kg	100
98) 1,4-Dioxane	10.70	88	31716	961.58 ug/Kg	100

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

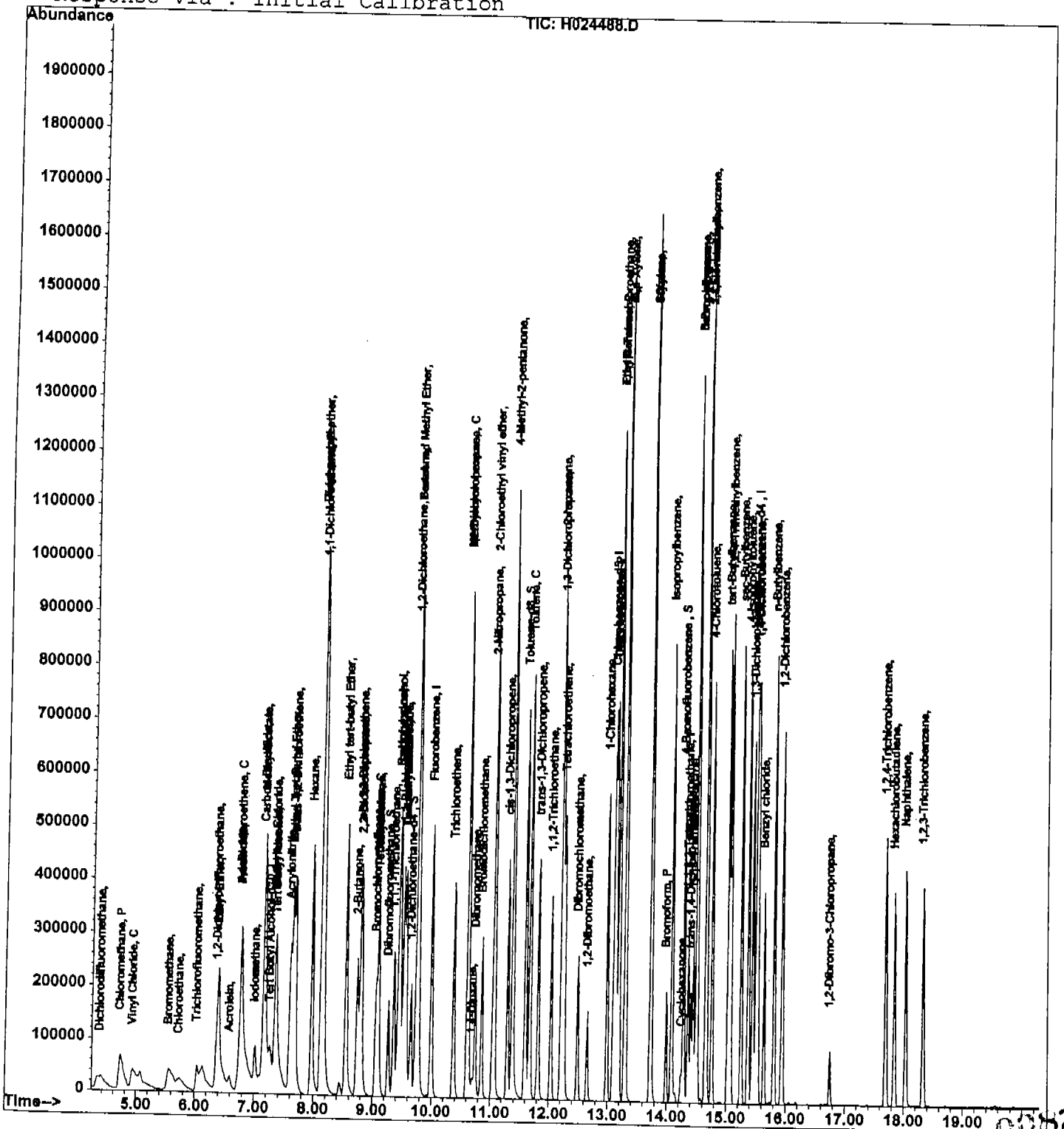
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



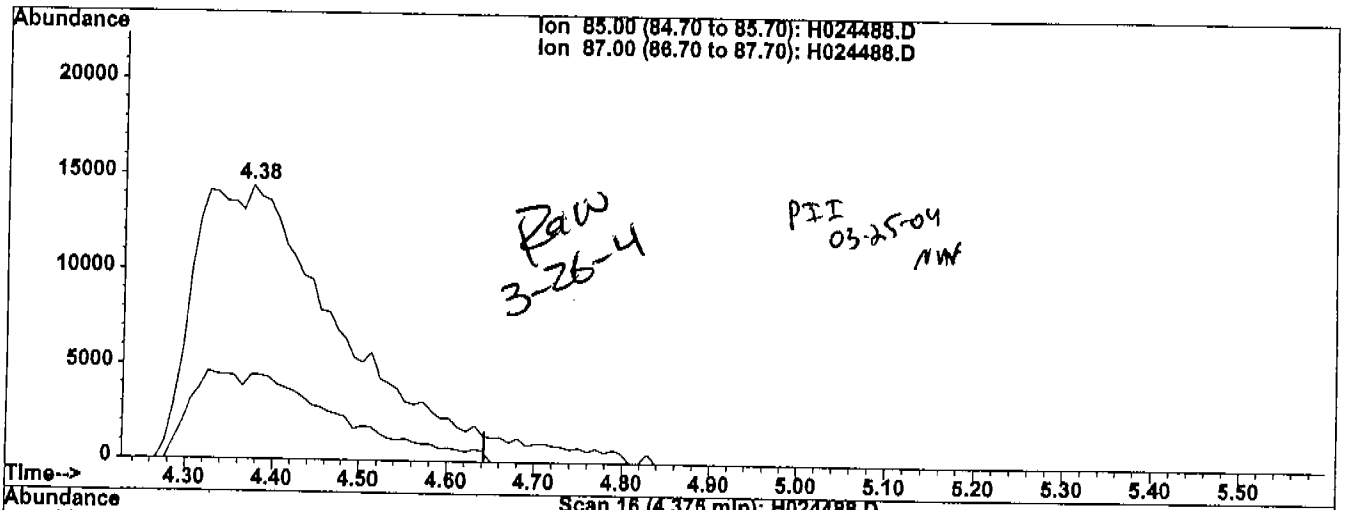
0082

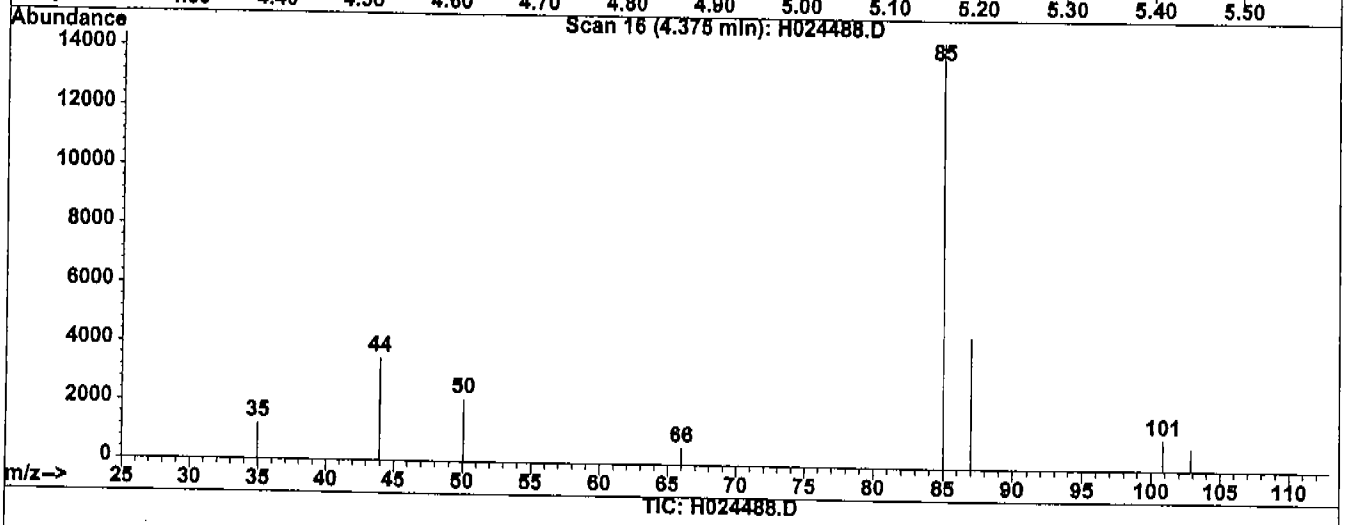
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(2) Dichlorodifluoromethane ( )

4.38min 48.09ug/Kg m

response 171905

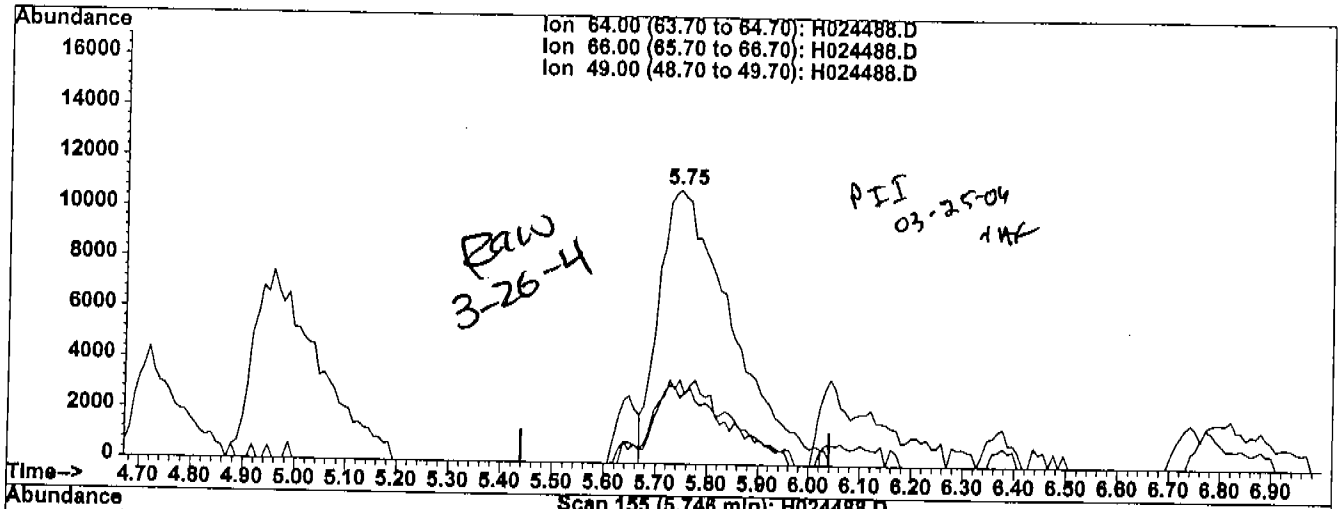
Ion	Exp%	Act%
85.00	100	100
87.00	31.00	31.00
0.00	0.00	0.00
0.00	0.00	0.00

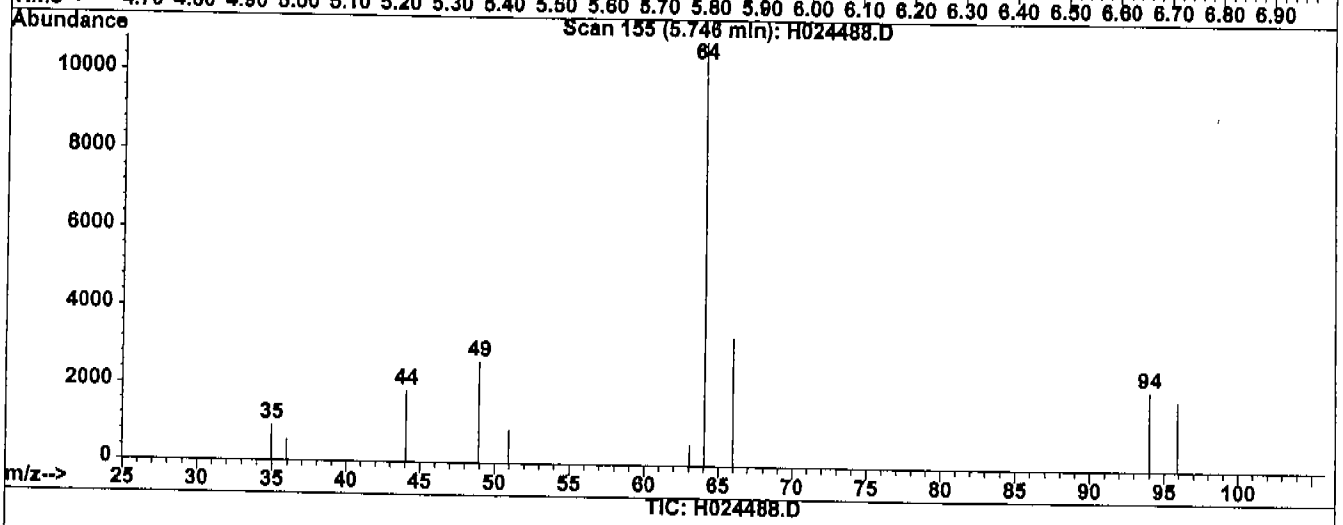
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(6) Chloroethane ( )

5.75min 49.99ug/Kg m

response 106840

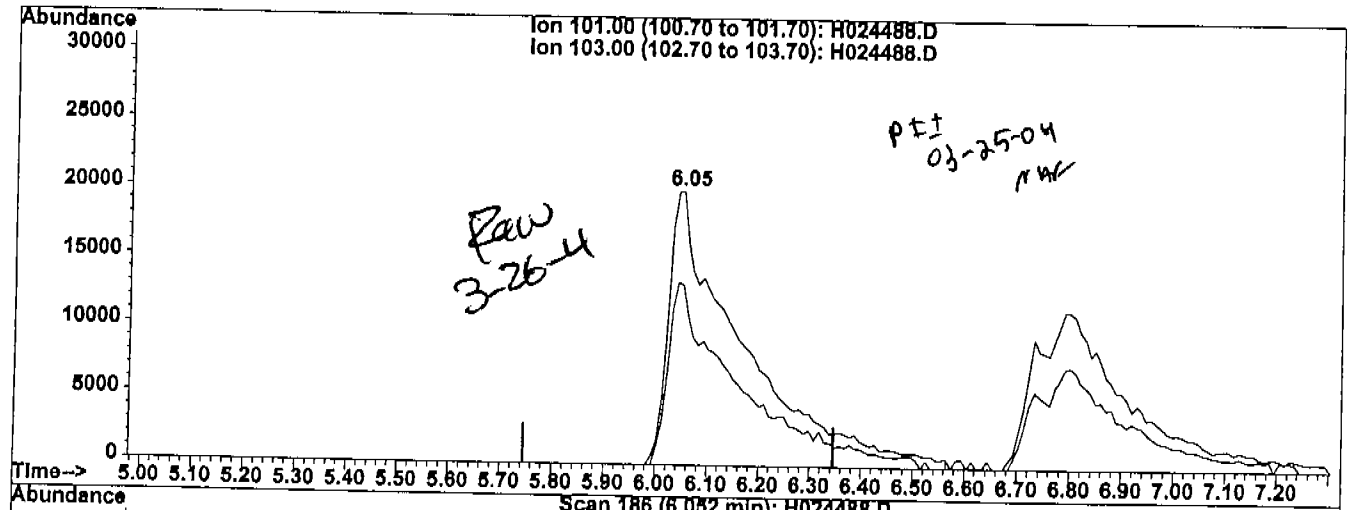
Ion	Exp%	Act%
64.00	100	100
66.00	33.00	30.62
49.00	26.00	24.09
0.00	0.00	0.00

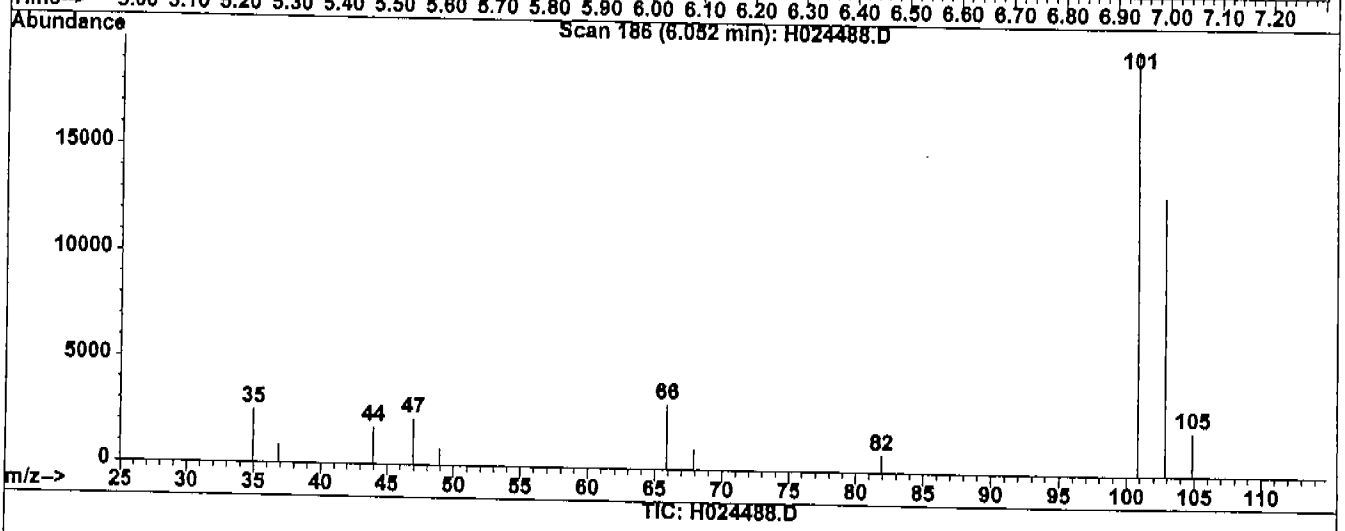
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(7) Trichlorofluoromethane ( )

6.05min 53.55ug/Kg m

response 199300

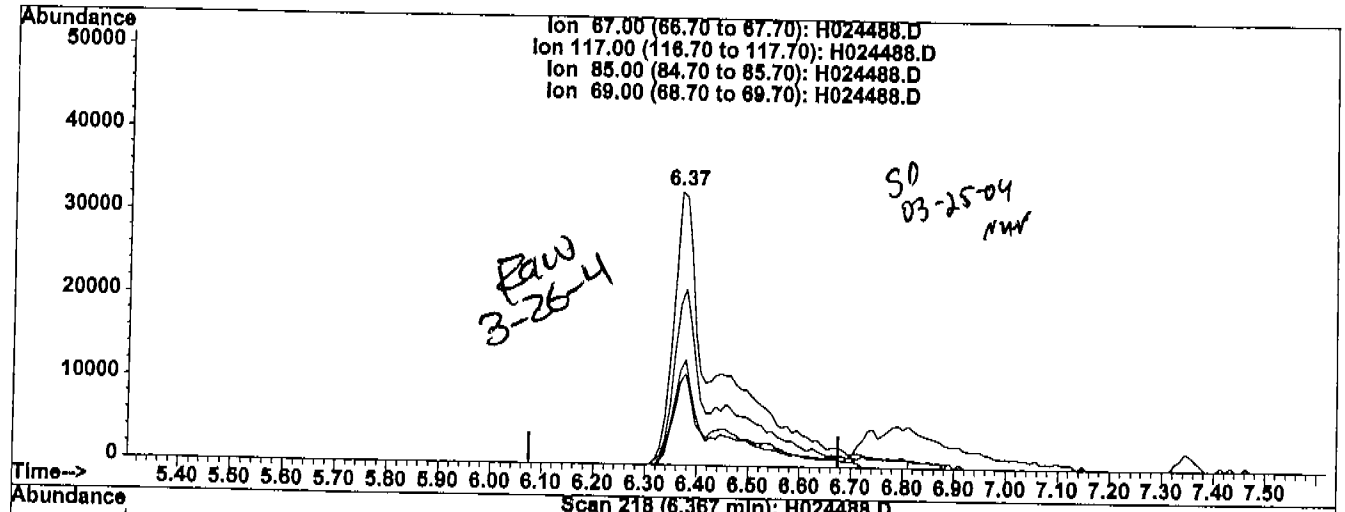
Ion	Exp%	Act%
101.00	100	100
103.00	65.90	65.85
0.00	0.00	0.00
0.00	0.00	0.00

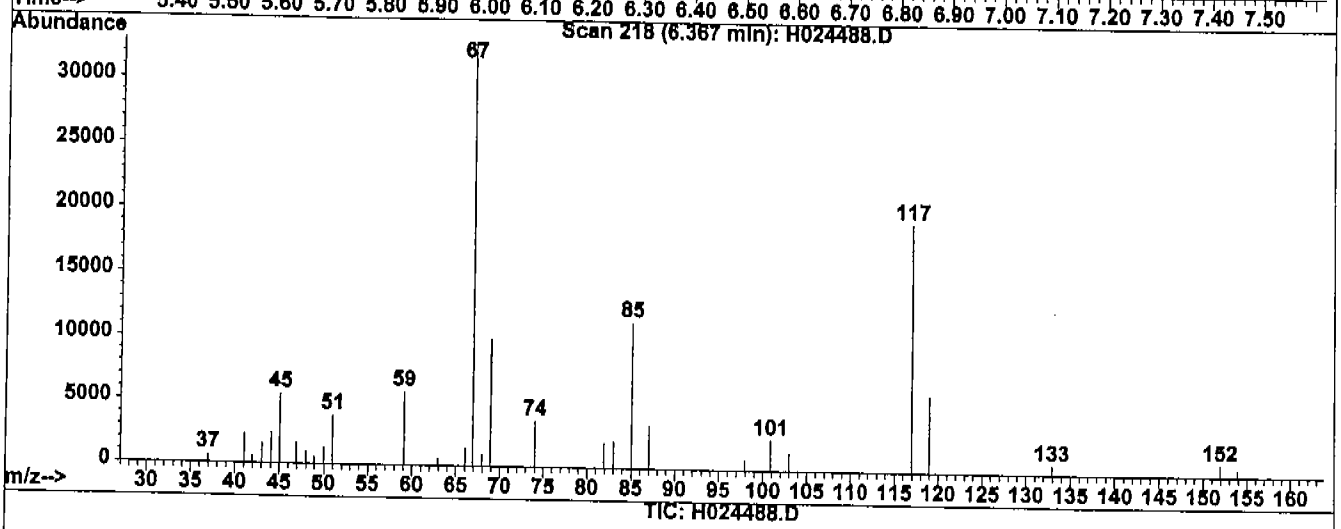
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(8) 1,2-Dichlorotrifluoroethane ( )

6.37min 48.99ug/Kg m

response 210318

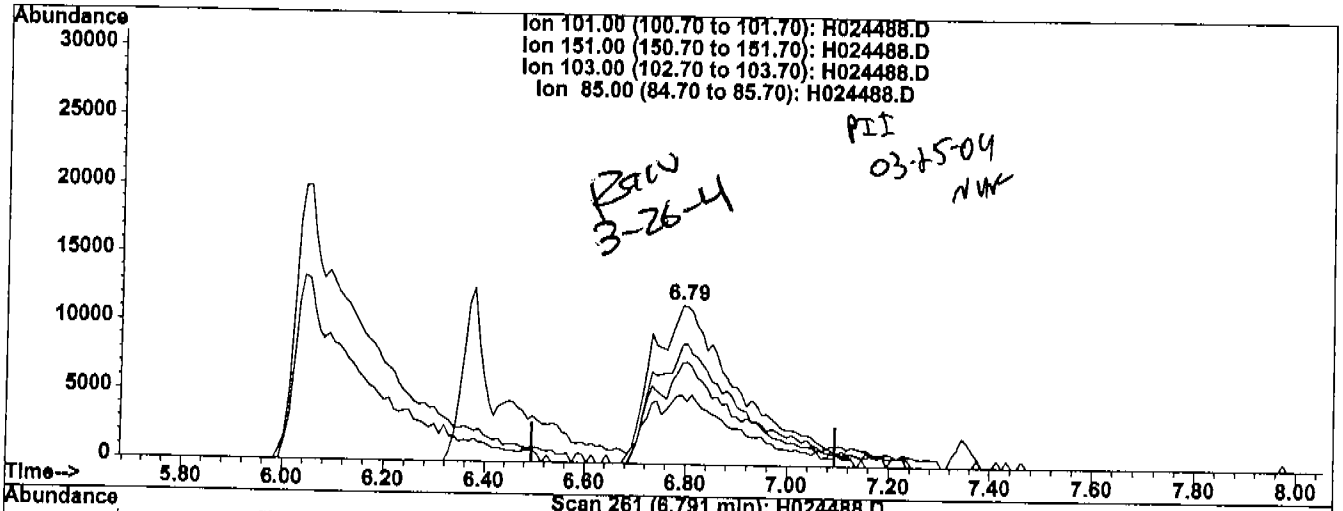
Ion	Exp%	Act%
67.00	100	100
117.00	58.60	58.64
85.00	34.70	34.72
69.00	30.30	30.28

Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024488.D
Acq On : 24 Mar 2004 1:28 pm
Sample : ICC909-40
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:50 2004

Vial: 4
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration



(11) Freon 113

6.79min 46.64ug/Kg m

response 146717

Ion	Exp%	Act%
101.00	100	100
151.00	75.40	75.41
103.00	63.90	63.85
85.00	35.20	43.82

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	10.00	96	487416	50.00	ug/Kg	0.00
50) Chlorobenzene-d5	13.10	117	400182	50.00	ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.51	152	210244	50.00	ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.27	65	96664	250.00	ug/Kg	0.00
System Monitoring Compounds						
32) Dibromofluoromethane	9.27	113	126704	51.21	ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 102.42%			
37) 1,2-Dichloroethane-d4	9.65	65	168977	49.86	ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 99.72%			
51) Toluene-d8	11.60	98	515663	49.96	ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 99.92%			
71) 4-Bromofluorobenzene	14.29	95	228303	46.97	ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 93.94%			

MH 05-05-04

Target Compounds						Qvalue
2) Dichlorodifluoromethane	4.33	85	354578m	96.05	ug/Kg	
3) Chloromethane	4.73	50	470125	84.89	ug/Kg	98
4) Vinyl Chloride	4.96	62	386370	87.05	ug/Kg	98
5) Bromomethane	5.56	94	225954	88.35	ug/Kg	96
6) Chloroethane	5.73	64	204475m	91.59	ug/Kg	
7) Trichlorofluoromethane	6.04	101	394229m	99.33	ug/Kg	
8) 1,2-Dichlorotrifluoroethan	6.38	67	404871m	90.83	ug/Kg	
9) Ethyl Ether	6.40	59	348411	97.42	ug/Kg	97
10) Acrolein	6.59	56	68046	637.67	ug/Kg	98
11) Freon 113	6.79	101	284174m	88.23	ug/Kg	
12) 1,1-Dichloroethene	6.78	61	515313	89.23	ug/Kg	98
13) Acetone	6.78	43	818032	497.80	ug/Kg	100
14) Iodomethane	7.02	142	499913	96.28	ug/Kg	98
15) Carbon Disulfide	7.14	76	1102885	90.07	ug/Kg	98
16) Methyl acetate	7.17	43	1882627	504.65	ug/Kg	99
17) Methylene Chloride	7.35	49	551205	78.16	ug/Kg	95
18) Acrylonitrile	7.60	53	757928	521.69	ug/Kg	97
19) Methyl Tert Butyl Ether	7.65	73	989921	98.63	ug/Kg	99
20) trans-1,2-Dichloroethene	7.69	61	592023	90.23	ug/Kg	98
21) Hexane	7.97	57	535601	73.81	ug/Kg	98
22) Vinyl acetate	8.13	43	3794060	475.50	ug/Kg	99
23) 1,1-Dichloroethane	8.16	63	695596	88.60	ug/Kg	100
24) Di-isopropyl ether	8.15	45	1467581	90.38	ug/Kg#	74
25) Ethyl tert-butyl Ether	8.55	59	1258666	96.74	ug/Kg	99
26) 2-Butanone	8.74	43	1279805	524.06	ug/Kg	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) cis-1,2-Dichloroethene	8.79	96	380863	94.69 ug/Kg	99
28) 2,2-Dichloropropane	8.81	77	414926	93.01 ug/Kg	99
29) Bromochloromethane	9.06	128	169130	102.46 ug/Kg	95
30) Chloroform	9.10	83	681519	96.64 ug/Kg	95
31) Tetrahydrofuran	9.11	42	135847	106.58 ug/Kg	98
33) 1,1,1-Trichloroethane	9.36	97	505034	94.01 ug/Kg	96
34) Cyclohexane	9.45	56	635363	87.57 ug/Kg	92
35) 1,1-Dichloropropene	9.51	75	476127	90.78 ug/Kg	97
36) Carbon Tetrachloride	9.55	117	433129	94.23 ug/Kg	99
38) 1,2-Dichloroethane	9.73	62	594860	99.44 ug/Kg	98
39) Benzene	9.75	78	1374542	88.36 ug/Kg	99
40) Tert-Amyl Methyl Ether	9.77	73	1188517	98.68 ug/Kg	98
41) Trichloroethene	10.38	95	377801	95.76 ug/Kg	93
42) Methylcyclohexane	10.62	83	537011	88.41 ug/Kg	98
43) 1,2-Dichloropropane	10.62	63	396771	98.18 ug/Kg	97
44) Dibromomethane	10.74	93	240638	106.60 ug/Kg	96
45) Bromodichloromethane	10.85	83	552803	107.17 ug/Kg	98
46) 2-Nitropropane	11.05	41	792193	611.00 ug/Kg#	79
47) 2-Chloroethyl vinyl ether	11.07	63	1009337	555.33 ug/Kg	90
48) cis-1,3-Dichloropropene	11.30	75	667204	103.52 ug/Kg	97
49) 4-Methyl-2-pentanone	11.38	43	2631254	548.92 ug/Kg	99
52) Toluene	11.67	91	1455385	86.55 ug/Kg	99
53) trans-1,3-Dichloropropene	11.82	75	626722	106.64 ug/Kg	97
54) 1,1,2-Trichloroethane	12.04	83	297350	103.64 ug/Kg	97
55) 1,3-Dichloropropane	12.22	76	596492	99.26 ug/Kg	91
56) 2-hexanone	12.20	43	1920674	580.21 ug/Kg	97
57) Tetrachloroethene	12.25	166	372243	87.85 ug/Kg	93
58) Dibromochloromethane	12.49	129	396948	108.90 ug/Kg	96
59) 1,2-Dibromoethane	12.66	107	340926	108.40 ug/Kg	97
60) 1-Chlorohexane	12.99	91	450345	93.64 ug/Kg	96
61) Chlorobenzene	13.13	112	940619	91.76 ug/Kg	96
62) 1,1,1,2-Tetrachloroethane	13.19	131	339444	94.79 ug/Kg	97
63) Ethylbenzene	13.19	91	1559767	86.25 ug/Kg	99
64) m,p-Xylene	13.30	91	2533454	167.86 ug/Kg	100
65) o-Xylene	13.73	91	1323887	87.22 ug/Kg	99
66) Styrene	13.73	104	980613	96.50 ug/Kg	97
67) Bromoform	14.00	173	294064	120.27 ug/Kg	98
69) Isopropylbenzene	14.09	105	1428079	83.62 ug/Kg	98
70) Cyclohexanone	14.25	55	87961	607.75 ug/Kg	96
72) 1,1,2,2-Tetrachloroethane	14.35	83	483612	100.66 ug/Kg	99
73) trans-1,4-Dichloro-2-Buten	14.40	53	147967	115.78 ug/Kg	96

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) 1,2,3-Trichloropropane	14.45	110	128604	99.57 ug/Kg	92
75) Bromobenzene	14.50	156	392920	86.88 ug/Kg	98
76) n-Propylbenzene	14.51	91	1788705	82.28 ug/Kg	95
77) 2-Chlorotoluene	14.66	91	1236265	80.02 ug/Kg	99
78) 1,3,5-Trimethylbenzene	14.66	105	1227029	78.49 ug/Kg	99
79) 4-Chlorotoluene	14.77	91	1195447	89.73 ug/Kg	99
80) tert-Butylbenzene	15.03	91	922161	87.64 ug/Kg	97
81) 1,2,4-Trimethylbenzene	15.07	105	1336055	81.77 ug/Kg	99
82) sec-Butylbenzene	15.26	105	1528048	88.94 ug/Kg	98
83) 4-Isopropyltoluene	15.38	119	1256208	92.04 ug/Kg	99
84) 1,3-Dichlorobenzene	15.45	146	746103	93.54 ug/Kg	98
85) 1,4-Dichlorobenzene	15.54	146	746367	92.45 ug/Kg	96
86) Benzyl chloride	15.65	91	875682	120.24 ug/Kg	99
87) n-Butylbenzene	15.81	91	1245582	96.84 ug/Kg	97
88) 1,2-Dichlorobenzene	15.95	146	735598	101.13 ug/Kg	96
89) 1,2-Dibromo-3-Chloropropan	16.75	75	94534	139.26 ug/Kg	93
90) 1,2,4-Trichlorobenzene	17.71	180	460628	104.00 ug/Kg	97
91) Hexachlorobutadiene	17.86	225	251085	95.60 ug/Kg	97
92) Naphthalene	18.04	128	1123039	114.52 ug/Kg	99
93) 1,2,3-Trichlorobenzene	18.34	180	425831	109.61 ug/Kg	93
95) Tert Butyl Alcohol	7.37	59	593873	1008.89 ug/Kg	97
96) Isobutyl alcohol	9.43	43	669680	1997.59 ug/Kg	90
97) Tert Amyl Alcohol	9.57	59	506451	1109.20 ug/Kg	97
98) 1,4-Dioxane	10.71	88	93432	2520.81 ug/Kg	97

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

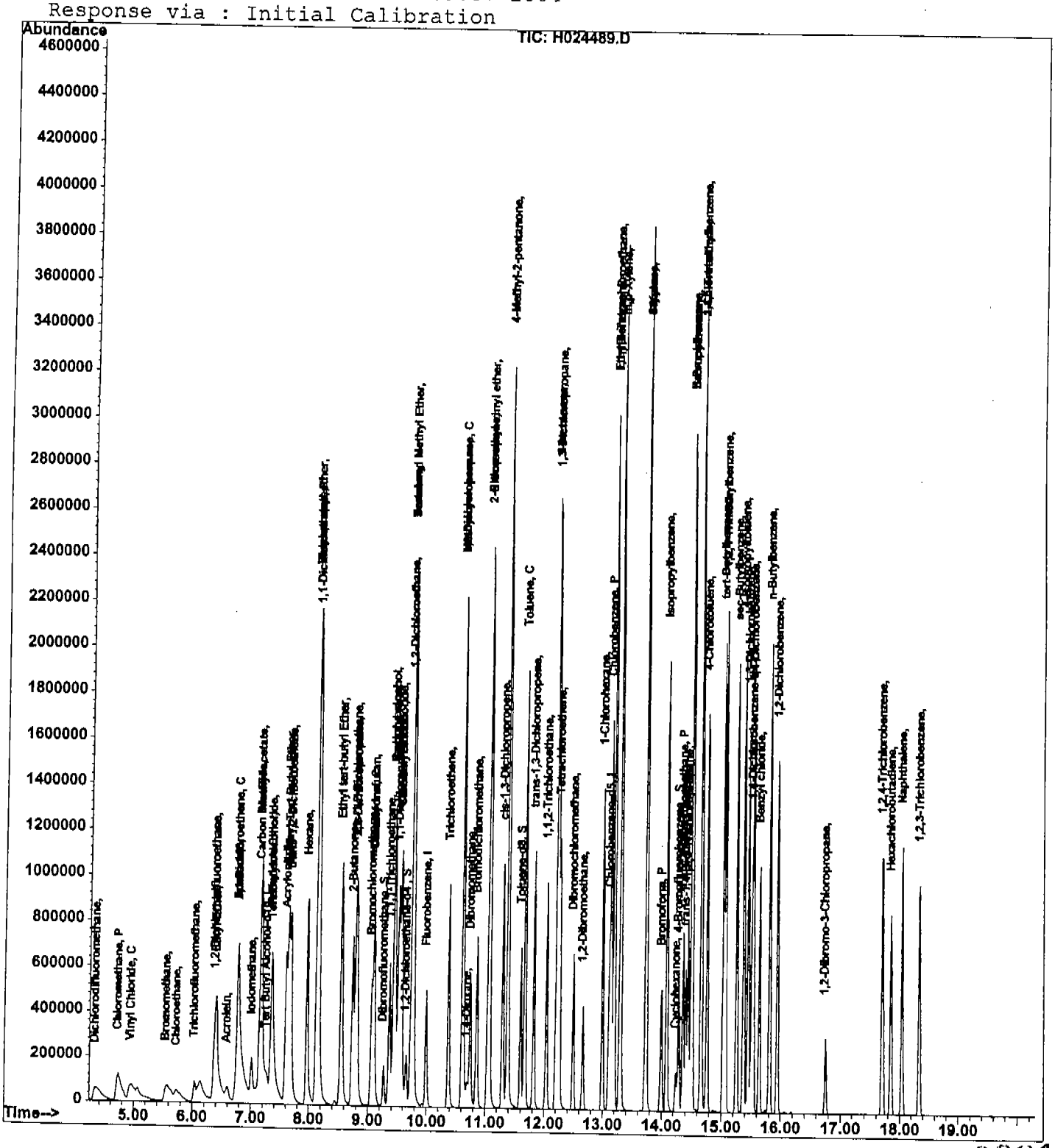
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

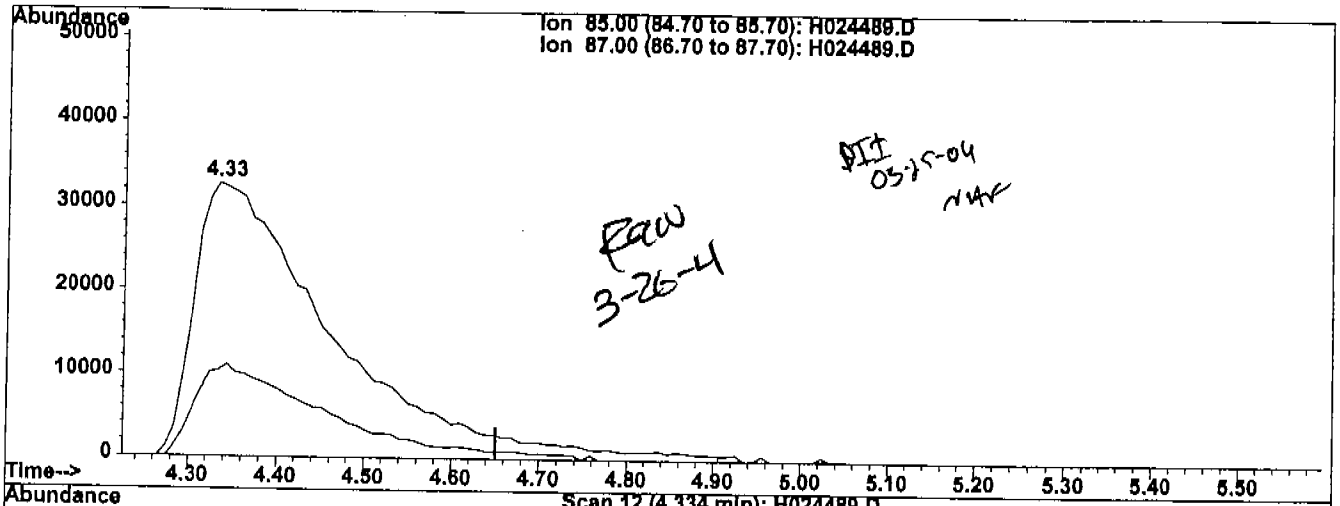


Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:51 2004

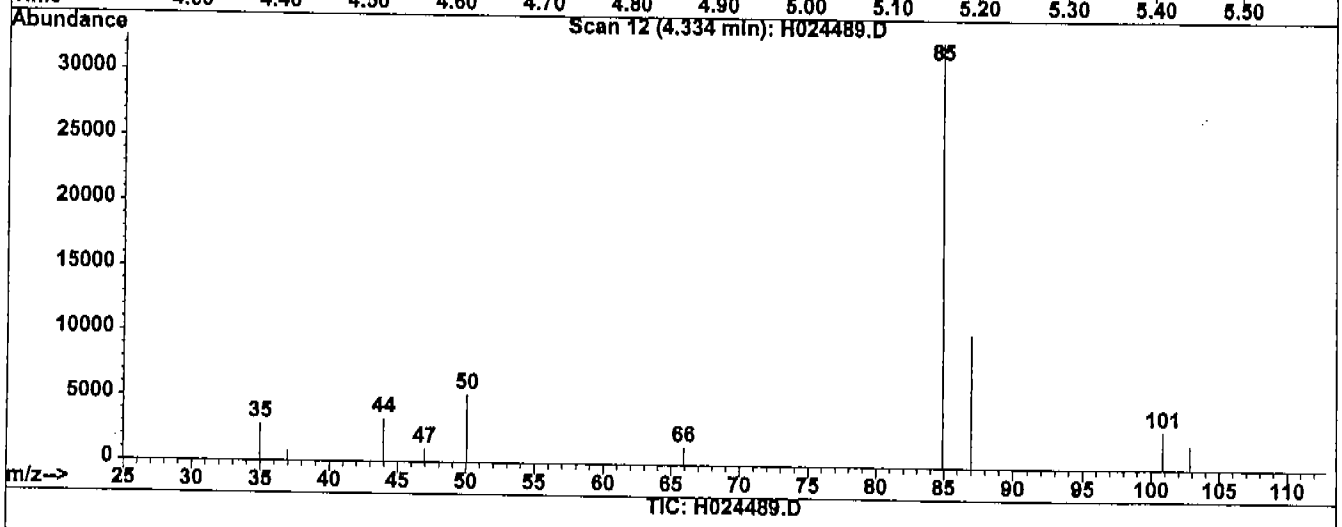
Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration



DIT 03-25-04

RAW 3-26-4



(2) Dichlorodifluoromethane ( )

4.33min 96.05ug/Kg m

response 354578

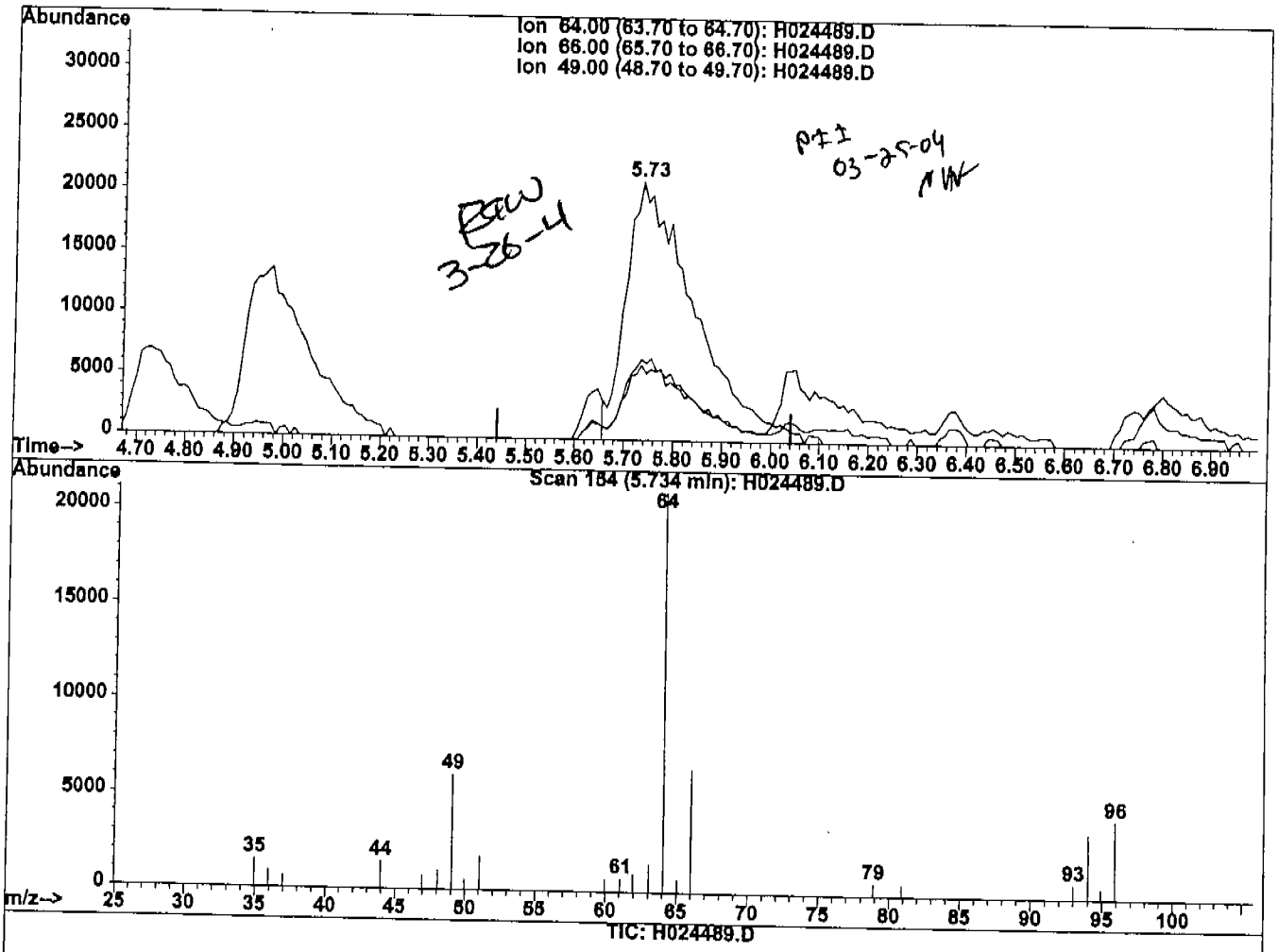
Ion	Exp%	Act%
85.00	100	100
87.00	31.00	31.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration



(6) Chloroethane ( )

5.73min 91.59ug/Kg m

response 204475

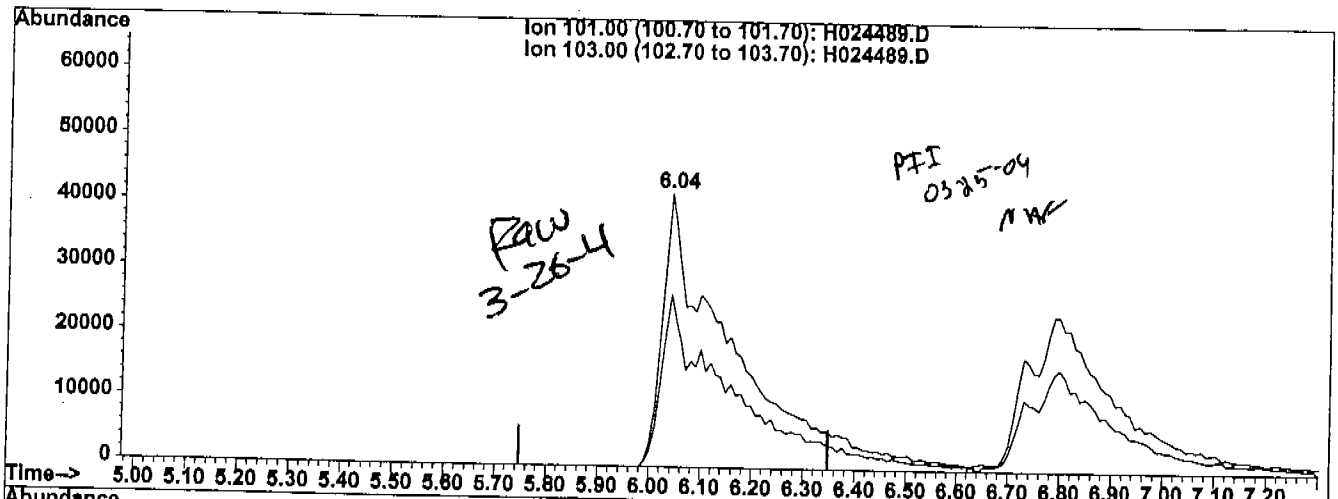
Ion	Exp%	Act%
64.00	100	100
66.00	30.60	31.16
49.00	24.10	29.03
0.00	0.00	0.00

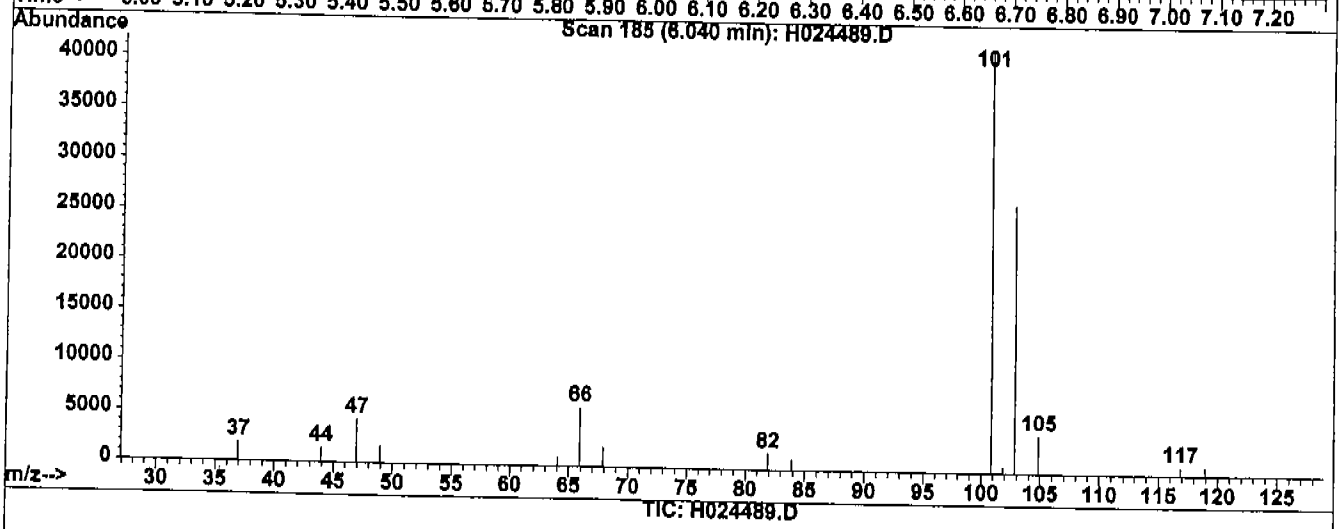
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(7) Trichlorofluoromethane ( )

6.04min 99.33ug/Kg m

response 394229

Ion	Exp%	Act%
101.00	100	100
103.00	65.90	63.47
0.00	0.00	0.00
0.00	0.00	0.00

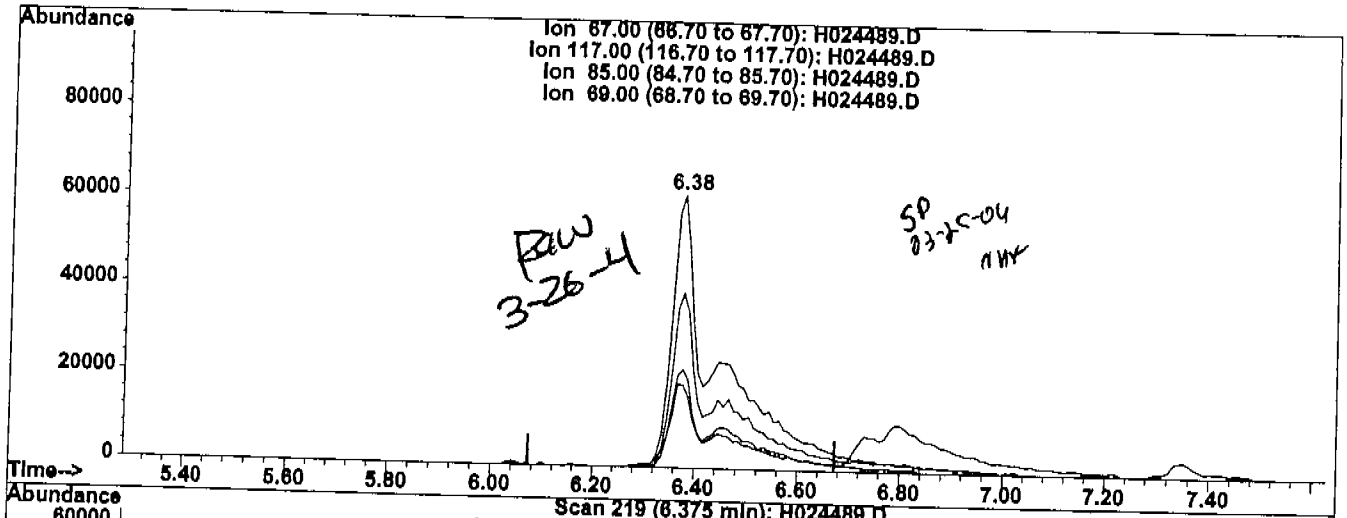
0094

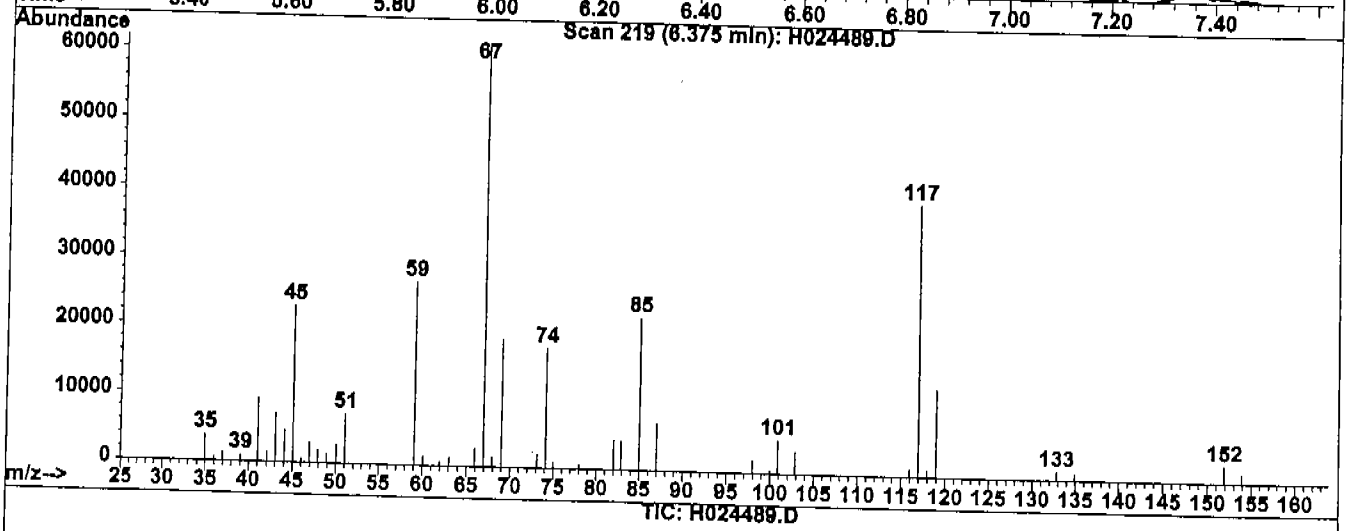
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(8) 1,2-Dichlorotrifluoroethane ( )

6.38min 90.83ug/Kg m

response 404871

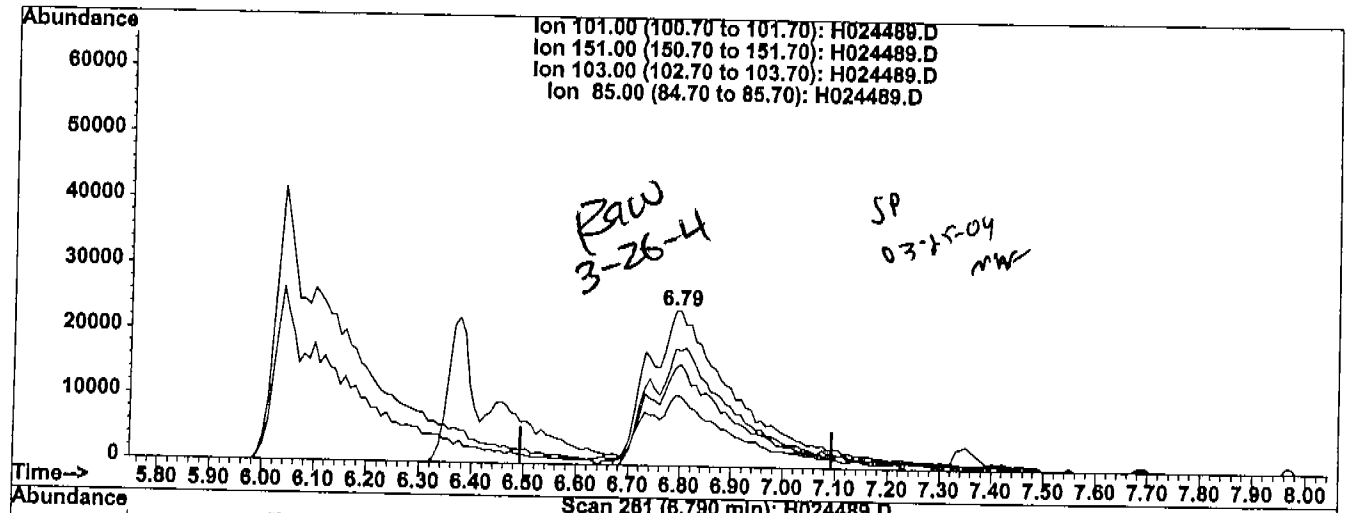
Ion	Exp%	Act%
67.00	100	100
117.00	58.60	64.30
85.00	34.70	36.01
69.00	30.30	30.29

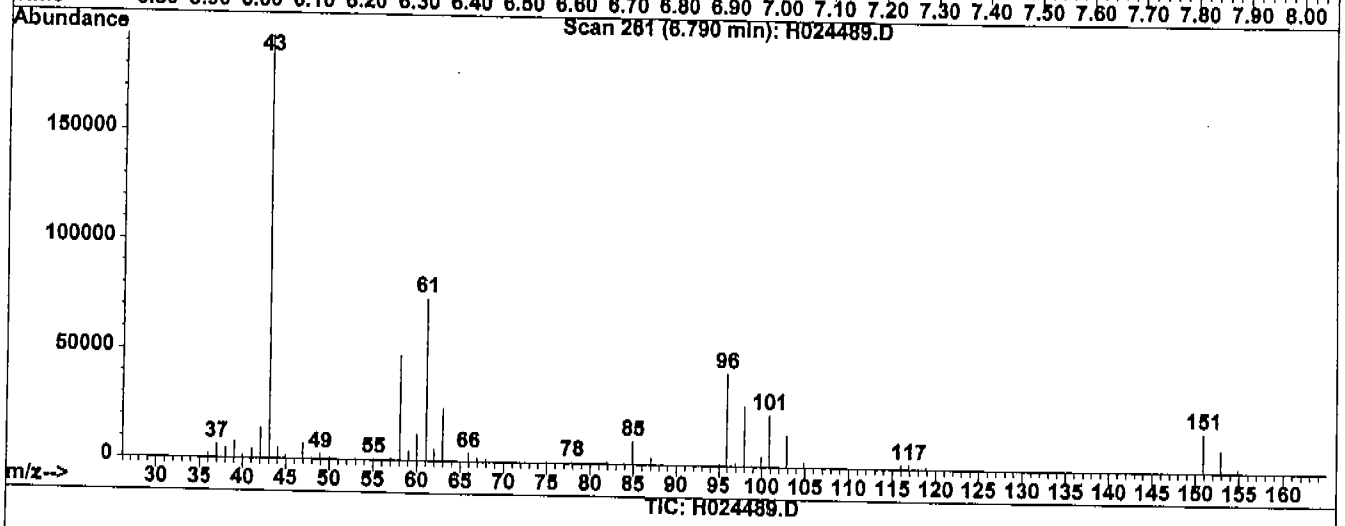
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024489.D
Acq On : 24 Mar 2004 1:55 pm
Sample : IC909-100
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:51 2004

Vial: 5
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(11) Freon 113

6.79min 88.23ug/Kg m

response 284174

Ion	Exp%	Act%
101.00	100	100
151.00	75.40	75.79
103.00	63.90	62.83
85.00	43.80	44.96

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	9.99	96	520524	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.10	117	419446	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.51	152	215856	50.00 ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.28	65	93183	250.00 ug/Kg	0.00

System Monitoring Compounds					
32) Dibromofluoromethane	9.27	113	129599	48.81 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 97.62%		
37) 1,2-Dichloroethane-d4	9.65	65	175325	48.47 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 96.94%		
51) Toluene-d8	11.60	98	544467	50.34 ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 100.68%		
71) 4-Bromofluorobenzene	14.28	95	240736	48.83 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 97.66%		

Target Compounds

MRF 03/25/04

					Qvalue
2) Dichlorodifluoromethane	4.34	85	698873m	178.68 ug/Kg	
3) Chloromethane	4.74	50	937326	163.42 ug/Kg	98
4) Vinyl Chloride	4.95	62	772304	167.26 ug/Kg	96
5) Bromomethane	5.56	94	416188	156.02 ug/Kg	98
6) Chloroethane	5.74	64	398317m	169.93 ug/Kg	
7) Trichlorofluoromethane	6.04	101	806631m	190.57 ug/Kg	
8) 1,2-Dichlorotrifluoroethan	6.37	67	825445m	176.64 ug/Kg	
9) Ethyl Ether	6.40	59	697522	183.58 ug/Kg	98
10) Acrolein	6.60	56	120325	1000.75 ug/Kg	91
11) Freon 113	6.80	101	563920m	167.90 ug/Kg	
12) 1,1-Dichloroethene	6.77	61	1011405	167.60 ug/Kg	99
13) Acetone	6.78	43	1538794	877.62 ug/Kg	100
14) Iodomethane	7.02	142	994095	180.63 ug/Kg	98
15) Carbon Disulfide	7.14	76	2206158	172.14 ug/Kg	95
16) Methyl acetate	7.17	43	3639493	911.84 ug/Kg	99
17) Methylene Chloride	7.35	49	1112680	154.49 ug/Kg	96
18) Acrylonitrile	7.61	53	1452223	927.95 ug/Kg	96
19) Methyl Tert Butyl Ether	7.65	73	1958394	183.22 ug/Kg	98
20) trans-1,2-Dichloroethene	7.69	61	1176984	171.32 ug/Kg	98
21) Hexane	7.97	57	1022203	139.20 ug/Kg	98
22) Vinyl acetate	8.13	43	7646701	906.27 ug/Kg	100
23) 1,1-Dichloroethane	8.16	63	1365467	166.66 ug/Kg	100
24) Di-isopropyl ether	8.15	45	2907145	170.94 ug/Kg#	78
25) Ethyl tert-butyl Ether	8.54	59	2536220	183.73 ug/Kg	97
26) 2-Butanone	8.74	43	2439419	926.45 ug/Kg	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
27) cis-1,2-Dichloroethene	8.79	96	756973	178.12 ug/Kg	99
28) 2,2-Dichloropropane	8.81	77	792437	168.69 ug/Kg	97
29) Bromochloromethane	9.06	128	339366	191.58 ug/Kg	96
30) Chloroform	9.10	83	1355290	181.18 ug/Kg	95
31) Tetrahydrofuran	9.11	42	260186	188.66 ug/Kg	99
33) 1,1,1-Trichloroethane	9.36	97	1001451	176.67 ug/Kg	97
34) Cyclohexane	9.45	56	1247785	165.14 ug/Kg	87
35) 1,1-Dichloropropene	9.51	75	933456	169.79 ug/Kg	97
36) Carbon Tetrachloride	9.55	117	857164	176.65 ug/Kg	98
38) 1,2-Dichloroethane	9.73	62	1181621	185.17 ug/Kg	99
39) Benzene	9.75	78	2703463	166.62 ug/Kg	98
40) Tert-Amyl Methyl Ether	9.77	73	2358835	183.88 ug/Kg	97
41) Trichloroethene	10.38	95	757341	181.29 ug/Kg	98
42) Methylcyclohexane	10.62	83	1039949	164.13 ug/Kg	95
43) 1,2-Dichloropropane	10.62	63	796168	185.15 ug/Kg	96
44) Dibromomethane	10.74	93	484216	198.24 ug/Kg	95
45) Bromodichloromethane	10.85	83	1117267	199.95 ug/Kg	97
46) 2-Nitropropane	11.05	41	1521974	1052.47 ug/Kg	89
47) 2-Chloroethyl vinyl ether	11.07	63	1969024	992.47 ug/Kg	95
48) cis-1,3-Dichloropropene	11.30	75	1369360	197.56 ug/Kg	97
49) 4-Methyl-2-pentanone	11.38	43	4988106	955.70 ug/Kg	99
52) Toluene	11.67	91	2854230	166.42 ug/Kg	97
53) trans-1,3-Dichloropropene	11.82	75	1272899	203.94 ug/Kg	97
54) 1,1,2-Trichloroethane	12.04	83	589037	194.46 ug/Kg	98
55) 1,3-Dichloropropane	12.22	76	1144875	182.03 ug/Kg	84
56) 2-hexanone	12.20	43	3592018	1003.08 ug/Kg	95
57) Tetrachloroethene	12.26	166	723067	166.86 ug/Kg	98
58) Dibromochloromethane	12.49	129	805872	207.25 ug/Kg	95
59) 1,2-Dibromoethane	12.66	107	691072	206.17 ug/Kg	96
60) 1-Chlorohexane	12.99	91	885182	177.86 ug/Kg	96
61) Chlorobenzene	13.14	112	1863870	176.38 ug/Kg	96
62) 1,1,1,2-Tetrachloroethane	13.19	131	663050	178.52 ug/Kg	97
63) Ethylbenzene	13.19	91	2964645	160.83 ug/Kg	99
64) m,p-Xylene	13.30	91	4720918	308.34 ug/Kg	100
65) o-Xylene	13.73	91	2511399	162.00 ug/Kg	99
66) Styrene	13.73	104	1869373	176.75 ug/Kg	94
67) Bromoform	14.00	173	586203	219.83 ug/Kg	99
69) Isopropylbenzene	14.09	105	2799295	165.05 ug/Kg	99
70) Cyclohexanone	14.25	55	177936	1147.98 ug/Kg	96
72) 1,1,2,2-Tetrachloroethane	14.36	83	976911	197.79 ug/Kg	99
73) trans-1,4-Dichloro-2-Buten	14.40	53	306064	226.12 ug/Kg	95

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 06:48:28 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74) 1,2,3-Trichloropropane	14.45	110	256096	193.29 ug/Kg	96
75) Bromobenzene	14.50	156	745986	164.99 ug/Kg	94
76) n-Propylbenzene	14.51	91	3358065	155.98 ug/Kg	99
77) 2-Chlorotoluene	14.67	91	2367189	155.46 ug/Kg	99
78) 1,3,5-Trimethylbenzene	14.66	105	2321793	151.16 ug/Kg	99
79) 4-Chlorotoluene	14.77	91	2347826	175.25 ug/Kg	95
80) tert-Butylbenzene	15.03	91	1783592	169.29 ug/Kg	99
81) 1,2,4-Trimethylbenzene	15.07	105	2543234	157.34 ug/Kg	99
82) sec-Butylbenzene	15.26	105	2952628	171.17 ug/Kg	99
83) 4-Isopropyltoluene	15.38	119	2350628	170.47 ug/Kg	98
84) 1,3-Dichlorobenzene	15.45	146	1453119	179.77 ug/Kg	97
85) 1,4-Dichlorobenzene	15.54	146	1449763	177.58 ug/Kg	97
86) Benzyl chloride	15.65	91	1692478	217.55 ug/Kg	98
87) n-Butylbenzene	15.81	91	2279501	173.72 ug/Kg	97
88) 1,2-Dichlorobenzene	15.95	146	1394842	186.36 ug/Kg	97
89) 1,2-Dibromo-3-Chloropropan	16.75	75	180022	239.50 ug/Kg	89
90) 1,2,4-Trichlorobenzene	17.71	180	847872	184.97 ug/Kg	97
91) Hexachlorobutadiene	17.85	225	450871	168.69 ug/Kg	97
92) Naphthalene	18.04	128	2072276	200.01 ug/Kg	100
93) 1,2,3-Trichlorobenzene	18.34	180	778590	191.52 ug/Kg	97
95) Tert Butyl Alcohol	7.37	59	1126465	1981.65 ug/Kg	96
96) Isobutyl alcohol	9.43	43	1287112	3983.71 ug/Kg	88
97) Tert Amyl Alcohol	9.57	59	947103	2105.79 ug/Kg	97
98) 1,4-Dioxane	10.70	88	186698	4966.64 ug/Kg	97

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

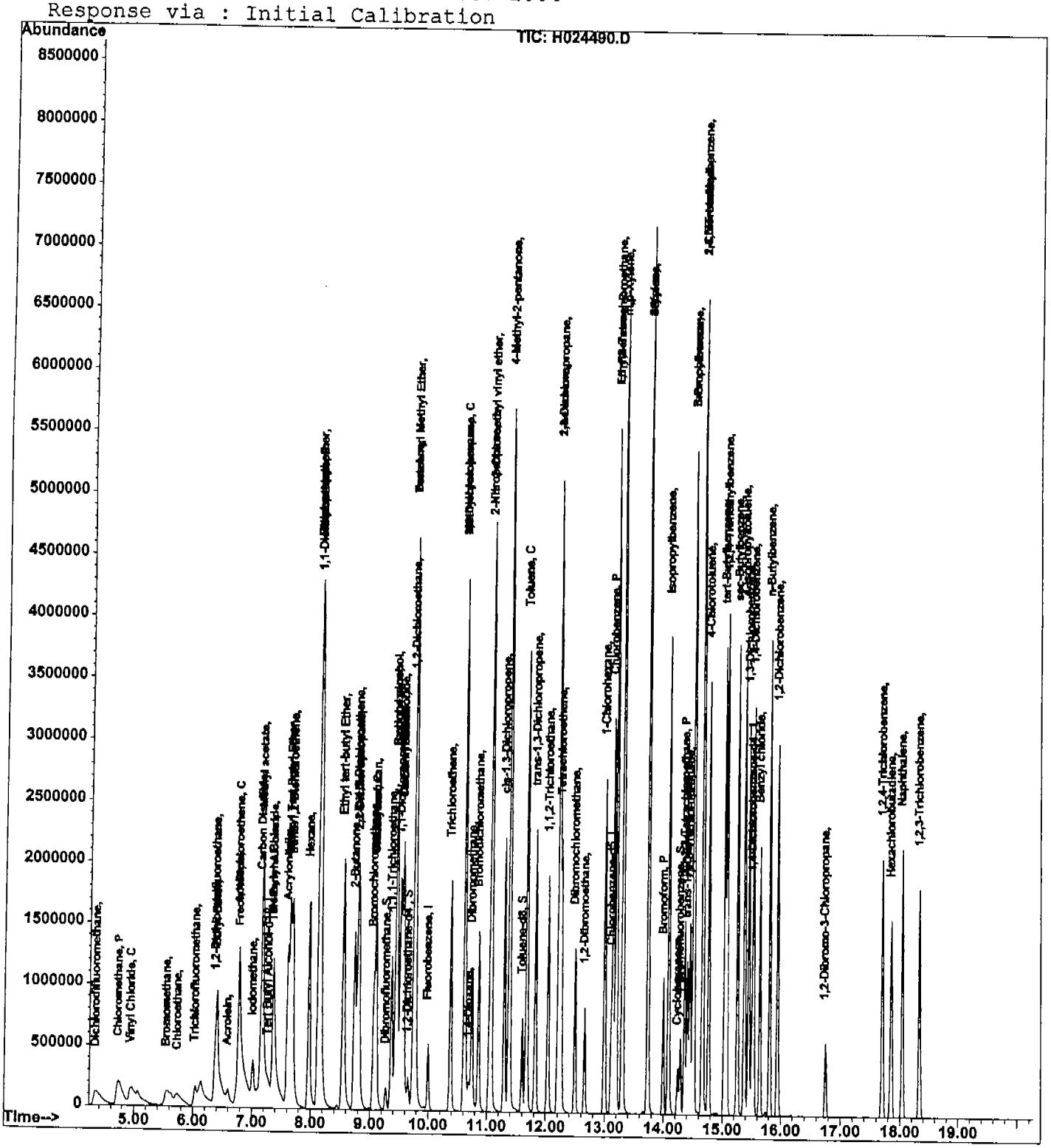
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration

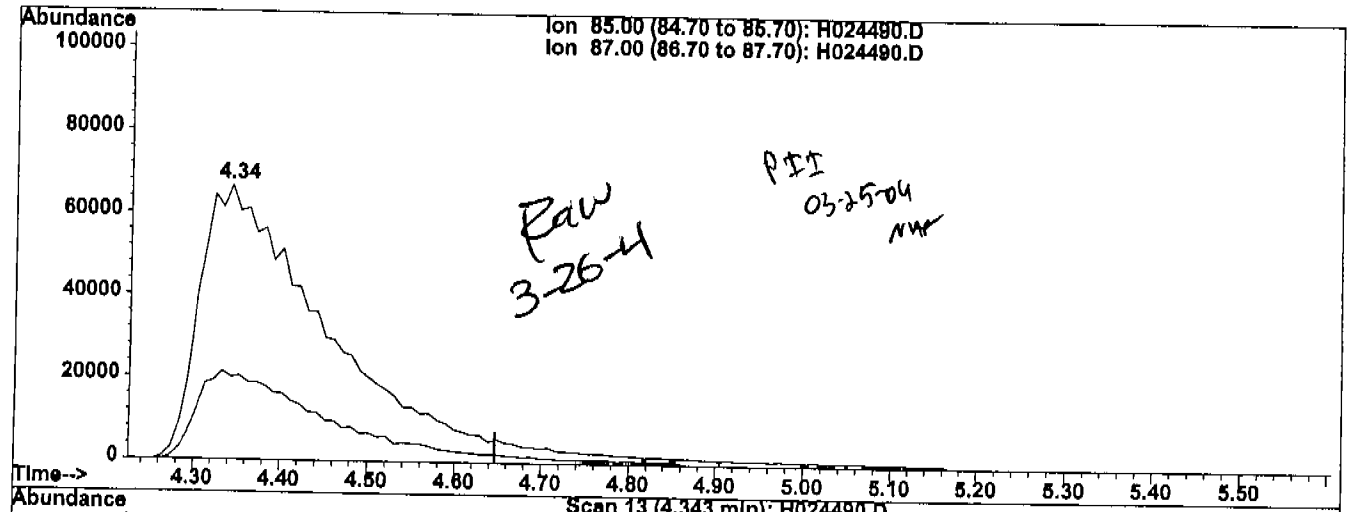


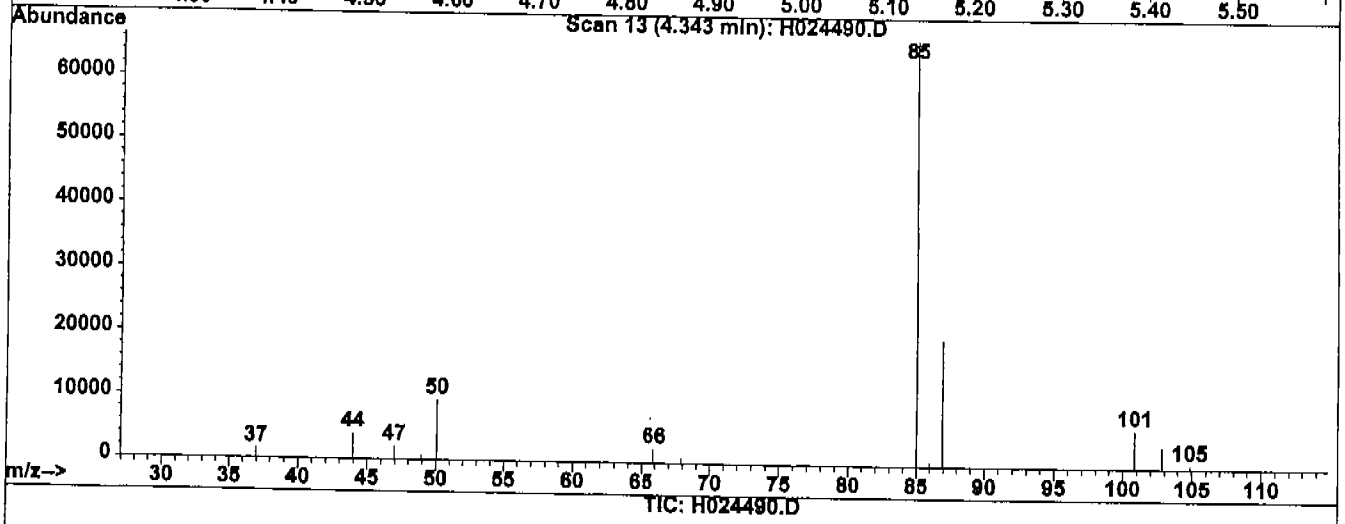
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(2) Dichlorodifluoromethane ( )

4.34min 178.68ug/Kg m

response 698873

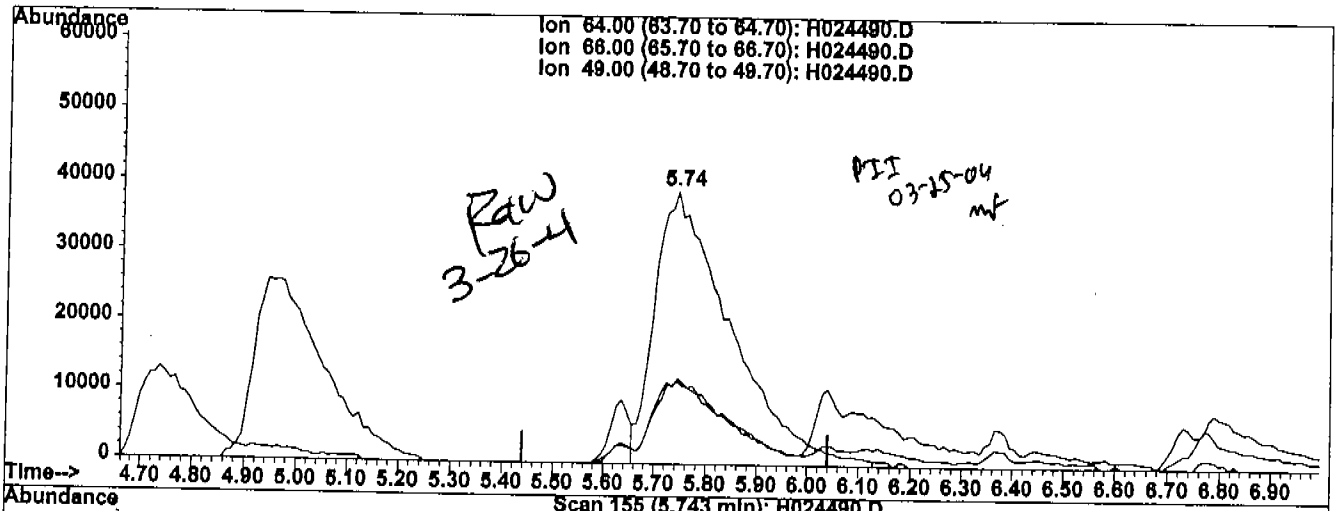
Ion	Exp%	Act%
85.00	100	100
87.00	31.00	29.85
0.00	0.00	0.00
0.00	0.00	0.00

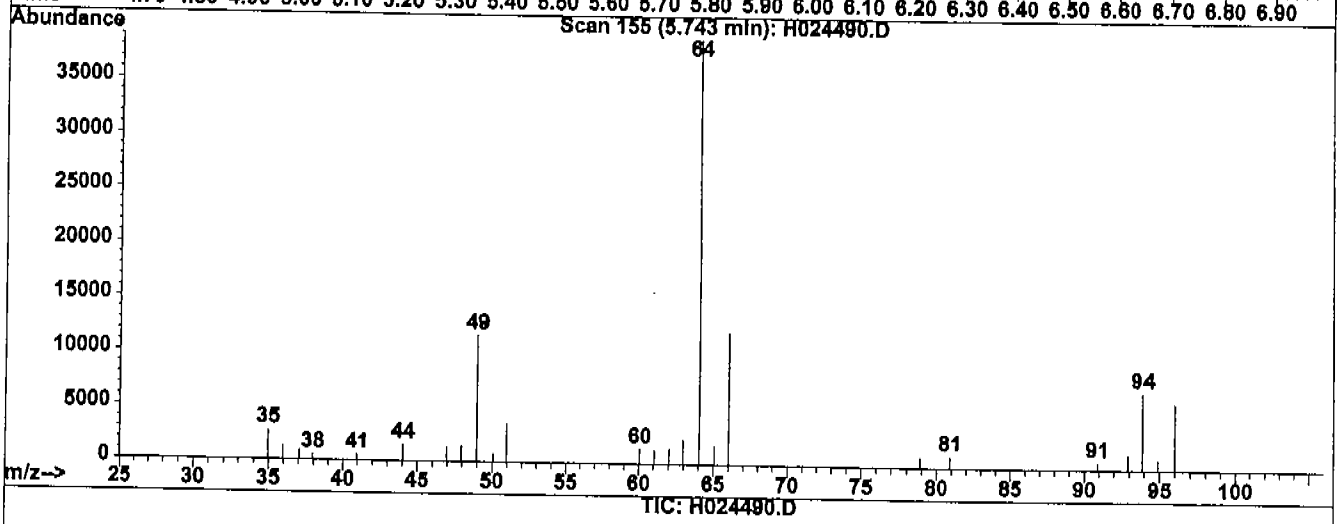
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





TIC: H024490.D

(6) Chloroethane ( )

5.74min 169.93ug/Kg m

response 398317

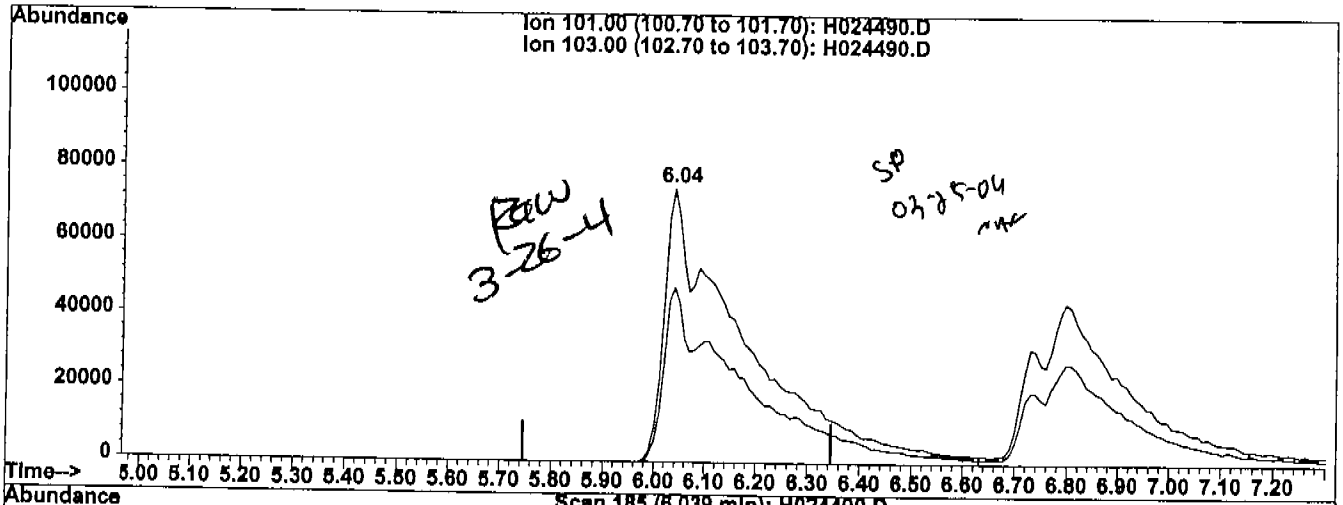
Ion	Exp%	Act%
64.00	100	100
66.00	30.60	31.17
49.00	24.10	29.88
0.00	0.00	0.00

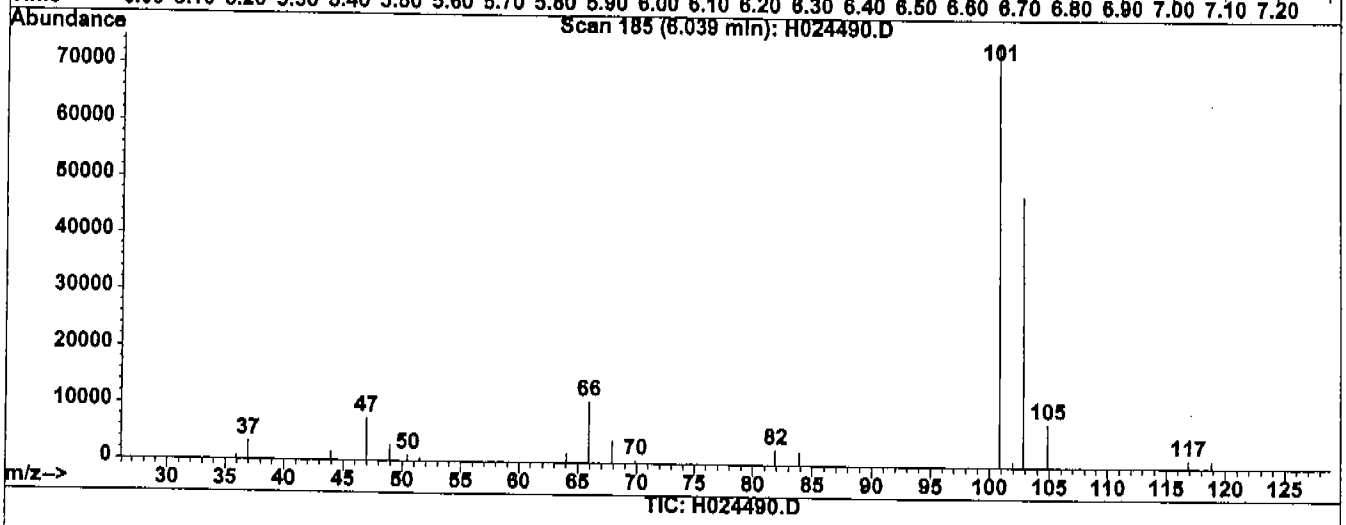
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(7) Trichlorofluoromethane ( )

6.04min 190.57ug/Kg m

response 806631

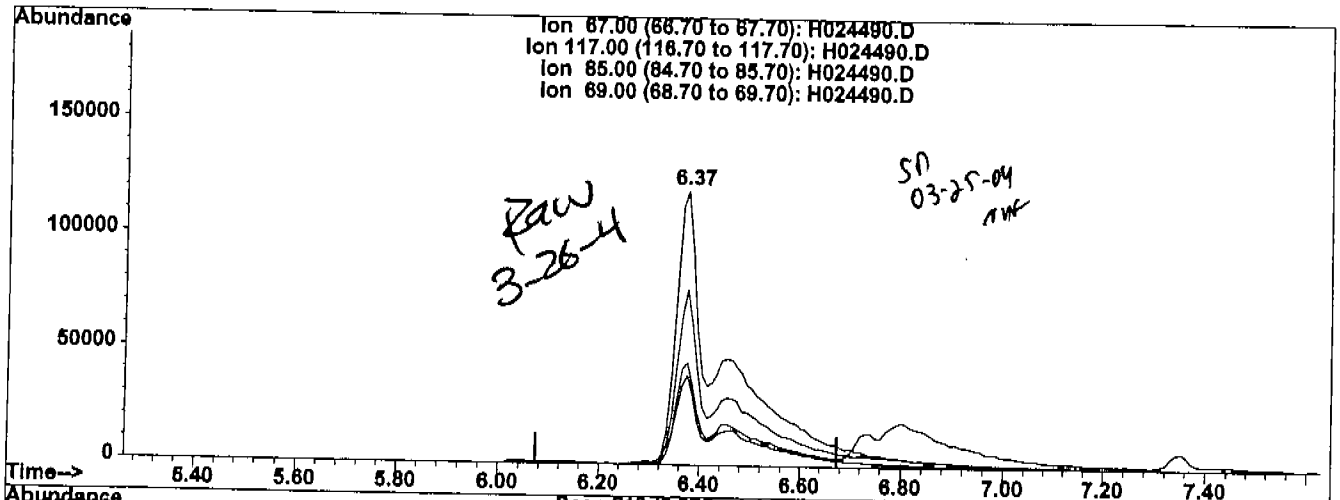
Ion	Exp%	Act%
101.00	100	100
103.00	65.90	64.01
0.00	0.00	0.00
0.00	0.00	0.00

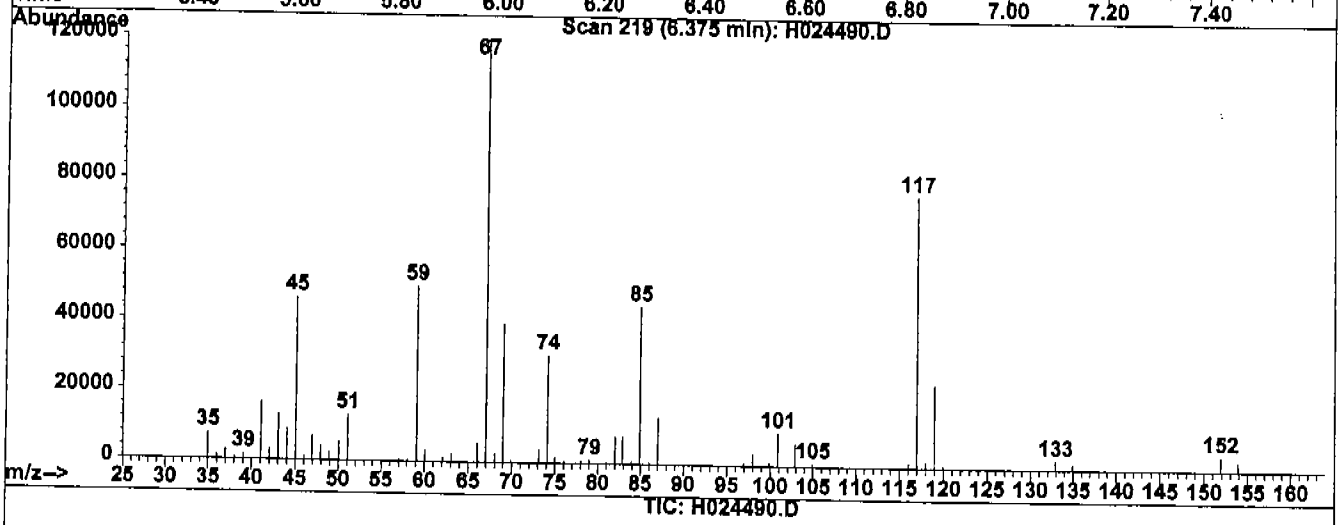
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(8) 1,2-Dichlorotrifluoroethane ( )

6.37min 176.64ug/Kg m

response 825445

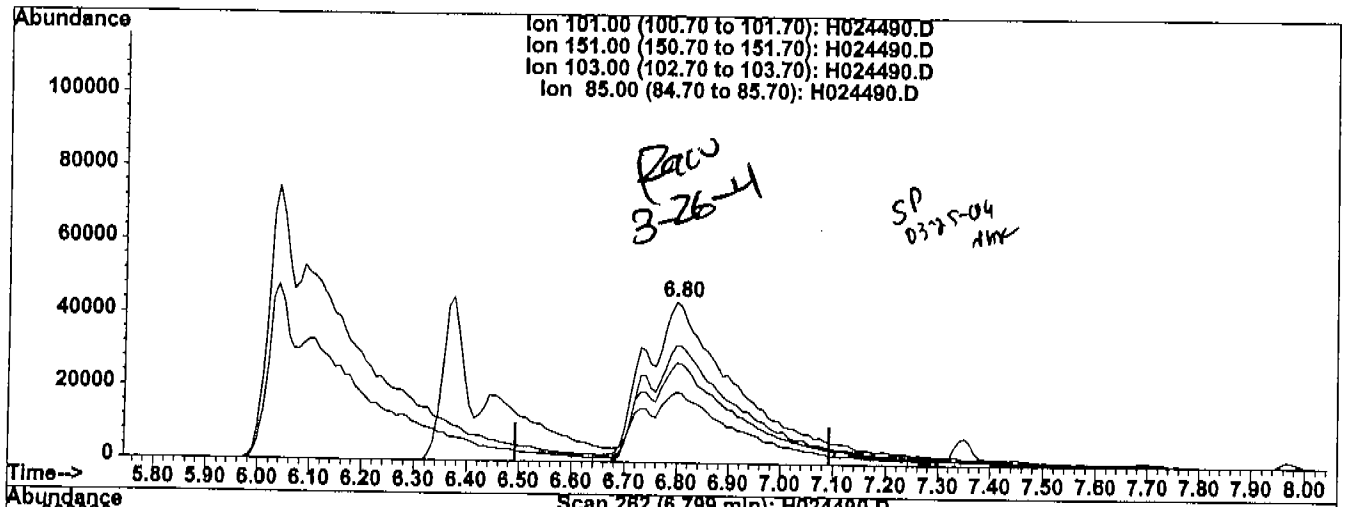
Ion	Exp%	Act%
67.00	100	100
117.00	58.60	64.24
85.00	34.70	37.27
69.00	30.30	32.77

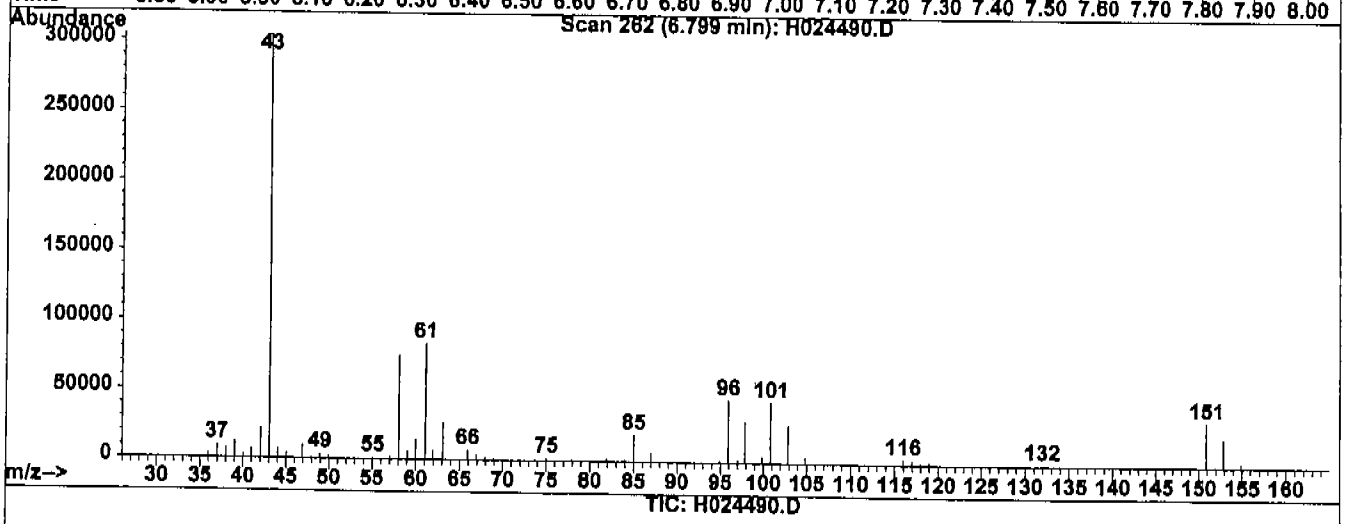
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024490.D
Acq On : 24 Mar 2004 2:22 pm
Sample : IC909-200
Misc : ms3013,vh908,4.45,,100,5,1,
Quant Time: Mar 25 6:52 2004

Vial: 6
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration





(11) Freon 113

6.80min 167.90ug/Kg m

response 563920

Ion	Exp%	Act%
101.00	100	100
151.00	75.40	73.14
103.00	63.90	62.15
85.00	43.80	44.13

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\032404\H024491.D
Acq On : 24 Mar 2004 2:50 pm
Sample : ICV-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P

Vial: 7
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

MRF-03-25-04

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	105	0.00	10.00
2		Dichlorodifluoromethane	0.379	0.309	18.5	75	0.00	4.35
3	P	Chloromethane	0.534	0.491	8.1	80	0.00	4.72
4	C	Vinyl Chloride	0.431	0.421	2.3	86	0.00	4.95
5		Bromomethane	0.256	0.245	4.3	82	0.02	5.57
6		Chloroethane	0.220	0.215	2.3	84	-0.01	5.73
7		Trichlorofluoromethane	0.422	0.424	-0.5	89	0.00	6.05
8		1,2-Dichlorotrifluoroetha	0.440	0.418	5.0	83	0.00	6.37
9		Ethyl Ether		----------NA----------				
10		Acrolein	0.012	0.018	-50.0#	149	0.00	6.60
11		Freon 113	0.314	0.350	-11.5	100	0.01	6.80
12	C	1,1-Dichloroethene	0.564	0.578	-2.5	94	0.00	6.78
13		Acetone	0.165	0.228	-38.2#	138	0.00	6.78
14		Iodomethane	0.520	0.567	-9.0	100	0.00	7.02
15		Carbon Disulfide	1.203	1.255	-4.3	96	0.00	7.15
16		Methyl acetate	0.378	0.352	6.9	94	0.00	7.17
		----------	True	Calc.	% Drift	----------		
17		Methylene Chloride	40.000	42.995	-7.5	98	0.00	7.35
		----------	AvgRF	CCRF	% Dev	----------		
18		Acrylonitrile	0.149	0.123	17.4	81	0.00	7.60
19		Methyl Tert Butyl Ether	1.012	1.173	-15.9	109	0.00	7.64
20		trans-1,2-Dichloroethene	0.644	0.675	-4.8	96	0.00	7.69
		----------	True	Calc.	% Drift	----------		
21		Hexane	40.000	49.888	-24.7#	107	0.00	7.97
		----------	AvgRF	CCRF	% Dev	----------		
22		Vinyl acetate	0.798	0.705	11.7	84	0.00	8.13
23	P	1,1-Dichloroethane	0.765	0.804	-5.1	97	0.00	8.17
24		Di-isopropyl ether	1.594	1.678	-5.3	99	0.00	8.15
25		Ethyl tert-butyl Ether	1.308	1.449	-10.8	104	0.00	8.55
26		2-Butanone	0.240	0.270	-12.5	124	0.00	8.74
27		cis-1,2-Dichloroethene	0.401	0.424	-5.7	110	0.00	8.79
28		2,2-Dichloropropane	0.439	0.510	-16.2	118	0.00	8.82
29		Bromochloromethane	0.169	0.202	-19.5	123	0.00	9.06
30	C	Chloroform	0.707	0.755	-6.8	111	0.00	9.09
31		Tetrahydrofuran	0.126	0.136	-7.9	121	0.00	9.11
32	S	Dibromofluoromethane	0.254	0.256	-0.8	107	0.00	9.27
33		1,1,1-Trichloroethane	0.534	0.600	-12.4	115	0.00	9.36
34		Cyclohexane	0.705	0.796	-12.9	119	0.00	9.45
35		1,1-Dichloropropene	0.515	0.553	-7.4	112	0.00	9.52
36		Carbon Tetrachloride	0.457	0.530	-16.0	116	0.00	9.55
37	S	1,2-Dichloroethane-d4	0.346	0.337	2.6	104	0.00	9.66

38		1,2-Dichloroethane	0.605	0.610	-0.8	104	0.00	9.73
39		Benzene	1.515	1.609	-6.2	111	0.00	9.75
40		Tert-Amyl Methyl Ether	1.216	1.216	0.0	104	0.00	9.76
41		Trichloroethene	0.395	0.438	-10.9	115	0.00	10.38
42		Methylcyclohexane	0.590	0.730	-23.7#	128	0.00	10.61
43	C	1,2-Dichloropropane	0.408	0.443	-8.6	113	0.00	10.61
44		Dibromomethane	0.234	0.241	-3.0	108	0.00	10.75
45		Bromodichloromethane	0.537	0.561	-4.5	106	0.00	10.86
46		2-Nitropropane	0.140	0.150	-7.1	115	0.00	11.05
47		2-Chloroethyl vinyl ether	0.190	0.154	18.9	87	0.00	11.07
48		cis-1,3-Dichloropropene	0.664	0.711	-7.1	111	0.00	11.29
49		4-Methyl-2-pentanone	0.498	0.509	-2.2	112	0.00	11.38
50	I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00	13.11
51	S	Toluene-d8	1.291	1.305	-1.1	108	0.00	11.60
52	C	Toluene	1.918	2.125	-10.8	116	0.00	11.67
53		trans-1,3-Dichloropropene	0.746	0.778	-4.3	108	0.00	11.82
54		1,1,2-Trichloroethane	0.359	0.360	-0.3	105	0.00	12.03
55		1,3-Dichloropropane	0.739	0.743	-0.5	108	0.00	12.22
56		2-hexanone	0.427	0.466	-9.1	124	0.00	12.21
57		Tetrachloroethene	0.502	0.580	-15.5	123	0.00	12.26
58		Dibromochloromethane	0.466	0.480	-3.0	108	0.00	12.50
59		1,2-Dibromoethane	0.402	0.411	-2.2	108	0.00	12.66
60		1-Chlorohexane	0.582	0.776	-33.3#	141	0.00	13.00
61	P	Chlorobenzene	1.235	1.343	-8.7	116	0.00	13.14
62		1,1,1,2-Tetrachloroethane	0.435	0.452	-3.9	107	0.00	13.19
63	C	Ethylbenzene	2.126	2.378	-11.9	119	0.00	13.20
64		m,p-Xylene	1.755	1.942	-10.7	118	0.00	13.29
65		o-Xylene	1.789	1.936	-8.2	113	0.00	13.73
66		Styrene	1.236	1.371	-10.9	113	0.00	13.73
67	P	Bromoform	0.323	0.345	-6.8	111	0.00	13.99
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	108	0.00	15.50
69		Isopropylbenzene	3.814	4.313	-13.1	124	0.00	14.08
70		Cyclohexanone	0.037	0.035	5.4	118	0.00	14.24
71	S	4-Bromofluorobenzene	1.138	1.072	5.8	107	0.00	14.28
72	P	1,1,2,2-Tetrachloroethane	1.142	1.110	2.8	112	0.00	14.36
73		trans-1,4-Dichloro-2-Bute	0.320	0.340	-6.3	122	0.00	14.41
74		1,2,3-Trichloropropane	0.305	0.282	7.5	106	0.00	14.45
75		Bromobenzene	1.017	1.045	-2.8	113	0.00	14.50
76		n-Propylbenzene	4.804	5.208	-8.4	118	0.00	14.51
77		2-Chlorotoluene	3.396	3.623	-6.7	118	0.00	14.67
		----------	True	Calc.	% Drift	----------		
78		1,3,5-Trimethylbenzene	40.000	49.975	-24.9#	122	0.00	14.66
		----------	AvgRF	CCRF	% Dev	----------		
79		4-Chlorotoluene	3.039	3.398	-11.8	119	0.00	14.76
80		tert-Butylbenzene	2.378	2.660	-11.9	120	0.00	15.03
81		1,2,4-Trimethylbenzene	3.381	3.754	-11.0	119	0.00	15.08
82		sec-Butylbenzene	3.900	4.575	-17.3	123	0.00	15.26
83		4-Isopropyltoluene	3.115	3.893	-25.0#	133	0.00	15.38
84		1,3-Dichlorobenzene	1.841	2.115	-14.9	123	0.00	15.45
85		1,4-Dichlorobenzene	1.856	2.063	-11.2	120	0.00	15.53
86		Benzyl chloride		----------NA----------				
87		n-Butylbenzene	2.973	3.769	-26.8#	132	0.00	15.81
88		1,2-Dichlorobenzene	1.714	1.960	-14.4	119	0.00	15.95
89		1,2-Dibromo-3-Chloropropa	0.190	0.190	0.0	110	0.00	16.75
90		1,2,4-Trichlorobenzene	1.085	1.250	-15.2	118	0.00	17.70
91		Hexachlorobutadiene	0.619	0.748	-20.8#	121	0.00	17.85
92		Naphthalene	2.400	2.631	-9.6	114	0.00	18.04
93		1,2,3-Trichlorobenzene	0.975	1.098	-12.6	114	0.00	18.33

94	I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	94	0.00	7.28
95		Tert Butyl Alcohol	1.523	1.663	-9.2	100	0.00	7.38
96		Isobutyl alcohol		----------NA----------				
97		Tert Amyl Alcohol		----------NA----------				
98		1,4-Dioxane	0.112	0.120	-7.1	103	0.00	10.70

(10.0 %) 9 of 90 compounds'%D > 20

(#) = Out of Range SPCC's out = 0 CCC's out = 0

H024488.D 0324SOIL.M Thu Mar 25 08:19:27 2004 RPT1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024491.D
Acq On : 24 Mar 2004 2:50 pm
Sample : ICV-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 7:02 2004

Vial: 7
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:02:01 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	10.00	96	522309	50.00 ug/Kg	0.00
50) Chlorobenzene-d5	13.11	117	430943	50.00 ug/Kg	0.00
68) 1,4-Dichlorobenzene-d4	15.50	152	226689	50.00 ug/Kg	0.00
94) Tert Butyl Alcohol-d10	7.28	65	85089	250.00 ug/Kg	0.00
System Monitoring Compounds					
32) Dibromofluoromethane	9.27	113	133736	50.40 ug/Kg	0.00
Spiked Amount 50.000	Range 78 - 123		Recovery = 100.80%		
37) 1,2-Dichloroethane-d4	9.66	65	175819	48.69 ug/Kg	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 97.38%		
51) Toluene-d8	11.60	98	562478	50.56 ug/Kg	0.00
Spiked Amount 50.000	Range 71 - 137		Recovery = 101.12%		
71) 4-Bromofluorobenzene	14.28	95	243031	47.12 ug/Kg	0.00
Spiked Amount 50.000	Range 61 - 157		Recovery = 94.24%		

NNF 03/15/04

Target Compounds					Qvalue
2) Dichlorodifluoromethane	4.35	85	129261	32.69 ug/Kg	94
3) Chloromethane	4.72	50	205042	36.75 ug/Kg	99
4) Vinyl Chloride	4.95	62	175820	39.01 ug/Kg	94
5) Bromomethane	5.57	94	102170	38.17 ug/Kg	99
6) Chloroethane	5.73	64	89649	39.10 ug/Kg	88
7) Trichlorofluoromethane	6.05	101	177123	40.21 ug/Kg	94
8) 1,2-Dichlorotrifluoroethan	6.37	67	174697	38.00 ug/Kg	99
10) Acrolein	6.60	56	37955	314.56 ug/Kg	89
11) Freon 113	6.80	101	146042	44.52 ug/Kg	95
12) 1,1-Dichloroethene	6.78	61	241661	41.02 ug/Kg	98
13) Acetone	6.78	43	475351	275.80 ug/Kg	98
14) Iodomethane	7.02	142	236746	43.57 ug/Kg	95
15) Carbon Disulfide	7.15	76	524489	41.75 ug/Kg	96
16) Methyl acetate	7.17	43	734371	186.10 ug/Kg	99
17) Methylene Chloride	7.35	49	268464	42.99 ug/Kg	96
18) Acrylonitrile	7.60	53	256471	165.31 ug/Kg	97
19) Methyl Tert Butyl Ether	7.64	73	490036	46.34 ug/Kg	99
20) trans-1,2-Dichloroethene	7.69	61	282202	41.94 ug/Kg	98
21) Hexane	7.97	57	295199	49.89 ug/Kg	97
22) Vinyl acetate	8.13	43	1473278	176.77 ug/Kg	99
23) 1,1-Dichloroethane	8.17	63	336097	42.05 ug/Kg	98
24) Di-isopropyl ether	8.15	45	701194	42.11 ug/Kg	81
25) Ethyl tert-butyl Ether	8.55	59	605642	44.33 ug/Kg	98
26) 2-Butanone	8.74	43	563895	224.55 ug/Kg	98
27) cis-1,2-Dichloroethene	8.79	96	176992	42.28 ug/Kg	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024491.D
Acq On : 24 Mar 2004 2:50 pm
Sample : ICV-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 7:02 2004

Vial: 7
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:02:01 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
28) 2,2-Dichloropropane	8.82	77	213164	46.43 ug/Kg	100
29) Bromochloromethane	9.06	128	84527	47.89 ug/Kg	91
30) Chloroform	9.09	83	315326	42.68 ug/Kg	95
31) Tetrahydrofuran	9.11	42	56851	43.15 ug/Kg	94
33) 1,1,1-Trichloroethane	9.36	97	250855	44.98 ug/Kg	99
34) Cyclohexane	9.45	56	332463	45.16 ug/Kg	91
35) 1,1-Dichloropropene	9.52	75	231031	42.96 ug/Kg	99
36) Carbon Tetrachloride	9.55	117	221288	46.35 ug/Kg	99
38) 1,2-Dichloroethane	9.73	62	254747	40.28 ug/Kg	98
39) Benzene	9.75	78	672165	42.47 ug/Kg	98
40) Tert-Amyl Methyl Ether	9.76	73	508269	40.02 ug/Kg	98
41) Trichloroethene	10.38	95	182923	44.33 ug/Kg	97
42) Methylcyclohexane	10.61	83	304953	49.44 ug/Kg	97
43) 1,2-Dichloropropane	10.61	63	185076	43.43 ug/Kg	94
44) Dibromomethane	10.75	93	100692	41.14 ug/Kg	96
45) Bromodichloromethane	10.86	83	234250	41.78 ug/Kg	99
46) 2-Nitropropane	11.05	41	313420	214.12 ug/Kg	98
47) 2-Chloroethyl vinyl ether	11.07	63	322263	162.08 ug/Kg	97
48) cis-1,3-Dichloropropene	11.29	75	297272	42.83 ug/Kg	98
49) 4-Methyl-2-pentanone	11.38	43	1063380	204.55 ug/Kg	99
52) Toluene	11.67	91	732572	44.31 ug/Kg	98
53) trans-1,3-Dichloropropene	11.82	75	268379	41.71 ug/Kg	95
54) 1,1,2-Trichloroethane	12.03	83	124247	40.11 ug/Kg	98
55) 1,3-Dichloropropane	12.22	76	256119	40.24 ug/Kg	77
56) 2-hexanone	12.21	43	804050	218.43 ug/Kg	99
57) Tetrachloroethene	12.26	166	199979	46.19 ug/Kg	98
58) Dibromochloromethane	12.50	129	165586	41.20 ug/Kg	96
59) 1,2-Dibromoethane	12.66	107	141549	40.89 ug/Kg	99
60) 1-Chlorohexane	13.00	91	267448	53.29 ug/Kg	96
61) Chlorobenzene	13.14	112	463083	43.51 ug/Kg	99
62) 1,1,1,2-Tetrachloroethane	13.19	131	155952	41.61 ug/Kg	98
63) Ethylbenzene	13.20	91	819692	44.74 ug/Kg	99
64) m,p-Xylene	13.29	91	1339363	88.53 ug/Kg	99
65) o-Xylene	13.73	91	667389	43.27 ug/Kg	99
66) Styrene	13.73	104	472770	44.37 ug/Kg	93
67) Bromoform	13.99	173	118973	42.72 ug/Kg	99
69) Isopropylbenzene	14.08	105	782203	45.23 ug/Kg	98
70) Cyclohexanone	14.24	55	31919	191.37 ug/Kg	95
72) 1,1,2,2-Tetrachloroethane	14.36	83	201335	38.89 ug/Kg	99
73) trans-1,4-Dichloro-2-Buten	14.41	53	61649	42.45 ug/Kg	95
74) 1,2,3-Trichloropropane	14.45	110	51183	36.99 ug/Kg	96

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

0110

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\032404\H024491.D Vial: 7
Acq On : 24 Mar 2004 2:50 pm Operator: NancyF
Sample : ICV-40 Inst : MSVOA3
Misc : ms3013,vh908,4.45,,100,5,1, Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 25 7:02 2004 Quant Results File: 0324SOIL.RES

Quant Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Thu Mar 25 07:02:01 2004
Response via : Initial Calibration
DataAcq Meth : 8260S

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
75) Bromobenzene	14.50	156	189536	41.12 ug/Kg	92
76) n-Propylbenzene	14.51	91	944507	43.37 ug/Kg	99
77) 2-Chlorotoluene	14.67	91	657118	42.68 ug/Kg	97
78) 1,3,5-Trimethylbenzene	14.66	105	676560	49.97 ug/Kg	97
79) 4-Chlorotoluene	14.76	91	616198	44.72 ug/Kg	94
80) tert-Butylbenzene	15.03	91	482412	44.74 ug/Kg	98
81) 1,2,4-Trimethylbenzene	15.08	105	680741	44.41 ug/Kg	99
82) sec-Butylbenzene	15.26	105	829681	46.93 ug/Kg	99
83) 4-Isopropyltoluene	15.38	119	705988	49.98 ug/Kg	99
84) 1,3-Dichlorobenzene	15.45	146	383551	45.96 ug/Kg	98
85) 1,4-Dichlorobenzene	15.53	146	374178	44.47 ug/Kg	97
87) n-Butylbenzene	15.81	91	683564	50.71 ug/Kg	98
88) 1,2-Dichlorobenzene	15.95	146	355428	45.74 ug/Kg	98
89) 1,2-Dibromo-3-Chloropropan	16.75	75	34534	40.15 ug/Kg	75
90) 1,2,4-Trichlorobenzene	17.70	180	226606	46.05 ug/Kg	100
91) Hexachlorobutadiene	17.85	225	135608	48.30 ug/Kg	97
92) Naphthalene	18.04	128	477180	43.86 ug/Kg	99
93) 1,2,3-Trichlorobenzene	18.33	180	199092	45.06 ug/Kg	97
95) Tert Butyl Alcohol	7.38	59	226380	436.79 ug/Kg	97
98) 1,4-Dioxane	10.70	88	32723	859.11 ug/Kg	95

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

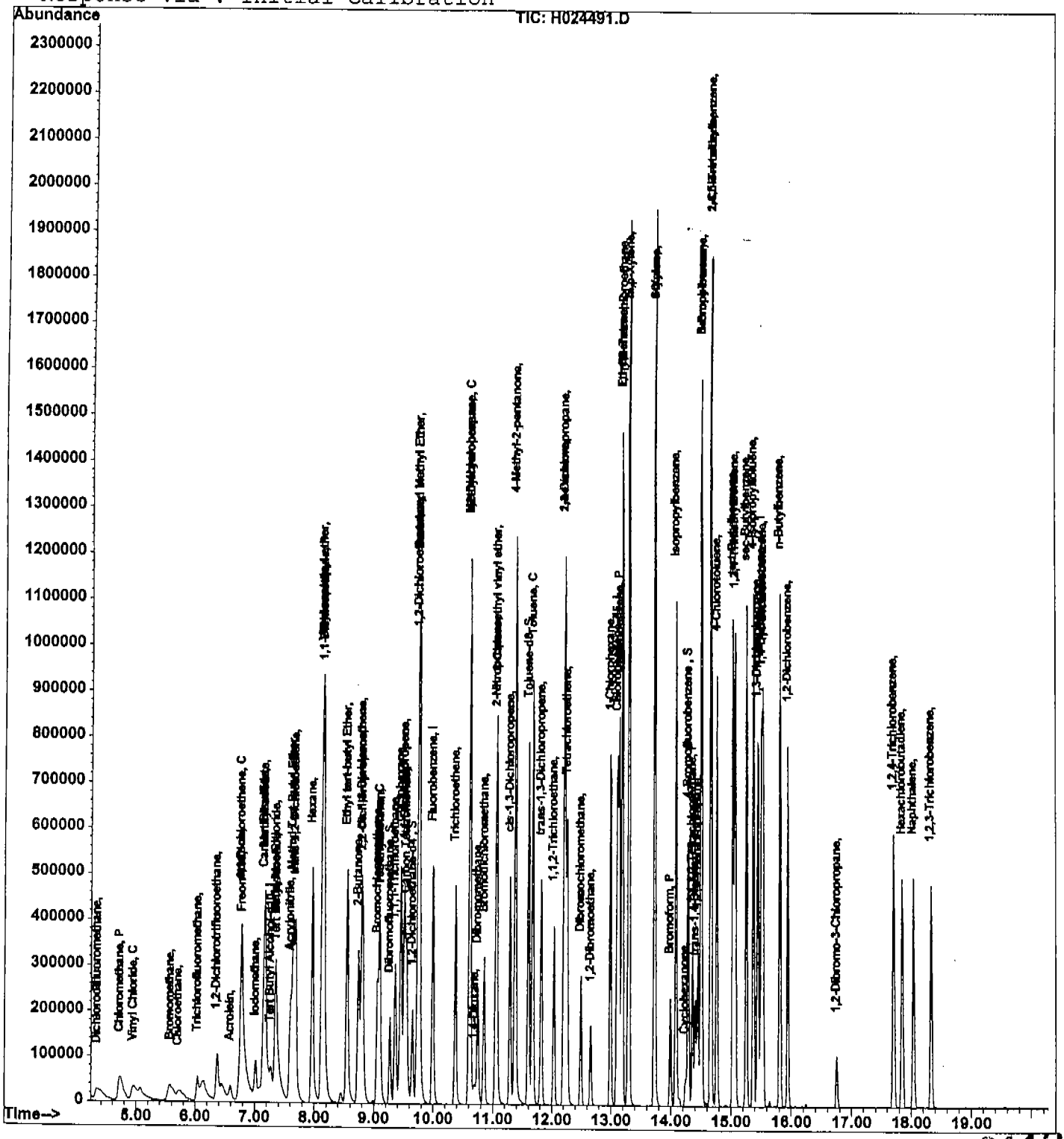
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032404\H024491.D
Acq On : 24 Mar 2004 2:50 pm
Sample : ICV-40
Misc : ms3013,vh908,4.45,,100,5,1,
MS Integration Params: RTEINT.P
Quant Time: Mar 25 7:02 2004

Vial: 7
Operator: NancyF
Inst : MSVOA3
Multiplr: 1.00

Quant Results File: 0324SOIL.RES

Method : C:\HPCHEM\1\METHODS\0324SOIL.M (RTE Integrator)
Title : SWA 5035/8260B
Last Update : Mon Feb 09 09:39:57 2004
Response via : Initial Calibration



CONTINUING CALIBRATION

VOC.09

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\040504\H024663.D
Tune Time : 5 Apr 2004 10:23 am

Daily Calibration File : C:\HPCHEM\1\DATA\040504\H024664.D

646580 586441 312106 197238

File	Sample	Surrogate Recovery %				Internal Standard Responses			
H024664.D	CC909-40	110	118	91	97	646580	586441	312106	197238
H024665.D	BS	103	101	92	91	566322	526291	293974	128435
H024666.D	MB	99	97	95	98	568456	497988	242883	99360
H024667.D	f23080-1	97	87	98	100	524544	429470	196206	49512*
H024668.D	f23080-2	103	102	98	100	568983	485068	230684	95608*
H024669.D	f23080-3	108	112	95	97	526580	461244	231406	167828
H024670.D	f23080-4	104	100	101	99	540794	453075	206572	97212*
H024671.D	f23080-2ms	104	93	98	99	544840	469384	224084	73230*
H024672.D	f23080-2ms	103	92	99	99	528307	447288	215990	63702*
H024673.D	f23080-5	108	110	97	97	534755	467801	227260	122975
H024674.D	f23080-6	108	112	93	110	524214	470541	208441	117929
H024675.D	f23080-7	107	102	99	101	493075	411345	162069	80119*
H024676.D	f23080-8	106	106	100	106	472891	331493	146710*	87836*
H024677.D	f23117-1	111	109	97	96	491145	373508	189333	72182*
H024678.D	f23133-4	128*	127*	96	95	410724	367338	185622	87963*
H024679.D	f23133-1	130*	129*	92	97	387447	356504	179140	74875*

H024680.D	f23133-2	114	118	95	95	445530	353052	181769	91247*
H024681.D	f23116-8	127*	134*	95	94	415227	382917	213487	107035
H024682.D	f23011-3	127*	131*	125	347*	327894	171195*	49489*	98767
H024683.D	f23011-5	103	104	102	112	506185	421934	182438	97309*
H024684.D	f23133-3	103	100	94	111	542575	482535	215501	96613*
H024685.D	f23011-4	102	102	98	95	526329	469588	270918	113992
H024686.D	f23116-1	103	103	95	124	532679	488058	222505	79513*
H024687.D	f23116-2	99	98	95	139	552961	494827	204478	85614*
H024688.D	f23116-3	99	98	95	94	579411	512723	271075	88940*
H024689.D t	f23116-4	99	97	95	103	551549	489042	264243	106727
H024690.D t	f23116-5	101	101	95	94	559861	512821	271110	108622
H024691.D t	f23116-6	106	104	94	97	543757	486607	244566	126193
H024692.D t	f23116-7	100	101	94	93	537032	494886	258158	92048*
H024693.D t	f23116-9	93	100	109	232*	526777	457130	111974*	124502

t - fails 12hr time check * - fails criteria

Created: Tue Apr 06 09:56:39 2004 MSVOA3