SDMS DOCID# 1120776

REMEDIAL INVESTIGATION
McKESSON CORPORATION PROPERTY
9005 SORENSEN AVENUE
SANTA FE SPRINGS, CALIFORNIA

HLA Project No. 11136-168

Prepared for

McKESSON CORPORATION
One Post Street
San Francisco, California 94104

By

HARDING LAWSON ASSOCIATES
3 Hutton Centre Drive, Suite 200
Santa Ana, California 92707

June 25, 1992
Revised October 30, 1992

VOLUME IV

APPENDICES

L ANALYTICAL RESULTS - GROUNDWATER
M QA/QC DATA VALIDATION
N PLUME CHARACTERIZATION RATIO PLOTS

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TABLE OF CONTENTS

VOLUME I

EXECUTIVE SUMMARY x

1.0 INTRODUCTION 1
- 1.1 Report Organization 1
- 1.2 Purpose of the Remedial Investigation 2
- 1.3 Site Background 2
  - 1.3.1 Site Description 2
  - 1.3.2 Site History 2
  - 1.3.3 Previous Investigations 6
    - 1.3.3.1 Onsite Investigations 6
    - 1.3.3.2 Offsite Investigations 7

2.0 STUDY AREA INVESTIGATION 12
- 2.1 Site Features Investigation 12
  - 2.1.1 Topographic Survey 12
  - 2.1.2 Geophysical and Utility Survey 13
- 2.2 Hazardous Substances Investigation 13
  - 2.2.1 Hazardous Material Types 13
  - 2.2.2 Potential Contaminant Sources 13
    - 2.2.2.1 Onsite Sources 13
    - 2.2.2.2 Offsite Sources 15
- 2.3 Meteorological Investigation 16
- 2.4 Soil and Vadose Zone Investigation 17
  - 2.4.1 Surface Soil 17
  - 2.4.2 Subsurface Soil 17
  - 2.4.3 Soil Analysis Program 21
    - 2.4.3.1 Physical Property Tests 21
    - 2.4.3.2 Chemical Analysis 21
- 2.5 Groundwater Investigation 22
  - 2.5.1 Surface Water 22
  - 2.5.2 Monitoring Well Installation 23
    - 2.5.2.1 Perched Zone Wells 23
    - 2.5.2.2 Aquifer Zone Wells 23
    - 2.5.2.3 Well Nest Installation 24
  - 2.5.3 CPT/HydroPunch Investigation 24
  - 2.5.4 Groundwater Monitoring and Analysis Program 25
  - 2.5.5 Aquifer Testing 26
- 2.6 Quality Assurance Program 26

3.0 PHYSICAL CHARACTERISTICS OF STUDY AREA 28
- 3.1 Demography and Land Use 28
- 3.2 Surface Features 28

MCK0003793

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CONTENTS (continued)

3.3 Meteorology 29
3.4 Surface-Water Hydrology 31
3.5 Geology 31
3.5.1 Regional Geologic Setting 31
3.5.2 Local Geologic Setting 31
3.6 Soils 33
3.6.1 Onsite Soils 33
3.6.2 Offsite Soils 34
3.7 Hydrogeology 34
3.7.1 Regional Hydrogeologic Setting 34
3.7.2 Regional Water Quality 35
3.7.3 Local Hydrogeologic Setting 36
3.7.4 Aquifer Test Results 37

4.0 NATURE AND EXTENT OF CHEMICALS 39
4.1 Source Areas 39
4.1.1 Onsite Source Area 39
4.1.2 Offsite Source Area 39
4.2 Soil and Vadose Zone 40
4.2.1 Inorganic Impacts to Soil 40
4.2.2 Organic Impacts to Soil 40
4.3 Groundwater 42
4.3.1 General Mineral Characterization 42
4.3.2 Inorganic Impacts to Groundwater 43
4.3.3 Organic Impacts to Groundwater 43
4.3.3.1 Onsite Organic Plume Characteristics 46
4.3.3.2 Offsite Organic Plume Characteristics 48
4.4 Quality Assurance 49

5.0 CHEMICAL FATE AND TRANSPORT 51
5.1 Fate and Transport of Chlorinated Compounds in Soil 51
5.2 Groundwater Transport and Chemical Migration 52

6.0 RISK ASSESSMENT 54
6.1 Chemicals of Concern 54
6.2 Potentially Exposed Populations and Exposure Pathways 55
6.3 Health Risk Estimates 55
6.4 Uncertainty Analysis 56
6.5 Soil and Groundwater Cleanup Levels 56

7.0 SUMMARY AND CONCLUSIONS 58
7.1 Summary 58
7.1.1 Nature and Extent of Chemicals 58
7.1.2 Fate and Transport 59
7.1.3 Risk Assessment 59

MCK0003794

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CONTENTS (continued)

7.2 Conclusions 60
7.2.1 Data Limitations 60
7.2.2 Recommendations for Future Work 61

REFERENCES

TABLES

ILLUSTRATIONS

DISTRIBUTION

VOLUME II

APPENDICES

A Field Procedures

B Boring Logs

C CPT Data

D Interpreted CPT Data

E Survey Information

F Well Development Forms

G Well Monitoring/Sampling Forms

H Aquifer Test Analysis

VOLUME III

I Analytical Results - Air

J Physical Properties Test Results - Soil

K Analytical Results - Soil

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CONTENTS (continued)

VOLUME IV

L Analytical Results - Groundwater

M QA/QC Data Validation

N Plume Characterization Ratio Plots

VOLUME V

O Risk Assessment

MCK0003796

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TABLES

Table 1	McKesson Environmental Data - June 1984
Table 2	McKesson Environmental Data - October 1984
Table 3	McKesson Environmental Data - March 1986
Table 4	McKesson Environmental Data - October 1989
Table 5	Summary of Tank Information - Aboveground Solvent Area
Table 6	Summary of Tank Information - Aboveground Corrosive Area
Table 7	Summary of Underground Storage Tank Information
Table 8	Summary of Chemicals Stored at Angeles Chemical Company
Table 9a	Summary of Analytical Data from Angeles Chemical Property - January 1990
Table 9b	Summary of Analytical Data from Angeles Chemical Property - June 1990
Table 10	Soil Analysis Schedule Summary
Table 11	Monitoring Well Completion Summary
Table 12	Groundwater Monitoring/Analysis Schedule Summary
Table 13	Wind Speed and Direction Frequency Distribution
Table 14	Hourly Windspeed and Direction Data
Table 15	Soil Physical Properties Test Results
Table 16	Summary of Water Level Monitoring Data
Table 17a	Summary of Soil Analysis - Selected Soil Ions, Metals, and pH
Table 17b	Summary of Soil Analysis - EPA Method 8240 Compounds
Table 17c	Summary of Soil Analysis - EPA Method 8270 Compounds
Table 17d	Summary of Soil Analysis - EPA Method 418.1 Compounds
Table 18	Soil Volatile Organic Compound - Statistical Analysis Summary
Table 19a	Summary of Groundwater Analysis - General Minerals and Selected Metals
Table 19b	Summary of Groundwater Analysis - EPA Method 624/8240 Compounds
Table 19c	Summary of Groundwater Analysis - EPA Method 625 Compounds
Table 19d	Summary of Groundwater Analysis - EPA Method 418.1 Compounds
Table 19e	Groundwater Volatile Organic Compounds - Statistical Analysis Survey
Table 20	Relative Percents of Total Concentrations of Selected Compounds

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CONTENTS (continued)

TABLES

Table 21	Concentration Ratios for Selected Compounds
Table 22	Groundwater Duplicate Sample Relative Percent Difference Summary
Table 23	Physical and Chemical Properties of Selected Solvent Compounds

MCK0003798

CONTENTS (continued)

ILLUSTRATIONS

Plate	1	General Location Map
Plate	2	Neighboring Facilities
Plate	3	Facility Layout
Plate	4	Location of Previous Investigations
Plate	5	Onsite Investigations
Plate	6	CPT/HydroPunch and Monitoring Well Locations
Plate	7	Physiographic Map
Plate	8	Hydrogeologic Cross Section
Plate	9	Generalized Site Stratigraphic Section
Plate	10	Site Plan with Cross-Section Locations
Plate	11	Cross-Section A-A'
Plate	12	Cross-Section B-B'
Plate	13	Cross-Section C-C'
Plate	14	Cross-Section D-D'
Plate	15	Structure Map Base of Upper Sand Unit
Plate	16	Aquifer Cross-Section E-E'
Plate	17	Structure Map Top of Aquifer Sand Unit
Plate	18	Fence Diagram from Onsite and Offsite CPT Data
Plates	19a through 19d	Groundwater Elevation Contour Maps
Plates	20a through 20c	Hydrographs MW 1-3 & SB-32
Plates	21a through 21b	Frequency Distribution Chart
Plate	22	1,1,1-TCA - Soil Isoconcentration Map
Plate	23	PCE - Soil Isoconcentration Map
Plate	24	TCE - Soil Isoconcentration Map
Plate	25	DCM - Soil Isoconcentration Map

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CONTENTS (continued)

ILLUSTRATIONS (continued)

Plate	26	1,1-DCE - Soil Concentration Distribution
Plate	27	1,2-DCA - Soil Concentration Distribution
Plate	28	Cross Section B-B' with Vertical 1,1,1-TCA Soil Isoconcentration Contours
Plate	29	Cross Section B-B' with Vertical PCE Soil Isoconcentration Contours
Plate	30	Piper Diagram
Plate	31	1,1,1-TCA - Groundwater Isoconcentration Map
Plate	32	PCE - Groundwater Isoconcentration Map
Plate	33	TCE - Groundwater Isoconcentration Map
Plate	34	1,1-DCE - Groundwater Isoconcentration Map
Plate	35	DCM - Groundwater Isoconcentration Map
Plate	36	Groundwater Contaminant Concentration with Depth
Plates	37a through 37b	Relative Percent Concentrations
Plates	38a through 38b	Chlorinated Concentration Ratios
Plate	39	MEK - Groundwater Isoconcentration Map
Plate	40	MIBK - Groundwater Isoconcentration Map
Plate	41	BTEX - Groundwater Isoconcentration Map
Plate	42	Biotransformation Pathways for Various Chlorinated Volatile Hydrocarbons

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EXECUTIVE SUMMARY

This report presents the results of Harding Lawson Associates' (HLA) Remedial Investigation (RI) conducted at McKesson Corporation's (McKesson) former chemical facility located at 9005 Sorensen Avenue, Santa Fe Springs, California. HLA conducted this work on behalf of McKesson in accordance with Consent Order 89/90-007, issued by the California Department of Health Services (DHS), now the California Environmental Protection Agency - Department of Toxic Substances Control (DTSC). HLA's work was conducted in compliance with the DTSC guidelines and the U.S. Environmental Protection Agency's (EPA), October 1988, "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA." Methods implemented during the RI are described in HLA's workplan entitled "Workplan (Revision 3), Remedial Investigation and Feasibility Study, McKesson Corporation Property, 9005 Sorensen Avenue, Santa Fe Springs, California," (Workplan), dated April 25, 1991.

The facility is located at 9005 Sorensen Avenue, in the City of Santa Fe Springs, Los Angeles County, California. The site is fenced; occupies approximately 4.3 acres in an industrialized area; and is bounded on the east by Sorensen Avenue, on the south by Fontaine Trucking Equipment Company, on the west by a small agricultural field owned by Liquid Air Corporation, and on the north by a Southern Pacific Railroad easement and Angeles Chemical Company (Angeles); a bulk chemical repackaging facility.

McKesson Chemical Company, a former division of McKesson, operated a bulk chemical repackaging facility at the site from 1976 to 1986. During this period of operation, the facility was organized into four areas for the purpose of chemical packaging:

- A solvent repack area,
- A corrosive repack area,
- A hydrogen peroxide repack area, and
- A Freon blending area.

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Forty-four aboveground storage tanks (now demolished) were situated onsite within the four areas of operations. The tanks were contained within 2- to 3-foot-high concrete containment berms and separated by internal dike walls. Twenty-three underground storage tanks (USTs) are presently onsite and predominately located adjacent to the former aboveground solvent tank storage area. Railroad spurs are located along the northern and western boundaries of the site. Loading platforms and underground distribution lines were associated with the offloading of chemicals delivered via the railroad spurs. A drum storage area was used onsite for the storage of hazardous waste.

In September 1985, the DTSC issued a Resource Conservation and Recovery Act (RCRA) Part B Hazardous Waste Facility Permit for the drum-storage area. This area has since been closed under RCRA regulations. The final RCRA closure report was submitted to the DTSC on February 5, 1990 (HLA, 1990a). On June 28, 1990, the DTSC acknowledged that the storage-drum area was officially closed.

At the request of the DTSC, McKesson Environmental Services (MES) conducted three subsurface investigations at the facility during its period of operation. Two studies were undertaken in the aboveground solvent-storage area, and one study was conducted in the corrosive-storage area. Chlorinated solvents were detected in both the soil and groundwater in the aboveground solvent-storage area in these investigations. The corrosive storage area was investigated for USEPA extraction procedure (EP) Toxic compounds; none were detected.

The purpose of the RI was to assess the nature and extent of chemicals of concern in air, soil, surface water, and groundwater associated with the former operations at the McKesson site.

The RI included the monitoring of ambient meteorological conditions and air quality, drilling of soil borings, drilling and installation of groundwater monitoring wells, cone penetrometer testing (CPT)/HydroPunch groundwater sampling, the collection and analysis of surface and subsurface soil samples, and the collection and analysis of surface water and groundwater samples. All field work and physical testing of soil samples was performed by HLA

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geologists, engineers, and technicians under the direct oversight of a registered geologist and/or professional engineer. Analytical testing of air, soil, and water samples was performed by a state-certified laboratory.

HLA's investigation of surface and subsurface soil and vadose zone conditions at the McKesson site was conducted in two phases. The first phase of the investigation was conducted from June to August 1990. Thirty-one soil borings were drilled and sampled during the first phase. Samples were also collected from four surface locations. Following review of the data collected during the first phase of the investigation, a second phase soil and vadose zone investigation was conducted in January and February of 1991, during which an additional ten soil borings were drilled and sampled.

Soil samples collected from borings drilled in the first phase of the investigation in the UST area, the aboveground storage tank area, and the Freon-blending area were analyzed for volatile and semivolatile organic compounds, glycols, and petroleum hydrocarbons. Based on the results from the first-phase borings, the samples collected from the three additional borings in the aboveground solvent-storage area were only analyzed for volatile organic compounds.

Soil samples collected in the corrosive and hydrogen peroxide bermed storage area were only analyzed for pH and selected ions and metals, with the exception of the two samples that were additionally analyzed for volatile and semivolatile organics, glycols, and petroleum hydrocarbons.

The groundwater investigation program consisted of the installation, monitoring, and sampling of a total of 18 onsite groundwater monitoring wells. Two wells were installed in a discontinuous perched-water zone encountered at two locations within the site. Twelve wells were installed in the upper portion of the underlying aquifer zone. Four additional wells were installed in the aquifer, two at an intermediate depth, and two at the bottom of the aquifer, to assess vertical hydraulic and chemical distribution characteristics. The monitoring well program was augmented by the collection of water samples using a

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HydroPunch sampling device. HydroPunch samples were collected at five onsite locations and twelve offsite locations.

Onsite groundwater monitoring wells were monitored for depth to groundwater 14 times during the period from June 1990 through April 1991. During the same period, three rounds of groundwater sampling were conducted. Samples collected in the first round of sampling conducted in August 1990 were analyzed using the following EPA methods:

- EPA Method 8240 - Volatile organic compounds,
- EPA Method 8270 - Semi-volatile compounds,
- EPA Method 8015 modified - Glycols,
- EPA Method 418.1 - Petroleum hydrocarbons,
- EPA Method 150.1 - pH,
- EPA Method 9050 - Conductivity,
- EPA Method 160.1 - Total dissolved solids,
- EPA Method 9036 - Sulfate,
- EPA Method 425.1 - Surfactants, and
- EPA Method 300.0/6010 - General minerals, selected metals.

Groundwater samples collected during subsequent sampling rounds were analyzed for volatile organics using EPA Method 8240 with selected samples being analyzed for general minerals and Ph. Hydropunch groundwater samples collected from onsite and offsite locations were analyzed for volatile organics using EPA Method 8240.

Impacts to vadose zone soils and groundwater by chlorinated hydrocarbon compounds were identified in this investigation. The predominant compounds detected in both the soil and groundwater are 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), trichloroethene (TCE), and methylene chloride (dichloromethane [DCM]). Elevated concentrations of these compounds detected in the soil appear to be limited in their areal extent to the immediate vicinity, including and surrounding the aboveground solvent storage area. Minor impacts to the soil were identified along the subsurface distribution lines connecting the northern railroad spur to the UST area. No significant impacts to vadose zone soils or groundwater

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were identified as resulting from activities associated with the storage, handling, or processing of corrosives, hydrogen peroxides, or glycols.

Two groundwater plumes exhibiting elevated concentrations of VOCs were identified during this investigation. An onsite plume, characterized by elevated concentrations of chlorinated hydrocarbons, including 1,1,1-TCA, PCE, TCE, 1,1-dichloroethene (1,1-DCE), and DCM was detected. Maximum concentrations of the major compounds comprising the onsite plume were detected in groundwater samples collected immediately downgradient of the aboveground solvent-storage area. Elevated concentrations extend offsite both downgradient and upgradient of the McKesson site. Even though a significant reduction of the concentration of compounds is observed perpendicular to the plume axis, the lateral extent of the plume has not been completely assessed. Vertically, the elevated concentration of compounds appear to be restricted to the upper part of the aquifer. No observations were made that would indicate elevated concentrations of dissolved organics or non-aqueous phase liquid solvents exist at depth within the aquifer.

An offsite plume, characterized by elevated concentrations of MEK, MIBK, and BTEX, in addition to concentrations of chlorinated hydrocarbons, was identified to the north (upgradient) and west (cross-gradient) of the McKesson site. This offsite plume extends downgradient from the Angeles site, which appears to be a possible source. Based on the compounds detected in the soil and the groundwater at the Angeles site during a preliminary investigation conducted in 1990 by SCS Engineers and the distribution of compounds detected in the groundwater upgradient of the McKesson site, the Angeles site appears to have contributed to the onsite plume identified at the McKesson site.

The observed distribution of compounds in the vadose zone soils appears to result from two transport processes. Within and in the vicinity of the aboveground solvent-storage area, the observed distribution is most probably the result of vertical migration of liquid-phase solvents through the vadose zone accompanied with lateral spreading along zones of high permeability contrasts. Away from the solvent storage tank area and at depths of 40 to 45 feet bgs, the detected concentrations of volatile organics appear to be the result of volatilization of dissolved compounds present in the groundwater.

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The observed plume configuration and aquifer test parameters indicated that the transport of chemical compounds in the groundwater is dominated by advection in a downgradient direction. Lateral to the plume axis, transport appears to be dependent primarily on diffusion. Diffusion also appears to control the distribution of compounds observed in the intermediate and deep zones of the aquifer.

A baseline risk assessment conducted by McLaren/ChemRisk concluded that under current conditions, the concentrations of the selected chemicals of concern detected in the site soils do not pose a significant noncancer risk or a significant increased cancer risk to future onsite residential or occupational populations. Risks to offsite populations were not quantitatively assessed. Site-related health risks associated with the chemicals detected in groundwater were not possible to assess because the relative contributions of probable onsite and offsite sources have not been established. The relationship between health effects and groundwater exposure irrespective of onsite versus offsite contribution of chemicals of concern was used to set cleanup levels for groundwater and soil.

Data collected as part of this investigation are sufficient to completely assess the extent of the groundwater plume identified onsite. However, offsite investigation of groundwater conditions is required to assess the downgradient, upgradient, and lateral extent of the plume. Assessment of soil and groundwater conditions upgradient of the McKesson site, including the Angeles site, is necessary to determine the magnitude of offsite contributions to the plumes identified both on and offsite.

The following activities are recommended to complete the remedial investigation of the McKesson site:

- Upon removal of the USTs, collection and analysis of soil samples from beneath the tanks.
- Analyses of soil samples collected during the tank removal activities should be evaluated.
- A report presenting the results of the UST removals and incorporating data generated during this investigation should be prepared as an addendum to the RI Report.

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These activities would complete the assessment of vadose zone soils onsite .

A workplan for the downgradient investigation of the groundwater plume detected onsite should be prepared. The scope of work associated with the downgradient investigation should be designed to monitor and assess the downgradient and lateral extent of the onsite plume.

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APPENDIX L

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APPENDIX L

ANALYTICAL RESULTS - GROUNDWATER

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AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

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3.4.2

ATI I.D. 008036

August 29, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick

On August 3, 1990, Analytical Technologies, Inc. received thirteen water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. The compounds listed as semi-quantitated compounds at the end of each gas chromatography/mass spectometry analysis have been identified as a "best match" in a computerized library search. They are not quantitated or identified in terms of standard. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nc

for Richard M. Amano
Laboratory Manager

AnalyticalTechnologies,Inc.

ATI I.D. 008036

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: McKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
ALKALINITY	TITRIMETRIC	EPA 310.1
CHLORIDE	COLORIMETRIC	EPA 325.2
CONDUCTIVITY	ELECTRODE	EPA 9050
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1
pH	ELECTRODE	EPA 150.1
SULFATE	COLORIMETRIC	EPA 9036
SURFACTANTS	COLORIMETRIC	EPA 425.1
TOTAL DISSOLVED SOLIDS	GRAVIMETRIC	EPA 160.1
CALCIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
HARDNESS	CALCULATION	EPA 6010
IRON	ICAP	EPA 6010
MAGNESIUM	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

AnalyticalTechnologies,Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
ATI I.D. : 008036

DATE RECEIVED : 08/02/90
REPORT DATE : 08/29/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-MW-01-080190	WATER	08/01/90
02	MK-MW-02-080190	WATER	08/01/90
03	MK-MW-02-080190D	WATER	08/01/90
04	MK-MW-02-080190B	WATER	08/01/90
05	MK-MW-02-080190E	WATER	08/01/90
06	MK-MW-03-080290	WATER	08/02/90
07	MK-SB-10-080290	WATER	08/02/90
08	MK-SB-17-080290	WATER	08/02/90
09	MK-SB-17-080290D	WATER	08/02/90
10	MK-SB-20-080290	WATER	08/02/90
11	MK-SB-13-080290	WATER	08/02/90
12	MK-SB-13-080290E	WATER	08/02/90
13	MK-SB-13-080290B	WATER	08/02/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	13

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/02/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	01	02	03	04	05
CARBONATE AS CACO3	MG/L	<5	<5	<5	<5	<5
BICARBONATE AS CACO3	MG/L	<5	412	404	<5	<5
HYDROXIDE AS CACO3	MG/L	<5	<5	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	<5	412	404	<5	<5
CATION/ANION BALANCE	RATIO	*	0.98	0.96	-	-
CHLORIDE	MG/L	100	90	85	<5	<5
CONDUCTIVITY, UMHOS/CM	-	1510	1460	1460	<20	<20
FLUORIDE	MG/L	<0.5	<0.5	<0.5	<0.5	<0.5
SURFACTANTS	MG/L	0.3	0.4	<0.1	<0.1	<0.1
NITRATE AS NITROGEN	MG/L	10.0	14.2	14.4	<0.05	<0.05
PETROLEUM HYDROCARBONS, IR	MG/L	<0.05	<0.05	<0.05	<0.05	<0.05
PH	UNITS	2.15	7.29	7.27	6.36	6.38
SULFATE	MG/L	2022	251	251	9.7	<5
TOTAL DISSOLVED SOLIDS	MG/L	1510	1120	1050	<20	<20

* Cation/anion balance was cancelled on the sample due to the unusually low ph.

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/02/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	06	07	08	09	10
CARBONATE AS CACO3	MG/L	<5	<5	<5	<5	<5
BICARBONATE AS CACO3	MG/L	234	361	362	372	422
HYDROXIDE AS CACO3	MG/L	<5	<5	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	234	361	362	372	422
CATION/ANION BALANCE	RATIO	0.95	0.96	1.00	0.93	0.99
CHLORIDE	MG/L	130	115	130	135	155
CONDUCTIVITY, UMHOS/CM	-	1170	1450	1470	1490	1540
FLUORIDE	MG/L	<0.5	<0.5	<0.5	<0.5	<0.5
SURFACTANTS	MG/L	0.3	0.1	0.4	0.2	0.2
NITRATE AS NITROGEN	MG/L	0.96	8.1	2.6	2.6	3.3
PETROLEUM HYDROCARBONS, IR	MG/L	<0.05	<0.05	<0.05	<0.05	0.15
PH	UNITS	7.27	7.26	6.99	6.94	7.08
SULFATE	MG/L	185	319	288	325	202
TOTAL DISSOLVED SOLIDS	MG/L	764	1070	1070	926	1360

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/02/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	11	12	13
CARBONATE AS CACO3	MG/L	<5	<5	<5
BICARBONATE AS CACO3	MG/L	416	<5	<5
HYDROXIDE AS CACO3	MG/L	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	416	<5	<5
CATION/ANION BALANCE	RATIO	0.99	-	-
CHLORIDE	MG/L	90	100	<5
CONDUCTIVITY, UMHOS/CM	-	1450	<20	<20
FLUORIDE	MG/L	<0.5	<0.5	<0.5
SURFACTANTS	MG/L	0.1	<0.1	<0.1
NITRATE AS NITROGEN	MG/L	13.7	<0.05	<0.05
PETROLEUM HYDROCARBONS, IR	MG/L	<0.05	<0.05	<0.05
PH	UNITS	7.12	6.66	6.46
SULFATE	MG/L	256	<5	<5
TOTAL DISSOLVED SOLIDS	MG/L	1080	<20	<20

AnalyticalTechnologies,Inc GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 008036

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE AS CACO3	MG/L	00803610	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		422	409	3	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		422	409	3	N/A	N/A	N/A
CARBONATE AS CACO3	MG/L	00804904	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		402	398	1	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		402	398	1	N/A	N/A	N/A
CHLORIDE	MG/L	00803608	130	125	4	170	40	106
CHLORIDE	MG/L	00803801	80	80	0	120	40	100
CONDUCTIVITY, UMHOS/CM	-	00803608	1470	1500	2	N/A	N/A	N/A
CONDUCTIVITY, UMHOS/CM	-	00804905	1600	1610	1	N/A	N/A	N/A
FLUORIDE	MG/L	00803610	<0.5	<0.5	0	4.8	5.0	96
FLUORIDE	MG/L	00804901	<0.5	<0.5	0	5.0	5.0	100
SURFACTANTS	MG/L	00805801	<0.1	<0.1	0	0.86	1.0	86
NITRATE AS NITROGEN	MG/L	00803605	<0.05	<0.05	0	1.9	2.0	95
ITRATE AS NITROGEN	MG/L	00804907	<0.05	<0.05	0	1.9	2.0	95
PETROLEUM HYDROCARBONS	MG/L	00803601	<0.05	<0.05	0	2.7	4.0	68
PETROLEUM HYDROCARBONS	MG/L	00803613	<0.05	<0.08	0	2.6	4.0	65
PH	UNITS	00718101	7.33	7.31	0	N/A	N/A	N/A
PH	UNITS	00803608	6.99	7.08	1	N/A	N/A	N/A
PH	UNITS	00804905	7.14	7.16	0	N/A	N/A	N/A
SULFATE	MG/L	00803608	288	300	4	477	200	92
SULFATE	MG/L	00803803	13.3	11.1	18	241	200	114
SULFATE	MG/L	00803613	<5	<5	0	187	200	94
TOTAL DISSOLVED SOLIDS	MG/L	00803604	<20	<20	0	N/A	N/A	N/A
TOTAL DISSOLVED SOLIDS	MG/L	00803613	<20	<20	0	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc. METALS RESULTS

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/02/9
REPORT DATE : 08/29/90

PARAMETER	UNITS	01	02	03	04	05
CALCIUM	MG/L	183	160	155	0.30	0.08
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
IRON	MG/L	0.83	<0.01	0.03	<0.01	<0.01
HARDNESS	MG/L	640	581	567	1.0	<0.5
POTASSIUM	MG/L	5.7	10.0	9.5	<0.1	<0.1
MAGNESIUM	MG/L	44.5	44.1	43.8	0.07	0.01
MANGANESE	MG/L	0.02	0.05	0.03	0.03	<0.01
SODIUM	MG/L	115	109	102	0.32	0.29
ZINC	MG/L	0.24	0.02	0.05	<0.01	<0.01

AnalyticalTechnologies,Inc.

METALS RESULTS

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/02/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	06	07	08	09	10
CALCIUM	MG/L	105	159	159	158	154
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
IRON	MG/L	<0.01	<0.01	<0.01	<0.01	<0.01
HARDNESS	MG/L	370	580	585	580	560
POTASSIUM	MG/L	5.8	8.7	5.3	5.5	5.2
MAGNESIUM	MG/L	26.2	44.5	45.7	45.1	42.6
MANGANESE	MG/L	0.64	0.90	12.1	12.0	12.8
SODIUM	MG/L	93.1	117	111	110	121
ZINC	MG/L	0.01	<0.01	0.02	0.02	0.02

AnalyticalTechnologies,Inc.

METALS RESULTS

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/02/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	11	12	13
CALCIUM	MG/L	172	0.30	0.12
COPPER	MG/L	<0.02	<0.02	<0.02
IRON	MG/L	<0.01	<0.01	<0.01
HARDNESS	MG/L	609	1.0	<0.5
POTASSIUM	MG/L	6.6	<0.1	<0.1
MAGNESIUM	MG/L	43.6	0.07	0.02
MANGANESE	MG/L	0.14	0.03	<0.01
SODIUM	MG/L	109	0.34	0.28
ZINC	MG/L	<0.01	<0.01	<0.01

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 008036

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CALCIUM	MG/L	00803606	105	106	1	207	100	102
COPPER	MG/L	00803610	<0.02	<0.02	0	1.9	2.0	95
IRON	MG/L	00803606	<0.01	<0.01	0	1.0	1.0	100
HARDNESS	MG/L	00803606	370	374	1	N/A	N/A	N/A
POTASSIUM	MG/L	00803606	5.8	5.9	2	105	100	99
MAGNESIUM	MG/L	00803606	26.2	26.6	2	126	100	100
MANGANESE	MG/L	00803610	12.8	12.6	2	27.7	15.6	96
SODIUM	MG/L	00803606	93.1	94.1	1	189	100	95
ZINC	MG/L	00803606	0.01	0.01	0	1.1	1.0	109

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803601

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-01-080190	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803602

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

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AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803603

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190D	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803604

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190B	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803605

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190E	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803606

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-03-080290	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803607

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-10-080290	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803608

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-17-080290	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803609

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-17-080290D	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803610

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-20-080290	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803611

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-13-080290	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803612

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-13-080290E	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00803613

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-13-080290B	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc. GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : GLYCOLS

		ATI I.D.	: 008036
CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE EXTRACTED	: N/A
PROJECT #	: 17333,157.11	DATE ANALYZED	: 08/21/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	UNITS	: MG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 008036

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00803601

DATE EXTRACTED : N/A
DATE ANALYZED : 08/21/90
SAMPLE MATRIX : WATER
UNITS : MG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
ETHYLENE GLYCOL	<2.0	25	27	108	19	76	35
DIETHYLENE GLYCOL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	25	31	124	24	96	25
HEXYLENE GLYCOL	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 008036

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00803611

DATE EXTRACTED : 08/23/90
DATE ANALYZED : 08/21/90
SAMPLE MATRIX : WATER
UNITS : MG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
ETHYLENE GLYCOL	<2.0	25	18	72	20	80	11
DIETHYLENE GLYCOL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	25	22	88	24	96	9
HEXYLENE GLYCOL	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

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AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00803601

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-01-080190	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 6

COMPOUNDS	RESULTS
CHLOROMETHANE	<60
BROMOMETHANE	<60
VINYL CHLORIDE	<6
CHLOROETHANE	<6
METHYLENE CHLORIDE	<30
ACETONE	<120
CARBON DISULFIDE	<6
1,1-DICHLOROETHENE	1100
1,1-DICHLOROETHANE	230
1,2-DICHLOROETHENE (TOTAL)	650
CHLOROFORM	TR<6
1,2-DICHLOROETHANE	7
2-BUTANONE (MEK)	<120
1,1,1-TRICHLOROETHANE	300
CARBON TETRACHLORIDE	<6
VINYL ACETATE	<60
BROMODICHLOROMETHANE	<6
1,1,2,2-TETRACHLOROETHANE	<6
1,2-DICHLOROPROPANE	<6
CIS-1,3-DICHLOROPROPENE	<6
TRICHLOROETHENE	590
DIBROMOCHLOROMETHANE	<6
1,1,2 TRICHLOROETHANE	<6
BENZENE	TR<6
TRANS-1,3-DICHLOROPROPENE	<6
BROMOFORM	<30
2-HEXANONE (MBK)	<60
4-METHYL-2-PENTANONE (MIBK)	<60
TETRACHLOROETHENE	600
TOLUENE	180
CHLOROBENZENE	<6
ETHYL BENZENE	<6
STYRENE	<6
TOTAL XYLENES	13

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	100
TOLUENE-D8 (%)	104

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TR - Compound detected at an unquantifiable trace level

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803601

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
256 TRICHLOROFLUOROMETHANE	TR<30@
480 BRANCHED KETONE	40

MCK0003838

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803602

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	270
1,1-DICHLOROETHANE	20
1,2-DICHLOROETHENE (TOTAL)	80
CHLOROFORM	2
1,2-DICHLOROETHANE	6
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	30
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	400
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	220
TOLUENE	6
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	100
TOLUENE-D8 (%)	102

MCK0003839

AnalyticalTechnologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803602

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
254 TRICHLOROFLUOROMETHANE	10@
264 FREON 113	14@

MCK0003840

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803603

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190D	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	210
1,1-DICHLOROETHANE	17
1,2-DICHLOROETHENE (TOTAL)	72
CHLOROFORM	1
1,2-DICHLOROETHANE	5
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	27
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	370
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	200
TOLUENE	5
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	108
BFB (%)	100
TOLUENE-D8 (%)	104

MCK0003841

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803603

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
256 TRICHLOROFLUOROMETHANE	7@
267 FREON 113	13@

@ - A standard was used to quantitate this value.

MCK0003842

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803604

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190B	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	106
BFB (%)	100
TOLUENE-D8 (%)	99

MCK0003843

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803604

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003844

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00803605

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-080190E	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	111
BFB (%)	101
TOLUENE-D8 (%)	99

MCK0003845

AnalyticalTechnologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803605

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003846

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803606

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-03-080290	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 8

COMPOUNDS	RESULTS
CHLOROMETHANE	<80
BROMOMETHANE	<80
VINYL CHLORIDE	<8
CHLOROETHANE	<8
METHYLENE CHLORIDE	140
ACETONE	210
CARBON DISULFIDE	<8
1,1-DICHLOROETHENE	1200
1,1-DICHLOROETHANE	100
1,2-DICHLOROETHENE (TOTAL)	230
CHLOROFORM	<8
1,2-DICHLOROETHANE	<8
2-BUTANONE (MEK)	<160
1,1,1-TRICHLOROETHANE	1700
CARBON TETRACHLORIDE	<8
VINYL ACETATE	<80
BROMODICHLOROMETHANE	<8
1,1,2,2-TETRACHLOROETHANE	<8
1,2-DICHLOROPROPANE	<8
CIS-1,3-DICHLOROPROPENE	<8
TRICHLOROETHENE	230
DIBROMOCHLOROMETHANE	<8
1,1,2 TRICHLOROETHANE	<8
BENZENE	<8
TRANS-1,3-DICHLOROPROPENE	<8
BROMOFORM	<40
2-HEXANONE (MBK)	<80
4-METHYL-2-PENTANONE (MIBK)	<80
TETRACHLOROETHENE	1100
TOLUENE	14
CHLOROBENZENE	<8
ETHYL BENZENE	<8
STYRENE	<8
TOTAL XYLENES	100

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	105
BFB (%)	104
TOLUENE-D8 (%)	102

MCK0003847

TR - Compound detected at an unquantifiable trace level

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803606

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
256 TRICHLOROFLUOROMETHANE	TR<40@
266 FREON 113	53@

MCK0003848

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803607

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-10-080290	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<200
BROMOMETHANE	<200
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	410
ACETONE	<400
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	3600
1,1-DICHLOROETHANE	160
1,2-DICHLOROETHENE (TOTAL)	83
CHLOROFORM	<20
1,2-DICHLOROETHANE	<20
2-BUTANONE (MEK)	<400
1,1,1-TRICHLOROETHANE	2900
CARBON TETRACHLORIDE	<20
VINYL ACETATE	<200
BROMODICHLOROMETHANE	<20
1,1,2,2-TETRACHLOROETHANE	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRICHLOROETHENE	830
DIBROMOCHLOROMETHANE	<20
1,1,2 TRICHLOROETHANE	<20
BENZENE	<20
TRANS-1,3-DICHLOROPROPENE	<20
BROMOFORM	<100
2-HEXANONE (MBK)	<200
4-METHYL-2-PENTANONE (MIBK)	<200
TETRACHLOROETHENE	2800
TOLUENE	<40
CHLOROBENZENE	<20
ETHYL BENZENE	<20
STYRENE	<20
TOTAL XYLENES	<20

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	111
BFB (%)	101
TOLUENE-D8 (%)	97

MCK0003849

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803607

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
265 TRICHLOROTRIFLUOROETHANE	190@
427 ALIPHATIC HYDROCARBON	600
584 ALIPHATIC HYDROCARBON	300
664 ALIPHATIC HYDROCARBON	100
730 ALIPHATIC HYDROCARBON	800

MCK0003850

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803608

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-17-080290	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 500

COMPOUNDS	RESULTS
CHLOROMETHANE	<5000
BROMOMETHANE	<5000
VINYL CHLORIDE	<500
CHLOROETHANE	<500
METHYLENE CHLORIDE	13000
ACETONE	<10000
CARBON DISULFIDE	<500
1,1-DICHLOROETHENE	5500
1,1-DICHLOROETHANE	<500
1,2-DICHLOROETHENE (TOTAL)	<500
CHLOROFORM	<500
1,2-DICHLOROETHANE	<500
2-BUTANONE (MEK)	<10000
1,1,1-TRICHLOROETHANE	65000
CARBON TETRACHLORIDE	<500
VINYL ACETATE	<5000
BROMODICHLOROMETHANE	<500
1,1,2,2-TETRACHLOROETHANE	<500
1,2-DICHLOROPROPANE	<500
CIS-1,3-DICHLOROPROPENE	<500
TRICHLOROETHENE	7200
DIBROMOCHLOROMETHANE	<500
1,1,2 TRICHLOROETHANE	<500
BENZENE	<500
TRANS-1,3-DICHLOROPROPENE	<500
BROMOFORM	<2500
2-HEXANONE (MBK)	<5000
4-METHYL-2-PENTANONE (MIBK)	<5000
TETRACHLOROETHENE	45000
TOLUENE	1000
CHLOROBENZENE	<500
ETHYL BENZENE	<500
STYRENE	<500
TOTAL XYLENES	<500

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	78
BFB (%)	81
TOLUENE-D8 (%)	86

MCK0003851

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803608

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003852

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00803609

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-17-080290D	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 500

COMPOUNDS	RESULTS
CHLOROMETHANE	<5000
BROMOMETHANE	<5000
VINYL CHLORIDE	<500
CHLOROETHANE	<500
METHYLENE CHLORIDE	13000
ACETONE	<10000
CARBON DISULFIDE	<500
1,1-DICHLOROETHENE	4300
1,1-DICHLOROETHANE	<500
1,2-DICHLOROETHENE (TOTAL)	<500
CHLOROFORM	<500
1,2-DICHLOROETHANE	<500
2-BUTANONE (MEK)	<10000
1,1,1-TRICHLOROETHANE	59000
CARBON TETRACHLORIDE	<500
VINYL ACETATE	<5000
BROMODICHLOROMETHANE	<500
1,1,2,2-TETRACHLOROETHANE	<500
1,2-DICHLOROPROPANE	<500
CIS-1,3-DICHLOROPROPENE	<500
TRICHLOROETHENE	6900
DIBROMOCHLOROMETHANE	<500
1,1,2 TRICHLOROETHANE	<500
BENZENE	<500
TRANS-1,3-DICHLOROPROPENE	<500
BROMOFORM	<2500
2-HEXANONE (MBK)	<5000
4-METHYL-2-PENTANONE (MIBK)	<5000
TETRACHLOROETHENE	43000
TOLUENE	1600
CHLOROBENZENE	<500
ETHYL BENZENE	<500
STYRENE	<500
TOTAL XYLENES	<500

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	70
BFB (%)	79
TOLUENE-D8 (%)	83

MCK0003853

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803609

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003854

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803610

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-20-080290	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 500

COMPOUNDS	RESULTS
CHLOROMETHANE	<5000
BROMOMETHANE	<5000
VINYL CHLORIDE	<500
CHLOROETHANE	<500
METHYLENE CHLORIDE	19000
ACETONE	<10000
CARBON DISULFIDE	<500
1,1-DICHLOROETHENE	20000
1,1-DICHLOROETHANE	200
1,2-DICHLOROETHENE (TOTAL)	540
CHLOROFORM	<500
1,2-DICHLOROETHANE	<500
2-BUTANONE (MEK)	<10000
1,1,1-TRICHLOROETHANE	36000
CARBON TETRACHLORIDE	<500
VINYL ACETATE	<5000
BROMODICHLOROMETHANE	<500
1,1,2,2-TETRACHLOROETHANE	<500
1,2-DICHLOROPROPANE	<500
CIS-1,3-DICHLOROPROPENE	<500
TRICHLOROETHENE	3200
DIBROMOCHLOROMETHANE	<500
1,1,2 TRICHLOROETHANE	<500
BENZENE	<500
TRANS-1,3-DICHLOROPROPENE	<500
BROMOFORM	<2500
2-HEXANONE (MBK)	<5000
4-METHYL-2-PENTANONE (MIBK)	<5000
TETRACHLOROETHENE	19000
TOLUENE	<1000
CHLOROBENZENE	<500
ETHYL BENZENE	<500
STYRENE	<500
TOTAL XYLENES	<500

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	109
BFB (%)	99
TOLUENE-D8 (%)	100

MCK0003855

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

'ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803610

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003856

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803611

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-13-080290	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<100
BROMOMETHANE	<100
VINYL CHLORIDE	<10
CHLOROETHANE	<10
METHYLENE CHLORIDE	700
ACETONE	<200
CARBON DISULFIDE	<10
1,1-DICHLOROETHENE	630
1,1-DICHLOROETHANE	66
1,2-DICHLOROETHENE (TOTAL)	150
CHLOROFORM	<10
1,2-DICHLOROETHANE	53
2-BUTANONE (MEK)	<200
1,1,1-TRICHLOROETHANE	170
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<100
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
CIS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	870
DIBROMOCHLOROMETHANE	12
1,1,2 TRICHLOROETHANE	<10
BENZENE	10
TRANS-1,3-DICHLOROPROPENE	<10
BROMOFORM	<50
2-HEXANONE (MBK)	<100
4-METHYL-2-PENTANONE (MIBK)	<100
TETRACHLOROETHENE	510
TOLUENE	<20
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	113
BFB (%)	99
TOLUENE-D8 (%)	98

MCK0003857

AnalyticalTechnologies, ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803611

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
470 ALDEHYDE	10
665 ALIPHATIC HYDROCARBON	20
719 ALIPHATIC HYDROCARBON	20
766 ALIPHATIC HYDROCARBON	20
626 ALIPHATIC HYDROCARBON	10

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803612

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-13-080290E	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	86
TOLUENE-D8 (%)	94

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

'ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803612

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003860

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803613

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-13-080290B	DATE ANALYZED	: 08/15/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	100
BFB (%)	80
TOLUENE-D8 (%)	88

MCK0003861

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00803613

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003862

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 008036
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 08/14/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	99
BFB (%)	96
TOLUENE-D8 (%)	102

. - Compound detected at an unquantifiable trace level

MCK0003863

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008036

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003864

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

		ATI I.D.	: 008036
CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE EXTRACTED	: N/A
PROJECT #	: 17333,157.11	DATE ANALYZED	: 08/15/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	10
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	1
CARBON TETRACHLORIDE	<1
NYL ACETATE	<10
OMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	105
BFB (%)	99
TOLUENE-D8 (%)	102

MCK0003865

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008036

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003866

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 008036
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 08/15/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
NYL ACETATE	<10
OMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	67
BFB (%)	92
TOLUENE-D8 (%)	97

. - Compound detected at an unquantifiable trace level

MCK0003867

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008036

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003868

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803603

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-MW-02-080190D	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003869

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803603

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	67
2-FLUOROBIPHENYL (%)	52
TERPHENYL (%)	22*
PHENOL-D6 (%)	62
2-FLUOROPHENOL (%)	77
2,4,6-TRIBROMOPHENOL (%)	57

* Result out of limits due to sample matrix interference

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

'ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803603

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
1132 CARBOXYLIC ACID	10

MCK0003871

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803604

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-MW-02-080190B	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003872

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803604

:ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	58
2-FLUOROBIPHENYL (%)	46
TERPHENYL (%)	51
PHENOL-D6 (%)	70
2-FLUOROPHENOL (%)	80
2,4,6-TRIBROMOPHENOL (%)	63

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803604

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003874

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803605

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/01/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-MW-02-080190E	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003875

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Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803606

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
518 TRIMETHYLBENZENE	30
544 TRIMETHYLCYCLOHEXANONE	40
1132 CARBOXYLIC ACID	10
1459 CARBOXYLIC ACID	10

MCK0003876

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803607

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-SB-10-080290	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003877

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803607

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	49
TERPHENYL (%)	36*
PHENOL-D6 (%)	22
2-FLUOROPHENOL (%)	17*
2,4,6-TRIBROMOPHENOL (%)	34

* Result out of limits due to sample matrix interference

MCK0003878

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803607

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
1131 CARBOXYLIC ACID	8
1155 CYCLOHYDROCARBON	10

MCK0003879

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803608

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	50
2-FLUOROBIPHENYL (%)	46
TERPHENYL (%)	36*
PHENOL-D6 (%)	23
2-FLUOROPHENOL (%)	21*
2,4,6-TRIBROMOPHENOL (%)	17*

* Result out of limits due to sample matrix interference

MCK0003880

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803608

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
439 TRIMETHYLBENZENE ISOMER	20
477 TRIMETHYLBENZENE ISOMER	80
518 TRIMETHYLBENZENE ISOMER	50
665 CARBOXYLIC ACID	70
1131 CARBOXYLIC ACID	20

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803608

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-SB-17-080290	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	16
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	TR<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003882

TR - Compound detected at an unquantifiable trace level

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803609

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-SB-17-080290D	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	13
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	TR<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003883

TR - Compound detected at an unquantifiable trace level

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803609

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	48
2-FLUOROBIPHENYL (%)	43*
TERPHENYL (%)	41
PHENOL-D6 (%)	16
2-FLUOROPHENOL (%)	22*
2,4,6-TRIBROMOPHENOL (%)	26

* Result out of limits due to sample matrix interference

MCK0003884

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803609

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
479 TRIMETHYLBENZENE ISOMER	70
519 TRIMETHYLBENZENE ISOMER	50
541 CARBOXYLIC ACID	60
1133 CARBOXYLIC ACID	30

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00803610

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
CLIENT I.D. : MK-SB-20-080290
SAMPLE MATRIX : WATER

DATE SAMPLED : 08/02/90
DATE RECEIVED : 08/02/90
DATE EXTRACTED : 08/06/90
DATE ANALYZED : 08/10/90
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	TR<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003886

TR - Compound detected at an unquantifiable trace level

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AnalyticalTechnologies,Inc. GCMS - RESULTS

ATI I.D. : 00803610

ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	50
2-FLUOROBIPHENYL (%)	45
TERPHENYL (%)	22*
PHENOL-D6 (%)	7*
2-FLUOROPHENOL (%)	2*
2,4,6-TRIBROMOPHENOL (%)	1*

* Result out of limits due to sample matrix interference

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803610

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
476 TRIMETHYLBENZENE ISOMER	30
518 TRIMETHYLBENZENE ISOMER	40
1133 CARBOXYLIC ACID	20
1156 CYCLOHYDROCARBON	20
1461 CARBOXYLIC ACID	10

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803611

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-SB-13-080290	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
NITROPHENOL	<50
BENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003889

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803611

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	45
TERPHENYL (%)	41
PHENOL-D6 (%)	76
2-FLUOROPHENOL (%)	100
2,4,6-TRIBROMOPHENOL (%)	58

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803612

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003891

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803612

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	57
2-FLUOROBIPHENYL (%)	45
TERPHENYL (%)	46
PHENOL-D6 (%)	76
2-FLUOROPHENOL (%)	92
2,4,6-TRIBROMOPHENOL (%)	49

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803611

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003893

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803612

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-SB-13-080290E	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003894

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803613

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/02/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/02/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/06/90
CLIENT I.D.	: MK-SB-13-080290B	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
·-METHYLPHENOL	<10
NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003895

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00803613

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	68
2-FLUOROBIPHENYL (%)	53
TERPHENYL (%)	50
PHENOL-D6 (%)	73
2-FLUOROPHENOL (%)	97
2,4,6-TRIBROMOPHENOL (%)	56

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00803613

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003897

AnalyticalTechnologies, Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 008036
PROJECT #	: 17333,157.11	DATE EXTRACTED	: 08/06/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 08/10/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10
4-CHLOROPHENYL PHENYL ETHER	<10

MCK0003898

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 008036

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	18
CHRYSENE	<10
T-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	54
2-FLUOROBIPHENYL (%)	48
TERPHENYL (%)	49
PHENOL-D6 (%)	36
2-FLUOROPHENOL (%)	87
2,4,6-TRIBROMOPHENOL (%)	64

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008036

UNITS : UG/L

COMPOUNDS	RESULTS
1534 ALIPHATIC HYDROCARBON C20	30
1983 CARBOXYLIC ACID	40
2201 ALIPHATIC HYDROCARBON C26	20
2249 ALIPHATIC HYDROCARBON C26	20
2301 ALIPHATIC HYDROCARBON C27	20

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 008036

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00803610

DATE EXTRACTED : 08/06/90
DATE ANALYZED : 08/11/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<10	100	42	42*	49	49	15
ACENAPHTHENE	<10	100	44	44*	48	48	9
2,4-DINITROTOLUENE	<10	100	50	50	57	57	13
PYRENE	<10	100	33	33*	32	32*	3
N-NITROSO-DI-N-PROPYLAMINE	<10	100	32	32*	39	39*	20
1,4-DICHLOROBENZENE	<10	100	37	37	45	45	20
PENTACHLOROPHENOL	<50	400	36	9*	33	16*	56*
PHENOL	<10	200	6	3*	8	4*	28
2-CHLOROPHENOL	<10	200	7	3*	4	2	40
4-CHLORO-3-METHYLPHENOL	<10	200	36	18*	35	18*	0
4-NITROPHENOL	<50	400	254	63	306	76	19

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to sample matrix interference

MCK0003901

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 008036

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : REAGENT WATER

DATE EXTRACTED : 08/06/90
DATE ANALYZED : 08/10/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<10	100	48	48	43	43	11
ACENAPHTHENE	<10	100	49	49	53	53	8
2,4-DINITROTOLUENE	<10	100	52	52	55	55	6
PYRENE	<10	100	58	58	60	60	3
N-NITROSO-DI-N-PROPYLAMINE	<10	100	32	32	33	33	3
1,4-DICHLOROBENZENE	<10	100	40	40	44	44	10
PENTACHLOROPHENOL	<50	400	246	62	251	63	2
PHENOL	<10	200	73	36	90	45	22
2-CHLOROPHENOL	<10	200	78	39	90	45	14
4-CHLORO-3-METHYLPHENOL	<10	200	100	50	97	48	4
4-NITROPHENOL	<50	400	344	86	336	84	2

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003902

Hr Lawson Associates
15 adhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

CHAIN OF C TODY FORM

Lab: ATT 008 26

Job Number: 17333, 15 11

Samplers: Tom Hardie, Dan Johnson

Name/Location: McKesson - Santa Fe Springs

Project Manager: Carol Sorlin/Burton Chalmers

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES
23	X				X	X	X	X				90	08	01	1445	mk-mw-01-080190
23	X				X	X	X	X				90	08	01	1545	mk-mw-02-080190
23	X											90	08	01	1600	mk-mw-02-080190D
23	X											90	08	01	1610	mk-mw-02-080190C
23	X											90	08	01	1615	mk-mw-03-080190B
23	X											90	08	01	1630	mk-mw-02-080190E
23	X											90	08	02		mk-mw-03-080290
23	X											90	08	02		mk-SB-10-080290
23	X															mk-SB-17-080290
23	X															mk-SB-17-080290D

ANALYSIS REQUESTED

EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pollut. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	418.1	Hardness (Grab Samples)	202	Ca/Mg/K/Na (Grab) Per Burton 8-3-90
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X
		X	X	X			X	X	X	X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Call Burton Chalmers at HLA - Tustin if there is any questions

MCK0003903

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
8/2/90	Bob DeBy	8/2/90 1550
RELINQUISHED BY: (Signature) Bob DeBy	RECEIVED BY: (Signature)	DATE/TIME 8/2/90 6:50
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

2 of 21

Lab: ATI 008036

Samplers: Tom Harder, Don Johnson

Job Number: 17333.157.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Carol Seelin/Burton Chadwick

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCl	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pollut. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	HSL	Inorganics (Specify)	TDS	Cons/Cal (Specify)	Petroleum Series	
23	X				X	X	X	X				90	08	02		MK-SB-20-080290			X	X	X			X	X	X	X	X	10
23	X				X	X	X	X				90	08	02		MK-SB-13-080290			X	X	X			X	X	X	X	X	11
23	X				X	X	X	X				90	08	02		MK-SB-13-080290E			X	X	X			X	X	X	X	X	12
23	X				X	X	X	X				90	08	02		MK-SB-13-080290B			X	X	X			X	X	X	X	X	13

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Call Burton Chadwick if there is any questions!

MCK0003904

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Don Johnson 8/2/90	Bob DeBay	8/2/90 1550
Bob DeBay	Graham	8/2/90 16:50

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

CONFIDENTIAL I.4.2

ATI I.D. 008049

August 29, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite #100
Tustin, California 92680

Project Name: McKesson Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick

On August 3, 1990, Analytical Technologies, Inc. received eight water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. The compounds listed as semi-quantitated compounds at the end of each gas chromatography/mass spectometry analysis have been identified as a "best match" in a computerized library search. They are not quantitated or identified in terms of standard. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

Timothy J. Fitzpatrick
Inorganics Supervisor

TJF:nc

for Richard M. Amano
Laboratory Manager

AnalyticalTechnologies,Inc.

ATI I.D. 008049

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: McKESSON SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
ALKALINITY	TITRIMETRIC	EPA 310.1
CHLORIDE	COLORIMETRIC	EPA 325.2
CONDUCTIVITY	ELECTRODE	EPA 9050
FLUORIDE	ELECTRODE	EPA 340.2
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
PETROLEUM HYDROCARBONS	IR	EPA 418.1
pH	ELECTRODE	EPA 150.1
SULFATE	COLORIMETRIC	EPA 9036
SURFACTANTS	COLORIMETRIC	EPA 425.1
TOTAL DISSOLVED SOLIDS	GRAVIMETRIC	EPA 160.1
CALCIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
HARDNESS	CALCULATION	EPA 6010
IRON	ICAP	EPA 6010
MAGNESIUM	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
GLYCOLS	GC/FID	EPA 8015
VOLATILE ORGANICS	GC/MS	EPA 8240
SEMI-VOLATILE ORGANICS (BNA)	GC/MS	EPA 8270

AnalyticalTechnologies,Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
OJECT # : 17333,157.11
.OJECT NAME : McKESSON-SANTA FE SPRINGS
ATI I.D. : 008049

DATE RECEIVED : 08/03/90
REPORT DATE : 08/29/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-04-080390	WATER	08/03/90
02	MK-SB-07-080390	WATER	08/03/90
03	MK-SB-23-080390	WATER	08/03/90
04	MK-SB-23-080390D	WATER	08/03/90
05	MK-SB-25-080390	WATER	08/03/90
06	MK-SB-32-080390	WATER	08/03/90
07	MK-SB-32-080390E	WATER	08/03/90
08	MK-SB-04-080390B	WATER	08/03/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 008049

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/03/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	01	02	03	04	05
CARBONATE AS CACO3	MG/L	<5	<5	<5	<5	<5
BICARBONATE AS CACO3	MG/L	436	364	400	402	452
HYDROXIDE AS CACO3	MG/L	<5	<5	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	436	364	400	402	452
CATION/ANION BALANCE	RATIO	0.98	1.02	0.96	1.01	0.95
CHLORIDE	MG/L	115	90	180	170	150
CONDUCTIVITY, UMHOS/CM	-	1540	1290	1650	1650	1600
FLUORIDE	MG/L	<0.5	<0.5	<0.5	<0.5	<0.5
SURFACTANTS	MG/L	0.1	0.3	<0.1	<0.1	0.1
NITRATE AS NITROGEN	MG/L	9.2	5.1	3.4	1.9	6.8
PETROLEUM HYDROCARBONS, IR	MG/L	0.07	<0.05	0.06	<0.05	0.18
PH	UNITS	7.22	7.44	7.12	7.09	7.14
SULFATE	MG/L	256	202	288	256	256
TOTAL DISSOLVED SOLIDS	MG/L	1150	972	1230	1250	1170

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 008049

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/03/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	06	07	08
CARBONATE AS CACO3	MG/L	<5	<5	<5
BICARBONATE AS CACO3	MG/L	494	<5	<5
HYDROXIDE AS CACO3	MG/L	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	494	<5	<5
CATION/ANION BALANCE	RATIO	0.94	-	-
CHLORIDE	MG/L	70	30	<5
CONDUCTIVITY, UMHOS/CM	-	1330	<20	<20
FLUORIDE	MG/L	<0.5	<0.5	<0.5
SURFACTANTS	MG/L	<0.1	<0.1	<0.1
NITRATE AS NITROGEN	MG/L	0.21	<0.05	<0.05
PETROLEUM HYDROCARBONS, IR	MG/L	0.62	<0.05	<0.05
PH	UNITS	7.21	6.01	5.87
SULFATE	MG/L	190	<5	<5
TOTAL DISSOLVED SOLIDS	MG/L	904	<20	<20

AnalyticalTechnologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 008049

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE AS CACO3	MG/L	00804904	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		402	398	1	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		402	398	1	N/A	N/A	N/A
CARBONATE AS CACO3	MG/L	00805801	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		190	188	1	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		190	188	1	N/A	N/A	N/A
CHLORIDE	MG/L	00804908	<5	<5	0	45	40	113
CONDUCTIVITY, UMHOS/CM	-	00804905	1600	1610	1	N/A	N/A	N/A
FLUORIDE	MG/L	00804901	<0.5	<0.5	0	5.0	5.0	100
FLUORIDE	MG/L	00805201	<0.5	<0.5	0	4.6	5.0	92
SURFACTANTS	MG/L	00805102	<0.1	<0.1	0	1.1	1.0	110
NITRATE AS NITROGEN	MG/L	00804907	<0.05	<0.05	0	1.9	2.0	95
NITRATE AS NITROGEN	MG/L	00804908	<0.05	<0.05	0	2.0	2.0	100
PETROLEUM HYDROCARBONS	MG/L	00804907	<0.05	<0.05	0	2.4	4.0	60
PETROLEUM HYDROCARBONS	MG/L	00805801	<0.05	<0.05	0	2.2	4.0	55
PH	UNITS	00804905	7.14	7.16	0	N/A	N/A	N/A
SULFATE	MG/L	00804908	<5	<5	0	187	200	94
TOTAL DISSOLVED SOLIDS	MG/L	00804908	<20	<20	0	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003910

AnalyticalTechnologies,Inc. METALS RESULTS

ATI I.D. : 008049

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/03/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	01	02	03	04	05
CALCIUM	MG/L	176	125	174	173	180
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02	<0.02
IRON	MG/L	<0.01	<0.01	<0.01	<0.01	<0.01
HARDNESS	MG/L	621	444	646	641	650
POTASSIUM	MG/L	6.5	5.9	10.0	8.4	7.7
MAGNESIUM	MG/L	44.1	32.0	51.4	50.7	48.8
MANGANESE	MG/L	0.30	0.12	5.7	5.8	2.9
SODIUM	MG/L	123	130	121	120	113
ZINC	MG/L	0.01	0.01	0.02	0.02	0.03

AnalyticalTechnologies,Inc. METALS RESULTS

ATI I.D. : 008049

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 08/03/90
REPORT DATE : 08/29/90

PARAMETER	UNITS	06	07	08
CALCIUM	MG/L	101	<0.05	<0.05
COPPER	MG/L	<0.02	<0.02	<0.02
IRON	MG/L	<0.01	<0.01	<0.01
HARDNESS	MG/L	398	<0.5	<0.5
POTASSIUM	MG/L	7.1	<0.1	<0.1
MAGNESIUM	MG/L	35.4	<0.01	<0.01
MANGANESE	MG/L	0.13	<0.01	<0.01
SODIUM	MG/L	155	0.27	0.29
ZINC	MG/L	<0.01	<0.01	<0.01

AnalyticalTechnologies, Inc. METALS - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 008049

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CALCIUM	MG/L	00804901	176	176	0	263	100	87
COPPER	MG/L	00804901	<0.02	<0.02	0	1.9	2.0	95
IRON	MG/L	00804901	<0.01	<0.01	0	1.0	1.0	100
HARDNESS	MG/L	00804901	621	621	0	N/A	N/A	N/A
POTASSIUM	MG/L	00804901	6.5	6.4	2	99.7	100	93
MAGNESIUM	MG/L	00804901	44.1	44.0	0	137	100	93
MANGANESE	MG/L	00804901	0.30	0.30	0	14.8	15.3	93
SODIUM	MG/L	00804901	123	122	1	207	100	84
ZINC	MG/L	00804901	0.01	0.02	67	1.1	1.0	108

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

MCK0003913

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804901

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-04-080390	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804902

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-07-080390	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804903

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-080390	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804904

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-080390D	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003917

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804905

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-25-080390	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003918

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804906

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-32-080390	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804907

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-32-080390E	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

MCK0003920

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 00804908

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-04-080390B	DATE ANALYZED	: 08/21/90
SAMPLE MATRIX	: WATER	UNITS	: MG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies, INC.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : GLYCOLS

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 008049
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 08/21/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
ETHYLENE GLYCOL	<2.0
DIETHYLENE GLYCOL	<4.0
PROPYLENE GLYCOL	<2.0
HEXYLENE GLYCOL	<2.0

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 008049

TEST : GLYCOLS

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00804901

DATE EXTRACTED : N/A
DATE ANALYZED : 08/21/90
SAMPLE MATRIX : WATER
UNITS : MG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
ETHYLENE GLYCOL	<2.0	25	21	84	22	88	5
DIETHYLENE GLYCOL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PROPYLENE GLYCOL	<2.0	25	27	108	31	124	14
HEXYLENE GLYCOL	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003923

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00804901

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-04-080390	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<200
BROMOMETHANE	<200
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	1400
ACETONE	<400
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	6200
1,1-DICHLOROETHANE	460
1,2-DICHLOROETHENE (TOTAL)	2500
CHLOROFORM	34
1,2-DICHLOROETHANE	<20
2-BUTANONE (MEK)	<400
1,1,1-TRICHLOROETHANE	2700
CARBON TETRACHLORIDE	<20
VINYL ACETATE	<200
BROMODICHLOROMETHANE	<20
1,1,2,2-TETRACHLOROETHANE	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRICHLOROETHENE	4300
DIBROMOCHLOROMETHANE	<20
1,1,2 TRICHLOROETHANE	<20
BENZENE	13
TRANS-1,3-DICHLOROPROPENE	<20
BROMOFORM	<100
2-HEXANONE (MBK)	<200
4-METHYL-2-PENTANONE (MIBK)	<200
TETRACHLOROETHENE	4100
TOLUENE	93
CHLOROBENZENE	<20
ETHYL BENZENE	<20
STYRENE	<20
TOTAL XYLENES	77

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	100
TOLUENE-D8 (%)	102

MCK0003924

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804901

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
240 TRICHLOROFLUOROMETHANE	31@
250 TRICHLOROFLUOROMETHANE	200@

MCK0003925

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804902

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-07-080390	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 50

COMPOUNDS	RESULTS
CHLOROMETHANE	<500
BROMOMETHANE	<500
VINYL CHLORIDE	<50
CHLOROETHANE	<50
METHYLENE CHLORIDE	<250
ACETONE	<1000
CARBON DISULFIDE	<50
1,1-DICHLOROETHENE	10000
1,1-DICHLOROETHANE	150
1,2-DICHLOROETHENE (TOTAL)	<50
CHLOROFORM	<50
1,2-DICHLOROETHANE	<50
2-BUTANONE (MEK)	<1000
1,1,1-TRICHLOROETHANE	17000
CARBON TETRACHLORIDE	<50
VINYL ACETATE	<500
BROMODICHLOROMETHANE	<50
1,1,2,2-TETRACHLOROETHANE	<50
1,2-DICHLOROPROPANE	<50
CIS-1,3-DICHLOROPROPENE	<50
TRICHLOROETHENE	1100
DIBROMOCHLOROMETHANE	<50
1,1,2 TRICHLOROETHANE	<50
BENZENE	<50
TRANS-1,3-DICHLOROPROPENE	<50
BROMOFORM	<250
2-HEXANONE (MBK)	<500
4-METHYL-2-PENTANONE (MIBK)	<500
TETRACHLOROETHENE	6700
TOLUENE	500
CHLOROBENZENE	<50
ETHYL BENZENE	<50
STYRENE	<50
TOTAL XYLENES	<50

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	99
TOLUENE-D8 (%)	100

MCK0003926

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804902

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
242 TRICHLOROFLUOROMETHANE	140@

MCK0003927

@ - A standard was used to quantitate this value.

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00804903

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-080390	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 300

COMPOUNDS	RESULTS
CHLOROMETHANE	<3000
BROMOMETHANE	<3000
VINYL CHLORIDE	<300
CHLOROETHANE	<300
METHYLENE CHLORIDE	88000
ACETONE	<6000
CARBON DISULFIDE	<300
1,1-DICHLOROETHENE	17000
1,1-DICHLOROETHANE	460
1,2-DICHLOROETHENE (TOTAL)	930
CHLOROFORM	<300
1,2-DICHLOROETHANE	<300
2-BUTANONE (MEK)	<6000
1,1,1-TRICHLOROETHANE	71000
CARBON TETRACHLORIDE	<300
VINYL ACETATE	<3000
BROMODICHLOROMETHANE	<300
1,1,2,2-TETRACHLOROETHANE	<300
1,2-DICHLOROPROPANE	<300
CIS-1,3-DICHLOROPROPENE	<300
TRICHLOROETHENE	5800
DIBROMOCHLOROMETHANE	<300
1,1,2 TRICHLOROETHANE	<300
BENZENE	<300
TRANS-1,3-DICHLOROPROPENE	<300
BROMOFORM	<1500
2-HEXANONE (MBK)	<3000
4-METHYL-2-PENTANONE (MIBK)	<3000
TETRACHLOROETHENE	24000
TOLUENE	1600
CHLOROBENZENE	<300
ETHYL BENZENE	440
STYRENE	<300
TOTAL XYLENES	<300

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	101
TOLUENE-D8 (%)	104

MCK0003928

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804903

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003929

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804904

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-080390D	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 300

COMPOUNDS	RESULTS
CHLOROMETHANE	<3000
BROMOMETHANE	<3000
VINYL CHLORIDE	<300
CHLOROETHANE	<300
METHYLENE CHLORIDE	83000
ACETONE	<6000
CARBON DISULFIDE	<300
1,1-DICHLOROETHENE	16000
1,1-DICHLOROETHANE	450
1,2-DICHLOROETHENE (TOTAL)	870
CHLOROFORM	<300
1,2-DICHLOROETHANE	<300
2-BUTANONE (MEK)	<6000
1,1,1-TRICHLOROETHANE	63000
CARBON TETRACHLORIDE	<300
VINYL ACETATE	<3000
BROMODICHLOROMETHANE	<300
1,1,2,2-TETRACHLOROETHANE	<300
1,2-DICHLOROPROPANE	<300
CIS-1,3-DICHLOROPROPENE	<300
TRICHLOROETHENE	5200
DIBROMOCHLOROMETHANE	<300
1,1,2 TRICHLOROETHANE	<300
BENZENE	<300
TRANS-1,3-DICHLOROPROPENE	<300
BROMOFORM	<1500
2-HEXANONE (MBK)	<3000
4-METHYL-2-PENTANONE (MIBK)	<3000
TETRACHLOROETHENE	31000
TOLUENE	1500
CHLOROBENZENE	<300
ETHYL BENZENE	400
STYRENE	<300
TOTAL XYLENES	<300

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	92
BFB (%)	101
TOLUENE-D8 (%)	103

MCK0003930

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804904

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003931

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00804905

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-25-080390	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 200

COMPOUNDS	RESULTS
CHLOROMETHANE	<2000
BROMOMETHANE	<2000
VINYL CHLORIDE	<200
CHLOROETHANE	<200
METHYLENE CHLORIDE	72000
ACETONE	5700
CARBON DISULFIDE	<200
1,1-DICHLOROETHENE	9200
1,1-DICHLOROETHANE	740
1,2-DICHLOROETHENE (TOTAL)	1900
CHLOROFORM	<200
1,2-DICHLOROETHANE	<200
2-BUTANONE (MEK)	<4000
1,1,1-TRICHLOROETHANE	2000
CARBON TETRACHLORIDE	<200
VINYL ACETATE	<2000
BROMODICHLOROMETHANE	<200
1,1,2,2-TETRACHLOROETHANE	<200
1,2-DICHLOROPROPANE	<200
CIS-1,3-DICHLOROPROPENE	<200
TRICHLOROETHENE	4200
DIBROMOCHLOROMETHANE	<200
1,1,2 TRICHLOROETHANE	<200
BENZENE	210
TRANS-1,3-DICHLOROPROPENE	<200
BROMOFORM	<1000
2-HEXANONE (MBK)	<2000
4-METHYL-2-PENTANONE (MIBK)	<2000
TETRACHLOROETHENE	7000
TOLUENE	1800
CHLOROBENZENE	<200
ETHYL BENZENE	<200
STYRENE	<200
TOTAL XYLENES	<200

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	101
TOLUENE-D8 (%)	104

MCK0003932

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804905

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003933

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804906

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-32-080390	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<200
BROMOMETHANE	<200
VINYL CHLORIDE	78
CHLOROETHANE	<20
METHYLENE CHLORIDE	<100
ACETONE	<400
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	5500
1,1-DICHLOROETHANE	290
1,2-DICHLOROETHENE (TOTAL)	780
CHLOROFORM	21
1,2-DICHLOROETHANE	<20
2-BUTANONE (MEK)	<400
1,1,1-TRICHLOROETHANE	5200
CARBON TETRACHLORIDE	<20
VINYL ACETATE	<200
BROMODICHLOROMETHANE	<20
1,1,2,2-TETRACHLOROETHANE	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRICHLOROETHENE	4100
DIBROMOCHLOROMETHANE	<20
1,1,2 TRICHLOROETHANE	<20
BENZENE	51
TRANS-1,3-DICHLOROPROPENE	<20
BROMOFORM	<100
2-HEXANONE (MBK)	<200
4-METHYL-2-PENTANONE (MIBK)	<200
TETRACHLOROETHENE	3100
TOLUENE	110
CHLOROBENZENE	<20
ETHYL BENZENE	<20
STYRENE	<20
TOTAL XYLENES	<20

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	91
BFB (%)	101
TOLUENE-D8 (%)	105

MCK0003934

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804906

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
250 TRICHLOROFLUOROMETHANE	270@

MCK0003935

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804907

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-32-080390E	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2-TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

MCK0003936

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	98
TOLUENE-D8 (%)	105

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804907

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003937

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804908

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-04-080390B	DATE ANALYZED	: 08/16/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	2
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	89
BFB (%)	99
TOLUENE-D8 (%)	102

MCK0003938

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 00804908

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003939

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 008049
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 08/15/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	67
BFB (%)	92
TOLUENE-D8 (%)	97

TR - Compound detected at an unquantifiable trace level

MCK0003940

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008049

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003941

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 008049
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 08/16/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	TR<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
BFB (%)	100
TOLUENE-D8 (%)	104

TR - Compound detected at an unquantifiable trace level

MCK0003942

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008049

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003943

AnalyticalTechnologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 008049

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00803613

DATE EXTRACTED : N/A
DATE ANALYZED : 08/16/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	40	35	88	38	95	8
TRICHLOROETHENE	<1	55	49	89	49	89	0
CHLOROBENZENE	<1	50	53	106	54	108	2
TOLUENE	<2	50	43	86	46	92	7
BENZENE	<1	50	44	88	44	88	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003944

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 008049

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00743702

DATE EXTRACTED : N/A
DATE ANALYZED : 08/10/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	40	28	70	31	78	11
TRICHLOROETHENE	<1	55	44	80	43	78	2
CHLOROBENZENE	<1	50	45	90	45	90	0
TOLUENE	<2	50	43	86	40	80	7
BENZENE	<1	50	35	70	35	70	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0003945

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00804901

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/07/90
CLIENT I.D.	: MK-SB-04-080390	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003946

(CONTINUED NEXT PAGE)

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804901

EST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	50
2-FLUOROBIPHENYL (%)	50
TERPHENYL (%)	21*
PHENOL-D6 (%)	42
2-FLUOROPHENOL (%)	29
2,4,6-TRIBROMOPHENOL (%)	29

* Result out of limits due to sample matrix interference

MCK0003947

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804901

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
741 TRIMETHYLCYCLOHEXENE METHANOL	40
867 TRIMETHYLCYCLOHEXENE METHANOL	10

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804902

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/07/90
CLIENT I.D.	: MK-SB-07-080390	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003949

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804902

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	52
2-FLUOROBIPHENYL (%)	46
TERPHENYL (%)	24*
PHENOL-D6 (%)	50
2-FLUOROPHENOL (%)	34
2,4,6-TRIBROMOPHENOL (%)	37

* Result out of limits due to sample matrix interference

AnalyticalTechnologies,Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804902

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
1154 CYCLOHYDROCARBON	30

MCK0003951

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804903

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/07/90
CLIENT I.D.	: MK-SB-23-080390	DATE ANALYZED	: 08/12/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	TR<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	70
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	14
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	TR<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003952

TR - Compound detected at an unquantifiable trace level

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804903

.EST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	47
2-FLUOROBIPHENYL (%)	46
TERPHENYL (%)	25*
PHENOL-D6 (%)	27
2-FLUOROPHENOL (%)	14*
2,4,6-TRIBROMOPHENOL (%)	9*

* Result out of limits due to sample matrix interference

MCK0003953

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804903

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
364 HYDROCARBON C7	1000
519 TRIMETHYLBENZENE	70
688 HYDROCARBON	200
749 BUTYL CARBITOL	100
784 PHENOXY ETHANOL	200

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00804904

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
CLIENT I.D. : MK-SB-23-080390D
SAMPLE MATRIX : WATER

DATE SAMPLED : 08/03/90
DATE RECEIVED : 08/03/90
DATE EXTRACTED : 08/07/90
DATE ANALYZED : 08/12/90
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
-NITROSO-DI-N-PROPYLAMINE	<10
EXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	62
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	14
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	TR<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
-NITROPHENOL	<50
IBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003955

TR - Compound detected at an unquantifiable trace level

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804904

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	48
2-FLUOROBIPHENYL (%)	46
TERPHENYL (%)	27*
PHENOL-D6 (%)	36
2-FLUOROPHENOL (%)	20*
2,4,6-TRIBROMOPHENOL (%)	14*

* Result out of limits due to sample matrix interference

MCK0003956

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804904

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
361 HYDROCARBON C7	800
518 TRIMETHYLBENZENE	60
687 HYDROCARBON	100
748 BUTYL CARBITOL	100
783 PHENOXY ETHANOL	200

MCK0003957

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804905

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/07/90
CLIENT I.D.	: MK-SB-25-080390	DATE ANALYZED	: 08/11/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003958

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804905

.ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
NZO(b)FLUORANTHENE	<10
ENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	45
2-FLUOROBIPHENYL (%)	46
TERPHENYL (%)	33*
PHENOL-D6 (%)	38
2-FLUOROPHENOL (%)	37
2,4,6-TRIBROMOPHENOL (%)	15*

* Result out of limits due to sample matrix interference

MCK0003959

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804905

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
479 TRIMETHYLBENZENE	30
708 HYDROCARBON C7	200
787 PHENOXY ETHANOL	10
875 BRANCHED ALCOHOL	40
970 BUTYL CELLOSOLVE	100

AnalyticalTechnologies, Inc.

GCMS - RESULTS

ATI I.D. : 00804906

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
CLIENT I.D. : MK-SB-32-080390
SAMPLE MATRIX : WATER

DATE SAMPLED : 08/03/90
DATE RECEIVED : 08/03/90
DATE EXTRACTED : 08/07/90
DATE ANALYZED : 08/12/90
UNITS : UG/L
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
-METHYLPHENOL	<10
-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
,4-DINITROPHENOL	<50
-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003961

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Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804906

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003962

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804906

:ST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
ENZO(b)FLUORANTHENE	<10
ENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	51
2-FLUOROBIPHENYL (%)	48
TERPHENYL (%)	44
PHENOL-D6 (%)	62
2-FLUOROPHENOL (%)	45
2,4,6-TRIBROMOPHENOL (%)	43

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804907

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/07/90
CLIENT I.D.	: MK-SB-32-080390E	DATE ANALYZED	: 08/12/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003964

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804907

TEST - EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	53
2-FLUOROBIPHENYL (%)	45
TERPHENYL (%)	44
PHENOL-D6 (%)	17
2-FLUOROPHENOL (%)	0*
2,4,6-TRIBROMOPHENOL (%)	7*

* Result out of limits due to sample matrix interference

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804907

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003966

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804908

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 08/03/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 08/03/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: 08/07/90
CLIENT I.D.	: MK-SB-04-080390B	DATE ANALYZED	: 08/12/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
-NITROSO-DI-N-PROPYLAMINE	<10
EXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
ANILINE	<10
BUTADIENE	<10
-METHYLPHENOL	<10
METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
-NITROPHENOL	<50
IBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10

MCK0003967

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 00804908

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
4-CHLOROPHENYL PHENYL ETHER	<10
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	<10
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

[illegible]ENZENE-D5 (%)	61
[illegible]PHENYL (%)	52
[illegible] (%)	49
[illegible]-D6 (%)	53
[illegible]FLUOROPHENOL (%)	38
[illegible],6-TRIBROMOPHENOL (%)	46

MCK0003968

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

ATI I.D. : 00804908

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003969

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

		ATI I.D.	: 008049
CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE EXTRACTED	: 08/07/90
PROJECT #	: 17333,157.11	DATE ANALYZED	: 08/11/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	UNITS	: UG/L
CLIENT I.D.	: REAGENT BLANK	DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
N-NITROSODIMETHYLAMINE	<10
PHENOL	<10
ANILINE	<10
BIS(2-CHLOROETHYL)ETHER	<10
2-CHLOROPHENOL	<10
1,3-DICHLOROBENZENE	<10
1,4-DICHLOROBENZENE	<10
BENZYL ALCOHOL	<10
1,2-DICHLOROBENZENE	<10
2-METHYLPHENOL	<10
BIS(2-CHLOROISOPROPYL)ETHER	<10
4-METHYLPHENOL	<10
N-NITROSO-DI-N-PROPYLAMINE	<10
HEXACHLOROETHANE	<10
NITROBENZENE	<10
ISOPHORONE	<10
2-NITROPHENOL	<10
2,4-DIMETHYLPHENOL	<10
BENZOIC ACID	<50
BIS(2-CHLOROETHOXY)METHANE	<10
2,4-DICHLOROPHENOL	<10
1,2,4-TRICHLOROBENZENE	<10
NAPHTHALENE	<10
4-CHLOROANILINE	<10
HEXACHLOROBUTADIENE	<10
4-CHLORO-3-METHYLPHENOL	<10
2-METHYLNAPHTHALENE	<10
HEXACHLOROCYCLOPENTADIENE	<10
2,4,6-TRICHLOROPHENOL	<10
2,4,5-TRICHLOROPHENOL	<50
2-CHLORONAPHTHALENE	<10
2-NITROANILINE	<50
DIMETHYL PHTHALATE	<10
ACENAPHTHYLENE	<10
3-NITROANILINE	<50
ACENAPHTHENE	<10
2,4-DINITROPHENOL	<50
4-NITROPHENOL	<50
DIBENZOFURAN	<10
2,4-DINITROTOLUENE	<10
2,6-DINITROTOLUENE	<10
DIETHYL PHTHALATE	<10
4-CHLOROPHENYL PHENYL ETHER	<10

MCK0003970

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AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

ATI I.D. : 008049

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

COMPOUNDS	RESULTS
FLUORENE	<10
4-NITROANILINE	<50
4,6-DINITRO-2-METHYLPHENOL	<50
N-NITROSODIPHENYLAMINE	<10
4-BROMOPHENYL PHENYL ETHER	<10
HEXACHLOROBENZENE	<10
PENTACHLOROPHENOL	<50
PHENANTHRENE	<10
ANTHRACENE	<10
DI-N-BUTYL PHTHALATE	<10
FLUORANTHENE	<10
BENZIDINE	<100
PYRENE	<10
BUTYLBENZYLPHTHALATE	<10
3,3-DICHLOROBENZIDINE	<20
BENZO(a)ANTHRACENE	<10
BIS(2-ETHYLHEXYL)PHTHALATE	13
CHRYSENE	<10
DI-N-OCTYL PHTHALATE	<10
BENZO(b)FLUORANTHENE	<10
BENZO(k)FLUORANTHENE	<10
BENZO(a)PYRENE	<10
INDENO(1,2,3-cd)PYRENE	<10
DIBENZO(a,h)ANTHRACENE	<10
BENZO(g,h,i)PERYLENE	<10

SURROGATE PERCENT RECOVERIES

NITROBENZENE-D5 (%)	85
2-FLUOROBIPHENYL (%)	68
TERPHENYL (%)	66
PHENOL-D6 (%)	88
2-FLUOROPHENOL (%)	71
2,4,6-TRIBROMOPHENOL (%)	55

MCK0003971

AnalyticalTechnologies, Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 008049

UNITS : UG/L

COMPOUNDS	RESULTS
1533 ALIPHATIC HYDROCARBON C20	40
1983 ALIPHATIC HYDROCARBON C24	20

MCK0003972

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 008049

TEST . EPA 8270 (GC/MS FOR SEMIVOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 00804905

DATE EXTRACTED : 08/07/90
DATE ANALYZED : 08/11/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,2,4-TRICHLOROBENZENE	<10	100	43	43*	47	47	9
ACENAPHTHENE	<10	100	51	51	50	50	2
2,4-DINITROTOLUENE	<10	100	57	57	60	60	5
PYRENE	<10	100	26	26*	42	42	47
N-NITROSO-DI-N-PROPYLAMINE	<10	100	42	42	49	49	15
1,4-DICHLOROBENZENE	<10	100	42	42	47	47	11
PENTACHLOROPHENOL	<50	400	74	18	116	29	47
PHENOL	<10	200	76	38	88	44	15
2-CHLOROPHENOL	<10	200	66	33	78	39	17
4-CHLORO-3-METHYLPHENOL	<10	200	71	36	70	35	3
4-NITROPHENOL	<50	400	180	45	225	56	22

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

* Result out of limits due to sample matrix interference

MCK0003973

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

008049

Lab: ATI

157 (Co)

Samplers: Don Johnson / Tom Hardie

Job Number: 17333, 158.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Carol Sachs / Burton Chadwick

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCl	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pollutant Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	LUFT (TPH)	Glycol/Ethylene	Methanol/Ethylene	Gen. minerals 300-6010	Carbon dioxide, methane, pH, NO_3
23	X				X	X	X	X				90	08	03	0830	MK-SB-04-080390		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	0945	MK-SB-07-080390		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	1130	MK-SB-23-080390		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	1135	MK-SB-23-080390 D		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	1315	MK-SB-25-080390		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	1430	MK-SB-32-080390		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	1445	MK-SB-32-080390 E		X	X	X				X		X	X	
23	X				X	X	X	X				90	08	03	0715	MK-SB-04-080390 B		X	X	X				X		X	X	

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Call Burton Chadwick at HLA-Tustin if there is any questions!

MCK0003974

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
8/3/90	Bob De Bey	8/3/90
Bob De Bey	M. Van Den Berg	8/3/90 1105
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or O Pin Copy

6533

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

3.4.2

C0340.1

ATI I.D. 010334

November 5, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

Project Name: McKesson-Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick/Ted Koelsch

On October 25, 1990, Analytical Technologies, Inc. received ten water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

for: Timothy J. Fitzpatrick
Senior Project Manager

for: Richard M. Amano
Laboratory Manager

TJF:nm

MCK0003975

AnalyticalTechnologies,Inc.

ATI I.D. 010334

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: McKESSON-SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
ALKALINITY	TITRIMETRIC	EPA 310.1
CHLORIDE	TITRIMETRIC	EPA 325.3
CONDUCTIVITY	ELECTRODE	EPA 9050
FLUORIDE	ELECTRODE	EPA 340.2
HARDNESS	CALCULATION	EPA 6010
SURFACTANTS	COLORIMETRIC	EPA 425.1
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
pH	ELECTRODE	EPA 150.1
SULFATE	TURBIDIMETRIC	EPA 9038
TOTAL DISSOLVED SOLIDS	GRAVIMETRIC	EPA 160.1
CALCIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
IRON	ICAP	EPA 6010
MAGNESIUM	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
VOLATILE ORGANICS	GC/MS	EPA 8240

Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
ATI I.D. : 010334

DATE RECEIVED : 10/25/90
REPORT DATE : 11/05/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-MW-02-102490B	WATER	10/24/90
02	MK-SB-13-102490	WATER	10/24/90
03	MK-MW-03-102490	WATER	10/24/90
04	MK-SB-4-102490	WATER	10/24/90
05	MK-SB-7-102490	WATER	10/24/90
06	MK-SB-7-102490E	WATER	10/24/90
07	MK-MW-02-102490	WATER	10/24/90
08	MK-MW-01-102490	WATER	10/24/90
09	MK-MW-01-102490D	WATER	10/24/90
10	MK-SB-10-102490	WATER	10/24/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	10

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 010334

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 10/25/90
REPORT DATE : 11/05/90

PARAMETER	UNITS	01	02	03	04	05
PH	UNITS	5.78	7.05	6.93	7.00	7.14

MCK0003978

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 010334

LIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 10/25/90
REPORT DATE : 11/05/90

PARAMETER	UNITS	06	07	08	09	10
CARBONATE AS CACO3	MG/L	-	<5	<5	<5	<5
BICARBONATE AS CACO3	MG/L	-	412	499	493	368
HYDROXIDE AS CACO3	MG/L	-	<5	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	-	412	499	493	368
CATION/ANION BALANCE	RATIO	-	0.97	0.94	1.00	0.90
CHLORIDE	MG/L	-	100	115	110	110
CONDUCTIVITY, UMHOS/CM	-	-	1520	1630	1600	1490
FLUORIDE	MG/L	-	<0.5	<0.5	<0.5	<0.5
SURFACTANTS	MG/L	-	0.2	0.2	0.2	<0.1
NITRATE AS NITROGEN	MG/L	-	14.5	9.1	8.8	9.2
PH	UNITS	6.23	7.13	6.93	6.90	7.15
SULFATE	MG/L	-	264	249	225	354
TOTAL DISSOLVED SOLIDS	MG/L	-	1010	1060	1050	1030

AnalyticalTechnologies, Inc. GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 010334

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE AS CACO3	MG/L	01033602	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		437	428	2	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		437	428	2	N/A	N/A	N/A
CHLORIDE	MG/L	01034101	275	275	0	315	40	100
CONDUCTIVITY, UMHOS/CM	-	01033901	919	942	2	N/A	N/A	N/A
FLUORIDE	MG/L	01034101	0.7	0.7	0	5.02	5.00	100
SURFACTANTS	MG/L	01033410	<0.1	<0.1	0	0.91	1.00	91
NITRATE AS NITROGEN	MG/L	01030101	14.1	15.8	11	35.2	20.0	101
PH	UNITS	01027022	6.23	6.29	1	N/A	N/A	N/A
PH	UNITS	01033404	7.00	7.01	0	N/A	N/A	N/A
SULFATE	MG/L	01033602	230	225	2	679	400	113
TOTAL DISSOLVED SOLIDS	MG/L	01033901	562	576	2	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc.

METALS RESULTS

ATI I.D. : 010334

LIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 10/25/90
REPORT DATE : 11/05/90

PARAMETER	UNITS	07	08	09	10
CALCIUM	MG/L	173	180	184	171
COPPER	MG/L	<0.02	<0.02	<0.02	<0.02
IRON	MG/L	<0.01	<0.01	<0.01	<0.01
HARDNESS	MG/L	614	634	646	600
POTASSIUM	MG/L	6.8	6.3	5.1	6.7
MAGNESIUM	MG/L	44.1	44.8	45.3	42.1
MANGANESE	MG/L	0.04	0.03	0.03	0.05
SODIUM	MG/L	106	117	119	102
ZINC	MG/L	0.07	0.04	0.04	<0.01

JBL
1

-2-
B

MCK0003981

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033402

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
263 FREON 113	30@
222 TRICHLOROFLUOROMETHANE	6@

MCK0003982

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033403

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-03-102490	DATE ANALYZED	: 10/29/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 20

COMPOUNDS	RESULTS
CHLOROMETHANE	<200
BROMOMETHANE	<200
VINYL CHLORIDE	<20
CHLOROETHANE	<20
METHYLENE CHLORIDE	<100
ACETONE	<400
CARBON DISULFIDE	<20
1,1-DICHLOROETHENE	1700
1,1-DICHLOROETHANE	480
1,2-DICHLOROETHENE (TOTAL)	630
CHLOROFORM	<20
1,2-DICHLOROETHANE	<20
BUTANONE (MEK)	<400
1,1,1-TRICHLOROETHANE	2200
CARBON TETRACHLORIDE	<20
VINYL ACETATE	<200
BROMODICHLOROMETHANE	<20
1,1,2,2-TETRACHLOROETHANE	<20
1,2-DICHLOROPROPANE	<20
CIS-1,3-DICHLOROPROPENE	<20
TRICHLOROETHENE	400
DIBROMOCHLOROMETHANE	<20
1,1,2 TRICHLOROETHANE	<20
BENZENE	29
TRANS-1,3-DICHLOROPROPENE	<20
BROMOFORM	<100
2-HEXANONE (MBK)	<200
4-METHYL-2-PENTANONE (MIBK)	<200
TETRACHLOROETHENE	1200
TOLUENE	<40
CHLOROBENZENE	<20
ETHYL BENZENE	<20
STYRENE	<20
TOTAL XYLENES	120

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	100
B (%)	102
TOLUENE-D8 (%)	100

MCK0003983

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033403

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
266 FREON 113	200@
226 TRICHLOROFLUOROMETHANE	80@

MCK0003984

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033404

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-4-102490	DATE ANALYZED	: 10/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 50

COMPOUNDS	RESULTS
CHLOROMETHANE	<500
BROMOMETHANE	<500
VINYL CHLORIDE	<50
CHLOROETHANE	<50
METHYLENE CHLORIDE	640
ACETONE	<1000
CARBON DISULFIDE	<50
1,1-DICHLOROETHENE	5700
1,1-DICHLOROETHANE	400
1,2-DICHLOROETHENE (TOTAL)	1300
CHLOROFORM	<50
1,2-DICHLOROETHANE	<50
·BUTANONE (MEK)	<1000
_,1,1-TRICHLOROETHANE	2000
CARBON TETRACHLORIDE	<50
VINYL ACETATE	<500
BROMODICHLOROMETHANE	<50
1,1,2,2-TETRACHLOROETHANE	<50
1,2-DICHLOROPROPANE	<50
CIS-1,3-DICHLOROPROPENE	<50
TRICHLOROETHENE	4200
DIBROMOCHLOROMETHANE	<50
1,1,2 TRICHLOROETHANE	<50
BENZENE	120
TRANS-1,3-DICHLOROPROPENE	<50
BROMOFORM	<250
2-HEXANONE (MBK)	<500
4-METHYL-2-PENTANONE (MIBK)	<500
TETRACHLOROETHENE	4300
TOLUENE	<100
CHLOROBENZENE	<50
ETHYL BENZENE	<50
STYRENE	<50
TOTAL XYLENES	52

SURROGATE PERCENT RECOVERIES

.2-DICHLOROETHANE-D4 (%)	80
FB (%)	103
TOLUENE-D8 (%)	103

MCK0003985

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033404

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
263 FREON 113	600@
223 TRICHLOROFLUOROMETHANE	80@

MCK0003986

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033405

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-7-102490	DATE ANALYZED	: 10/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 40

COMPOUNDS	RESULTS
CHLOROMETHANE	<400
BROMOMETHANE	<400
VINYL CHLORIDE	<40
CHLOROETHANE	<40
METHYLENE CHLORIDE	<200
ACETONE	<800
CARBON DISULFIDE	<40
1,1-DICHLOROETHENE	3300
1,1-DICHLOROETHANE	45
1,2-DICHLOROETHENE (TOTAL)	<40
CHLOROFORM	<40
1,2-DICHLOROETHANE	<40
BUTANONE (MEK)	<800
1,1-TRICHLOROETHANE	3600
CARBON TETRACHLORIDE	<40
VINYL ACETATE	<400
BROMODICHLOROMETHANE	<40
1,1,2,2-TETRACHLOROETHANE	<40
1,2-DICHLOROPROPANE	<40
CIS-1,3-DICHLOROPROPENE	<40
TRICHLOROETHENE	760
DIBROMOCHLOROMETHANE	<40
1,1,2 TRICHLOROETHANE	<40
BENZENE	<40
TRANS-1,3-DICHLOROPROPENE	<40
BROMOFORM	<200
2-HEXANONE (MBK)	<400
4-METHYL-2-PENTANONE (MIBK)	<400
TETRACHLOROETHENE	3600
TOLUENE	<80
CHLOROBENZENE	<40
ETHYL BENZENE	<40
STYRENE	<40
TOTAL XYLENES	<40

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	98
B (%)	103
TOLUENE-D8 (%)	102

MCK0003987

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033405

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
264 FREON 113	200@
225 TRICHLOROFLUOROMETHANE	40@

MCK0003988

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033406

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-7-102490E	DATE ANALYZED	: 10/29/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	98
B (%)	106
TOLUENE-D8 (%)	106

MCK0003989

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033406

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003990

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033407

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-02-102490	DATE ANALYZED	: 10/29/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
CHLOROMETHANE	<50
BROMOMETHANE	<50
VINYL CHLORIDE	<5
CHLOROETHANE	<5
METHYLENE CHLORIDE	<25
ACETONE	<100
CARBON DISULFIDE	<5
1,1-DICHLOROETHENE	67
1,1-DICHLOROETHANE	<5
1,2-DICHLOROETHENE (TOTAL)	47
CHLOROFORM	<5
1,2-DICHLOROETHANE	<5
BUTANONE (MEK)	<100
1,1-TRICHLOROETHANE	27
CARBON TETRACHLORIDE	<5
VINYL ACETATE	<50
BROMODICHLOROMETHANE	<5
1,1,2,2-TETRACHLOROETHANE	<5
1,2-DICHLOROPROPANE	<5
CIS-1,3-DICHLOROPROPENE	<5
TRICHLOROETHENE	680
DIBROMOCHLOROMETHANE	<5
1,1,2 TRICHLOROETHANE	<5
BENZENE	<5
TRANS-1,3-DICHLOROPROPENE	<5
BROMOFORM	<25
2-HEXANONE (MBK)	<50
4-METHYL-2-PENTANONE (MIBK)	<50
TETRACHLOROETHENE	<5
TOLUENE	<10
CHLOROBENZENE	<5
ETHYL BENZENE	<5
STYRENE	<5
TOTAL XYLENES	<5

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	101
B (%)	104
TOLUENE-D8 (%)	103

MCK0003991

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033407

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
260 FREON 113	30@
221 TRICHLOROFLUOROMETHANE	10@

MCK0003992

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033408

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-01-102490	DATE ANALYZED	: 10/29/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<100
BROMOMETHANE	<100
VINYL CHLORIDE	<10
CHLOROETHANE	<10
METHYLENE CHLORIDE	<50
ACETONE	<200
CARBON DISULFIDE	<10
1,1-DICHLOROETHENE	790
1,1-DICHLOROETHANE	180
1,2-DICHLOROETHENE (TOTAL)	440
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
BUTANONE (MEK)	<200
1,1,1-TRICHLOROETHANE	260
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<100
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
CIS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	520
DIBROMOCHLOROMETHANE	<10
1,1,2 TRICHLOROETHANE	<10
BENZENE	<10
TRANS-1,3-DICHLOROPROPENE	<10
BROMOFORM	<50
2-HEXANONE (MBK)	<100
4-METHYL-2-PENTANONE (MIBK)	<100
TETRACHLOROETHENE	530
TOLUENE	<20
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	118
FB (%)	103
TOLUENE-D8 (%)	103

MCK0003993

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033408

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
266 FREON 113	40@
223 TRICHLOROFLUOROMETHANE	30@

MCK0003994

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033409

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-MW-01-102490D	DATE ANALYZED	: 10/30/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
CHLOROMETHANE	<100
BROMOMETHANE	<100
VINYL CHLORIDE	<10
CHLOROETHANE	<10
METHYLENE CHLORIDE	<50
ACETONE	<200
CARBON DISULFIDE	<10
1,1-DICHLOROETHENE	1100
1,1-DICHLOROETHANE	240
1,2-DICHLOROETHENE (TOTAL)	600
CHLOROFORM	<10
1,2-DICHLOROETHANE	<10
2-BUTANONE (MEK)	<200
1,1-TRICHLOROETHANE	340
CARBON TETRACHLORIDE	<10
VINYL ACETATE	<100
BROMODICHLOROMETHANE	<10
1,1,2,2-TETRACHLOROETHANE	<10
1,2-DICHLOROPROPANE	<10
CIS-1,3-DICHLOROPROPENE	<10
TRICHLOROETHENE	680
DIBROMOCHLOROMETHANE	<10
1,1,2 TRICHLOROETHANE	<10
BENZENE	<10
TRANS-1,3-DICHLOROPROPENE	<10
BROMOFORM	<50
2-HEXANONE (MBK)	<100
4-METHYL-2-PENTANONE (MIBK)	<100
TETRACHLOROETHENE	710
TOLUENE	<20
CHLOROBENZENE	<10
ETHYL BENZENE	<10
STYRENE	<10
TOTAL XYLENES	<10

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	93
TB (%)	103
LUENE-D8 (%)	103

MCK0003995

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033409

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
264 FREON 113	40@
225 TRICHLOROFLUOROMETHANE	50@

MCK0003996

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033410

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/24/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-10-102490	DATE ANALYZED	: 10/10/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 25

COMPOUNDS	RESULTS
CHLOROMETHANE	<250
BROMOMETHANE	<250
VINYL CHLORIDE	<25
CHLOROETHANE	<25
METHYLENE CHLORIDE	<125
ACETONE	<500
CARBON DISULFIDE	<25
1,1-DICHLOROETHENE	1800
1,1-DICHLOROETHANE	<25
1,2-DICHLOROETHENE (TOTAL)	<25
CHLOROFORM	<25
1,2-DICHLOROETHANE	<25
BUTANONE (MEK)	<500
1,1,1-TRICHLOROETHANE	2400
CARBON TETRACHLORIDE	<25
VINYL ACETATE	<250
BROMODICHLOROMETHANE	<25
1,1,2,2-TETRACHLOROETHANE	<25
1,2-DICHLOROPROPANE	<25
CIS-1,3-DICHLOROPROPENE	<25
TRICHLOROETHENE	<25
DIBROMOCHLOROMETHANE	<25
1,1,2 TRICHLOROETHANE	<25
BENZENE	<25
TRANS-1,3-DICHLOROPROPENE	<25
BROMOFORM	<125
2-HEXANONE (MBK)	<250
4-METHYL-2-PENTANONE (MIBK)	<250
TETRACHLOROETHENE	1600
TOLUENE	<50
CHLOROBENZENE	<25
ETHYL BENZENE	<25
STYRENE	<25
TOTAL XYLENES	<25

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	78
BFB (%)	104
TOLUENE-D8 (%)	108

MCK0003997

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033410

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0003998

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010334
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 10/26/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
NYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	100
BFB (%)	103
TOLUENE-D8 (%)	101

MCK0003999

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010334

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004000

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010334
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 10/29/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
NYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	80
BFB (%)	103
TOLUENE-D8 (%)	100

AnalyticalTechnologies, Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010334

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004002

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010334
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 10/30/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	10
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
NYL ACETATE	<10
OMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	104
TOLUENE-D8 (%)	103

MCK0004003

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010334

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004004

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010334
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 10/29/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	98
BFB (%)	104
TOLUENE-D8 (%)	101

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010334

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004006

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 010334

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 01033401

DATE EXTRACTED : N/A
DATE ANALYZED : 10/30/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	40	34	85	31	78	9
TRICHLOROETHENE	<1	55	51	93	52	95	2
CHLOROBENZENE	<1	55	52	95	54	98	3
TOLUENE	<2	55	54	98	57	104	6
BENZENE	<1	55	53	96	54	98	2

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0004007

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

CHAIN OF CUSTODY FORM

Lab: ATI 010330

Samplers: Dan Johnson, Tom Harder

Job Number: 17333,15 Phase 7 BK 11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Todd Koelsch/Burton Chadwick

Recorder: (Signature Required)

	SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pllnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	General Minerals (Interested metals) 3 containers		pH
07	SO	X				X	X	X	X				901024			0740	MK-MW-02-102490			X					X		X
01	SO	X				X			X				901024			0715	MK-MW-02-102490B			X							X
08	SO	X				X	X	X	X				901024			0945	MK-MW-01-102490			X					X		X
09	SO	X				X	X	X	X				901024			1000	MK-MW-01-102490 D			X					X		X
02	SO	X				X			X				901024			0840	MK-SB-13-102490			X							X
10	SO	X				X	X	X	X				901024			1150	MK-SB-10-102490			X					X		X
03	SO	X				X			X				901024			1100	MK-MW-03-102490			X							X
04	SO	X				X			X				901024			1405	MK-SB-4-102490			X							X
05	SO	X				X			X				901024			1500	MK-SB-7-102490			X							X
06	SO	X				X			X				901024			1510	MK-SB-7-102490 E			X							X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
		MCK0004008				

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Burton Chadwick	B.G. DeBey	10/25/90 12:00
B.G. DeBey	Graham	10/25/90 2:00

DISPATCHED BY: (Signature) DATE/TIME

RECEIVED FOR LAB BY: (Signature) DATE/TIME

METHOD OF SHIPMENT: Courier custody seal on container

Laboratory Copy White — Project Office Copy Yellow — Field or F Copy

6533

3.4.2

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 010336

November 8, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

Project Name: McKesson-Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick/Ted Koelsch

On October 25, 1990, Analytical Technologies, Inc. received eight water samples for analyses. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference.

The results of these analyses and the quality control data are enclosed.

for Timothy J. Fitzpatrick
Senior Project Manager

Richard M. Amano
Laboratory Manager

TJF:nm

MCK0004009

AnalyticalTechnologies,Inc.

ATI I.D. 010336

ANALYTICAL SCHEDULE

CLIENT: HARDING LAWSON ASSOCIATES
PROJECT NAME: McKESSON-SANTA FE SPRINGS

PROJECT NO.: 17333,157.11

ANALYSIS	TECHNIQUE	REFERENCE/METHOD
ALKALINITY	TITRIMETRIC	EPA 310.1
CHLORIDE	TITRIMETRIC	EPA 325.3
CONDUCTIVITY	ELECTRODE	EPA 9050
FLUORIDE	ELECTRODE	EPA 340.2
HARDNESS	CALCULATION	EPA 6010
SURFACTANTS	COLORIMETRIC	EPA 425.1
NITRATE AS NITROGEN	COLORIMETRIC	EPA 353.1
pH	ELECTRODE	EPA 150.1
SULFATE	TURBIDIMETRIC	EPA 9038
TOTAL DISSOLVED SOLIDS	GRAVIMETRIC	EPA 160.1
CALCIUM	ICAP	EPA 6010
COPPER	ICAP	EPA 6010
IRON	ICAP	EPA 6010
MAGNESIUM	ICAP	EPA 6010
MANGANESE	ICAP	EPA 6010
POTASSIUM	ICAP	EPA 6010
SODIUM	ICAP	EPA 6010
ZINC	ICAP	EPA 6010
VOLATILE ORGANICS	GC/MS	EPA 8240

Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
ATI I.D. : 010336

DATE RECEIVED : 10/25/90
REPORT DATE : 11/07/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-32-102590	WATER	10/25/90
02	MK-SB-17-102590	WATER	10/25/90
03	MK-SB-20-102590	WATER	10/25/90
04	MK-SB-23-102590	WATER	10/25/90
05	MK-SB-25-102590	WATER	10/25/90
06	MK-SB-23-102590D	WATER	10/25/90
07	MK-SB-20-102590B	WATER	10/25/90
08	MK-SB-23-102590E	WATER	10/25/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 010336

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 10/25/90
REPORT DATE : 11/07/90

PARAMETER	UNITS	01	02	03	04	05
CARBONATE AS CACO3	MG/L	<5	<5	-	-	-
BICARBONATE AS CACO3	MG/L	521	437	-	-	-
HYDROXIDE AS CACO3	MG/L	<5	<5	-	-	-
TOTAL ALKALINITY AS CACO3	MG/L	521	437	-	-	-
CATION/ANION BALANCE	RATIO	0.98	0.97	-	-	-
CHLORIDE	MG/L	70	205	-	-	-
CONDUCTIVITY, UMHOS/CM	-	1430	1760	-	-	-
FLUORIDE	MG/L	<0.5	<0.5	-	-	-
SURFACTANTS	MG/L	0.1	<0.1	-	-	-
NITRATE AS NITROGEN	MG/L	<0.05	2.4	-	-	-
PH	UNITS	6.84	6.92	7.04	6.70	6.73
SULFATE	MG/L	186	230	-	-	-
TOTAL DISSOLVED SOLIDS	MG/L	912	1140	-	-	-

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 010336

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 10/25/90
REPORT DATE : 11/07/90

PARAMETER	UNITS	06	07	08
PH	UNITS	6.68	6.03	6.05

MCK0004013

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 010336

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE AS CACO3	MG/L	01033602	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		437	428	2	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		437	428	2	N/A	N/A	N/A
CHLORIDE	MG/L	01034101	275	275	0	315	40	100
CONDUCTIVITY, UMHOS/CM	-	01033901	919	942	2	N/A	N/A	N/A
FLUORIDE	MG/L	01034101	0.7	0.7	0	5.02	5.00	100
SURFACTANTS	MG/L	01033410	<0.1	<0.1	0	0.91	1.00	91
NITRATE AS NITROGEN	MG/L	01030101	14.1	15.8	11	35.2	20.0	101
PH	UNITS	01033404	7.00	7.01	0	N/A	N/A	N/A
PH	UNITS	01033608	6.05	6.03	0	N/A	N/A	N/A
SULFATE	MG/L	01033602	230	225	2	679	400	113
TOTAL DISSOLVED SOLIDS	MG/L	01033901	562	576	2	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc.

METALS RESULTS

ATI I.D. : 010336

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS

DATE RECEIVED : 10/25/90
REPORT DATE : 11/07/90

PARAMETER	UNITS	01	02
CALCIUM	MG/L	116	179
COPPER	MG/L	<0.02	<0.02
IRON	MG/L	<0.01	<0.01
HARDNESS	MG/L	444	666
POTASSIUM	MG/L	5.9	5.5
MAGNESIUM	MG/L	37.6	53.2
MANGANESE	MG/L	0.21	12.8
SODIUM	MG/L	158	112
ZINC	MG/L	0.02	0.02

AnalyticalTechnologies, Inc. METALS - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 010336

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CALCIUM	MG/L	01033602	179	178	1	278	100	99
COPPER	MG/L	01033602	<0.02	<0.02	0	1.0	1.0	100
IRON	MG/L	01033602	<0.01	<0.01	0	1.0	1.0	100
HARDNESS	MG/L	01033602	666	663	0	1330	662	100
POTASSIUM	MG/L	01033602	5.5	5.4	2	107	100	102
MAGNESIUM	MG/L	01033602	53.2	53.0	0	155	100	102
MANGANESE	MG/L	01033602	12.8	12.7	1	14.0	1.0	120
SODIUM	MG/L	01033602	112	111	1	205	100	93
ZINC	MG/L	01033602	0.02	0.02	0	1.1	1.0	108

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033601

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-32-102590	DATE ANALYZED	: 10/31/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 25

COMPOUNDS	RESULTS
CHLOROMETHANE	<250
BROMOMETHANE	<250
VINYL CHLORIDE	<25
CHLOROETHANE	<25
METHYLENE CHLORIDE	<125
ACETONE	<500
CARBON DISULFIDE	<25
1,1-DICHLOROETHENE	4200
1,1-DICHLOROETHANE	450
1,2-DICHLOROETHENE (TOTAL)	660
CHLOROFORM	<25
1,2-DICHLOROETHANE	<25
·BUTANONE (MEK)	<500
,1,1-TRICHLOROETHANE	4600
CARBON TETRACHLORIDE	<25
VINYL ACETATE	<250
BROMODICHLOROMETHANE	<25
1,1,2,2-TETRACHLOROETHANE	<25
1,2-DICHLOROPROPANE	<25
CIS-1,3-DICHLOROPROPENE	<25
TRICHLOROETHENE	4100
DIBROMOCHLOROMETHANE	<25
1,1,2 TRICHLOROETHANE	<25
BENZENE	56
TRANS-1,3-DICHLOROPROPENE	<25
BROMOFORM	<125
2-HEXANONE (MBK)	<250
4-METHYL-2-PENTANONE (MIBK)	<250
TETRACHLOROETHENE	2600
TOLUENE	<50
CHLOROBENZENE	<25
ETHYL BENZENE	<25
STYRENE	<25
TOTAL XYLENES	<25

SURROGATE PERCENT RECOVERIES

·2-DICHLOROETHANE-D4 (%)	97
·B (%)	105
TOLUENE-D8 (%)	103

MCK0004017

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033601

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
259 FREON 113	700@
221 TRICHLOROFLUOROMETHANE	80@

MCK0004018

@ - A standard was used to quantitate this value.

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033602

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-17-102590	DATE ANALYZED	: 11/01/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 250

COMPOUNDS	RESULTS
CHLOROMETHANE	<2500
BROMOMETHANE	<2500
VINYL CHLORIDE	<250
CHLOROETHANE	<250
METHYLENE CHLORIDE	45000
ACETONE	<5000
CARBON DISULFIDE	<250
1,1-DICHLOROETHENE	6300
1,1-DICHLOROETHANE	<250
1,2-DICHLOROETHENE (TOTAL)	1000
CHLOROFORM	<250
1,2-DICHLOROETHANE	600
2-BUTANONE (MEK)	<5000
1,1,1-TRICHLOROETHANE	25000
CARBON TETRACHLORIDE	<250
VINYL ACETATE	<2500
BROMODICHLOROMETHANE	<250
1,1,2,2-TETRACHLOROETHANE	<250
1,2-DICHLOROPROPANE	<250
CIS-1,3-DICHLOROPROPENE	<250
TRICHLOROETHENE	5300
DIBROMOCHLOROMETHANE	<250
1,1,2 TRICHLOROETHANE	<250
BENZENE	<250
TRANS-1,3-DICHLOROPROPENE	<250
BROMOFORM	<1250
2-HEXANONE (MBK)	<2500
4-METHYL-2-PENTANONE (MIBK)	<2500
TETRACHLOROETHENE	19000
TOLUENE	2000
CHLOROBENZENE	<250
ETHYL BENZENE	<250
STYRENE	<250
TOTAL XYLENES	500

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	88
BB (%)	104
TOLUENE-D8 (%)	100

MCK0004019

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033602

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004020

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033603

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-20-102590	DATE ANALYZED	: 11/02/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 100

COMPOUNDS	RESULTS
CHLOROMETHANE	<1000
BROMOMETHANE	<1000
VINYL CHLORIDE	<100
CHLOROETHANE	<100
METHYLENE CHLORIDE	6700
ACETONE	<2000
CARBON DISULFIDE	<100
1,1-DICHLOROETHENE	4000
1,1-DICHLOROETHANE	120
1,2-DICHLOROETHENE (TOTAL)	<100
CHLOROFORM	<100
1,2-DICHLOROETHANE	150
2-BUTANONE (MEK)	<2000
1,1,1-TRICHLOROETHANE	12000
CARBON TETRACHLORIDE	<100
VINYL ACETATE	<1000
BROMODICHLOROMETHANE	<100
1,1,2,2-TETRACHLOROETHANE	<100
1,2-DICHLOROPROPANE	<100
CIS-1,3-DICHLOROPROPENE	<100
TRICHLOROETHENE	1400
DIBROMOCHLOROMETHANE	<100
1,1,2 TRICHLOROETHANE	<100
BENZENE	<100
TRANS-1,3-DICHLOROPROPENE	<100
BROMOFORM	<500
2-HEXANONE (MBK)	<1000
4-METHYL-2-PENTANONE (MIBK)	<1000
TETRACHLOROETHENE	8600
TOLUENE	310
CHLOROBENZENE	<100
ETHYL BENZENE	<100
STYRENE	<100
TOTAL XYLENES	<100

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	95
BFB (%)	105
TOLUENE-D8 (%)	102

MCK0004021

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033603

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004022

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033604

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-102590	DATE ANALYZED	: 11/01/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1000

COMPOUNDS	RESULTS
CHLOROMETHANE	<10000
BROMOMETHANE	<10000
VINYL CHLORIDE	<1000
CHLOROETHANE	<1000
METHYLENE CHLORIDE	54000
ACETONE	<20000
CARBON DISULFIDE	<1000
1,1-DICHLOROETHENE	8200
1,1-DICHLOROETHANE	<1000
1,2-DICHLOROETHENE (TOTAL)	2500
CHLOROFORM	<1000
1,2-DICHLOROETHANE	<1000
2-BUTANONE (MEK)	<20000
1,1,1-TRICHLOROETHANE	87000
CARBON TETRACHLORIDE	<1000
VINYL ACETATE	<10000
BROMODICHLOROMETHANE	<1000
1,1,2,2-TETRACHLOROETHANE	<1000
1,2-DICHLOROPROPANE	<1000
CIS-1,3-DICHLOROPROPENE	<1000
TRICHLOROETHENE	7100
DIBROMOCHLOROMETHANE	<1000
1,1,2 TRICHLOROETHANE	<1000
BENZENE	<1000
TRANS-1,3-DICHLOROPROPENE	<1000
BROMOFORM	<5000
2-HEXANONE (MBK)	<10000
4-METHYL-2-PENTANONE (MIBK)	<10000
TETRACHLOROETHENE	27000
TOLUENE	2600
CHLOROBENZENE	<1000
ETHYL BENZENE	<1000
STYRENE	<1000
TOTAL XYLENES	<1000

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	103
FB (%)	104
TOLUENE-D8 (%)	102

MCK0004023

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033604

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004024

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033605

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-25-102590	DATE ANALYZED	: 11/01/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 125

COMPOUNDS	RESULTS
CHLOROMETHANE	<1200
BROMOMETHANE	<1200
VINYL CHLORIDE	<120
CHLOROETHANE	<120
METHYLENE CHLORIDE	25000
ACETONE	4900
CARBON DISULFIDE	<120
1,1-DICHLOROETHENE	7600
1,1-DICHLOROETHANE	<120
1,2-DICHLOROETHENE (TOTAL)	1500
CHLOROFORM	<120
1,2-DICHLOROETHANE	160
BUTANONE (MEK)	<2500
,1,1-TRICHLOROETHANE	1800
CARBON TETRACHLORIDE	<120
VINYL ACETATE	<1200
BROMODICHLOROMETHANE	<120
1,1,2,2-TETRACHLOROETHANE	<120
1,2-DICHLOROPROPANE	<120
CIS-1,3-DICHLOROPROPENE	<120
TRICHLOROETHENE	4200
DIBROMOCHLOROMETHANE	<120
1,1,2 TRICHLOROETHANE	<120
BENZENE	<120
TRANS-1,3-DICHLOROPROPENE	<120
BROMOFORM	<620
2-HEXANONE (MBK)	<1200
4-METHYL-2-PENTANONE (MIBK)	<1200
TETRACHLOROETHENE	5100
TOLUENE	1600
CHLOROBENZENE	<120
ETHYL BENZENE	<120
STYRENE	<120
TOTAL XYLENES	400

SURROGATE PERCENT RECOVERIES

2-DICHLOROETHANE-D4 (%)	101
B (%)	105
TOLUENE-D8 (%)	102

MCK0004025

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033605

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004026

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033606

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-102590D	DATE ANALYZED	: 11/01/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 500

COMPOUNDS	RESULTS
CHLOROMETHANE	<5000
BROMOMETHANE	<5000
VINYL CHLORIDE	<500
CHLOROETHANE	<500
METHYLENE CHLORIDE	43000
ACETONE	<10000
CARBON DISULFIDE	<500
1,1-DICHLOROETHENE	14000
1,1-DICHLOROETHANE	<500
1,2-DICHLOROETHENE (TOTAL)	2600
CHLOROFORM	<500
1,2-DICHLOROETHANE	<500
2-BUTANONE (MEK)	<10000
1,1-TRICHLOROETHANE	78000
CARBON TETRACHLORIDE	<500
VINYL ACETATE	<5000
BROMODICHLOROMETHANE	<500
1,1,2,2-TETRACHLOROETHANE	<500
1,2-DICHLOROPROPANE	<500
CIS-1,3-DICHLOROPROPENE	<500
TRICHLOROETHENE	6600
DIBROMOCHLOROMETHANE	<500
1,1,2 TRICHLOROETHANE	<500
BENZENE	<500
TRANS-1,3-DICHLOROPROPENE	<500
BROMOFORM	<2500
2-HEXANONE (MBK)	<5000
4-METHYL-2-PENTANONE (MIBK)	<5000
TETRACHLOROETHENE	27000
TOLUENE	2000
CHLOROBENZENE	<500
ETHYL BENZENE	<500
STYRENE	<500
TOTAL XYLENES	<500

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	87
B (%)	103
TOLUENE-D8 (%)	104

MCK0004027

Analytical Technologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033606

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004028

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033607

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-20-102590B	DATE ANALYZED	: 11/01/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	102
TB (%)	103
OLUENE-D8 (%)	102

MCK0004029

AnalyticalTechnologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033607

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004030

AnalyticalTechnologies,Inc.

GCMS - RESULTS

ATI I.D. : 01033608

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	DATE SAMPLED	: 10/25/90
PROJECT #	: 17333,157.11	DATE RECEIVED	: 10/25/90
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE EXTRACTED	: N/A
CLIENT I.D.	: MK-SB-23-102590E	DATE ANALYZED	: 11/01/90
SAMPLE MATRIX	: WATER	UNITS	: UG/L
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	82
FB (%)	104
TOLUENE-D8 (%)	102

MCK0004031

Analytical Technologies, Inc. ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

ATI I.D. : 01033608

MATRIX : WATER

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010336
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 10/30/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK) 2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	84
BFB (%)	103
TOLUENE-D8 (%)	98

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010336

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004034

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010336
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 11/01/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	80
BFB (%)	103
TOLUENE-D8 (%)	100

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010336

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004036

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010336
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 11/01/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	85
BFB (%)	101
TOLUENE-D8 (%)	100

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010336

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004038

AnalyticalTechnologies,Inc.

GCMS - RESULTS

REAGENT BLANK

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT	: HARDING LAWSON ASSOC.-TUSTIN	ATI I.D.	: 010336
PROJECT #	: 17333,157.11	DATE EXTRACTED	: N/A
PROJECT NAME	: McKESSON-SANTA FE SPRINGS	DATE ANALYZED	: 10/31/90
CLIENT I.D.	: REAGENT BLANK	UNITS	: UG/L
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
CHLOROMETHANE	<10
BROMOMETHANE	<10
VINYL CHLORIDE	<1
CHLOROETHANE	<1
METHYLENE CHLORIDE	<5
ACETONE	<20
CARBON DISULFIDE	<1
1,1-DICHLOROETHENE	<1
1,1-DICHLOROETHANE	<1
1,2-DICHLOROETHENE (TOTAL)	<1
CHLOROFORM	<1
1,2-DICHLOROETHANE	<1
2-BUTANONE (MEK)	<20
1,1,1-TRICHLOROETHANE	<1
CARBON TETRACHLORIDE	<1
VINYL ACETATE	<10
BROMODICHLOROMETHANE	<1
1,1,2,2-TETRACHLOROETHANE	<1
1,2-DICHLOROPROPANE	<1
CIS-1,3-DICHLOROPROPENE	<1
TRICHLOROETHENE	<1
DIBROMOCHLOROMETHANE	<1
1,1,2 TRICHLOROETHANE	<1
BENZENE	<1
TRANS-1,3-DICHLOROPROPENE	<1
BROMOFORM	<5
2-HEXANONE (MBK)	<10
4-METHYL-2-PENTANONE (MIBK)	<10
TETRACHLOROETHENE	<1
TOLUENE	<2
CHLOROBENZENE	<1
ETHYL BENZENE	<1
STYRENE	<1
TOTAL XYLENES	<1

SURROGATE PERCENT RECOVERIES

1,2-DICHLOROETHANE-D4 (%)	86
BFB (%)	103
TOLUENE-D8 (%)	101

AnalyticalTechnologies,Inc. GCMS - RESULTS

REAGENT BLANK

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN

ATI I.D. : 010336

UNITS : UG/L

COMPOUNDS	RESULTS
NONE DETECTED	N/A

MCK0004040

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 010336

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 01022702

DATE EXTRACTED : N/A
DATE ANALYZED : 10/29/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	40	34	85	35	88	4
TRICHLOROETHENE	77	55	119	76	120	78	3
CHLOROBENZENE	53	55	103	91	102	89	2
TOLUENE	11	55	63	95	64	96	1
BENZENE	<1	55	50	91	51	93	2

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0004041

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 010336

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 01024801

DATE EXTRACTED : N/A
DATE ANALYZED : 10/23/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	41	36	88	36	88	0
TRICHLOROETHENE	<1	55	51	93	51	93	0
CHLOROBENZENE	<1	59	52	88	52	88	0
TOLUENE	<2	59	51	86	51	86	0
BENZENE	<1	59	51	86	50	85	2

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

MCK0004042

Har Lawson Associates
1562 Jhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

010336

CHAIN OF CUSTODY FORM

Lab: ATT

Samplers: Tom Harder, Don Johnson

Job Number: 17333,15 7 (G) 11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Ted Kurlach/Burton Chalmers

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr Wk Seq	DATE: Yr Mo Dy Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pltnt. Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	General Minerals	2	3 - containers	H						
50	X				X			X		901025 0830	MK-SB-20-102590			X								X						03
50	X				X			X		901025 1115	MK-SB-23-102590			X								X						04
50	X				X	X	X	X		901025 1245	MK-SB-32-102590			X					X			X						01
50	X				X			X		901025 0925	MK-SB-25-102590			X								X						05
50	X				X	X	X	X		901025 1030	MK-SB-17-102590			X					X			X						02
50	X				X			X		901025 1140	MK-SB-23-102590 D			X								X						06
50	X				X			X		901025 0800	MK-SB-20-102590 B			X								X						07
50	X				X			X		901025 1325	MK-SB-23-102590 E			X								X						08

LAB NUMBER: Yr Wk Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
				Standard turnaround time!
				Call Burton Chalmers if there is any questions!

MCK0004043

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
10-25-90 15:30	Bob DeDay	10/25/90 15:30
RELINQUISHED BY: (Signature) Bob DeDay	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) Marian Van Dekoff	DATE/TIME 10/25/90 15:30
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

3.4.2

CC5490

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D. 010336

November 20, 1990

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680

Project Name: McKesson-Santa Fe Springs

Project No.: 17333,157.11

Attention: Burton Chadwick/Ted Koelsch

Enclosed are amended quality control data sheets for fluoride, nitrate as nitrogen, and volatile organics.

We apologize for the inconvenience this may have caused you.

Timothy J. Fitzpatrick
Senior Project Manager

Richard M. Amano
Laboratory Manager

TJF:nm

Analytical Technologies, Inc.

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
ATI I.D. : 010336

DATE RECEIVED : 10/25/90
REPORT DATE : 11/19/90

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	MK-SB-32-102590	WATER	10/25/90
02	MK-SB-17-102590	WATER	10/25/90
03	MK-SB-20-102590	WATER	10/25/90
04	MK-SB-23-102590	WATER	10/25/90
05	MK-SB-25-102590	WATER	10/25/90
06	MK-SB-23-102590D	WATER	10/25/90
07	MK-SB-20-102590B	WATER	10/25/90
08	MK-SB-23-102590E	WATER	10/25/90

----- TOTALS -----

MATRIX	# SAMPLES
WATER	8

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS ATI I.D. : 010336

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CARBONATE AS CACO3	MG/L	01033602	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	MG/L		437	428	2	N/A	N/A	N/A
HYDROXIDE AS CAC03	MG/L		<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CA	MG/L		437	428	2	N/A	N/A	N/A
CHLORIDE	MG/L	01034101	275	275	0	315	40	100
CONDUCTIVITY, UMHOS/CM	-	01033901	919	942	2	N/A	N/A	N/A
FLUORIDE	MG/L	01034101	0.7	0.7	0	5.02	5.00	86
SURFACTANTS	MG/L	01033410	<0.1	<0.1	0	0.91	1.00	91
NITRATE AS NITROGEN	MG/L	01030101	14.1	15.8	11	35.2	20.0	106
PH	UNITS	01033404	7.00	7.01	0	N/A	N/A	N/A
PH	UNITS	01033608	6.05	6.03	0	N/A	N/A	N/A
SULFATE	MG/L	01033602	230	225	2	679	400	113
TOTAL DISSOLVED SOLIDS	MG/L	01033901	562	576	2	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

AnalyticalTechnologies,Inc.

QUALITY CONTROL DATA

ATI I.D. : 010336

TEST : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

CLIENT : HARDING LAWSON ASSOC.-TUSTIN
PROJECT # : 17333,157.11
PROJECT NAME : McKESSON-SANTA FE SPRINGS
REF I.D. : 01022702

DATE EXTRACTED : N/A
DATE ANALYZED : 10/29/90
SAMPLE MATRIX : WATER
UNITS : UG/L

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
1,1-DICHLOROETHENE	<1	40	34	85	35	88	3
TRICHLOROETHENE	77	55	119	76	120	78	2
CHLOROBENZENE	53	55	103	91	102	89	2
TOLUENE	11	55	63	95	64	96	2
BENZENE	<1	55	50	91	51	93	2

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 102139

February 28, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,166.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
February 11, 1991	9	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

RICHARD M. AMANO
LABORATORY MANAGER

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: February 28, 1991
ATI I.D. : 102139

ATI #	Client Description	Matrix	Date Collected
1	MK-MW-02-021191	WATER	11-FEB-91
2	MK-MW-03-021191	WATER	11-FEB-91
3	MK-SB-13-021191	WATER	11-FEB-91
4	MK-MW-01-021191	WATER	11-FEB-91
5	MK-SB-04-021191	WATER	11-FEB-91
6	MK-MW-02-021191B	WATER	11-FEB-91
7	MK-SB-10-021191	WATER	11-FEB-91
8	MK-MW-01-021191D	WATER	11-FEB-91
9	MK-SB-04-021191E	WATER	11-FEB-91

---TOTALS---

Matrix	# Samples
WATER	9

ATI STANDARD DISPOSAL PRACTICE

sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 102139

Analysis	Technique/Description
CATION/ANION BALANCE	CALCULATION
EPA 160.1 (TOTAL DISSOLVED SOLIDS)	GRAVIMETRIC
EPA 310.1 (ALKALINITY)	TITRIMETRIC
EPA 325.2 (CHLORIDE)	COLORIMETRIC
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 353.2 (NITRATE-NITRITE AS NITROGEN)	COLORIMETRIC
EPA 425.1 (SURFACTANTS (MBAS))	COLORIMETRIC
EPA 6010 (CALCIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (COPPER)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MAGNESIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (TOTAL HARDNESS)	CALCULATION
EPA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
EPA 9036 (SULFATE)	COLORIMETRIC
EPA 9040 (pH)	ELECTRODE
EPA 9050 (ELECTRICAL CONDUCTIVITY)	ELECTRODE

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

ɜnt : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D.: 102139

Sample #	Client ID	Matrix	Date Sampled	Date Received
1	MK-MW-02-021191	WATER	11-FEB-91	11-FEB-91
2	MK-MW-03-021191	WATER	11-FEB-91	11-FEB-91
3	MK-SB-13-021191	WATER	11-FEB-91	11-FEB-91
4	MK-MW-01-021191	WATER	11-FEB-91	11-FEB-91
5	MK-SB-04-021191	WATER	11-FEB-91	11-FEB-91

Parameter	Units	1	2	3	4	5
CARBONATE AS CACO3	MG/L	<5	<5	-	-	-
BICARBONATE AS CACO3	MG/L	417	240	-	-	-
HYDROXIDE AS CACO3	MG/L	<5	<5	-	-	-
TOTAL ALKALINITY AS CACO3	MG/L	417	240	-	-	-
CATION/ANION BALANCE	RATIO	0.99	0.92	-	-	-
CHLORIDE	MG/L	89.6	130	-	-	-
ELECTRICAL CONDUCTIVITY	UMHOS	1480	1150	-	-	-
FLUORIDE	MG/L	<0.5	<0.5	-	-	-
SURFACTANTS (MBAS)	MG/L	0.5	0.3	-	-	-
NITRATE-NITRITE AS NITROGEN	MG/L	13.9	1.0	-	-	-
pH	UNITS	7.42	7.31	7.10	7.11	7.19
SULFATE	MG/L	227	193	-	-	-
TOTAL DISSOLVED SOLIDS	MG/L	994	680	-	-	-

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SURFACTANTS (MBAS)	102100-01	MG/L	<0.1	<0.1	0	0.72	1.0	72

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CHLORIDE	102158-07	MG/L	75.3	74.1	2	173	100	98

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0004053

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CARBONATE AS CACO3	102139-02	MG/L	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	102139-02	MG/L	240	242	<1	N/A	N/A	N/A
HYDROXIDE AS CACO3	102139-02	MG/L	<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CACO3	102139-02	MG/L	240	242	<1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
pH	102150-01	UNITS	8.16	8.16	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
ELECTRICAL CONDUCTIVITY	102158-07	UMHOS	1630	1640	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
NITRATE-NITRITE AS NITROGEN	102099-01	MG/L	<0.05	<0.05	0	1.9	2.0	95

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL DISSOLVED SOLIDS	102150-02	MG/L	410	382	7	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
FLUORIDE	102149-01	MG/L	<0.5	<0.5	0	4.7	5.0	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SULFATE	102139-01	MG/L	227	232	0	400	200	85

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CHLORIDE	10283	MG/L	<5.0	104	100	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
NITRATE-NITRITE AS NITROGEN	10332	MG/L	<0.05	2.10	2.00	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
SULFATE	10486	MG/L	<10.0	19.0	20.0	95

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS RESULTS

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D.: 102139

Sample #	Client ID	Matrix	Date Sampled	Date Received
1	MK-MW-02-021191	WATER	11-FEB-91	11-FEB-91
2	MK-MW-03-021191	WATER	11-FEB-91	11-FEB-91

Parameter	Units	1	2
CALCIUM	MG/L	161	105
COPPER	MG/L	<0.02	<0.02
IRON	MG/L	<0.01	<0.01
TOTAL HARDNESS	MG/L	577	370
POTASSIUM	MG/L	14.0	4.1
MAGNESIUM	MG/L	42.6	26.2
MANGANESE	MG/L	0.03	3.3
SODIUM	MG/L	106	88.7
ZINC	MG/L	0.09	0.05

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CALCIUM	102139-02	MG/L	105	106	1	204	100	99
IRON	102139-02	MG/L	<0.01	<0.01	0	1.0	1.0	100
MAGNESIUM	102139-02	MG/L	26.2	26.4	1	129	100	103
POTASSIUM	102139-02	MG/L	4.1	4.1	0	108	100	104
SODIUM	102139-02	MG/L	88.7	89.1	0	178	100	89
ZINC	102139-02	MG/L	0.05	0.04	22	1.2	1.0	115

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies, Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL HARDNESS	102139-02	MG/L	370	373	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
COPPER	102125-02	MG/L	<0.02	<0.02	0	2.0	2.0	100
MANGANESE	102125-02	MG/L	<0.01	<0.01	0	4.2	4.0	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies, Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CALCIUM	10410	MG/L	<0.05	1.1	1.0	110
IRON	10410	MG/L	<0.01	0.98	1.0	98
MAGNESIUM	10410	MG/L	<0.01	1.0	1.0	100
POTASSIUM	10410	MG/L	<0.1	10.3	10.0	103
SODIUM	10410	MG/L	<0.1	0.81	1.0	81
ZINC	10410	MG/L	<0.01	1.0	1.0	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CALCIUM	10412	MG/L	0.16	20.0	20.0	99
COPPER	10412	MG/L	<0.02	2.0	2.0	100
IRON	10412	MG/L	<0.01	4.1	4.0	102
MANGANESE	10412	MG/L	<0.01	4.2	4.0	105
POTASSIUM	10412	MG/L	0.23	9.8	10.0	96
SODIUM	10412	MG/L	0.35	23.0	20.0	113

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON
ATI I.D. : 102139
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-MW-02-021191	WATER	N/A	11-FEB-91	15-FEB-91	5.00
2	MK-MW-03-021191	WATER	N/A	11-FEB-91	15-FEB-91	10.00
3	MK-SB-13-021191	WATER	N/A	11-FEB-91	15-FEB-91	2.00

Parameter	Units	1	2	3
ACETONE	UG/L	<100	<200	<40
BENZENE	UG/L	<5	11	4
BROMODICHLOROMETHANE	UG/L	<5	<10	<2
BROMOFORM	UG/L	<25	<50	<10
BROMOMETHANE	UG/L	<50	<100	<20
2-BUTANONE (MEK)	UG/L	<100	<200	<40
CARBON DISULFIDE	UG/L	<5	<10	<2
CARBON TETRACHLORIDE	UG/L	<5	<10	<2
CHLOROBENZENE	UG/L	<5	<10	<2
CHLOROETHANE	UG/L	<5	<10	<2
CHLOROFORM	UG/L	<5	<10	<2
CHLOROMETHANE	UG/L	<50	<100	<20
DIBROMOCHLOROMETHANE	UG/L	<5	<10	<2
1,1-DICHLOROETHANE	UG/L	22	200	28
1,2-DICHLOROETHANE	UG/L	<5	<10	23
1,1-DICHLOROETHENE	UG/L	360	1300	360
CIS-1,2-DICHLOROETHENE	UG/L	78	280	40
TRANS-1,2-DICHLOROETHENE	UG/L	<5	<10	<2
1,2-DICHLOROPROPANE	UG/L	<5	<10	<2
CIS-1,3-DICHLOROPROPENE	UG/L	<5	<10	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<5	<10	<2
ETHYLBENZENE	UG/L	<5	<10	<2
2-HEXANONE (MBK)	UG/L	<50	<100	<20
METHYLENE CHLORIDE	UG/L	<25	<50	<10
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50	<100	<20
STYRENE	UG/L	<5	<10	<2
1,1,2,2-TETRACHLOROETHANE	UG/L	<5	<10	<2
TETRACHLOROETHENE	UG/L	270	1100	300
TOLUENE	UG/L	<10	<20	<4
1,1,1-TRICHLOROETHANE	UG/L	37	1300	140
1,1,2-TRICHLOROETHANE	UG/L	<5	<10	<2
TRICHLOROETHENE	UG/L	700	210	340
VINYL ACETATE	UG/L	<50	<100	<20
VINYL CHLORIDE	UG/L	<5	<10	<2
XYLENES (TOTAL)	UG/L	<5	49	<2
BFB	%	101	98	100
1,2-DICHLOROETHANE-D4	%	110	109	109
TOLUENE-D8	%	99	100	99

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

.od: EPA 8240 (GC/MS FOR VOLATILE ORGANICS) Matrix: WATER

ATI I.D.: 102139

Sample	Parameters	Units	Results
1	212 FREON 113	UG/L	24 *
	187 TRICHLOROFLUORMETHANE	UG/L	26 *
2	213 FREON 113	UG/L	76 *
	183 TRICHLOROFLUOROMETHANE	UG/L	77 *
3	212 FREON 113	UG/L	28 *
	188 TRICHLOROFLUOROMETHANE	UG/L	27 *

* STANDARD WAS USED TO QUANTIFY THESE VALUES.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
4	MK-MW-01-021191	WATER	N/A	11-FEB-91	15-FEB-91	5.00
5	MK-SB-04-021191	WATER	N/A	11-FEB-91	20-FEB-91	5.00
6	MK-MW-02-021191B	WATER	N/A	11-FEB-91	19-FEB-91	1.00

Parameter	Units	4	5	6
ACETONE	UG/L	<100	<100	<20
BENZENE	UG/L	<5	10	<1
BROMODICHLOROMETHANE	UG/L	<5	<5	<1
BROMOFORM	UG/L	<25	<25	<5
BROMOMETHANE	UG/L	<50	<50	<10
2-BUTANONE (MEK)	UG/L	<100	<100	<20
CARBON DISULFIDE	UG/L	<5	<5	<1
CARBON TETRACHLORIDE	UG/L	<5	<5	<1
CHLOROBENZENE	UG/L	<5	<5	<1
CHLOROETHANE	UG/L	<5	<5	<1
CHLOROFORM	UG/L	<5	<5	<1
CHLOROMETHANE	UG/L	<50	<50	<10
DIBROMOCHLOROMETHANE	UG/L	<5	<5	<1
1,1-DICHLOROETHANE	UG/L	93	25	<1
1,2-DICHLOROETHANE	UG/L	<5	<5	<1
1,1-DICHLOROETHENE	UG/L	530	550	<1
CIS-1,2-DICHLOROETHENE	UG/L	320	110	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<5	<5	<1
1,2-DICHLOROPROPANE	UG/L	<5	<5	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<5	<5	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<5	<5	<1
ETHYLBENZENE	UG/L	<5	<5	<1
2-HEXANONE (MBK)	UG/L	<50	<50	<10
METHYLENE CHLORIDE	UG/L	<25	<25	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50	<50	<10
STYRENE	UG/L	<5	<5	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<5	<5	<1
TETRACHLOROETHENE	UG/L	350	410	<1
TOLUENE	UG/L	<10	<10	<2
1,1,1-TRICHLOROETHANE	UG/L	150	150	<1
1,1,2-TRICHLOROETHANE	UG/L	<5	<5	<1
TRICHLOROETHENE	UG/L	360	400	<1
VINYL ACETATE	UG/L	<50	<50	<10
VINYL CHLORIDE	UG/L	<5	<5	<1
XYLENES (TOTAL)	UG/L	<5	<5	<1
BFB	%	99	99	100
1,2-DICHLOROETHANE-D4	%	108	100	105
TOLUENE-D8	%	98	101	99

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

1 iod: EPA 8240 (GC/MS FOR VOLATILE ORGANICS) Matrix: WATER

ATI I.D.: 102139

Sample	Parameters	Units	Results
4	215 FREON 113	UG/L	19 *
	185 TRICHLOROFLUOROMETHANE	UG/L	14 *
5	188 TRICHLOROFLUOROMETHANE	UG/L	25 *
6	NONE DETECTED		N/A

* STANDARD WAS USED TO QUANTIFY THESE VALUES.

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
7	MK-SB-10-021191	WATER	N/A	11-FEB-91	18-FEB-91	20.00
8	MK-MW-01-021191D	WATER	N/A	11-FEB-91	18-FEB-91	15.00
9	MK-SB-04-021191E	WATER	N/A	11-FEB-91	15-FEB-91	1.00

Parameter	Units	7	8	9
ACETONE	UG/L	<400	<300	<20
BENZENE	UG/L	<20	<15	<1
BROMODICHLOROMETHANE	UG/L	<20	<15	<1
BROMOFORM	UG/L	<100	<75	<5
BROMOMETHANE	UG/L	<200	<150	<10
2-BUTANONE (MEK)	UG/L	<400	<300	<20
CARBON DISULFIDE	UG/L	<20	<15	<1
CARBON TETRACHLORIDE	UG/L	<20	<15	<1
CHLOROBENZENE	UG/L	<20	<15	<1
CHLOROETHANE	UG/L	<20	<15	<1
CHLOROFORM	UG/L	<20	<15	<1
CHLOROMETHANE	UG/L	<200	<150	<10
DIBROMOCHLOROMETHANE	UG/L	<20	<15	<1
1,1-DICHLOROETHANE	UG/L	85	120	<1
1,2-DICHLOROETHANE	UG/L	<20	<15	<1
1,1-DICHLOROETHENE	UG/L	1700	830	<1
CIS-1,2-DICHLOROETHENE	UG/L	<20	400	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<20	<15	<1
1,2-DICHLOROPROPANE	UG/L	<20	<15	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<20	<15	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<20	<15	<1
ETHYLBENZENE	UG/L	<20	<15	<1
2-HEXANONE (MBK)	UG/L	<200	<150	<10
METHYLENE CHLORIDE	UG/L	<100	<75	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<200	<150	<10
STYRENE	UG/L	<20	<15	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<20	<15	<1
TETRACHLOROETHENE	UG/L	1400	480	<1
TOLUENE	UG/L	<40	<30	<2
1,1,1-TRICHLOROETHANE	UG/L	1800	200	<1
1,1,2-TRICHLOROETHANE	UG/L	<20	<15	<1
TRICHLOROETHENE	UG/L	390	440	<1
VINYL ACETATE	UG/L	<200	<150	<10
VINYL CHLORIDE	UG/L	<20	<15	<1
XYLENES (TOTAL)	UG/L	<20	<15	<1
BFB	%	100	100	116
1,2-DICHLOROETHANE-D4	%	105	106	123
TOLUENE-D8	%	99	96	112

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS) Matrix: WATER

ATI I.D.: 102139

Sample	Parameters	Units	Results
7	209 FREON 113	UG/L	79 *
8	NONE DETECTED		N/A
9	NONE DETECTED		N/A

* STANDARD WAS USED TO QUANTIFY THESE VALUES.

MCK0004075

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10462
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	113✓
1,2-DICHLOROETHANE-D4	%	114✓
TOLUENE-D8	%	109✓

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10462
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004077

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10464
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	6
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	97 ✓
1,2-DICHLOROETHANE-D4	%	96 ✓
TOLUENE-D8	%	98 ✓

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10464
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004079

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10504
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	98
1,2-DICHLOROETHANE-D4	%	100
TOLUENE-D8	%	100

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10504
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004081

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10515
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 19-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	98
1,2-DICHLOROETHANE-D4	%	99
TOLUENE-D8	%	99

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10515
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 19-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004083

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10526
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	97
1,2-DICHLOROETHANE-D4	%	100
TOLUENE-D8	%	102

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10526
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004085

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 10845
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Sample Matrix : WATER
REF I.D. : 102139-09

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<1	55	51	93	46	84	10
CHLOROBENZENE	UG/L	<1	55	53	96	49	89	8
1,1-DICHLOROETHENE	UG/L	<1	48	43	90	34	71	24
TOLUENE	UG/L	<2	55	51	93	46	84	10
TRICHLOROETHENE	UG/L	<1	50	44	88	40	80	10

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10341
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	52	95
CHLOROBENZENE	UG/L	<1	55	53	96
1,1-DICHLOROETHENE	UG/L	<1	48	46	96
TOLUENE	UG/L	<2	55	52	95
TRICHLOROETHENE	UG/L	<1	50	46	92

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10343
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	50	91
CHLOROBENZENE	UG/L	<1	55	50	91
1,1-DICHLOROETHENE	UG/L	<1	48	41	85
TOLUENE	UG/L	<2	55	49	89
TRICHLOROETHENE	UG/L	<1	50	41	82

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10369
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	52	96
CHLOROBENZENE	UG/L	<1	55	51	93
1,1-DICHLOROETHENE	UG/L	<1	48	46	96
TOLUENE	UG/L	<2	55	50	91
TRICHLOROETHENE	UG/L	<1	50	42	84

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10378
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 19-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	60	109
CHLOROBENZENE	UG/L	<1	55	58	105
1,1-DICHLOROETHENE	UG/L	<1	48	49	102
TOLUENE	UG/L	<2	55	57	104
TRICHLOROETHENE	UG/L	<1	50	50	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10418
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102139
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	50	55	91
CHLOROBENZENE	UG/L	<1	51	55	93
1,1-DICHLOROETHENE	UG/L	<1	44	48	93
TOLUENE	UG/L	<2	51	55	93
TRICHLOROETHENE	UG/L	<1	42	50	84

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

102139

CHAIN OF CUSTODY FORM

Lab: ATI

Samplers: Tom Harder, Don Johnson

Job Number: 17333,166.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Tod Kerlsch & Burton Chadwick

Recorder: _____ (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240 (VOC's)	EPA 625/8270	ICP METALS	EPA 8015M/TPH	General Minerals	Metals	SO_4	EPA 150.1 (pH)				
23	X				X	X	X	X				91	02	11	1045	MK-MW-02-021191		X					X	X	X	X				
23	X				X	X	X	X				91	02	11	1350	MK-MW-03-021191		X					X	X	X	X				
23	X							X				91	02	11	1000	MK-MW-02-021191B		X												
23	X				X			X				91	02	11	1135	MK-SB-13-021191		X								X				
23	X							X				91	02	11	1450	MK-SB-10-021191		X												
23	X				X			X				91	02	11	1240	MK-MW-01-021191		X								X				
23	X							X				91	02	11	1250	MK-MW-01-021191D		X												
23	X				X			X				91	02	11	1555	MK-SB-04-021191		X								X				
23	X							X				91	02	11	1600	MK-SB-04-021191E		X												

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Standard turnaround time!
						Call Burton Chadwick if there is any questions!

MCK0004092

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
16:15 2-11-91	Bob De Bay	2/11/91 16:15
Bob De Bay		
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) Marian Van Deusen	DATE/TIME 2/11/91

METHOD OF SHIPMENT

Laboratory Copy White — Project Office Copy Yellow — Field or Off. Copy Pink

6533

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 102173

March 05, 1991

EARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,166.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
February 13, 1991	7	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

for RICHARD M. AMANO
LABORATORY MANAGER

MCK0004093

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: March 05, 1991
ATI I.D. : 102178

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-17-021391	WATER	13-FEB-91
2	MK-SB-20-021391	WATER	13-FEB-91
3	MK-SB-36-021391	WATER	13-FEB-91
4	MK-SB-36-021391D	WATER	13-FEB-91
5	MK-SB-37-021391B	WATER	13-FEB-91
6	MK-SB-17-021391E	WATER	13-FEB-91
7	MK-SB-25-021391	WATER	13-FEB-91

---TOTALS---

Matrix	# Samples
WATER	7

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

.ent : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 102178

Analysis	Technique/Description
CATION/ANION BALANCE	CALCULATION
EPA 160.1 (TOTAL DISSOLVED SOLIDS)	GRAVIMETRIC
EPA 310.1 (ALKALINITY)	TITRIMETRIC
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 353.2 (NITRATE-NITRITE AS NITROGEN)	COLORIMETRIC
EPA 425.1 (SURFACTANTS (MBAS))	COLORIMETRIC
EPA 6010 (CALCIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (COPPER)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MAGNESIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (TOTAL HARDNESS)	CALCULATION
EPA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
EPA 325.2 (CHLORIDE)	COLORIMETRIC
EPA 9038 (SULFATE)	TURBIDIMETRIC
EPA 150.1 (pH)	ELECTRODE
\ 9050 (ELECTRICAL CONDUCTIVITY)	ELECTRODE

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 102178

Sample #	Client ID	Matrix	Date Sampled	Date Received
1	MK-SB-17-021391	WATER	13-FEB-91	13-FEB-91
2	MK-SB-20-021391	WATER	13-FEB-91	13-FEB-91
3	MK-SB-36-021391	WATER	13-FEB-91	13-FEB-91

Parameter	Units	1	2	3
CARBONATE AS CACO3	MG/L	<5	-	-
BICARBONATE AS CACO3	MG/L	406	-	-
HYDROXIDE AS CACO3	MG/L	<5	-	-
TOTAL ALKALINITY AS CACO3	MG/L	406	-	-
CATION/ANION BALANCE	RATIO	0.96	-	-
CHLORIDE	MG/L	115	-	-
ELECTRICAL CONDUCTIVITY	UMHOS	1540	-	-
FLUORIDE	MG/L	<0.5	-	-
SURFACTANTS (MBAS)	MG/L	0.23	-	-
NITRATE-NITRITE AS NITROGEN	MG/L	5.6	-	-
pH	UNITS	7.11	7.07	7.05
SULFATE	MG/L	290	-	-
TOTAL DISSOLVED SOLIDS	MG/L	1040	-	-

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
NITRATE-NITRITE AS NITROGEN	102178-01	MG/L	5.6	5.4	4	25.0	20.0	98

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CHLORIDE	102179-01	MG/L	38.4	38.7	1	139	100	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
ELECTRICAL CONDUCTIVITY	102191-06	UMHOS	25	25	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
pH	102191-04	UNITS	7.35	7.35	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
pH	102194-02	UNITS	6.86	6.84	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SURFACTANTS (MBAS)	102149-06	MG/L	<0.1	<0.1	0	0.87	1.0	97

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0004102

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CARBONATE AS CACO3	102179-01	MG/L	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	102179-01	MG/L	229	227	<1	N/A	N/A	N/A
HYDROXIDE AS CACO3	102179-01	MG/L	<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CACO3	102179-01	MG/L	229	227	<1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
FLUORIDE	102194-02	MG/L	<0.5	<0.5	0	4.7	5.0	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL DISSOLVED SOLIDS	102215-01	MG/L	5040	4930	2	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SULFATE	102178-01	MG/L	290	277	5	685	400	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
NITRATE-NITRITE AS NITROGEN	10332	MG/L	<0.05	2.10	2.00	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CHLORIDE	10337	MG/L	<5.0	106	100	106

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
SURFACTANTS (MBAS)	10373	MG/L	<0.1	0.97	1.0	97

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
SULFATE	10532	MG/L	<10.0	20.1	20.0	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS RESULTS

.ent : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D.: 102178

Sample #	Client ID	Matrix	Date Sampled	Date Received
1	MK-SB-17-021391	WATER	13-FEB-91	13-FEB-91

Parameter	Units	1
CALCIUM	MG/L	170
COPPER	MG/L	<0.02
IRON	MG/L	0.02
TOTAL HARDNESS	MG/L	619
POTASSIUM	MG/L	5.4
MAGNESIUM	MG/L	47.3
MANGANESE	MG/L	9.1
SODIUM	MG/L	98.2
ZINC	MG/L	0.03

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
COPPER	102149-01	MG/L	0.02	<0.02	0	1.9	2.0	94
MANGANESE	102149-01	MG/L	0.17	0.17	0	3.8	4.0	91

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

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AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CALCIUM	102178-01	MG/L	170	172	1	266	100	96
IRON	102178-01	MG/L	0.02	0.02	0	1.0	1.0	98
MAGNESIUM	102178-01	MG/L	47.3	48.3	2	143	100	96
POTASSIUM	102178-01	MG/L	5.4	5.6	4	103	100	98
SODIUM	102178-01	MG/L	98.2	101	3	180	100	82
ZINC	102178-01	MG/L	0.03	0.03	0	1.1	1.0	107

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102178

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL HARDNESS	102178-01	MG/L	619	628	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
COPPER	10403	MG/L	<0.02	2.0	2.0	100
MANGANESE	10403	MG/L	<0.01	3.9	4.0	98

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CALCIUM	10445	MG/L	<0.01	104	100	104
IRON	10445	MG/L	0.02	1.0	1.0	98
MAGNESIUM	10445	MG/L	<0.01	102	100	102
POTASSIUM	10445	MG/L	<0.1	102	100	102
SODIUM	10445	MG/L	<0.1	87.1	100	87
ZINC	10445	MG/L	<0.01	1.1	1.0	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

. .t : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ATI I.D. : 102178
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-SB-17-021391	WATER	N/A	13-FEB-91	15-FEB-91	250.00
2	MK-SB-20-021391	WATER	N/A	13-FEB-91	18-FEB-91	200.00
3	MK-SB-36-021391	WATER	N/A	13-FEB-91	18-FEB-91	250.00

Parameter	Units	1	2	3
ACETONE	UG/L	<5000	<4000	<5000
BENZENE	UG/L	<250	<200	<250
BROMODICHLOROMETHANE	UG/L	<250	<200	<250
BROMOFORM	UG/L	<1250	<1000	<1250
BROMOMETHANE	UG/L	<2500	<2000	<2500
2-BUTANONE (MEK)	UG/L	<5000	<4000	<5000
CARBON DISULFIDE	UG/L	<250	<200	<250
CARBON TETRACHLORIDE	UG/L	<250	<200	<250
CHLOROBENZENE	UG/L	<250	<200	<250
CHLOROETHANE	UG/L	<250	<200	<250
CHLOROFORM	UG/L	<250	<200	<250
CHLOROMETHANE	UG/L	<2500	<2000	<2500
DIBROMOCHLOROMETHANE	UG/L	<250	<200	<250
-DICHLOROETHANE	UG/L	<250	<200	<250
-DICHLOROETHANE	UG/L	<250	460	<250
1,1-DICHLOROETHENE	UG/L	2900	11000	14000
CIS-1,2-DICHLOROETHENE	UG/L	1000	<200	<250
TRANS-1,2-DICHLOROETHENE	UG/L	<250	<200	<250
1,2-DICHLOROPROPANE	UG/L	<250	<200	<250
CIS-1,3-DICHLOROPROPENE	UG/L	<250	<200	<250
TRANS-1,3-DICHLOROPROPENE	UG/L	<250	<200	<250
ETHYLBENZENE	UG/L	<250	<200	<250
2-HEXANONE (MBK)	UG/L	<2500	<2000	<2500
METHYLENE CHLORIDE	UG/L	4000	29000	17000
4-METHYL-2-PENTANONE (MIBK)	UG/L	<2500	<2000	<2500
STYRENE	UG/L	<250	<200	<250
1,1,2,2-TETRACHLOROETHANE	UG/L	<250	<200	<250
TETRACHLOROETHENE	UG/L	15000	19000	13000
TOLUENE	UG/L	<500	820	1900
1,1,1-TRICHLOROETHANE	UG/L	23000	28000	40000
1,1,2-TRICHLOROETHANE	UG/L	<250	<200	<250
TRICHLOROETHENE	UG/L	2700	2400	1900
VINYL ACETATE	UG/L	<2500	<2000	<2500
VINYL CHLORIDE	UG/L	<250	<200	<250
XYLENES (TOTAL)	UG/L	<250	<200	1200
BFB	%	99	101	102
1,2-DICHLOROETHANE-D4	%	99	110	105
TOLUENE-D8	%	100	97	99

AnalyticalTechnologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: WATER

ATI I.D.: 102178

Sample	Parameters	Units	Results
1	NONE DETECTED		N/A
2	NONE DETECTED		N/A
3	208 FREON 113	UG/L	250*5

*5 A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

t : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ATI I.D. : 102178
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
4	MK-SB-36-021391D	WATER	N/A	13-FEB-91	18-FEB-91	300.00
5	MK-SB-37-021391B	WATER	N/A	13-FEB-91	18-FEB-91	1.00
6	MK-SB-17-021391E	WATER	N/A	13-FEB-91	18-FEB-91	1.00

Parameter	Units	4	5	6
ACETONE	UG/L	<6000	<20	<20
BENZENE	UG/L	<300	<1	<1
BROMODICHLOROMETHANE	UG/L	<300	<1	<1
BROMOFORM	UG/L	<1500	<5	<5
BROMOMETHANE	UG/L	<3000	<10	<10
2-BUTANONE (MEK)	UG/L	<6000	<20	<20
CARBON DISULFIDE	UG/L	<300	<1	<1
CARBON TETRACHLORIDE	UG/L	<300	<1	<1
CHLOROBENZENE	UG/L	<300	<1	<1
CHLOROETHANE	UG/L	<300	<1	<1
CHLOROFORM	UG/L	<300	<1	<1
CHLOROMETHANE	UG/L	<3000	<10	<10
DIBROMOCHLOROMETHANE	UG/L	<300	<1	<1
1-DICHLOROETHANE	UG/L	<300	<1	<1
-DICHLOROETHANE	UG/L	<300	<1	<1
1,1-DICHLOROETHENE	UG/L	14000	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<300	<1	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<300	<1	<1
1,2-DICHLOROPROPANE	UG/L	<300	<1	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<300	<1	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<300	<1	<1
ETHYLBENZENE	UG/L	<300	<1	<1
2-HEXANONE (MBK)	UG/L	<3000	<10	<10
METHYLENE CHLORIDE	UG/L	18000	<5	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<3000	<10	<10
STYRENE	UG/L	<300	<1	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<300	<1	<1
TETRACHLOROETHENE	UG/L	13000	<1	<1
TOLUENE	UG/L	2000	<2	<2
1,1,1-TRICHLOROETHANE	UG/L	42000	<1	<1
1,1,2-TRICHLOROETHANE	UG/L	<300	<1	<1
TRICHLOROETHENE	UG/L	1900	<1	<1
VINYL ACETATE	UG/L	<3000	<10	<10
VINYL CHLORIDE	UG/L	<300	<1	<1
XYLENES (TOTAL)	UG/L	1300	<1	<1
BFB	%	99	100	101
1,2-DICHLOROETHANE-D4	%	103	102	107
TOLUENE-D8	%	100	95	98

AnalyticalTechnologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS) Matrix: WATER

ATI I.D.: 102178

Sample	Parameters	Units	Results
4	NONE DETECTED		N/A
5	NONE DETECTED		N/A
6	NONE DETECTED		N/A

MCK0004120

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

st : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ATI I.D. : 102178
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
7	MK-SB-25-021391	WATER	N/A	13-FEB-91	19-FEB-91	500.00

Parameter	Units	7
ACETONE	UG/L	<10000
BENZENE	UG/L	<500
BROMODICHLOROMETHANE	UG/L	<500
BROMOFORM	UG/L	<2500
BROMOMETHANE	UG/L	<5000
2-BUTANONE (MEK)	UG/L	<10000
CARBON DISULFIDE	UG/L	<500
CARBON TETRACHLORIDE	UG/L	<500
CHLOROBENZENE	UG/L	<500
CHLOROETHANE	UG/L	<500
CHLOROFORM	UG/L	<500
CHLOROMETHANE	UG/L	<5000
DIBROMOCHLOROMETHANE	UG/L	<500
1,1-DICHLOROETHANE	UG/L	<500
1,2-DICHLOROETHANE	UG/L	<500
-DICHLOROETHENE	UG/L	6500
-1,2-DICHLOROETHENE	UG/L	<500
TRANS-1,2-DICHLOROETHENE	UG/L	<500
1,2-DICHLOROPROPANE	UG/L	<500
CIS-1,3-DICHLOROPROPENE	UG/L	<500
TRANS-1,3-DICHLOROPROPENE	UG/L	<500
ETHYLBENZENE	UG/L	<500
2-HEXANONE (MBK)	UG/L	<5000
METHYLENE CHLORIDE	UG/L	46000
4-METHYL-2-PENTANONE (MIBK)	UG/L	<5000
STYRENE	UG/L	<500
1,1,2,2-TETRACHLOROETHANE	UG/L	<500
TETRACHLOROETHENE	UG/L	5500
TOLUENE	UG/L	940
1,1,1-TRICHLOROETHANE	UG/L	1100
1,1,2-TRICHLOROETHANE	UG/L	<500
TRICHLOROETHENE	UG/L	3300
VINYL ACETATE	UG/L	<5000
VINYL CHLORIDE	UG/L	<500
XYLENES (TOTAL)	UG/L	<500
BFB	%	102
1,2-DICHLOROETHANE-D4	%	105
TOLUENE-D8	%	101

MCK0004121

AnalyticalTechnologies, Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS) Matrix: WATER

ATI I.D.: 102178

Sample Parameters	Units	Results
7 NONE DETECTED		N/A

MCK0004122

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10502
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
'-1,2-DICHLOROETHENE	UG/L	<1
ANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	98
1,2-DICHLOROETHANE-D4	%	98
TOLUENE-D8	%	102

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10502
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted:
Date Analyzed : 15-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004124

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10504
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1-DICHLOROETHENE	UG/L	<1
-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	98
1,2-DICHLOROETHANE-D4	%	100
TOLUENE-D8	%	100

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10504
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004126

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10516
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 19-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
`-1,2-DICHLOROETHENE	UG/L	<1
.NS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	101
1,2-DICHLOROETHANE-D4	%	100
TOLUENE-D8	%	101

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10516
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 19-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004128

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 10879
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Sample Matrix : WATER
REF I.D. : 102178-05

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<1	55	49	89	49	89	0
CHLOROBENZENE	UG/L	<1	55	51	93	52	95	2
1,1-DICHLOROETHENE	UG/L	<1	48	41	85	39	81	5
TOLUENE	UG/L	<2	55	49	89	49	89	0
TRICHLOROETHENE	UG/L	<1	50	42	84	43	86	2

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10368
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	52	95
CHLOROBENZENE	UG/L	<1	55	51	93
1,1-DICHLOROETHENE	UG/L	<1	48	40	83
TOLUENE	UG/L	<2	55	50	91
TRICHLOROETHENE	UG/L	<1	50	44	80

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10369
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 18-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	52	96
CHLOROBENZENE	UG/L	<1	55	51	93
1,1-DICHLOROETHENE	UG/L	<1	48	46	96
TOLUENE	UG/L	<2	55	50	91
TRICHLOROETHENE	UG/L	<1	50	42	84

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10379
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102178
Date Extracted: N/A
Date Analyzed : 19-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	53	96
CHLOROBENZENE	UG/L	<1	55	55	100
1,1-DICHLOROETHENE	UG/L	<1	48	45	94
TOLUENE	UG/L	<2	55	54	98
TRICHLOROETHENE	UG/L	<1	50	45	90

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

Hart[illegible]awson Associates
1562[illegible]nill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

102178

CHAIN OF CU[illegible]ODY FORM

Lab: ATI

Job Number: 17333.166.11

Name/Location: McKesson-Santa Fe Springs

Project Manager: Burton Chadwick

Samplers: Don Johnson, Tom Harder

Recorder: [illegible] (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr Wk Seq	DATE: Yr Mo Dy Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	General minerals	Metals (Filtered Sample)	20	EPA 150.1	
23	X				X			X		910213 0900 S	MK-SB-20-021391			X							X	
23	X				X			X		910213 1000 S	MK-SB-36-021391			X							X	
23	X							X		910213 1010	MK-SB-36-021391D			X								
23	X							X		910213 0800	MK-SB-37-021391B			X								
23	X							X		910213 1430	MK-SB-17-021391E			X				~~X~~	~~X~~	~~X~~	~~X~~	
23	X				X	X	X	X		910213 1410	MK-SB-17-021391			X				X	X	X	X	
23	X							X		910213 1050	MK-SB-25-021391			X								

LAB NUMBER: Yr Wk Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
MCK0004133				Standard turnaround time! Call Burton Chadwick if there is any questions! Custody Seals on cooler!

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
2-13-91 15:45 [illegible] - HLA	Bob DeRay	2/13/91 1545
RELINQUISHED BY: (Signature) Bob DeRay	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature) Marian VanDelaf	DATE/TIME 2/13/91
METHOD OF SHIPMENT		

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Analytical Technologies, Inc.

ATI I.D.: 10215

March 07, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,166.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
February 12, 1991	7	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

for RICHARD M. AMANO
LABORATORY MANAGER

MCK0004134

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: March 07, 1991
ATI I.D. : 102158

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-32-021291E	WATER	12-FEB-91
2	MK-SB-17B-021291D	WATER	12-FEB-91
3	MK-SB-7-021291B	WATER	12-FEB-91
4	MK-SB-32-021291	WATER	12-FEB-91
5	MK-SB-7-021291	WATER	12-FEB-91
6	MK-SB-17B-021291	WATER	12-FEB-91
7	MK-SB-17A-021291	WATER	12-FEB-91

---TOTALS---

Matrix	# Samples
WATER	7

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0004135

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 102158

Analysis	Technique/Description
CATION/ANION BALANCE	CALCULATION
EPA 160.1 (TOTAL DISSOLVED SOLIDS)	GRAVIMETRIC
EPA 310.1 (ALKALINITY)	TITRIMETRIC
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 353.2 (NITRATE-NITRITE AS NITROGEN)	COLORIMETRIC
EPA 425.1 (SURFACTANTS (MBAS))	COLORIMETRIC
EPA 6010 (CALCIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (COPPER)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MAGNESIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (TOTAL HARDNESS)	CALCULATION
EPA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
EPA 9038 (SULFATE)	TURBIDIMETRIC
EPA 9040 (pH)	ELECTRODE
EPA 9050 (ELECTRICAL CONDUCTIVITY)	ELECTRODE
EPA 9251 (CHLORIDE)	COLORIMETRIC

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 102158

Sample #	Client ID	Matrix	Date Sampled	Date Received
4	MK-SB-32-021291	WATER	12-FEB-91	12-FEB-91
5	MK-SB-7-021291	WATER	12-FEB-91	12-FEB-91
6	MK-SB-17B-021291	WATER	12-FEB-91	12-FEB-91
7	MK-SB-17A-021291	WATER	12-FEB-91	12-FEB-91

Parameter	Units	4	5	6	7
CARBONATE AS CACO3	MG/L	-	-	<5	<5
BICARBONATE AS CACO3	MG/L	-	-	231	330
HYDROXIDE AS CACO3	MG/L	-	-	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	-	-	231	330
CATION/ANION BALANCE	RATIO	-	-	1.05	0.89
CHLORIDE	MG/L	-	-	63.3	75.3
ELECTRICAL CONDUCTIVITY	UMHOS	-	-	1190	1640
FLUORIDE	MG/L	-	-	<0.5	<0.5
SURFACTANTS (MBAS)	MG/L	-	-	0.2	0.4
NITRATE-NITRITE AS NITROGEN	MG/L	-	-	7.4	8.4
pH	UNITS	7.03	7.29	7.53	5.95
SULFATE	MG/L	-	-	270	475
TOTAL DISSOLVED SOLIDS	MG/L	-	-	802	1180

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 10215

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SURFACTANTS (MBAS)	102100-01	MG/L	<0.1	<0.1	0	0.72	1.0	72

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CHLORIDE	102158-07	MG/L	75.3	74.1	2	173	100	98

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
pH	102158-07	UNITS	5.95	5.94	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
ELECTRICAL CONDUCTIVITY	102158-07	UMHOS	1630	1640	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
NITRATE-NITRITE AS NITROGEN	102178-01	MG/L	5.6	5.4	4	25.0	20.0	98

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL DISSOLVED SOLIDS	102197-01	MG/L	1590	1570	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CARBONATE AS CACO3	102179-01	MG/L	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	102179-01	MG/L	229	227	<1	N/A	N/A	N/A
HYDROXIDE AS CACO3	102179-01	MG/L	<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CACO3	102179-01	MG/L	229	227	<1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
FLUORIDE	102158-06	MG/L	<0.5	<0.5	0	4.7	5.0	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
FLUORIDE	102194-02	MG/L	<0.5	<0.5	0	4.7	5.0	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SULFATE	102149-05	MG/L	<10.0	<10.0	0	17.3	20.0	87

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CHLORIDE	10283	MG/L	<5.0	104	100	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
NITRATE-NITRITE AS NITROGEN	10332	MG/L	<0.05	2.10	2.00	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10215

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
SULFATE	10697	MG/L	<10.0	19.0	20.0	95

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS RESULTS

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D.: 102158

Sample #	Client ID	Matrix	Date Sampled	Date Received
6	MK-SB-17B-021291	WATER	12-FEB-91	12-FEB-91
7	MK-SB-17A-021291	WATER	12-FEB-91	12-FEB-91

Parameter	Units	6	7
CALCIUM	MG/L	137	93.9
COPPER	MG/L	<0.02	<0.02
IRON	MG/L	0.02	0.03
TOTAL HARDNESS	MG/L	516	408
POTASSIUM	MG/L	5.0	9.5
MAGNESIUM	MG/L	42.2	42.2
MANGANESE	MG/L	0.01	0.04
SODIUM	MG/L	64.1	200
ZINC	MG/L	<0.01	0.06

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
COPPER	102125-02	MG/L	<0.02	<0.02	0	2.0	2.0	100
MANGANESE	102125-02	MG/L	<0.01	<0.01	0	4.2	4.0	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102158

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CALCIUM	102178-01	MG/L	170	172	1	266	100	96
IRON	102178-01	MG/L	0.02	0.02	0	1.0	1.0	98
MAGNESIUM	102178-01	MG/L	47.3	48.3	2	143	100	96
POTASSIUM	102178-01	MG/L	5.4	5.6	4	103	100	98
SODIUM	102178-01	MG/L	98.2	101	3	180	100	82
ZINC	102178-01	MG/L	0.03	0.03	0	1.1	1.0	107

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10215

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL HARDNESS	102178-01	MG/L	619	628	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102158

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CALCIUM	10412	MG/L	0.16	20.0	20.0	99
COPPER	10412	MG/L	<0.02	2.0	2.0	100
IRON	10412	MG/L	<0.01	4.1	4.0	102
MANGANESE	10412	MG/L	<0.01	4.2	4.0	105
POTASSIUM	10412	MG/L	0.23	9.8	10.0	96
SODIUM	10412	MG/L	0.35	23.0	20.0	113

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CALCIUM	10415	MG/L	<0.05	104	100	104
IRON	10415	MG/L	<0.01	1.0	1.0	100
MAGNESIUM	10415	MG/L	<0.01	102	100	102
POTASSIUM	10415	MG/L	<0.1	102	100	102
SODIUM	10415	MG/L	<0.1	87.1	100	87
ZINC	10415	MG/L	<0.01	1.1	1.0	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS
ATI I.D. : 102158

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-SB-32-021291E	WATER	N/A	12-FEB-91	14-FEB-91	1.00
2	MK-SB-17B-021291D	WATER	N/A	12-FEB-91	14-FEB-91	1.00
3	MK-SB-7-021291B	WATER	N/A	12-FEB-91	14-FEB-91	1.00

Parameter	Units	1	2	3
ACETONE	UG/L	<20	<20	<20
BENZENE	UG/L	<1	<1	<1
BROMODICHLOROMETHANE	UG/L	<1	<1	<1
BROMOFORM	UG/L	<5	<5	<5
BROMOMETHANE	UG/L	<10	<10	<10
2-BUTANONE (MEK)	UG/L	<20	<20	<20
CARBON DISULFIDE	UG/L	<1	<1	<1
CARBON TETRACHLORIDE	UG/L	<1	<1	<1
CHLOROBENZENE	UG/L	<1	<1	<1
CHLOROETHANE	UG/L	<1	<1	<1
CHLOROFORM	UG/L	<1	<1	<1
CHLOROMETHANE	UG/L	<10	<10	<10
DIBROMOCHLOROMETHANE	UG/L	<1	<1	<1
-DICHLOROETHANE	UG/L	<1	<1	<1
,2-DICHLOROETHANE	UG/L	<1	<1	<1
1,1-DICHLOROETHENE	UG/L	<1	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1	<1	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<1	<1
1,2-DICHLOROPROPANE	UG/L	<1	<1	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<1	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<1	<1
ETHYLBENZENE	UG/L	<1	<1	<1
2-HEXANONE (MBK)	UG/L	<10	<10	<10
METHYLENE CHLORIDE	UG/L	<5	<5	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<10	<10
STYRENE	UG/L	<1	<1	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<1	<1
TETRACHLOROETHENE	UG/L	<1	4	<1
TOLUENE	UG/L	<2	2	<2
1,1,1-TRICHLOROETHANE	UG/L	<1	1	<1
1,1,2-TRICHLOROETHANE	UG/L	<1	<1	<1
TRICHLOROETHENE	UG/L	<1	<1	<1
VINYL ACETATE	UG/L	<10	<10	<10
VINYL CHLORIDE	UG/L	<1	<1	<1
XYLENES (TOTAL)	UG/L	<1	<1	<1
BFB	%	96	97	99
1,2-DICHLOROETHANE-D4	%	114	110	112
TOLUENE-D8	%	102	100	101

MCK0004157

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: WATER

ATI I.D.: 102158

Sample	Parameters	Units	Results
1	NONE DETECTED		N/A
2	NONE DETECTED		N/A
3	NONE DETECTED		N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

st : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ATI I.D. : 102158
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
4	MK-SB-32-021291	WATER	N/A	12-FEB-91	15-FEB-91	20.00
5	MK-SB-7-021291	WATER	N/A	12-FEB-91	15-FEB-91	30.00
6	MK-SB-17B-021291	WATER	N/A	12-FEB-91	15-FEB-91	1.00

Parameter	Units	4	5	6
ACETONE	UG/L	<400	<600	<20
BENZENE	UG/L	41	<30	<1
BROMODICHLOROMETHANE	UG/L	<20	<30	<1
BROMOFORM	UG/L	<100	<150	<5
BROMOMETHANE	UG/L	<200	<300	<10
2-BUTANONE (MEK)	UG/L	<400	<600	<20
CARBON DISULFIDE	UG/L	<20	<30	<1
CARBON TETRACHLORIDE	UG/L	<20	<30	<1
CHLOROBENZENE	UG/L	<20	<30	<1
CHLOROETHANE	UG/L	<20	<30	<1
CHLOROFORM	UG/L	<20	<30	<1
CHLOROMETHANE	UG/L	<200	<300	<10
DIBROMOCHLOROMETHANE	UG/L	<20	<30	<1
1,1-DICHLOROETHANE	UG/L	250	<30	<1
1-DICHLOROETHANE	UG/L	<20	<30	<1
1,1-DICHLOROETHENE	UG/L	3300	3600	<1
CIS-1,2-DICHLOROETHENE	UG/L	520	<30	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<20	<30	<1
1,2-DICHLOROPROPANE	UG/L	<20	<30	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<20	<30	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<20	<30	<1
ETHYLBENZENE	UG/L	<20	<30	<1
2-HEXANONE (MBK)	UG/L	<200	<300	<10
METHYLENE CHLORIDE	UG/L	<100	<150	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<200	<300	<10
STYRENE	UG/L	<20	<30	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<20	<30	<1
TETRACHLOROETHENE	UG/L	2200	3300	5
TOLUENE	UG/L	<40	<60	3
1,1,1-TRICHLOROETHANE	UG/L	3000	6000	<1
1,1,2-TRICHLOROETHANE	UG/L	<20	<30	<1
TRICHLOROETHENE	UG/L	3100	680	33
VINYL ACETATE	UG/L	<200	<300	<10
VINYL CHLORIDE	UG/L	<20	<30	<1
XYLENES (TOTAL)	UG/L	<20	<30	<1
BFB	%	101	100	105
1,2-DICHLOROETHANE-D4	%	96	99	107
TOLUENE-D8	%	98	97	101

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: WATER

ATI I.D.: 102158

Sample	Parameters	Units	Results
4	NONE DETECTED		N/A
5	NONE DETECTED		N/A
6	NONE DETECTED		N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

st : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ATI I.D. : 102158
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
7	MK-SB-17A-021291	WATER	N/A	12-FEB-91	14-FEB-91	1.00

Parameter	Units	7
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
-DICHLOROETHENE	UG/L	<1
-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	7
TOLUENE	UG/L	11
1,1,1-TRICHLOROETHANE	UG/L	3
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	12
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	99
1,2-DICHLOROETHANE-D4	%	116
TOLUENE-D8	%	102

MCK0004161

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: WATER

ATI I.D.: 102158

Sample Parameters	Units	Results
7 NONE DETECTED		N/A

MCK0004162

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10462
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1-DICHLOROETHENE	UG/L	<1
-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	113
1,2-DICHLOROETHANE-D4	%	114
TOLUENE-D8	%	109

MCK0004163

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10462
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004164

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10463
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	97
1,2-DICHLOROETHANE-D4	%	101
TOLUENE-D8	%	100

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10463
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004166

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 10844
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 15-FEB-91
Sample Matrix : WATER
REF I.D. : 102158-06

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<1	55	48	87	51	93	7
CHLOROBENZENE	UG/L	<1	55	51	93	54	98	5
1,1-DICHLOROETHENE	UG/L	<1	48	35	73	44	92	23
TOLUENE	UG/L	3	55	51	87	54	93	7
TRICHLOROETHENE	UG/L	33	50	76	86	79	92	7

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10341
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	52	95
CHLOROBENZENE	UG/L	<1	55	53	96
1,1-DICHLOROETHENE	UG/L	<1	48	46	96
TOLUENE	UG/L	<2	55	52	95
TRICHLOROETHENE	UG/L	<1	50	46	92

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10342
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102158
Date Extracted: N/A
Date Analyzed : 14-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	55	50	91
CHLOROBENZENE	UG/L	<1	55	53	96
1,1-DICHLOROETHENE	UG/L	<1	48	44	92
TOLUENE	UG/L	<2	55	50	91
TRICHLOROETHENE	UG/L	<1	50	42	84

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

102158

CHAIN OF CUSTODY FORM

Lab: ATI

Samplers: Tom Harder, Don Johnson

Job Number: 17333,166.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Burton Chadwick

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	General minerals	Metals	203	pH 150.1 (EPA					
23	X							X				91	02	12	1605	MK-SB-32-021291E			X												01
23	X				X			X				91	02	12	1555	MK-SB-32-021291			X							X					04
23	X				X	X	X	X				91	02	12	1525	MK-SB-17B-021291			X				X	X	X	X					06
23	X							X				91	02	12	1530	MK-SB-17B-021291D			X												02
23	X				X	X	X	X				91	02	12	1305	MK-SB-17A-021291			X				X	X	X	X					07
23	X				X			X				91	02	12	0850	MK-SB-7-021291			X							X					05
23	X							X				91	02	12	0800	MK-SB-7-021291 B			X												03

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Standard turnaround time!
						call Burton Chadwick
						if there is any question
						Custody seals on cooler!

MCK0004170

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) 16:15 2-12-91	RECEIVED BY: (Signature) Bob DeBy — DATE/TIME 2/12/91 1610
RELINQUISHED BY: (Signature) Bob DeBy	RECEIVED BY: (Signature) — DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) — DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature) — DATE/TIME
DISPATCHED BY: (Signature) — DATE/TIME	RECEIVED FOR LAB BY: (Signature) Marian Van Deusen — DATE/TIME 2/14/91 705
METHOD OF SHIPMENT	

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

Analytical Technologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 102195

March 08, 1991

HARDING LAWSON
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,166.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
February 14, 1991	6	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

RICHARD M. AMANO
LABORATORY MANAGER

MCK0004171

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: March 08, 1991
ATI I.D. : 102195

ATI #	Client Description	Matrix	Date Collected
1	MK-SB-23-021491B	WATER	14-FEB-91
2	MK-SB-23-021491D	WATER	14-FEB-91
3	MK-SB-23-021491E	WATER	14-FEB-91
4	MK-SB-23-021491	WATER	14-FEB-91
5	MK-SB-23A-021491	WATER	14-FEB-91
6	MK-SB-23B-021491	WATER	14-FEB-91

---TOTALS---

Matrix	# Samples
WATER	6

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

ient : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 10219

Analysis	Technique/Description
CATION/ANION BALANCE	CALCULATION
EPA 160.1 (TOTAL DISSOLVED SOLIDS)	GRAVIMETRIC
EPA 310.1 (ALKALINITY)	TITRIMETRIC
EPA 340.2 (FLUORIDE)	ELECTRODE
EPA 353.2 (NITRATE-NITRITE AS NITROGEN)	COLORIMETRIC
EPA 425.1 (SURFACTANTS (MBAS))	COLORIMETRIC
EPA 6010 (CALCIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (COPPER)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (IRON)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MAGNESIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (MANGANESE)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (POTASSIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (SODIUM)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 6010 (TOTAL HARDNESS)	CALCULATION
EPA 6010 (ZINC)	INDUCTIVELY COUPLED ARGON PLASMA
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
EPA 9038 (SULFATE)	TURBIDIMETRIC
EPA 9040 (pH)	ELECTRODE
EPA 9050 (ELECTRICAL CONDUCTIVITY)	ELECTRODE
EPA 9251 (CHLORIDE)	COLORIMETRIC

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY RESULTS

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 10219

Sample #	Client ID	Matrix	Date Sampled	Date Received
4	MK-SB-23-021491	WATER	14-FEB-91	14-FEB-9
5	MK-SB-23A-021491	WATER	14-FEB-91	14-FEB-9
6	MK-SB-23B-021491	WATER	14-FEB-91	14-FEB-9

Parameter	Units	4	5	6
CARBONATE AS CACO3	MG/L	<5	<5	<5
BICARBONATE AS CACO3	MG/L	391	82	147
HYDROXIDE AS CACO3	MG/L	<5	<5	<5
TOTAL ALKALINITY AS CACO3	MG/L	391	82	147
CATION/ANION BALANCE	RATIO	0.95	1.5	0.98
CHLORIDE	MG/L	237	84.6	78.0
ELECTRICAL CONDUCTIVITY	UMHOS	1880	2640	1530
FLUORIDE	MG/L	<0.5	<0.5	<0.5
SURFACTANTS (MBAS)	MG/L	<0.1	0.11	0.17
NITRATE-NITRITE AS NITROGEN	MG/L	3.7	12.0	11.9
pH	UNITS	6.93	5.20	6.34
SULFATE	MG/L	248	680	472
TOTAL DISSOLVED SOLIDS	MG/L	1260	2620	1170

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS ATI I.D. : 102195

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
pH	102200-06	UNITS	6.70	6.71	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
ELECTRICAL CONDUCTIVITY	102195-06	UMHOS	1530	1550	1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CHLORIDE	102195-06	MG/L	78.0	78.0	0	177	100	99

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SURFACTANTS (MBAS)	102197-01	MG/L	<0.1	<0.1	0	0.90	1.0	90

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
NITRATE-NITRITE AS NITROGEN	102199-01	MG/L	<0.05	<0.05	0	2.1	2.0	105

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0004179

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
FLUORIDE	102195-06	MG/L	<0.5	<0.5	0	4.6	5.0	92

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL DISSOLVED SOLIDS	102195-04	MG/L	1260	1320	5	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
SULFATE	102191-07	MG/L	<10.0	<10.0	0	21.6	20.0	108

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CARBONATE AS CACO3	102195-06	MG/L	<5	<5	0	N/A	N/A	N/A
BICARBONATE AS CACO3	102195-06	MG/L	147	146	<1	N/A	N/A	N/A
HYDROXIDE AS CACO3	102195-06	MG/L	<5	<5	0	N/A	N/A	N/A
TOTAL ALKALINITY AS CACO3	102195-06	MG/L	147	146	<1	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
SURFACTANTS (MBAS)	10373	MG/L	<0.1	0.97	1.0	97

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CHLORIDE	10374	MG/L	5.0	108	100	108

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
NITRATE-NITRITE AS NITROGEN	10395	MG/L	<0.05	2.06	2.00	103

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
SULFATE	10532	MG/L	<10.0	20.1	20.0	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0004187

AnalyticalTechnologies,Inc.

METALS RESULTS

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 10219

Sample #	Client ID	Matrix	Date Sampled	Date Received
4	MK-SB-23-021491	WATER	14-FEB-91	14-FEB-9
5	MK-SB-23A-021491	WATER	14-FEB-91	14-FEB-9
6	MK-SB-23B-021491	WATER	14-FEB-91	14-FEB-9

Parameter	Units	4	5	6
CALCIUM	MG/L	187	120	89.5
COPPER	MG/L	<0.02	0.06	<0.02
IRON	MG/L	<0.01	1.1	<0.01
TOTAL HARDNESS	MG/L	689	505	403
POTASSIUM	MG/L	5.3	12.2	7.7
MAGNESIUM	MG/L	54.0	49.9	43.5
MANGANESE	MG/L	5.6	0.08	<0.01
SODIUM	MG/L	112	417	165
ZINC	MG/L	0.02	1.7	0.03

Analytical Technologies, Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
TOTAL HARDNESS	102195-06	MG/L	403	404	0	N/A	N/A	N/A

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
COPPER	102195-06	MG/L	<0.02	<0.02	0	0.97	1.0	97
MANGANESE	102195-06	MG/L	<0.01	<0.01	0	0.94	1.0	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

MCK0004190

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

MSMSD

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	REF I.D.	Units	Sample Result	Dup Result	RPD	Spiked Sample	Spike Conc	% Rec
CALCIUM	102195-06	MG/L	89.5	89.8	0	179	100	90
IRON	102195-06	MG/L	<0.01	<0.01	0	0.91	1.0	91
MAGNESIUM	102195-06	MG/L	43.5	43.7	0	141	100	98
POTASSIUM	102195-06	MG/L	7.7	7.8	1	108	100	100
SODIUM	102195-06	MG/L	165	165	0	244	100	79
ZINC	102195-06	MG/L	0.03	0.01	100	0.97	1.0	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 10219

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
CALCIUM	10491	MG/L	<0.05	98.8	100	99
IRON	10491	MG/L	<0.01	0.99	1.0	99
MAGNESIUM	10491	MG/L	<0.01	107	100	107
POTASSIUM	10491	MG/L	<0.1	109	100	109
SODIUM	10491	MG/L	<0.1	91.1	100	91
ZINC	10491	MG/L	<0.01	1.0	1.0	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

METALS - QUALITY CONTROL

BLANK SPIKE

Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102

Parameters	Blank Spike	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
COPPER	10492	MG/L	<0.02	1.1	1.0	110
MANGANESE	10492	MG/L	<0.01	1.1	1.0	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON
ATI I.D. : 102195
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
1	MK-SB-23-021491B	WATER	N/A	14-FEB-91	20-FEB-91	1.00
2	MK-SB-23-021491D	WATER	N/A	14-FEB-91	21-FEB-91	500.00
3	MK-SB-23-021491E	WATER	N/A	14-FEB-91	20-FEB-91	1.00

Parameter	Units	1	2	3
ACETONE	UG/L	<20	<10000	<20
BENZENE	UG/L	<1	<500	<1
BROMODICHLOROMETHANE	UG/L	<1	<500	<1
BROMOFORM	UG/L	<5	<2500	<5
BROMOMETHANE	UG/L	<10	<5000	<10
2-BUTANONE (MEK)	UG/L	<20	<10000	<20
CARBON DISULFIDE	UG/L	<1	<500	<1
CARBON TETRACHLORIDE	UG/L	<1	<500	<1
CHLOROBENZENE	UG/L	<1	<500	<1
CHLOROETHANE	UG/L	<1	<500	<1
CHLOROFORM	UG/L	<1	<500	<1
CHLOROMETHANE	UG/L	<10	<5000	<10
DIBROMOCHLOROMETHANE	UG/L	<1	<500	<1
1,1-DICHLOROETHANE	UG/L	<1	<500	<1
1,2-DICHLOROETHANE	UG/L	<1	1000	<1
1,1-DICHLOROETHENE	UG/L	<1	11000	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1	500	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<500	<1
1,2-DICHLOROPROPANE	UG/L	<1	<500	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<500	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<500	<1
ETHYLBENZENE	UG/L	<1	<500	<1
2-HEXANONE (MBK)	UG/L	<10	<5000	<10
METHYLENE CHLORIDE	UG/L	<5	100000	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<5000	<10
STYRENE	UG/L	<1	<500	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<500	<1
TETRACHLOROETHENE	UG/L	<1	44000	30
TOLUENE	UG/L	<2	3000	2
1,1,1-TRICHLOROETHANE	UG/L	<1	110000	25
1,1,2-TRICHLOROETHANE	UG/L	<1	<500	<1
TRICHLOROETHENE	UG/L	<1	5400	1
VINYL ACETATE	UG/L	<10	<5000	<10
VINYL CHLORIDE	UG/L	<1	<500	<1
XYLENES (TOTAL)	UG/L	<1	620	<1
BFB	%	94	100	101
1,2-DICHLOROETHANE-D4	%	92	107	105
TOLUENE-D8	%	103	98	102

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)

Matrix: WATER

ATI I.D.: 102195

Sample	Parameters	Units	Results
1	NONE DETECTED		N/A
2	NONE DETECTED		N/A
3	NONE DETECTED		N/A

MCK0004195

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195

Sample #	Client ID	Matrix	Date Extracted	Date Sampled	Date Analyzed	Dil. Factor
4	MK-SB-23-021491	WATER	N/A	14-FEB-91	21-FEB-91	500.00
5	MK-SB-23A-021491	WATER	N/A	14-FEB-91	21-FEB-91	1.00
6	MK-SB-23B-021491	WATER	N/A	14-FEB-91	21-FEB-91	1.00

Parameter	Units	4	5	6
ACETONE	UG/L	<10000	<20	<20
BENZENE	UG/L	<500	<1	<1
BROMODICHLOROMETHANE	UG/L	<500	<1	<1
BROMOFORM	UG/L	<2500	<5	<5
BROMOMETHANE	UG/L	<5000	<10	<10
2-BUTANONE (MEK)	UG/L	<10000	<20	<20
CARBON DISULFIDE	UG/L	<500	<1	<1
CARBON TETRACHLORIDE	UG/L	<500	<1	<1
CHLOROBENZENE	UG/L	<500	<1	<1
CHLOROETHANE	UG/L	<500	<1	<1
CHLOROFORM	UG/L	<500	<1	<1
CHLOROMETHANE	UG/L	<5000	<10	<10
DIBROMOCHLOROMETHANE	UG/L	<500	<1	<1
1,1-DICHLOROETHANE	UG/L	<500	<1	<1
1,2-DICHLOROETHANE	UG/L	1300	<1	<1
1,1-DICHLOROETHENE	UG/L	10000	2	2
CIS-1,2-DICHLOROETHENE	UG/L	600	<1	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<500	<1	<1
1,2-DICHLOROPROPANE	UG/L	<500	<1	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<500	<1	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<500	<1	<1
ETHYLBENZENE	UG/L	<500	<1	<1
2-HEXANONE (MBK)	UG/L	<5000	<10	<10
METHYLENE CHLORIDE	UG/L	93000	<5	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<5000	<10	<10
STYRENE	UG/L	<500	<1	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<500	<1	<1
TETRACHLOROETHENE	UG/L	40000	13	17
TOLUENE	UG/L	2500	10	10
1,1,1-TRICHLOROETHANE	UG/L	94000	12	17
1,1,2-TRICHLOROETHANE	UG/L	<500	<1	<1
TRICHLOROETHENE	UG/L	5000	7	67
VINYL ACETATE	UG/L	<5000	<10	<10
VINYL CHLORIDE	UG/L	<500	<1	<1
XYLENES (TOTAL)	UG/L	<500TR	<1	<1
BFB	%	100	95	94
1,2-DICHLOROETHANE-D4	%	108	92	92
TOLUENE-D8	%	99	103	102

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL.

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method: EPA 8240 (GC/MS FOR VOLATILE ORGANICS) Matrix: WATER

ATI I.D.: 102195

Sample	Parameters	Units	Results
4	NONE DETECTED		N/A
5	NONE DETECTED		N/A
6	NONE DETECTED		N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10526
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	97
1,2-DICHLOROETHANE-D4	%	100
TOLUENE-D8	%	102

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10526
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004199

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10528
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	10
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	97
1,2-DICHLOROETHANE-D4	%	94
TOLUENE-D8	%	106

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10528
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004201

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10551
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 21-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	8
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
BFB	%	99
1,2-DICHLOROETHANE-D4	%	97
TOLUENE-D8	%	100

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
(ADDITIONAL COMPOUNDS)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 10551
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 21-FEB-91
Dil. Factor : 1.00

Parameters	Units	Results
NONE DETECTED		N/A

MCK0004203

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 10923
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Sample Matrix : WATER
REF I.D. : 102195-03

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<1	55	55	100	55	100	0
CHLOROBENZENE	UG/L	<1	55	57	104	59	107	3
1,1-DICHLOROETHENE	UG/L	<1	48	45	94	47	98	4
TOLUENE	UG/L	2	55	56	98	57	100	2
TRICHLOROETHENE	UG/L	1	50	48	94	48	94	0

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10418
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	50	55	91
CHLOROBENZENE	UG/L	<1	51	55	93
1,1-DICHLOROETHENE	UG/L	<1	44	48	93
TOLUENE	UG/L	<2	51	55	93
TRICHLOROETHENE	UG/L	<1	42	50	84

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10420
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 20-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	56	55	102
CHLOROBENZENE	UG/L	<1	57	55	104
1,1-DICHLOROETHENE	UG/L	<1	51	48	106
TOLUENE	UG/L	<2	57	55	104
TRICHLOROETHENE	UG/L	<1	55	50	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 10437
Client : HARDING LAWSON
Project # : 17333,166.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 102195
Date Extracted: N/A
Date Analyzed : 21-FEB-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1.0	49	55	89
CHLOROBENZENE	UG/L	<1.0	49	55	89
1,1-DICHLOROETHENE	UG/L	<1.0	42	48	88
TOLUENE	UG/L	<2.0	48	55	87
TRICHLOROETHENE	UG/L	<1.0	41	50	82

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative Percent Difference) = (Sample Result - Duplicate Result)*100/Average Result

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

1021951

CHAIN OF CUSTODY FORM

Lab: ATI

Samplers: Dan Johnson, Tom Herdis

Job Number: 17333,166.11

Name/Location: McKesson - Santa Fe Springs

Project Manager: Buxton Chadwick

Recorder: (Signature Required)

	SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	General minerals	metals (Field Filtered)	203		QA EPA 150.1
01	23	X							X				910214			0730	MK-SB-23-021491B			X								
02	23	X				X	X	X	X				910214			1330	MK-SB-23-021491D			X								
04	23	X				X	X	X	X				910214			1325	MK-SB-23-021491			X				X	X	X		X
05	23	X				X	X	X	X				910214			0945	MK-SB-23A-021491			X				X	X	X		X
06	23	X							X				910214			1150	MK-SB-23B-021491			X				X	X	X		X
03	23	X							X				910214			1345	MK-SB-23C-021491E			X								

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						Standard Turnaround time! Call Buxton Chadwick if there is any question!
						Custody seals on cooler!

MCK0004208

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
[illegible]	Mike Teague	2/14/91 15:51
Mike Teague	[illegible]	
[illegible]	Dan #31	2/14/91 16:30
	[illegible]	2-14 18:45

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
[illegible]	2-14 2210	[illegible]	2/14/91 22:10

METHOD OF SHIPMENT

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

6533

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 104152

April 23, 1991

HARDING LAWSON ASSOCIATES
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,165.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
April 09, 1991	6	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

RICHARD M. AMANO
LABORATORY MANAGER

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: April 23, 1991
ATI I.D. : 104152

ATI #	Client Description	Matrix	Date Collected
1	MK-CPT-1-040991	WATER	09-APR-91
2	MK-CPT-2-040991	WATER	09-APR-91
3	MK-CPT-3-040991E	WATER	09-APR-91
4	MK-CPT-3-040991B	WATER	09-APR-91
5	MK-CPT-3-040991	WATER	09-APR-91
6	MK-CPT-4-040991	WATER	09-APR-91

---TOTALS---

Matrix	# Samples
WATER	6

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 104152

Analysis	Technique/Description
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
ATI I.D. : 104152
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	MK-CPT-1-040991	WATER	09-APR-91	N/A	18-APR-91	4.00
2	MK-CPT-2-040991	WATER	09-APR-91	N/A	19-APR-91	5.00
3	MK-CPT-3-040991E	WATER	09-APR-91	N/A	17-APR-91	1.00

Parameter	Units	1	2	3
ACETONE	UG/L	<80	<100	<20
BENZENE	UG/L	<4	<5	<1
BROMODICHLOROMETHANE	UG/L	<4	<5	<1
BROMOFORM	UG/L	<20	<25	<5
BROMOMETHANE	UG/L	<40	<50	<10
2-BUTANONE (MEK)	UG/L	<80	<100	<20
CARBON DISULFIDE	UG/L	<4	<5	<1
CARBON TETRACHLORIDE	UG/L	<4	<5	<1
CHLOROBENZENE	UG/L	<4	<5	<1
CHLOROETHANE	UG/L	<4	<5	<1
CHLOROFORM	UG/L	<4	<5	<1
CHLOROMETHANE	UG/L	<40	<50	<10
DIBROMOCHLOROMETHANE	UG/L	<4	<5	<1
1,1-DICHLOROETHANE	UG/L	64	88	<1
1,2-DICHLOROETHANE	UG/L	<4	<5	<1
1,1-DICHLOROETHENE	UG/L	220	330	<1
CIS-1,2-DICHLOROETHENE	UG/L	160	44	<1
TRANS-1,2-DICHLOROETHENE	UG/L	8	<5	<1
1,2-DICHLOROPROPANE	UG/L	<4	<5	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<4	<5	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<4	<5	<1
ETHYLBENZENE	UG/L	<4	<5	<1
2-HEXANONE (MBK)	UG/L	<40	<50	<10
METHYLENE CHLORIDE	UG/L	<20	450	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<40	<50	<10
STYRENE	UG/L	<4	<5	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<4	<5	<1
TETRACHLOROETHENE	UG/L	150	330	<1
TOLUENE	UG/L	<8	18	<2
1,1,1-TRICHLOROETHANE	UG/L	48	610	<1
1,1,2-TRICHLOROETHANE	UG/L	<4	<5	<1
TRICHLOROETHENE	UG/L	280	220	<1
VINYL ACETATE	UG/L	<40	<50	<10
VINYL CHLORIDE	UG/L	<4	<5	<1
XYLENES (TOTAL)	UG/L	<4	14	<1
SURROGATES				
BFB	%	100	91	92
1,2-DICHLOROETHANE-D4	%	100	98	104
TOLUENE-D8	%	102	99	96

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
ATI I.D.: 104152
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
1	NONE DETECTED	N/A	N/A
2	TRICHLOROTRIFLUOROETHANE (FREON 113)	UG/L	35*P
3	NONE DETECTED	N/A	N/A

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
ATI I.D. : 104152
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	MK-CPT-3-040991B	WATER	09-APR-91	N/A	19-APR-91	1.00
5	MK-CPT-3-040991	WATER	09-APR-91	N/A	17-APR-91	50.00
6	MK-CPT-4-040991	WATER	09-APR-91	N/A	19-APR-91	100.00

Parameter	Units	4	5	6
ACETONE	UG/L	<20	<1000	<2000
BENZENE	UG/L	<1	<50	<100
BROMODICHLOROMETHANE	UG/L	<1	<50	<100
BROMOFORM	UG/L	<5	<250	<500
BROMOMETHANE	UG/L	<10	<500	<1000
2-BUTANONE (MEK)	UG/L	<20	<1000	<2000
CARBON DISULFIDE	UG/L	<1	<50	<100
CARBON TETRACHLORIDE	UG/L	<1	<50	<100
CHLOROBENZENE	UG/L	<1	<50	<100
CHLOROETHANE	UG/L	<1	<50	<100
CHLOROFORM	UG/L	<1	<50	<100
CHLOROMETHANE	UG/L	<10	<500	<1000
DIBROMOCHLOROMETHANE	UG/L	<1	<50	<100
1,1-DICHLOROETHANE	UG/L	<1	270	730
1,2-DICHLOROETHANE	UG/L	<1	<50	<100
1,1-DICHLOROETHENE	UG/L	<1	1900	11000
CIS-1,2-DICHLOROETHENE	UG/L	<1	2700	150
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<50	<100
1,2-DICHLOROPROPANE	UG/L	<1	<50	<100
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<50	<100
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<50	<100
ETHYLBENZENE	UG/L	<1	<50	<100
2-HEXANONE (MBK)	UG/L	<10	<500	<1000
METHYLENE CHLORIDE	UG/L	<5	5000	<500
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<500	<1000
STYRENE	UG/L	<1	<50	<100
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<50	<100
TETRACHLOROETHENE	UG/L	<1	1500	10000
TOLUENE	UG/L	<2	210	<200
1,1,1-TRICHLOROETHANE	UG/L	<1	2400	20000
1,1,2-TRICHLOROETHANE	UG/L	<1	<50	<100
TRICHLOROETHENE	UG/L	<1	2200	2400
VINYL ACETATE	UG/L	<10	<500	<1000
VINYL CHLORIDE	UG/L	<1	<50	<100
XYLENES (TOTAL)	UG/L	<1	98	<100
SURROGATES				
BFB	%	98	98	94
1,2-DICHLOROETHANE-D4	%	103	96	97
TOLUENE-D8	%	106	100	102

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 104152

Sample	Parameters	Units	Results
4	NONE DETECTED	N/A	N/A
5	NONE DETECTED	N/A	N/A
6	NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11581
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 17-APR-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	25
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
SURROGATES		
BFB	%	95
1,2-DICHLOROETHANE-D4	%	104
TOLUENE-D8	%	102

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11581 ATI I.D. : 104152
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11610
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 18-APR-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
SURROGATES		
BFB	%	97
1,2-DICHLOROETHANE-D4	%	110
TOLUENE-D8	%	102

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11610 ATI I.D. : 104152
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11649
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 19-APR-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	8
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
SURROGATES		
BFB	%	96
1,2-DICHLOROETHANE-D4	%	108
TOLUENE-D8	%	102

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11649 ATI I.D. : 104152
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11655
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 18-APR-91
Dil. Factor : 1.00

Parameters	Units	Results
ACETONE	UG/L	<20
BENZENE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
BROMOFORM	UG/L	<5
BROMOMETHANE	UG/L	<10
2-BUTANONE (MEK)	UG/L	<20
CARBON DISULFIDE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
CHLOROBENZENE	UG/L	<1
CHLOROETHANE	UG/L	<1
CHLOROFORM	UG/L	<1
CHLOROMETHANE	UG/L	<10
DIBROMOCHLOROMETHANE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
1,1-DICHLOROETHENE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
METHYLENE CHLORIDE	UG/L	7
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
STYRENE	UG/L	<1
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
TOLUENE	UG/L	<2
1,1,1-TRICHLOROETHANE	UG/L	<1
1,1,2-TRICHLOROETHANE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
SURROGATES		
BFB	%	102
1,2-DICHLOROETHANE-D4	%	106
TOLUENE-D8	%	105

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 11655 ATI I.D. : 104152
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 13482
Client : HARDING LAWSON ASSOCIATES

Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 19-APR-91
Sample Matrix : WATER
REF I.D. : 104152-04

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<1	50	48	96	48	96	0
CHLOROBENZENE	UG/L	<1	50	47	94	47	94	0
1,1-DICHLOROETHENE	UG/L	<1	90	42	105	42	105	0
TOLUENE	UG/L	<2	50	48	96	48	96	0
TRICHLOROETHENE	UG/L	<1	50	45	90	46	92	2

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 11964
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 17-APR-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	47	50	94
CHLOROBENZENE	UG/L	<1	47	50	94
1,1-DICHLOROETHENE	UG/L	<1	42	40	105
TOLUENE	UG/L	<2	47	50	94
TRICHLOROETHENE	UG/L	<1	46	50	92

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 12014
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 18-APR-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	49	50	98
CHLOROBENZENE	UG/L	<1	48	50	96
1,1-DICHLOROETHENE	UG/L	<1	43	40	108
TOLUENE	UG/L	<2	48	50	96
TRICHLOROETHENE	UG/L	<1	47	50	94

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 12080
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 104152
Date Extracted: N/A
Date Analyzed : 19-APR-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<1	50	46	92
CHLOROBENZENE	UG/L	<1	50	45	90
1,1-DICHLOROETHENE	UG/L	<1	40	39	98
TOLUENE	UG/L	<2	50	46	92
TRICHLOROETHENE	UG/L	<1	50	43	86

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

AnalyticalTechnologies, Inc.

5550 MOREHOUSE DRIVE
SAN DIEGO, CA 92121-1709
(619) 458-9141

Chain of Custody

DATE 4-9-91 PAGE 1 OF 1

PROJECT MANAGER: Burton Chadwick
COMPANY: Harding Lawson Associates
ADDRESS: 15621 Redhill Ave Suite 100
Tustin Calif 92680

BILL TO: Same as above
COMPANY:
ADDRESS:

Tom Harder (714) 259-7992
SAMPLERS: (Signature) PHONE NUMBER

Recommended Quantity and Preservative (Provide triple volume on QC Samples)

	SAMPLE ID	SAMPLE DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons 418.1 (1L (H2SO4)/100g)	Oil and Grease 413.2 (1L (H2SO4)/100g)	Gasoline (MOD 8015/DOHS) (4 oz (HCl)/50g)	Diesel (MOD 8015/DOHS) (4 oz (HCl)/50g)	Gasoline/BTXE (MOD 8015/8020) (4 oz (HCl)/50g)	MOD 8015 (Unknown) (2X40ml (HCl)/50g)	BTXE (8020) (2X40ml (HCl)/50g)	Chlorinated Hydrocarbons (8010) (2X40ml (HCl)/50g)	Aromatic Hydrocarbons (8020) (2X40ml (HCl)/50g)	Chlorinated/Aromatic Hydrocarbons (8010/8020) (2X40ml (HCl)/50g)	Organic Pb (500ml/50g)	Pesticides/PCB (8080) (1L/50g)	Base/NEU/Acid Cmpds GC/MS (8270) (1L/100g)	Volatile Cmpds GC/MS (8240) (2X40ml (HCl)/100g)	Polynuclear Aromatic (8310) (1L/100g)	CCR Metals (500ml/100g)	Priority Pollutant Metals (500ml/100g)	Number of Containers
01	MK-CPT-1-040991	4-9-91	0845	Water															X				2
02	MK-CPT-2-040991	4-9-91	1030	Water															X				2
03	MK-CPT-3-040991E	4-9-91	1130	Water															X				2
04	MK-CPT-3-040991B	4-9-91	1135	Water															X				2
05	MK-CPT-3-040991	4-9-91	1240	Water															X				2
06	MK-CPT-1-040991	4-9-91	1400	Water															X				2

MCK0004228

PROJECT INFORMATION	
PROJECT NUMBER: 17335,165,11	
PROJECT NAME: McKesson S.F.S.	
PURCHASE ORDER NUMBER:	
VIA:	
TAT: ☐24HR ☐48HRS ☐72HRS ☐1WK ☐2WK	

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	12
CHAIN OF CUSTODY SEALS Y/N/NA	N
SEALS INTACT? Y/N/NA	N/A
RECEIVED GOOD COND./COLD	✓
LAB NUMBER	104152

SAMPLE DISPOSAL INSTRUCTIONS

☐ ATI Disposal @ $5.00 each ☐ Return ☐ Pickup

Comments:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Tom Harder Time: 15:20	Signature: Time:	Signature: Time:
Printed Name: Tom Harder Date: 4-9-91	Printed Name: Date: 4/9	Printed Name: Date:
Company: HLA	Company:	Company:

RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY: (LAB) 3.
Signature: Time: 1500	Signature: Time:	Signature: M Van Dekker Time: 5:45
Printed Name: Date: 4/9/91	Printed Name: Date:	Printed Name: M VANDERKOOI Date: 4/9/91
Company: ATI	Company:	Analytical Technologies, Inc. ATI

DISTRIBUTION: White, Canary - ANALYTICAL TECHNOLOGIES, INC. • Pink - ORI R

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 104179

April 24, 1991

HARDING LAWSON ASSOCIATES
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,165.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
April 10, 1991	2	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

for RICHARD M. AMANO
LABORATORY MANAGER

MCK0004229

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: April 24, 1991
ATI I.D. : 104179

ATI #	Client Description	Matrix	Date Collected
1	MK-CPT-6-041091	WATER	10-APR-91
2	MK-CPT-6-041091D	WATER	10-APR-91

---TOTALS---

Matrix	# Samples
WATER	2

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 104179

Analysis	Technique/Description
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 104179
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	MK-CPT-6-041091	WATER	10-APR-91	N/A	19-APR-91	2.00
2	MK-CPT-6-041091D	WATER	10-APR-91	N/A	19-APR-91	2.00

Parameter	Units	1	2
ACETONE	UG/L	<40	<40
BENZENE	UG/L	<2	<2
BROMODICHLOROMETHANE	UG/L	<2	<2
BROMOFORM	UG/L	<10	<10
BROMOMETHANE	UG/L	<20	<20
2-BUTANONE (MEK)	UG/L	<40	<40
CARBON DISULFIDE	UG/L	<2	<2
CARBON TETRACHLORIDE	UG/L	<2	<2
CHLOROBENZENE	UG/L	<2	<2
CHLOROETHANE	UG/L	<2	<2
CHLOROFORM	UG/L	<2	<2
CHLOROMETHANE	UG/L	<20	<20
DIBROMOCHLOROMETHANE	UG/L	<2	<2
1,1-DICHLOROETHANE	UG/L	81	88
1,2-DICHLOROETHANE	UG/L	<2	<2
1,1-DICHLOROETHENE	UG/L	300	370
CIS-1,2-DICHLOROETHENE	UG/L	140	160
TRANS-1,2-DICHLOROETHENE	UG/L	<2	5
1,2-DICHLOROPROPANE	UG/L	<2	<2
CIS-1,3-DICHLOROPROPENE	UG/L	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<2	<2
ETHYLBENZENE	UG/L	<2	<2
2-HEXANONE (MBK)	UG/L	<20	<20
METHYLENE CHLORIDE	UG/L	<10	<10
4-METHYL-2-PENTANONE (MIBK)	UG/L	<20	<20
STYRENE	UG/L	<2	<2
1,1,2,2-TETRACHLOROETHANE	UG/L	<2	<2
TETRACHLOROETHENE	UG/L	130	160
TOLUENE	UG/L	<4	<4
1,1,1-TRICHLOROETHANE	UG/L	66	94
1,1,2-TRICHLOROETHANE	UG/L	<2	<2
TRICHLOROETHENE	UG/L	200	250
VINYL ACETATE	UG/L	<20	<20
VINYL CHLORIDE	UG/L	<2	<2
XYLENES (TOTAL)	UG/L	<2	<2
SURROGATES			
BFB	%	98	97
1,2-DICHLOROETHANE-D4	%	106	106
TOLUENE-D8	%	101	101

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

WATER
ATI I.D.: 104179

Sample	Parameters	Units	Results
1	TRICHLOROFLUOROMETHANE	UG/L	28*P
	FREON 113	UG/L	43*P
2	TRICHLOROFLUOROMETHANE	UG/L	36*P
	FREON 113	UG/L	55*P
	CYCLOHEXANE	UG/L	10
	METHYL CYCLOHEXANE	UG/L	20

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 13482
Client : HARDING LAWSON ASSOCIATES

Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 104179
Date Extracted: N/A
Date Analyzed : 19-APR-91
Sample Matrix : WATER
REF I.D. : 104152-04

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<1	50	48	96	48	96	0
CHLOROBENZENE	UG/L	<1	50	47	94	47	94	0
1,1-DICHLOROETHENE	UG/L	<1	90	42	105	42	105	0
TOLUENE	UG/L	<2	50	48	96	48	96	0
TRICHLOROETHENE	UG/L	<1	50	45	90	46	92	2

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

'est : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
3lank Spike #: 12080
:lient : HARDING LAWSON ASSOCIATES
'roject # : 17333,165.11
'roject Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 104179
Date Extracted: N/A
Date Analyzed : 19-APR-91
Sample Matrix : WATER

'arameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
3ENZENE	UG/L	<1	50	46	92
:HLOROBENZENE	UG/L	<1	50	45	90
.,1-DICHLOROETHENE	UG/L	<1	40	39	98
:OLUENE	UG/L	<2	50	46	92
:RICHLOROETHENE	UG/L	<1	50	43	86

. Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
:PD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

Analytical Technologies, Inc.

5550 MOREHOUSE DRIVE
SAN DIEGO, CA 92121-1709
(619) 458-9141

Chain of Custody

DATE 4-10-91 PAGE 1 OF 1

PROJECT MANAGER: Burton Chadwick
COMPANY: Harding Lawson Associates
ADDRESS: 15621 Redhill Ave. Suite 100
Tustin, CA 92680

BILL TO: Same as Above
COMPANY:
ADDRESS:

Tom Harder — SAMPLERS: (Signature)
(714) 259-7992 — PHONE NUMBER

Recommended Quantity and Preservative (Provide triple volume on QC Samples)

SAMPLE ID	SAMPLE DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons 418.1 (1L (H; SO4)/100g)	Oil and Grease 413.2 (1L (H; SO4)/100g)	Gasoline (MOD 8015/DOHS) (4 oz (HCl)/50g)	Diesel (MOD 8015/DOHS) (4 oz (HCl)/50g)	Gasoline/BTXE (MOD 8015/8020) (4 oz (HCl)/50g)	MOD 8015 (Unknown)	BTXE (8020) (2X40ml (HCl)/50g)	Chlorinated Hydrocarbons (8010) (2X40ml (HCl)/50g)	Aromatic Hydrocarbons (8020) (2X40ml (HCl)/50g)	Chlorinated/Aromatic Hydrocarbons (8010/8020) (2X40ml (HCl)/50g)	Organic Pb (500ml/50g)		Pesticides/PCB (8080) (1L/50g)	Base/NEU/Acid Cmpds GC/MS (8270) (1L/100g)	Volatile Cmpds GC/MS (8240) (2X40ml (HCl)/100g)	Polynuclear Aromatic (8310) (1L/100g)	CCR Metals (500ml/100g)	Priority Pollutant Metals (500ml/100g)									Number of Containers
01 MK-CPT-6-041091	4-10-91	09:45	Water																X												2
02 MK-CPT-6-041091D	"	09:50	"																X												2

MCK0004236

PROJECT INFORMATION	SAMPLE RECEIPT	
PROJECT NUMBER: 17333,165.11	TOTAL NUMBER OF CONTAINERS	4
PROJECT NAME: McKesson S.F.S.	CHAIN OF CUSTODY SEALS Y/N/NA	✓
PURCHASE ORDER NUMBER:	SEALS INTACT? Y/N/NA cooler	✓
VIA:	RECEIVED GOOD COND./COLD	✓
TAT: ☐24HR ☐48HRS ☐72HRS ☐1WK ☐2WK	LAB NUMBER 104179	

SAMPLE DISPOSAL INSTRUCTIONS

☐ ATI Disposal @ $5.00 each ☐ Return ☐ Pickup

Comments:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Tom Harder Time:	Signature: Bard Bailey Time: 4:20	Signature: [illegible] Time: 1851
Printed Name: Tom Harder Date: 4/10/91	Printed Name: Bard Bailey Date: 4/10/91	Printed Name: TERRIE Date: 4/10
Company: HLA	Company:	Company: PDQ
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: (LAB) 3.**
Signature: Bard Bailey Time:	Signature: [illegible] Time: 1620	Signature: M. VanDerhoff Time:
Printed Name: Bard Bailey Date: 4/10/91	Printed Name: TERRIE Date: 4/10	Printed Name: M VANDERHOFF Date:
Company:	Company: PDQ	Analytical Technologies, Inc. AT 4/10/91 6:50

DISTRIBUTION: White, Canary - ANALYTICAL TECHNOLOGIES, INC. • Pink - ORIGINATOR

AnalyticalTechnologies, Inc. Corporate Offices 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 109149

September 26, 1991

HARDING LAWSON ASSOCIATES
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,165.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
September 11, 1991	5	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

KENNETH WAHL
LABORATORY MANAGER

Analytical Technologies, Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: September 26, 1991
ATI I.D. : 109149

ATI #	Client Description	Matrix	Date Collected
1	MK-CPT-10-091091	WATER	10-SEP-91
2	MK-CPT-10-091091B	WATER	10-SEP-91
3	MK-CPT-10-091091D	WATER	10-SEP-91
4	MK-CPT-11-091091	WATER	10-SEP-91
5	MK-CPT-11-091091E	WATER	10-SEP-91

---TOTALS---

Matrix	# Samples
WATER	5

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MCK0004238

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 109149

Analysis	Technique/Description
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 109149
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	MK-CPT-10-091091	WATER	10-SEP-91	N/A	19-SEP-91	2.00
2	MK-CPT-10-091091B	WATER	10-SEP-91	N/A	18-SEP-91	1.00
3	MK-CPT-10-091091D	WATER	10-SEP-91	N/A	18-SEP-91	2.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<20	<10	<20
VINYL CHLORIDE	UG/L	<2	<1	<2
BROMOMETHANE	UG/L	<20	<10	<20
CHLOROETHANE	UG/L	<2	<1	<2
ACETONE	UG/L	<40	<20	<40
1,1-DICHLOROETHENE	UG/L	56	<1	46
METHYLENE CHLORIDE	UG/L	<10	<5	<10
CARBON DISULFIDE	UG/L	<2	<1	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<2	<1	<2
VINYL ACETATE	UG/L	<20	<10	<20
1,1-DICHLOROETHANE	UG/L	<2	<1	<2
CIS-1,2-DICHLOROETHENE	UG/L	5	<1	5
CHLOROFORM	UG/L	<2	<1	<2
2-BUTANONE (MEK)	UG/L	<40	<20	<40
1,1,1-TRICHLOROETHANE	UG/L	5	<1	5
CARBON TETRACHLORIDE	UG/L	<2	<1	<2
1,2-DICHLOROETHANE	UG/L	<2	<1	<2
BENZENE	UG/L	<2	<1	<2
TRICHLOROETHENE	UG/L	240	<1	210
1,2-DICHLOROPROPANE	UG/L	<2	<1	<2
BROMODICHLOROMETHANE	UG/L	<2	<1	<2
4-METHYL-2-PENTANONE (MIBK)	UG/L	<20	<10	<20
CIS-1,3-DICHLOROPROPENE	UG/L	<2	<1	<2
TOLUENE	UG/L	<4	<2	<4
TRANS-1,3-DICHLOROPROPENE	UG/L	<2	<1	<2
2-HEXANONE (MBK)	UG/L	<20	<10	<20
1,1,2-TRICHLOROETHANE	UG/L	<2	<1	<2
TETRACHLOROETHENE	UG/L	89	<1	81
DIBROMOCHLOROMETHANE	UG/L	<2	<1	<2
CHLOROBENZENE	UG/L	<2	<1	<2
ETHYLBENZENE	UG/L	<2	<1	<2
XYLENES (TOTAL)	UG/L	<2	<1	<2
STYRENE	UG/L	<2	<1	<2
BROMOFORM	UG/L	<10	<5	<10
1,1,2,2-TETRACHLOROETHANE	UG/L	<2	<1	<2
SURROGATES				
1,2-DICHLOROETHANE-D4	%	115	103	102
TOLUENE-D8	%	110	102	101
BFB	%	109	100	99

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
ATI I.D.: 109149
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
1	TRICHLOROTRIFLUOROETHANE (FREON 113)	UG/L	25*P
	TRICHLOROFLUOROMETHANE	UG/L	24*P
2	NONE DETECTED	N/A	N/A
3	TRICHLOROTRIFLUOROETHANE (FREON 113)	UG/L	22*P
	TRICHLOROFLUOROMETHANE	UG/L	18*P

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 109149
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	MK-CPT-11-091091	WATER	10-SEP-91	N/A	18-SEP-91	1.00
5	MK-CPT-11-091091E	WATER	10-SEP-91	N/A	19-SEP-91	1.00

Parameter	Units	4	5
CHLOROMETHANE	UG/L	<10	<10
VINYL CHLORIDE	UG/L	<1	<1
BROMOMETHANE	UG/L	<10	<10
CHLOROETHANE	UG/L	<1	<1
ACETONE	UG/L	<20	<20
1,1-DICHLOROETHENE	UG/L	68	<1
METHYLENE CHLORIDE	UG/L	<5	<5
CARBON DISULFIDE	UG/L	<1	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<1
VINYL ACETATE	UG/L	<10	<10
1,1-DICHLOROETHANE	UG/L	32	<1
CIS-1,2-DICHLOROETHENE	UG/L	3	<1
CHLOROFORM	UG/L	<1	<1
2-BUTANONE (MEK)	UG/L	<20	<20
1,1,1-TRICHLOROETHANE	UG/L	79	<1
CARBON TETRACHLORIDE	UG/L	<1	<1
1,2-DICHLOROETHANE	UG/L	<1	<1
BENZENE	UG/L	<1	<1
TRICHLOROETHENE	UG/L	10	<1
1,2-DICHLOROPROPANE	UG/L	<1	<1
BROMODICHLOROMETHANE	UG/L	<1	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<1
TOLUENE	UG/L	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<1
2-HEXANONE (MBK)	UG/L	<10	<10
1,1,2-TRICHLOROETHANE	UG/L	<1	<1
TETRACHLOROETHENE	UG/L	70	<1
DIBROMOCHLOROMETHANE	UG/L	<1	<1
CHLOROBENZENE	UG/L	<1	<1
ETHYLBENZENE	UG/L	<1	<1
XYLENES (TOTAL)	UG/L	<1	<1
STYRENE	UG/L	<1	<1
BROMOFORM	UG/L	<5	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<1
SURROGATES			
1,2-DICHLOROETHANE-D4	%	101	116
TOLUENE-D8	%	102	112
BFB	%	100	112

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D.: 109149
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
4	TRICHLOROTRIFLUOROETHANE (FREON 113)	UG/L	<5TR *P
	TRICHLOROFLUOROMETHANE	UG/L	<5TR *P
5	NONE DETECTED	N/A	N/A

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.
TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 14966
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 109149
Date Extracted: N/A
Date Analyzed : 18-SEP-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	103
TOLUENE-D8	%	102
BFB	%	98

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 14966 ATI I.D. : 109149
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 14967
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 109149
Date Extracted: N/A
Date Analyzed : 18-SEP-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	112
TOLUENE-D8	%	111
BFB	%	110

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 14967 ATI I.D. : 109149
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 22098
Client : HARDING LAWSON ASSOCIATES

Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 109149
Date Extracted: N/A
Date Analyzed : 19-SEP-91
Sample Matrix : WATER
REF I.D. : 109149-05

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
1,1-DICHLOROETHENE	UG/L	<1	40	49	123	49	123	0
BENZENE	UG/L	<1	50	55	110	56	112	2
TRICHLOROETHENE	UG/L	<1	45	45	100	46	102	2
TOLUENE	UG/L	<2	50	56	112	57	114	2
CHLOROBENZENE	UG/L	<1	50	58	116	59	118	2

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 17277
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 109149
Date Extracted: N/A
Date Analyzed : 18-SEP-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	42	40	105
BENZENE	UG/L	<1	48	50	96
TRICHLOROETHENE	UG/L	<1	41	45	91
TOLUENE	UG/L	<2	49	50	98
CHLOROBENZENE	UG/L	<1	50	50	100

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

Analytical Technologies, Inc.

5550 MOREHOUSE DRIVE
SAN DIEGO, CA 92121-1709
(619) 458-9141

Chain of Custody

DATE 9-10-91 PAGE 1 OF 1

PROJECT MANAGER: Burton Chadwick
COMPANY: Harding Lawson Associates
ADDRESS: 15621 Redhill Ave. Suite 100
Tustin, CA 92680

BILL TO: Same as Above
COMPANY:
ADDRESS:

Tom Harder — SAMPLERS: (Signature)
(714) 259-7992 — PHONE NUMBER

MCK0004250

Recommended Quantity and Preservative (Provide triple volume on QC Samples)

SAMPLE ID	SAMPLE DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons 418.1 (1L (H₂ SO₄)/100g)	Oil and Grease 413.2 (1L (H₂ SO₄)/100g)	Gasoline (MOD 8015/DOHS) (4 oz (HCl)/50g)	Diesel (MOD 8015/DOHS) (4 oz (HCl)/50g)	Gasoline/BTXE (MOD 8015/8020) (4 oz (HCl)/50g)	MOD 8015 (Unknown)	BTXE (8020) (2X40ml (HCl)/50g)	Chlorinated Hydrocarbons (8010) (2X40ml (HCl)/50g)	Aromatic Hydrocarbons (8020) (2X40ml (HCl)/50g)	Chlorinated/Aromatic Hydrocarbons (8010/8020) (2X40ml (HCl)/50g)	Organic Pb (500ml/50g)		Pesticides/PCB (8080) (1L/50g)	Base/NEU/Acid Cmpds GC/MS (8270) (1L/100g)	Volatile Cmpds GC/MS (8240) (2X40ml (HCl)/100g)	Polynuclear Aromatic (8310) (1L/100g)	CCR Metals (500ml/100g)	Priority Pollutant Metals (500ml/100g)	Number of Containers
MK-CPT-10-091091	9-10-91	1345	water	C1															X					2
MK-CPT-10-091091B	9-10-91	1335	water	02															X					2
MK-CPT-10-091091D	9-10-91	1345	water	03															X					2
MK-CPT-11-091091	9-10-91	1615	water	04															X					1 *
MK-CPT-11-091091E	9-10-91	1445	water	05															X					2

PROJECT INFORMATION	SAMPLE RECEIPT	
PROJECT NUMBER: 17333,165.11	TOTAL NUMBER OF CONTAINERS	9
PROJECT NAME: McKesson S. Fe S.	CHAIN OF CUSTODY SEALS Y/N/NA	N
PURCHASE ORDER NUMBER:	SEALS INTACT? Y/N/NA	NA
VIA:	RECEIVED GOOD COND./COLD	Y
TAT: ☐24HR ☐48HRS ☐72HRS ☐1WK ☐2WK	LAB NUMBER	10F1149

SAMPLE DISPOSAL INSTRUCTIONS

☐ ATI Disposal @ $5.00 each ☐ Return ☐ Pickup

Comments: Please Note! MK-CPT-11 has only one Vial for analyses

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Tom Harder Time: 1410	Signature: [illegible] Time:	Signature: [illegible] Time:
Printed Name: Tom Harder Date: 9-11-91	Printed Name: T. Rommelfanger Date: 9-11-91	Printed Name: Date:
Company: HLA	Company: ATI	Company:
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: (LAB) 3.**
Signature: [illegible] Time: 1410	Signature: [illegible] Time: 1820	Signature: Time:
Printed Name: T. Rommelfanger Date: 9/11/91	Printed Name: Teague Date: 9/11	Printed Name: Date:
Company: ATI	Company: ATI	Analytical Technologies, Inc.

DISTRIBUTION: White, Canary - ANALYTICAL TECHNOLOGIES, INC. • Pink - ORIGINATOR

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 110061

October 17, 1991

HARDING LAWSON ASSOCIATES
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,165.11

Attention: BURTON CHADWICK

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
October 03, 1991	3	SOIL
October 03, 1991	6	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

The results of these analyses and the quality control data are enclosed.

TIMOTHY J. FITZPATRICK
SENIOR PROJECT MANAGER

Kenneth Wahl
KENNETH WAHL
LABORATORY MANAGER

MCK0004251

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: October 17, 1991
ATI I.D. : 110061

ATI #	Client Description	Matrix	Date Collected
1	MK-HP-8-100291B	WATER	02-OCT-91
2	MK-HP-8-100291	WATER	02-OCT-91
3	MK-HP-8-100291D	WATER	02-OCT-91
4	MK-HP-9-100291	WATER	02-OCT-91
5	MK-HP-7-100291	WATER	02-OCT-91
6	MK-HP-7-100291E	WATER	02-OCT-91
7	MK-HPC-7/8	SOIL	02-OCT-91
8	MK-HPC-8/9	SOIL	02-OCT-91
9	COMPOSITE MK-HPC-7-9 (07,08)	SOIL	02-OCT-91

---TOTALS---

Matrix	# Samples
SOIL	3
WATER	6

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ANALYTICAL SCHEDULE

ent : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 110061

Analysis	Technique/Description
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS
ATI I.D. : 110061

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	MK-HP-8-100291B	WATER	02-OCT-91	N/A	08-OCT-91	1.00
2	MK-HP-8-100291	WATER	02-OCT-91	N/A	08-OCT-91	100.00
3	MK-HP-8-100291D	WATER	02-OCT-91	N/A	08-OCT-91	100.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<10	<1000	<1000
VINYL CHLORIDE	UG/L	<1	<100	<100
BROMOMETHANE	UG/L	<10	<1000	<1000
CHLOROETHANE	UG/L	<1	<100	<100
ACETONE	UG/L	<20	<2000	<2000
1,1-DICHLOROETHENE	UG/L	<1	3400	3300
METHYLENE CHLORIDE	UG/L	<5	8200	8200
CARBON DISULFIDE	UG/L	<1	<100	<100
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<100	<100
VINYL ACETATE	UG/L	<10	<1000	<1000
1,1-DICHLOROETHANE	UG/L	<1	400	400
CIS-1,2-DICHLOROETHENE	UG/L	<1	<100	<100
CHLOROFORM	UG/L	<1	<100	<100
2-BUTANONE (MEK)	UG/L	<20	<2000	<2000
1,1,1-TRICHLOROETHANE	UG/L	<1	4600	4400
CARBON TETRACHLORIDE	UG/L	<1	<100	<100
1,2-DICHLOROETHANE	UG/L	<1	<100	<100
BENZENE	UG/L	<1	<100TR	<100TR
TRICHLOROETHENE	UG/L	<1	2100	2000
1,2-DICHLOROPROPANE	UG/L	<1	<100	<100
BROMODICHLOROMETHANE	UG/L	<1	<100	<100
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<1000	<1000
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<100	<100
TOLUENE	UG/L	<2	400	300
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<100	<100
2-HEXANONE (MBK)	UG/L	<10	<1000	<1000
1,1,2-TRICHLOROETHANE	UG/L	<1	<100	<100
TETRACHLOROETHENE	UG/L	<1	13000	12000
DIBROMOCHLOROMETHANE	UG/L	<1	<100	<100
CHLOROBENZENE	UG/L	<1	<100	<100
ETHYLBENZENE	UG/L	<1	<100TR	<100
XYLENES (TOTAL)	UG/L	<1	800	700
STYRENE	UG/L	<1	<100	<100
BROMOFORM	UG/L	<5	<500	<500
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<100	<100
SURROGATES				
1,2-DICHLOROETHANE-D4	%	109	100	99
TOLUENE-D8	%	103	102	101
BFB	%	100	97	96

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

WATER
ATI I.D.: 110061

Sample	Parameters	Units	Results
1	NONE DETECTED	N/A	N/A
2	TRICHLOROTRIFLOUROETHANE	UG/L	<5TR*P
3	TRICHLOROTRIFLUOROETHANE	UG/L	<5TR*P

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
ATI I.D. : 110061
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	MK-HP-9-100291	WATER	02-OCT-91	N/A	08-OCT-91	50.00
5	MK-HP-7-100291	WATER	02-OCT-91	N/A	08-OCT-91	10.00
6	MK-HP-7-100291E	WATER	02-OCT-91	N/A	08-OCT-91	1.00

Parameter	Units	4	5	6
CHLOROMETHANE	UG/L	<500	<100	<10
VINYL CHLORIDE	UG/L	<50	<10	<1
BROMOMETHANE	UG/L	<500	<100	<10
CHLOROETHANE	UG/L	<50	<10	<1
ACETONE	UG/L	6800	<200	<20
1,1-DICHLOROETHENE	UG/L	950	960	<1
METHYLENE CHLORIDE	UG/L	8900	307	<5
CARBON DISULFIDE	UG/L	<50	<10	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<50	<10	<1
VINYL ACETATE	UG/L	<500	<100	<10
1,1-DICHLOROETHANE	UG/L	1100	280	<1
CIS-1,2-DICHLOROETHENE	UG/L	1100	290	<1
CHLOROFORM	UG/L	<50	<10TR	<1
2-BUTANONE (MEK)	UG/L	5300	<200	<20
1,1,1-TRICHLOROETHANE	UG/L	300	760	<1
CARBON TETRACHLORIDE	UG/L	<50	<10	<1
1,2-DICHLOROETHANE	UG/L	<50	<10	<1
BENZENE	UG/L	70	20	<1
TRICHLOROETHENE	UG/L	200	120	<1
1,2-DICHLOROPROPANE	UG/L	<50	<10	<1
BROMODICHLOROMETHANE	UG/L	<50	<10	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	1200	<100	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<50	<10	<1
TOLUENE	UG/L	2100	160	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<50	<10	<1
2-HEXANONE (MBK)	UG/L	<500	<100	<10
1,1,2-TRICHLOROETHANE	UG/L	<50	<10	<1
TETRACHLOROETHENE	UG/L	740	460	<1
DIBROMOCHLOROMETHANE	UG/L	<50	<10	<1
CHLOROBENZENE	UG/L	<50	<10	<1
ETHYLBENZENE	UG/L	300	180	<1
XYLENES (TOTAL)	UG/L	860	370	<1
STYRENE	UG/L	<50	<10	<1
BROMOFORM	UG/L	<250	<50	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<50	<10	<1
SURROGATES				
1,2-DICHLOROETHANE-D4	%	97	103	109
TOLUENE-D8	%	100	103	108
BFB	%	98	97	104

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

WATER
ATI I.D.: 110061

Sample	Parameters	Units	Results
4	NONE DETECTED	N/A	N/A
5	ETHYLMETHYLBENZENE ISOMER	UG/L	400
	ETHYLMETHYLBENZENE ISOMER	UG/L	100
	TRIMETHYLBENZENE ISOMER	UG/L	500
	TRIMETHYLBENZENE ISOMER	UG/L	200
6	NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 110061
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
9	COMPOSITE MK-HPC-7-9 (07,08)	SOIL	02-OCT-91	04-OCT-91	14-OCT-91	1.00

SEE ATTACHED MATERIAL FROM ATI (12-17-91) WHICH SHOWS AMENDED EXTRACTION DATE OF 10-5-9

Parameter	Units	9
CHLOROMETHANE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
BROMOMETHANE	MG/KG	<0.5
CHLOROETHANE	MG/KG	<0.05
ACETONE	MG/KG	<1
1,1-DICHLOROETHENE	MG/KG	<0.05
METHYLENE CHLORIDE	MG/KG	<0.3
CARBON DISULFIDE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
1,1-DICHLOROETHANE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
2-BUTANONE (MEK)	MG/KG	<1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
BENZENE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TOLUENE	MG/KG	0.2
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	0.69
DIBROMOCHLOROMETHANE	MG/KG	<0.05
CHLOROBENZENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	0.96
STYRENE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
SURROGATES		
1,2-DICHLOROETHANE-D4	%	114
TOLUENE-D8	%	94
BFB	%	99

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) SOIL
Client : HARDING LAWSON ASSOCIATES ATI I.D.: 110061
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
9	ALIPHATIC HYDROCARBON C10	MG/KG	6
	TRIMETHYLBENZENE ISOMER	MG/KG	5
	ALIPHATIC HYDROCARBON C10+	MG/KG	10
	CYCLIC HYDROCARBON	MG/KG	6
	ALIPHATIC HYDROCARBON C10+	MG/KG	7

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15340
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: N/A
Date Analyzed : 07-OCT-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	97
TOLUENE-D8	%	97
BFB	%	96

MCK0004260

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15340 ATI I.D. : 110061
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

MCK0004261

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15346
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: 05-OCT-91
Date Analyzed : 07-OCT-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	MG/KG	<0.5
VINYL CHLORIDE	MG/KG	<0.05
BROMOMETHANE	MG/KG	<0.5
CHLOROETHANE	MG/KG	<0.05
ACETONE	MG/KG	<1
1,1-DICHLOROETHENE	MG/KG	<0.05
METHYLENE CHLORIDE	MG/KG	<0.3TR
CARBON DISULFIDE	MG/KG	<0.05
TRANS-1,2-DICHLOROETHENE	MG/KG	<0.05
VINYL ACETATE	MG/KG	<0.5
1,1-DICHLOROETHANE	MG/KG	<0.05
CIS-1,2-DICHLOROETHENE	MG/KG	<0.05
CHLOROFORM	MG/KG	<0.05
2-BUTANONE (MEK)	MG/KG	<1
1,1,1-TRICHLOROETHANE	MG/KG	<0.05
CARBON TETRACHLORIDE	MG/KG	<0.05
1,2-DICHLOROETHANE	MG/KG	<0.05
BENZENE	MG/KG	<0.05
TRICHLOROETHENE	MG/KG	<0.05
1,2-DICHLOROPROPANE	MG/KG	<0.05
BROMODICHLOROMETHANE	MG/KG	<0.05
4-METHYL-2-PENTANONE (MIBK)	MG/KG	<0.5
CIS-1,3-DICHLOROPROPENE	MG/KG	<0.05
TOLUENE	MG/KG	<0.1
TRANS-1,3-DICHLOROPROPENE	MG/KG	<0.05
2-HEXANONE (MBK)	MG/KG	<0.5
1,1,2-TRICHLOROETHANE	MG/KG	<0.05
TETRACHLOROETHENE	MG/KG	<0.05
DIBROMOCHLOROMETHANE	MG/KG	<0.05
CHLOROBENZENE	MG/KG	<0.05
ETHYLBENZENE	MG/KG	<0.05
XYLENES (TOTAL)	MG/KG	<0.05
STYRENE	MG/KG	<0.05
BROMOFORM	MG/KG	<0.3
1,1,2,2-TETRACHLOROETHANE	MG/KG	<0.05
SURROGATES		
1,2-DICHLOROETHANE-D4	%	95
TOLUENE-D8	%	109
BFB	%	105

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15346 ATI I.D. : 110061
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15349
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: N/A
Date Analyzed : 08-OCT-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	101
TOLUENE-D8	%	101
BFB	%	102

MCK0004264

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15349 ATI I.D. : 110061
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 22734
Client : HARDING LAWSON ASSOCIATES

Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: 01-OCT-91
Date Analyzed : 01-OCT-91
Sample Matrix : SOIL
REF I.D. : 110011-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
1,1-DICHLOROETHENE	MG/KG	<0.05	2.0	1.8	90	1.7	85	6
BENZENE	MG/KG	<0.05	2.5	2.4	96	2.4	96	0
TRICHLOROETHENE	MG/KG	<0.05	2.3	2.0	87	2.0	87	0
TOLUENE	MG/KG	<0.1	2.5	2.5	100	2.5	100	0
CHLOROBENZENE	MG/KG	<0.05	2.5	2.6	104	2.6	104	0

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 23083
Client : HARDING LAWSON ASSOCIATES

Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: N/A
Date Analyzed : 08-OCT-91
Sample Matrix : WATER
REF I.D. : 110061-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
1,1-DICHLOROETHENE	UG/L	<1	40	39	98	41	103	5
BENZENE	UG/L	<1	50	49	98	52	104	6
TRICHLOROETHENE	UG/L	<1	45	43	96	45	100	5
TOLUENE	UG/L	<2	50	50	100	53	106	6
CHLOROBENZENE	UG/L	<1	50	52	104	55	110	6

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 17997
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: 05-OCT-91
Date Analyzed : 08-OCT-91
Sample Matrix : SOIL

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	MG/KG	<0.05	1.6	2.0	80
BENZENE	MG/KG	<0.05	2.1	2.5	84
TRICHLOROETHENE	MG/KG	<0.05	2.0	2.2	91
TOLUENE	MG/KG	<0.10	2.1	2.5	84
CHLOROBENZENE	MG/KG	<0.05	2.1	2.5	84

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 18012
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 110061
Date Extracted: N/A
Date Analyzed : 08-OCT-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	41	40	103
BENZENE	UG/L	<1	51	50	102
TRICHLOROETHENE	UG/L	<1	44	45	98
TOLUENE	UG/L	<2	51	50	102
CHLOROBENZENE	UG/L	<1	52	50	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

Harding Lawson Associates
15621 Redhill Avenue, Suite 100
Tustin, California 92680
714/259-7992 — 213/617-7232
Telecopy: 714/259-1378

110061 DUE 10/16 6(3)VOA, 7B

CHAIN OF CUSTODY FORM

Lab: ATI

Samplers: Tom Harder

Job Number: 17333, 165.11

Name/Location: McKesson / Santa Fe Spgs

Project Manager: Burton Chadwick

Recorder: Tom Harder (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCL	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH
23	X							2				91	10	02	0930	MK-HP-8-100291B			X			01
23	X							2				91	10	02	1020	MK-HP-8-100291			X			02
23	X							2				91	10	02	1025	MK-HP-8-100291D			X			03
23	X							2				91	10	02	1250	MK-HP-9-100291			X			04
23	X							2				91	10	02	1450	MK-HP-~~7~~ 8-100291			X			05
23	X							2				91	10	02	1435	MK-HP-7-100291E			X			06
50		X			1			4 TH				91	10	02	1635	MK-HPC-7/8 } composite sample			X	07		
50		X			1							91	10	02	1640	MK-HPC-8/9 }				08		
																				09 = Comp of 07, 08		

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						* Please Composite Soil Samples MK-HPC-7/8 and MK-HPC-8/9
						Normal Turnaround

MCK0004270

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
Tom Harder	K. McCarter	10-3 1710
K. McCarter	M. Lagne	10-3 1720
M. Lagne		

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy White — Project Office Copy Yellow — Field Office Copy

6533

AnalyticalTechnologies, Inc. Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 110453

November 12, 1991

HARDING LAWSON ASSOCIATES
15621 REDHILL AVE., SUITE 100
TUSTIN, CA 92680

Project Name: McKESSON SANTA FE SPRINGS
Project # : 17333,165.11

Attention: TED KOELSCH

Analytical Technologies, Inc. has received the following sample(s):

Date Received	Quantity	Matrix
October 29, 1991	10	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. Please see the attached sheet for the sample cross reference table.

results of these analyses and the quality control data are enclosed.

for
GARY STEWART
PROJECT MANAGER-FUELS

Kenneth Wahl
KENNETH WAHL
LABORATORY MANAGER

AnalyticalTechnologies,Inc.

SAMPLE CROSS REFERENCE

Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Report Date: November 12, 1991
ATI I.D. : 110453

ATI #	Client Description	Matrix	Date Collected
1	MK-CPT-12-102891B	WATER	28-OCT-91
2	MK-CPT-12-102891	WATER	28-OCT-91
3	MK-CPT-13-102891	WATER	28-OCT-91
4	MK-CPT-13-102891D	WATER	28-OCT-91
5	MK-CPT-14-102891	WATER	28-OCT-91
6	MK-CPT-15-102891	WATER	28-OCT-91
7	MK-CPT-16-102891E	WATER	28-OCT-91
8	MK-CPT-16-102891	WATER	28-OCT-91
9	MK-CPT-17-102991	WATER	29-OCT-91
10	MK-CPT-18-102991	WATER	29-OCT-91

---TOTALS---

Matrix	# Samples
WATER	10

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

AnalyticalTechnologies,Inc.

ANALYTICAL SCHEDULE

:nt : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D.: 110453

Analysis	Technique/Description
EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	MK-CPT-12-102891B	WATER	28-OCT-91	N/A	01-NOV-91	1.00
2	MK-CPT-12-102891	WATER	28-OCT-91	N/A	01-NOV-91	20.00
3	MK-CPT-13-102891	WATER	28-OCT-91	N/A	02-NOV-91	500.00

Parameter	Units	1	2	3	
CHLOROMETHANE	UG/L	<10	<200	<5000	Na
VINYL CHLORIDE	UG/L	<1	<20	<500	
BROMOMETHANE	UG/L	<10	<200	<5000	
CHLOROETHANE	UG/L	<1	<20	<500	
ACETONE	UG/L	<20	<400	<10000	
1,1-DICHLOROETHENE	UG/L	<1	3400	38000	4400
METHYLENE CHLORIDE	UG/L	<5	<100	52000	5100
CARBON DISULFIDE	UG/L	<1	<20	<500	
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<20	<500	
VINYL ACETATE	UG/L	<10	<200	<5000	
1,1-DICHLOROETHANE	UG/L	<1	430	1000	950
CIS-1,2-DICHLOROETHENE	UG/L	<1	990	4000	350
CHLOROFORM	UG/L	<1	<20	<500	
2-BUTANONE (MEK)	UG/L	<20	<400	<10000	
1,1,1-TRICHLOROETHANE	UG/L	<1	890	88000	95
CARBON TETRACHLORIDE	UG/L	<1	<20	<500	
1,2-DICHLOROETHANE	UG/L	<1	<20	900	
BENZENE	UG/L	<1	50	<500	
TRICHLOROETHENE	UG/L	<1	970	11000	
1,2-DICHLOROPROPANE	UG/L	<1	<20	<500	
BROMODICHLOROMETHANE	UG/L	<1	<20	<500	
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	<200	<5000	
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<20	<500	
TOLUENE	UG/L	<2	<40	2000	
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<20	<500	
2-HEXANONE (MBK)	UG/L	<10	<200	<5000	
1,1,2-TRICHLOROETHANE	UG/L	<1	<20	<500	
TETRACHLOROETHENE	UG/L	<1	2700	36000	
DIBROMOCHLOROMETHANE	UG/L	<1	<20	<500	
CHLOROBENZENE	UG/L	<1	<20	<500	
ETHYLBENZENE	UG/L	<1	<20	<500	
XYLENES (TOTAL)	UG/L	<1	100	<500	
STYRENE	UG/L	<1	<20	<500	
BROMOFORM	UG/L	<5	<100	<2500	
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<20	<500	
SURROGATES					
1,2-DICHLOROETHANE-D4	%	94	95	97	
TOLUENE-D8	%	103	103	100	
BFB	%	99	100	96	

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

hod : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) WATER
Client : HARDING LAWSON ASSOCIATES ATI I.D.: 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
1	NONE DETECTED	N/A	N/A
2	DICHLOROFLUOROMETHANE	UG/L	200*P
	TRICHLOROFLUOROMETHANE	UG/L	100*P
	FREON 113	UG/L	200*P
3	NONE DETECTED	N/A	N/A

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	MK-CPT-13-102891D	WATER	28-OCT-91	N/A	02-NOV-91	500.00
5	MK-CPT-14-102891	WATER	28-OCT-91	N/A	02-NOV-91	25.00
6	MK-CPT-15-102891	WATER	28-OCT-91	N/A	01-NOV-91	5.00

Parameter	Units	4	5	6
CHLOROMETHANE	UG/L	<5000	<250	<50
VINYL CHLORIDE	UG/L	<500	<25	<5
BROMOMETHANE	UG/L	<5000	<250	<50
CHLOROETHANE	UG/L	<500	<25	<5
ACETONE	UG/L	<10000	<500	<100
1,1-DICHLOROETHENE	UG/L	50000	3700	600
METHYLENE CHLORIDE	UG/L	50000	<120	<25
CARBON DISULFIDE	UG/L	<500	<25	<5
TRANS-1,2-DICHLOROETHENE	UG/L	<500	<25	<5
VINYL ACETATE	UG/L	<5000	<250	<50
1,1-DICHLOROETHANE	UG/L	900	100	40
CIS-1,2-DICHLOROETHENE	UG/L	3000	90	40
CHLOROFORM	UG/L	<500	<25	<5
2-BUTANONE (MEK)	UG/L	<10000	<500	<100
1,1,1-TRICHLOROETHANE	UG/L	62000	3300	160
CARBON TETRACHLORIDE	UG/L	<500	<25	<5
1,2-DICHLOROETHANE	UG/L	900	<25	<5
BENZENE	UG/L	<500	<25	<5
TRICHLOROETHENE	UG/L	11000	650	130
1,2-DICHLOROPROPANE	UG/L	<500	<25	<5
BROMODICHLOROMETHANE	UG/L	<500	<25	<5
4-METHYL-2-PENTANONE (MIBK)	UG/L	<5000	<250	<50
CIS-1,3-DICHLOROPROPENE	UG/L	<500	<25	<5
TOLUENE	UG/L	2000	<50	<10
TRANS-1,3-DICHLOROPROPENE	UG/L	<500	<25	<5
2-HEXANONE (MBK)	UG/L	<5000	<250	<50
1,1,2-TRICHLOROETHANE	UG/L	<500	<25	<5
TETRACHLOROETHENE	UG/L	38000	3000	620
DIBROMOCHLOROMETHANE	UG/L	<500	<25	<5
CHLOROBENZENE	UG/L	<500	<25	<5
ETHYLBENZENE	UG/L	<500	<25	<5
XYLENES (TOTAL)	UG/L	<500	<25	<5
STYRENE	UG/L	<500	<25	<5
BROMOFORM	UG/L	<2500	<120	<25
1,1,2,2-TETRACHLOROETHANE	UG/L	<500	<25	<5
SURROGATES				
1,2-DICHLOROETHANE-D4	%	96	94	92
TOLUENE-D8	%	101	100	104
BFB	%	99	102	100

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

ıod : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) WATER
Client : HARDING LAWSON ASSOCIATES ATI I.D.: 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
4	NONE DETECTED	N/A	N/A
5	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	260*P
6	CYCLIC HYDROCARBON	UG/L	30
	DICHLOROFLUOROMETHANE	UG/L	120*P
	TRICHLOROFLUOROMETHANE	UG/L	40*P
	FREON 113	UG/L	120*P

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies, Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
7	MK-CPT-16-102891E	WATER	28-OCT-91	N/A	01-NOV-91	1.00
8	MK-CPT-16-102891	WATER	28-OCT-91	N/A	01-NOV-91	50.00
9	MK-CPT-17-102991	WATER	29-OCT-91	N/A	01-NOV-91	1.00

Parameter	Units	7	8	9
CHLOROMETHANE	UG/L	<10	<500	<10
VINYL CHLORIDE	UG/L	<1	<50	<1
BROMOMETHANE	UG/L	<10	<500	<10
CHLOROETHANE	UG/L	<1	<50	<1
ACETONE	UG/L	<20	<1000	<20
1,1-DICHLOROETHENE	UG/L	<1	400	53
METHYLENE CHLORIDE	UG/L	<5	6700	<5
CARBON DISULFIDE	UG/L	<1	<50	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1	<50	<1
VINYL ACETATE	UG/L	<10	<500	<10
1,1-DICHLOROETHANE	UG/L	<1	710	31
CIS-1,2-DICHLOROETHENE	UG/L	<1	1900	3
CHLOROFORM	UG/L	<1	<50	<1
2-BUTANONE (MEK)	UG/L	<20	2100	<20
1,1,1-TRICHLOROETHANE	UG/L	<1	50	5
CARBON TETRACHLORIDE	UG/L	<1	<50	<1
1,2-DICHLOROETHANE	UG/L	<1	<50	<1
BENZENE	UG/L	<1	50	<1
TRICHLOROETHENE	UG/L	<1	200	81
1,2-DICHLOROPROPANE	UG/L	<1	<50	<1
BROMODICHLOROMETHANE	UG/L	<1	<50	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10	740	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1	<50	<1
TOLUENE	UG/L	<2	820	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1	<50	<1
2-HEXANONE (MBK)	UG/L	<10	<500	<10
1,1,2-TRICHLOROETHANE	UG/L	<1	<50	1
TETRACHLOROETHENE	UG/L	<1	400	170
DIBROMOCHLOROMETHANE	UG/L	<1	<50	<1
CHLOROBENZENE	UG/L	<1	<50	<1
ETHYLBENZENE	UG/L	<1	400	<1
XYLENES (TOTAL)	UG/L	<1	650	<1
STYRENE	UG/L	<1	<50	<1
BROMOFORM	UG/L	<5	<250	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1	<50	<1
SURROGATES				
1,2-DICHLOROETHANE-D4	%	95	93	91
TOLUENE-D8	%	104	100	97
BFB	%	101	93	88

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) WATER
Client : HARDING LAWSON ASSOCIATES ATI I.D.: 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
7	NONE DETECTED	N/A	N/A
8	NONE DETECTED	N/A	N/A
9	1,1,2-TRIFLUORO-1,2,2,-TRICHLOROETHANE	UG/L	9*P
	ALIPHATIC HYDROCARBON C3	UG/L	700

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Client : HARDING LAWSON ASSOCIATES ATI I.D. : 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
10	MK-CPT-18-102991	WATER	29-OCT-91	N/A	01-NOV-91	1.00

Parameter	Units	10
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	32
METEYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	4
CIS-1,2-DICHLOROETHENE	UG/L	3
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	88
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	170
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	98
TOLUENE-D8	%	104
BFB	%	97

MCK0004280

AnalyticalTechnologies,Inc.

ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

. hod : EPA 8240 (GC/MS FOR VOLATILE ORGANICS) WATER
Client : HARDING LAWSON ASSOCIATES ATI I.D.: 110453
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Sample	Parameters	Units	Results
10	1,1,2-TRIFLUORO-1,2,2-TRICHLOROETHANE	UG/L	50*P
	ALIPHATIC HYDROCARBON C3	UG/L	400
	CYCLIC HYDROCARBON	UG/L	20
	CYCLIC HYDROCARBON	UG/L	100
	CYCLIC HYDROCARBON	UG/L	8

*P A STANDARD WAS USED TO QUANTITATE THIS VALUE.

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15795
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 31-OCT-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5TR
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	93
TOLUENE-D8	%	103
BFB	%	99

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15795 ATI I.D. : 110453
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15826
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 01-NOV-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5TR
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	96
TOLUENE-D8	%	96
BFB	%	96

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15826 ATI I.D. : 110453
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

MCK0004285

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15827
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 02-NOV-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20TR
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	5
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	96
TOLUENE-D8	%	99
BFB	%	94

TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL

MCK0004286

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15827 ATI I.D. : 110453
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15860
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 01-NOV-91
Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<1
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<1
ACETONE	UG/L	<20
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	6
CARBON DISULFIDE	UG/L	<1
TRANS-1,2-DICHLOROETHENE	UG/L	<1
VINYL ACETATE	UG/L	<10
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<20
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<1
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
SURROGATES		
1,2-DICHLOROETHANE-D4	%	94
TOLUENE-D8	%	103
BFB	%	100

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 15860 ATI I.D. : 110453
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

Parameters	Units	Results
NONE DETECTED	N/A	N/A

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 24582
Client : HARDING LAWSON ASSOCIATES

Project # : 17333,165.11
Project Name: McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 01-NOV-91
Sample Matrix : WATER
REF I.D. : 110453-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
1,1-DICHLOROETHENE	UG/L	<1	40	28	70	30	75	7
BENZENE	UG/L	<1	50	54	108	55	110	2
TRICHLOROETHENE	UG/L	<1	45	52	116	53	118	2
TOLUENE	UG/L	<2	50	54	108	54	108	0
CHLOROBENZENE	UG/L	<1	50	52	104	54	108	4

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 18865
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 31-OCT-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	45	40	112
BENZENE	UG/L	<1	51	50	102
TRICHLOROETHENE	UG/L	<1	52	45	116
TOLUENE	UG/L	<2	52	50	104
CHLOROBENZENE	UG/L	<1	52	50	104

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 18916
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 02-NOV-91
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	32	40	80
BENZENE	UG/L	<1	52	50	104
TRICHLOROETHENE	UG/L	<1	50	45	111
TOLUENE	UG/L	<2	49	50	98
CHLOROBENZENE	UG/L	<1	51	50	102

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

AnalyticalTechnologies,Inc.

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank Spike #: 18995
Client : HARDING LAWSON ASSOCIATES
Project # : 17333,165.11
Project Name : McKESSON SANTA FE SPRINGS

ATI I.D. : 110453
Date Extracted: N/A
Date Analyzed : 01-NOV-91
Sample Matrix : WATER

rameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1-DICHLOROETHENE	UG/L	<1	31	40	78
NZENE	UG/L	<1	55	50	110
ICHLOROETHENE	UG/L	<1	54	45	120
LUENE	UG/L	<2	53	50	106
LOROBENZENE	UG/L	<1	54	50	108

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result

Analytical Technologies, Inc.

5550 MOREHOUSE DRIVE
SAN DIEGO, CA 92121-1709
(619) 458-9141

Chain of Custody

DATE 10-29-91 PAGE 1 OF 1

PROJECT MANAGER: Ted Koelsch
COMPANY: Harding Lawson Associates
ADDRESS: 15621 Redhill Ave Suite 100
Tustin, Calif. 92680

BILL TO: Same as Above
COMPANY:
ADDRESS:

Tom Harder (714) 259-7992
SAMPLERS: (Signature) PHONE NUMBER

Recommended Quantity and Preservative (Provide triple volume on QC Samples)

SAMPLE ID	SAMPLE DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons 418.1 (1L (H2SO4)/100g)	Oil and Grease 413.2 (1L (H2SO4)/100g)	Gasoline (MOD 8015/DOHS) (4 oz (HCl)/50g)	Diesel (MOD 8015/DOHS) (4 oz (HCl)/50g)	Gasoline/BTXE (MOD 8015/8020) (4 oz (HCl)/50g)	MOD 8015 (Unknown)	BTXE (8020) (2X40ml (HCl)/50g)	Chlorinated Hydrocarbons (8010) (2X40ml (HCl)/50g)	Aromatic Hydrocarbons (8020) (2X40ml (HCl)/50g)	Chlorinated/Aromatic Hydrocarbons (8010/8020) (2X40ml (HCl)/50g)	Organic Pb (500ml/50g)		Pesticides/PCB (8080) (1L/50g)	Base/NEU/Acid Cmpds GC/MS (8270) (1L/100g)	Volatile Cmpds GC/MS (8240) (2X40ml (HCl)/100g)	Polynuclear Aromatic (8310) (1L/100g)	CCR Metals (500ml/100g)	Priority Pollutant Metals (500ml/100g)	Number of Containers
MK-CPT-12-102891B	10-28-91	0845	Water	01															X					2
MK-CPT-12-102891	"	0922	"	02															X					2
MK-CPT-13-102891	"	1058	"	03															X					2
MK-CPT-13-102891D	"	1100	"	04															X					2
MK-CPT-14-102891	"	1240	"	05															X					2
MK-CPT-15-102891	"	1405	"	06															X					2
MK-CPT-16-102891E	"	1515	"	07															X					2
MK-CPT-16-102891	"	1535	"	08															X					2

MCK0004294

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NUMBER: 17333, 165.11		TOTAL NUMBER OF CONTAINERS	16
PROJECT NAME: McKesson S.F.S.		CHAIN OF CUSTODY SEALS Y/N/NA	N
PURCHASE ORDER NUMBER:		SEALS INTACT? Y/N/NA	n/a
VIA:		RECEIVED GOOD COND./COLD	Y
TAT: ☐24HR ☐48HRS ☐72HRS ☐1WK ☒2WK		LAB NUMBER	110453

SAMPLE DISPOSAL INSTRUCTIONS

☐ ATI Disposal @ $5.00 each ☐ Return ☐ Pickup

Comments:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Tom Harder Time: 14:35	Signature: Time:	Signature: M Cuque Time: 1835
Printed Name: Tom Harder Date: 10-29-91	Printed Name: T. Rommelfanger Date: 10-29-91	Printed Name: Teague Date: 10/29
Company: HLA	Company: ATI	Company: PDQ
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: (LAB) 3.**
Signature: Time: 1475	Signature: M Cuque Time: 1700	Signature: Time:
Printed Name: T. Rommelfanger Date: 10-29-91	Printed Name: Teague Date: 10/29	Printed Name: Date: 10/29/91
Company: ATI	Company: PDQ	Analytical Technologies, Inc.

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Analytical Technologies, Inc.

5550 MOREHOUSE DRIVE
SAN DIEGO, CA 92121-1709
(619) 458-9141

Chain of Custody

DATE 10-29-91 PAGE 1 OF 1

PROJECT MANAGER: Ted Koelsch
COMPANY: Harding Lawson Associates
ADDRESS: 15621 Redhill Ave Suite 100
Tustin, Calif. 92680

BILL TO: Same as above
COMPANY:
ADDRESS:

Tom Harder — SAMPLERS: (Signature)
(714) 259-7992 — PHONE NUMBER

Recommended Quantity and Preservative (Provide triple volume on QC Samples)

SAMPLE ID	SAMPLE DATE	TIME	MATRIX	LAB ID	Petroleum Hydrocarbons 418.1 (1L (H2 SO4)/100g)	Oil and Grease 413.2 (1L (H2 SO4)/100g)	Gasoline (MOD 8015/DOHS) (4 oz (HCl)/50g)	Diesel (MOD 8015/DOHS) (4 oz (HCl)/50g)	Gasoline/BTXE (MOD 8015/8020) (4 oz (HCl)/50g)	MOD 8015 (Unknown) (2X40ml (HCl)/50g)	BTXE (8020) (2X40ml (HCl)/50g)	Chlorinated Hydrocarbons (8010) (2X40ml (HCl)/50g)	Aromatic Hydrocarbons (8020) (2X40ml (HCl)/50g)	Chlorinated/Aromatic Hydrocarbons (8010/8020) (2X40ml (HCl)/50g)	Organic Pb (500ml/50g)		Pesticides/PCB (8080) (1L/50g)	Base/NEU/Acid Cmpds GC/MS (8270) (1L/100g)	Volatile Cmpds GC/MS (8240) (2X40ml (HCl)/100g)	Polynuclear Aromatic (8310) (1L/100g)	CCR Metals (500ml/100g)	Priority Pollutant Metals (500ml/100g)									Number of Containers
MK-CPT-17-102991	10-29-91	0915	Water	09															X												2
MK-CPT-18-102991	10-29-91	1040	Water	10															X												2

MCK0004295

PROJECT INFORMATION	SAMPLE RECEIPT	
PROJECT NUMBER: 17333, 165.11	TOTAL NUMBER OF CONTAINERS	4
PROJECT NAME: McKesson S. Fe Sp.	CHAIN OF CUSTODY SEALS Y/N/NA	N
PURCHASE ORDER NUMBER:	SEALS INTACT? Y/N/NA	N
VIA:	RECEIVED GOOD COND./COLD	Y
TAT: ☐24HR ☐48HRS ☐72HRS ☐1WK ☒2WK	LAB NUMBER	110453

SAMPLE DISPOSAL INSTRUCTIONS

☐ ATI Disposal @ $5.00 each ☐ Return ☐ Pickup

Comments:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: Tom Harder Time: 14:35	Signature: [illegible] Time:	Signature: M Teague Time: 1835
Printed Name: Tom Harder Date: 10-29-91	Printed Name: T. Rommelfanger Date: 10-29-91	Printed Name: Teague Date: 10/29
Company: HLA	Company: ATI	Company: PDQ
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY: (LAB) 3.**
Signature: [illegible] Time: 1435	Signature: M Teague Time: 1700	Signature: [illegible] Time: 1839
Printed Name: T. Rommelfanger Date: 10-29-91	Printed Name: Teague Date: 10/29	Printed Name: [illegible] Date: 10/29/91
Company: ATI	Company: PDQ	Analytical Technologies, Inc.

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APPENDIX M

MCK0004296

APPENDIX M
QA/QC DATA VALIDATION

Printed on Recycled Paper

DATA VALIDATION CHECKLIST

Laboratory ATE

Report No. 7230
Report Date 8/13/90

Checked by PS
Date 10/26/90

Date(s) collected 7/13/90
Date submitted 7/16/90
Date(s) extracted 7/17/90
Within holding time? N/A
Date(s) analyzed 7/20/90
Within holding time? N/A

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015 (Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00723003		W.L.'s	Not Available	
Reagent Soil				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004298

DATA VALIDATION CHECKLIST

Laboratory ATE

Report No. 7230
Report Date 8/13/90

Checked by PS
Date 10/26/90

Date(s) collected 7/13/90
Date submitted 7/16/90
Date(s) extracted 7/17/90
Within holding time? N/A
Date(s) analyzed 7/27/90
Within holding time? yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(2) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? 0.3 ppm M.C. No IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004299

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7230
Report Date 8-13-90

Checked by SP
Date 12-26-90

Date(s) collected 7/13/90
Date submitted 7/16/90
Date(s) extracted 7/18/90
Within holding time? YES
Date(s) analyzed 8/6/90, 8/8/90
Within holding time? YES

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatiles Method GC/MS Technique 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00723003	N	N	Y	4 spiked analytes outside W.L, but within C.L., 4 spiked analytes outside C.L. No IMPACT per Tim Fitzpatrick (ATI) because spikes were out of control on high side of limits, & samples analyzed were generally clean. (ie test results would tend to be higher than actual)

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? N(0) (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004300

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

DATA VALIDATION CHECKLIST

CC 3E-23

Laboratory ATI

Report No. 7257
Report Date ~~9/13/90~~ TAK 8/13/90

Checked by PS
Date 10/23/90

Number of Samples 6 (Soil)
Date(s) Collected 7/16/90
Date Submitted 7/17/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X	~~[illegible]~~ PS	Submitted in cold cooler
Chain-of-custody Form Complete	X		Lab signed off in wrong place
Samples received in good condition	X		
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

PS 10/23/90

MCK0004321

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7257
Report Date ~~8/13/90~~ 8/13/90 TMK
Checked by PS (SP)
Date 12-26-90

Date(s) collected 7/16/90
Date submitted 7/17/90
Date(s) extracted
Within holding time?
Date(s) analyzed
Within holding time? yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis TPH Method IR Technique 418.1 (Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?			
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00724416	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004322

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7257
Report Date ~~9/13/90~~ 8/13/90

Checked by PS
Date 12-26-90

Date(s) collected 7/16/90
Date submitted 7/17/90
Date(s) extracted 7-18-90
Within holding time? N/A
Date(s) analyzed 7-20-90
Within holding time? N/A

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique 8015-mod.

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00725703 Reagent Soil	Limits not available			

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004323

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7257
Report Date ~~9/19/90~~ 8/13/90 AK

Checked by PS (SP)
Date 12-26-90

Date(s) collected 7/16/90
Date submitted 7/17/90
Date(s) extracted 7/18/90
Within holding time? N/A
Date(s) analyzed 7/30, 7/31/90
Within holding time? ~~YES~~ NO MK-SB-27-31, MKSB-27-41 analyzed on 15th day

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatiles Method GC/MS Technique 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?		✓	2 sample analyzed on 15th day & 2 hours after holding time expired - NO IMPACT.
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
~~Reagent~~ + Soil	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(2) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? Trace <0.3, 0.72 ppm M.C. - NO IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004324

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7257
Report Date ~~9/13/90~~ 8/12/90 TAK

Checked by PS TAK
Date 12/31

Date(s) collected 7/16/90
Date submitted 7/17/90
Date(s) extracted 7/18/90
Within holding time? YES
Date(s) analyzed 8/8, 8/9/90
Within holding time? yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8290

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0072300 3	N	N	Y	4 spiked analytes outside W.L., but within C.L.; 4 spike analytes outside C.L. No Impact per Tim Fitzpatrick (ATI) because spikes were out of control on high side of limits and analyzed samples were generally clean. (i.e. test results would tend to be higher than actual).

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004325

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7283
Report Date 8/13/90

Checked by PS
Date 10/23/90

Number of Samples 10 (Soil - 2 Waters)
Date(s) Collected ~~7/17/90~~ 7/18/90
Date Submitted 7/18/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	X		Submitted in cold coolers.
Chain-of-custody Form Complete	X		Under preserved heading on COC - all columns checked (H2SO4, HCl, unpreserved, HNO3)
Samples received in good condition	X		According to ATI
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	X		1 trip blank
Duplicate samples checked	X		None

PS 10/23/90

MCK0004326

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7283
Report Date 8/13/90

Checked by (SP)
Date 12-26-90

Date(s) collected 7/17/90 7/18/90
Date submitted 7/18/90
Date(s) extracted ~~N/A~~
Within holding time? N/A
Date(s) analyzed ~~N/A~~
Within holding time? ~~N/A~~ Yes, Report Date 8/13/90

Number of Samples 8 (soil), 2 (water)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chem Method See Attached Technique _____

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested (TPH) within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00730402	Y	Y		
00730701	Y	Y		
00728305	N	Y		No IMPACT Chloride outside W.L. w/in C.
00730702	N	Y		Sulfate outside W.L./within C.C. No impa
00726301	Y	Y		

SEE BACK

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004327

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7283
Report Date 8/13/90

Checked by SP
Date 12-26-90

Date(s) collected 7/17/90, 7/18/90
Date submitted 7/18/90
Date(s) extracted ?
Within holding time? _____
Date(s) analyzed ?
Within holding time? Yes, Report date 8/13/90

Number of Samples ~~10~~ 8 (soil), ~~2~~ 1 (water)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00730403	N	Y		No IMPACT all samples within C.L.
00728301	N	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004328

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7283
Report Date 8/13/90

Checked by SP
Date 12-26-90

Date(s) collected ~~8~~ 7/17/90, 7/18/90
Date submitted 7/18/90
Date(s) extracted 7/23/90
Within holding time? N/A
Date(s) analyzed 7/29/90
Within holding time? N/A

Number of Samples 8 (soil), 1 (water)
Number of Duplicates _____

ANALYSIS SCHEDULE

Analysis Glycol Method GC/FID Technique 8015-MOD

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Limits not Available from ATI			
00728302				
00728309				
~~Reagent water~~				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? Y(3) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004329

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7283
Report Date 8/13/90

Checked by SP.
Date 12-26-90

Date(s) collected 7/17/90, 7/18/90
Date submitted 7/18/90
Date(s) extracted 7/23/90
Within holding time? N/A
Date(s) analyzed 7/30, 7/31/90
Within holding time? yes

Number of Samples 8 (soil), 2 (water)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatiles Method GC/MS Technique 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent + Water	Y	Y	Y	
Reagent Soil	Y	Y	Y	

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.)
Significance? Acetone 50 ppb, TCA 1 ppb No IMPACT not Detected in water sample.

How many equipment blanks? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? Y(3) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? M.C. TR < 5 ppb, 0.5 ppm, 0.3 ppm ; Acetone TR < 2 ppb No IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004330

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

TC3000

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6240
Report Date 7/18/90

Checked by PS
Date 10/23/90

Number of Samples 6 (Soil)
Date(s) Collected 6/12/90
Date Submitted 6/13/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓	—	
Samples properly perserved	✓	—	Submitted in cold cooler
Chain-of-custody Form Complete	✓	—	
Samples received in good condition	X	—	According to ATI notes
Laboratory QC confirmed	✓	—	
Field/Equipment/Trip Blanks checked	—	—	None
Duplicate samples checked	—	—	None

MCK0004331

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6240
Report Date 7/18/90

Checked by DS
Date 10/26/90

Date(s) collected 6/12/90
Date submitted 6/13/90
Date(s) analyzed ~~7/6/90~~ PS 6/22/90 (TPH)
Within holding time? ~~N/A~~ yes
Date(s) extracted ~~7/5/90~~ PS
Within holding time? ~~N/A~~

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chem Method _____ Technique _____

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH)	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00624006	Spike 1	N	~~N~~ Y TPH	N/A	Fluoride outside W.L.
00624005	Spike 2	N	N	N/A	Nitrate outside C.L. – No impact
00626401	Spike 3	Y	Y	N/A	
00640001	Spike 4	Y	Y	N/A	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004332

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6240
Report Date 7/18/90

Checked by PS
Date 10/24/90

Date(s) collected 6/12/90
Date submitted 6/13/90
Date(s) analyzed Not known / Prior to 7/18/90
Within holding time? Yes / Report date 7/18/90
Date(s) extracted Not known / Prior to 7/18/90
Within holding time? _____

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method 6010 Technique _____

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0062Y002 Spike 1	N	Y	N/A	No impact - All values are w/in control limits

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004333

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6240
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/12/90
Date submitted 6/13/90
Date(s) ~~analyzed~~ extracted 7/5/90
Within holding time? ✓
PS Date(s) ~~extracted~~ analyzed 7/6/90
Within holding time? ✓

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis ~~8240~~ Glycols
Method ~~8240~~ Modified 8015 PS
Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil Spike 1 00633402	No warning	limits available for ATI		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004334

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6240
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/12/90
Date submitted 6/13/90
Date(s) ~~analyzed~~ extracted 6/22
Within holding time? YES
PS Date(s) ~~extracted~~ analyzed 6/26, 6/25 (Reagent blank)
Within holding time? YES

Number of Samples 6 (So.1)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis _____ Method 8240 Technique _____

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Spike 1	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.) Trace < 0.3 mg/kg
Significance? No impact; common lab solvent used for cleaning Methylenechloride.

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004335

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6240
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/12/90
Date submitted 6/13/90
Date(s) ~~analyzed~~ extracted 6/19
Within holding time? YES
PS Date(s) ~~extracted~~ analyzed 6/27
Within holding time? YES

Number of Samples 6 (So. 1)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis _____ Method 8270 Technique _____

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00628808 Soil	PS ~~N~~ Y	PS ~~N~~ Y	Y	
Reagent Spike	N	N	N/A	2 Chlorophenol outside C.L. — Was a contr reagent problem
				4-Nitrophenol outside W.L. — No impact

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004336

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6334
Report Date 7/18/90

Checked by PS
Date 10/23/90

Number of Samples 2 (Soil)
Date(s) Collected 6/18/90
Date Submitted 6/19/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X	—	
Samples properly perserved	X	—	Submitted in cold cooler According to ATI notes
Chain-of-custody Form Complete	X	—	Lab signed off in wrong spot
Samples received in good condition	X	—	According to ATI notes
Laboratory QC confirmed	✓	—	
Field Equipment/Trip Blanks checked	—	—	N/A
Duplicate samples checked	—	—	N/A

MCK0004337

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6334
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/18/90
Date submitted 6/19/90
Date(s) extracted _____
Within holding time? N/A
Date(s) analyzed 6/28/90 (TPH)
Within holding time? ~~N/A~~ yes

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chem Method See attached Technique _____

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH)	~~N/A~~ ✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00624006	Spike 1	N	Y	N/A	Fluoride - outside W.L / within C.L - No Impact
00633402		Y	Y		
00632201		Y	Y		
00635904		Y	Y		
00640001					

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004338

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6334
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/18/90
Date submitted 6/19/90
Date(s) extracted ~~6/26/90~~ (SP)
Within holding time? ~~N/A~~ (SP)
Date(s) analyzed ~~7/6/90~~ (SP)
Within holding time? ~~N/A~~ YES - Report date 7/18/90

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (SP) ~~N/A~~	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00635904	Spike 1	Y	Y	N/A	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004339

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6334
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/18/90
Date submitted 6/19/90
Date(s) extracted 6/26/90
Within holding time? N/A
Date(s) analyzed 7/6/90
Within holding time? N/A

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique 8015(Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00633402	Spike 1	NO	WARNING	LIMITS AVAILABLE FROM ATI	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004340

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6334
Report Date 7/18/90

Checked by DS
Date 10/26/90

Date(s) collected 6/18/90
Date submitted 6/19/90
Date(s) extracted 6/22/90
Within holding time? N/A
Date(s) analyzed 6/29/90
Within holding time? YES

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00629101 Spike 1	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? 0.33 M.G - Common cleaning solvent in Lab / Not detect in soil samples - No Impact

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004341

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6334
Report Date 7/18/90

Checked by PS
Date 10/26/90

Date(s) collected 6/18/90
Date submitted 6/19/90
Date(s) extracted 6/27/90
Within holding time? YES
Date(s) analyzed 6/29/90
Within holding time? YES

Number of Samples 2 (Soil D)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatiles Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Spike 1	~~Y~~ (SP)	(SP) ~~Y~~	Y	~~Naphthalene out of W.L./within~~ (SP)
~~Spike Dup~~	~~Y~~	~~Y~~ (SP)	Y	Acenaphthene - sample matrix interference unable to quantify.

0062 8816

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004342

DATA VALIDATION CHECKLIST

3.4.1

C..533

Laboratory ATI

Report No. 6400
Report Date 7/20/90

Checked by PS
Date 10/23/90

Number of Samples 17 (15 soil & 2 W)
Date(s) Collected 6-19 thru 6/23/90
Date Submitted 6/25/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X	—	
Samples properly perserved	X	—	Submitted in cold cooler
Chain-of-custody Form Complete	X	—	
Samples received in good condition	X	—	According to ATI notes
Laboratory QC confirmed	✓	—	
Field/Equipment/Trip Blanks checked	~~X~~	—	None
Duplicate samples checked	~~X~~	—	None

MCK0004343

PS 10/23/90

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6400
Report Date 7/20/90

Checked by PS
Date 10/26/90

Date(s) collected 6-19 thru 6/23/90
Date submitted 6/25/90
Date(s) extracted 7/2/90
Within holding time? YES
Date(s) analyzed 7/9, 7/10, 7/11
Within holding time? YES

Number of Samples 17 (5 soil & 2W)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00640003	Y	Y	Y	
00640309	N	Y	Y	1,2,4-TRICHLOROBENZENE Outside W.L. w/in C.L. No impact
Reagent Water	N	Y	Y	1,2,4-TRICHLOROBENZENE, ACENAPHTHENE, 2,4-DINITROTOLUENE, N-NITROSO-DI-N-PROPYLAMINE — ALL outside W.L. ALL w/in C.L. NO impact.

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004344

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6400
Report Date 7/20/90

Checked by PS
Date 10/26/90

Date(s) collected 6-19 thru 6/23/90
Date submitted 6/25/90
Date(s) extracted 6/28/90
Within holding time? N/A
Date(s) analyzed 7/1, 7/2, 7/4, 7/5, 7/6.
Within holding time? YES

Number of Samples 17 (Soil & 2W)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil 1	N	Y	Y	Benzene outside W.L., within C.L. - No impact
Reagent Soil 2	N	Y	Y	Benzene outside W.L, w/in C.L - NO IMPACT
Reagent Soil 3	Y	Y	Y	
00640017	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? M.C. 2 - Trace < 0.3 ppm, 0.5 ppm, 0.6 ppm - No IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004345

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6400
Report Date 7/20/90

Checked by PS
Date 10/26/90

Date(s) collected 6-19 thru 6/23/90
Date submitted 6/25/90
Date(s) extracted 6/30/90
Within holding time? N/A
Date(s) analyzed 7/8/90
Within holding time? NA

Number of Samples 17 (Sol. 1 & 2W)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015(Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	NA		
Laboratory QC data checked?			

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00640003	Spike 1	NO WARNING LIMITS AVAILABLE			
00646602	Spike 2	FROM ATI.			
00652405	Spike 3				
P ~~00652414~~	~~Spike 4~~				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004346

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6400
Report Date 7/20/90

Checked by PS
Date 10/26/90

Date(s) collected 6-19 thru 6/23/90
Date submitted 6/25/90
Date(s) extracted Not Known
Within holding time? _____
Date(s) analyzed Not Known
Within holding time? YES - REPORT DATE 7/20/90

Number of Samples 17 (5 soil & 2W)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique EPA 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
30640001	Spike 1	Y	Y	N/A	
30640013	Spike 2	Y	Y	N/A	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004347

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6400
Report Date 7/20/90

Checked by PS
Date 10/26/90

Date(s) collected 6-19 thru 6/23/90
Date submitted 6/25/90
Date(s) extracted
Within holding time? NA
Date(s) analyzed 7/9/90 (TPH)
Within holding time? ~~NA~~ yes

Number of Samples 17 (5 S. 1 & 2W)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chem. (Ions) Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within (TPH) holding times?	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00640008	Spike	~~NO~~ Y	✓	N/A	Fluoride outside W.L, within C.L., No impact
00640002 SP	~~Spike Dup~~ Spike 1	Y	✓		
00640013	Spike ~~Dup~~ 2	Y	Y		
00640009	Spike 3	N	Y		
00640010	Spike 4	Y	Y		
00640001	Spike 5	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004348

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.41

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6466
Report Date 7/27/90

Checked by PS
Date 10/23/90

Number of Samples 6 (Soil)
Date(s) Collected 6/26 & 6/27/90
Date Submitted 6/27/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in cold code
Chain-of-custody Form Complete	X		Lab signed off in wrong spot
Samples received in good condition	X		According to ATI note
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

PS 10/23/90

MCK0004349

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6466
Report Date 7/27/90

Checked by PS
Date 10/23/90

Date(s) collected 6/26 & 6/27/90
Date submitted 6/27/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed 7/10/90 (TPH)
Within holding time? ~~N/A~~ yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis ~~None~~ General Chemistry Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH)	✓		
Laboratory QC data checked?	X		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00650701	Y	Y		
00646606	N	Y		? No impact within C.L.
00646605	N	Y		?
00652402	Y	Y		
00640009				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004350

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6466
Report Date 7/27/90

Checked by DS
Date 10/23/90

Date(s) collected 6/26 & 6/27/90
Date submitted 6/27/90
Date(s) extracted
Within holding time?
Date(s) analyzed Not known
Within holding time? Yes, Report Date 7/27/90

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique EPA 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0064 6606	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004351

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6466
Report Date 7/27/90

Checked by PS
Date 10/23/90

Date(s) collected 6/26 & 6/27/90
Date submitted 6/27/90
Date(s) extracted ~~N/A~~ 6/30/90
Within holding time? N/A
Date(s) analyzed 7/11/90
Within holding time? N/A

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA ~~8240~~ 8015 (Modified) PS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil 00646602	W.L/ C.L.	Not Available from ATI		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004352

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6466
Report Date 7/27/90

Checked by PS
Date 10/23/90

Date(s) collected 6/26 & 6/27/90
Date submitted 6/27/90
Date(s) extracted 7/2/90
Within holding time? N/A
Date(s) analyzed 7/7/90
Within holding time? Y

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? TR (< 0.3 ppm) M.C. — NO IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004353

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6466
Report Date 7/27/90

Checked by DS
Date 10/23/90

Date(s) collected 6/26 & 6/27/90
Date submitted 6/27/90
Date(s) extracted 6/29/90
Within holding time? YES
Date(s) analyzed 7/11/90
Within holding time? YES

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00646605	Y	Y	N	RPD 1,2,4-Trichlorobenzene out of control

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? (Y) / (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004354

B.4.1

DATA VALIDATION CHECKLIST

C[illegible]5

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by PS
Date 10/23/90

Number of Samples 8 (Soil)
Date(s) Collected 6/29/90
Date Submitted 6/29/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in cold cooler
Chain-of-custody Form Complete		X	Date missing for when collected. Check field logs (6/28/90)
Samples received in good condition	X		Lab signed off in wrong spot According to ATI
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

PS 10/23/90

MCK0004355

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 6/29/90
Date submitted 6/29/90
Date(s) extracted ~~6/29/90~~ SP
Within holding time? N/A
Date(s) analyzed ~~[illegible]~~ SP 7/12/90 (TPH)
Within holding time? ~~N/A~~ yes

Number of Samples 8 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chemistry (Ions) Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH)	~~N/A~~ ✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00652407	Y	Y		
00706204	Y	Y		
00652104	N	Y		NO IMPACT
00652402	Y	Y		
00704202				

SEE BACK

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? ~~Y~~ N (Y/N)
How did the duplicates compare? PS

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004356

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 6/29/90
Date submitted 6/29/90
Date(s) extracted ~~6/29~~ Not known
Within holding time? ·
Date(s) analyzed 7/27/90
Within holding time? YES, Report Date 7/27/90

Number of Samples 8 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis	Method	Technique
Metals	ICAP	EPA 6010
Fuel HC	GC/FID	Fuel HC

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00652 401	Y	Y		
00652 405	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? ~~Y~~ N (Y/N)
How did the duplicates compare? PS

MCK0004357

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by SP
Date 12-26-90

Date(s) collected 6/29/90
Date submitted 6/29/90
Date(s) extracted 7/3/90
Within holding time? _____
Date(s) analyzed 7/6/90
Within holding time? YES

Number of Samples 8 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Fuel Hydrocarbons Method GC/FID Technique 8015/Mod

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00702601	Y	Y	N	RPD out of Limits due to sample matrix interference

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004358

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 6/29/90
Date submitted 6/29/90
Date(s) extracted 7/3/90
Within holding time?
Date(s) analyzed 7/12/90, 7/13/90
Within holding time? yes

Number of Samples 8 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? Y(2) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? 0.35 ppm, 0.40 ppm M.C. NO-IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004359

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 6/29/90
Date submitted 6/29/90
Date(s) extracted 7/3/90
Within holding time? N/A
Date(s) analyzed 7/11/90
Within holding time? N/A

Number of Samples 8 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015(Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent + Soil 00652405	NO	LIMITS	AVAILABLE	FROM ATI

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____(Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? N (Y/N)
Were any compounds present in blank? _____(Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004360

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 6524
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 6/29/90
Date submitted 6/29/90
Date(s) extracted 7/5/90
Within holding time? Yes
Date(s) analyzed 7/11/90, 7/12/90
Within holding time? Yes

Number of Samples 8 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00653408	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? TR <0.17 ppm DIETHYLPHTHALATE - No Impact

Were any duplicates run? ~~Y~~ N (Y/N)
How did the duplicates compare? PS

MCK0004361

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7042
Report Date 7/27/90

Checked by PS
Date 10/23/90

Number of Samples 4 (Soil)
Date(s) Collected 7/3/90
Date Submitted 7/5/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in cold cooler
Chain-of-custody Form Complete	X		~~Lab~~ Lab signed off in wrong spot
Samples received in good condition	X		According to ATI notes
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	X		None
Duplicate samples checked	X		None

PS 10/23/90

MCK0004362

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7042
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 7/3/90
Date submitted 7/5/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed Not known
Within holding time? N/A

Number of Samples 4 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chem (Long) Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00706204	Y	Y		
00706202	Y	Y		
00711701	Y	Y		
00718501	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004363

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7042
Report Date 7/27/90

Checked by PS
Date 10/26/90

Date(s) collected 7/3/90
Date submitted 7/5/90
Date(s) extracted
Within holding time?
Date(s) analyzed Not known
Within holding time? Yes, Report date 7/27/90

Number of Samples 4 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique EPA 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00648901	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø (~~Y/N~~)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004364

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7062
Report Date 7/31/90

Checked by PS
Date 10/23/90

Number of Samples 4 (So.1)
Date(s) Collected 7/5/90
Date Submitted 7/6/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in cold cooler
Chain-of-custody Form Complete	X		Lab signed of in wrong place
Samples received in good condition	X		According to ATI notes
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

PS 10/23/90

MCK0004365

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7062
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/5/90
Date submitted 7/6/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed Not Known
Within holding time? ~~N/A~~ Yes, Report date 7/31/90

Number of Samples 4 (5.1)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Gen Chemistry Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples (TPH) tested within holding times?	~~N/A~~ ✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00706204	N	Y	~~A~~	FLUORIDE out of W.L W/IN C.L
00706203	N	Y		NITRATE out of W.L W/in C.L
00706201	Y	Y		
00718501	Y	Y		

NO IMPACT

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004366

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7062
Report Date 7/31/90

Checked by PS
Date 10/28/90

Date(s) collected 7/5/90
Date submitted 7/6/90
Date(s) extracted Not known
Within holding time?
Date(s) analyzed Not known
Within holding time? Yes, Report Date 7/31/90

Number of Samples 4 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique EPA 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00648901	YES	YES		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004367

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7062
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/5/90
Date submitted 7/6/90
Date(s) extracted 7/9/90
Within holding time? N/A
Date(s) analyzed 7/11/90
Within holding time? N/A

Number of Samples 4 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015(Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	limits not Available from ATI			
00708702				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004368

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7062
Report Date 7/31/90

Checked by PS
Date 10/28/90

Date(s) collected 7/5/90
Date submitted 7/6/90
Date(s) extracted 7/9/90
Within holding time? N/A
Date(s) analyzed 7/18/90 7/19/90
Within holding time? yes

Number of Samples 4 (S.1)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
~~Reagent~~ Soil	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? TR (0.3 ppm M.C. NO IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004369

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7062
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/5/90
Date submitted 7/6/90
Date(s) extracted 7/10/90
Within holding time? YES
Date(s) analyzed 7/20/90
Within holding time? YES

Number of Samples 4 (5.1)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00707209	N	Y		1,2,4-Trichlorobenzene, Acenaphthene, Pyrene, all out side W.L, w/in C.L. No-Impact

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004370

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3.4.1

DATA VALIDATION CHECKLIST

CC5E39

Laboratory ATI

Report No. 7087
Report Date 7/31/90

Checked by PS
Date 10/23/90

Number of Samples 2 (Soil)
Date(s) Collected 7/6/90
Date Submitted 7/9/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in cold cooler
Chain-of-custody Form Complete	X		Lab signed off in wrong place
Samples received in good condition	X		According to ATI
Laboratory QC confirmed	X		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

PS 10/23/90

MCK0004371

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7087
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/6/90
Date submitted 7/9/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed
Within holding time? Yes, Report date 7/31/90

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Pet HC Method IR Technique EPA 418.1 (Mod

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested (TPH) within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0071201	N	~~SPIKES NOT AVERAGE THE~~		
		Y		NO IMPACT

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004372

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7087
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/6/90
Date submitted 7/9/90
Date(s) extracted 7/10/90
Within holding time? N/A
Date(s) analyzed ~~N/A~~ 7/11/90
Within holding time? N/A

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015 (Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Limits Not Available			
0070 8702				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004373

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7087
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/6/90
Date submitted 7/9/90
Date(s) extracted 7/10/90
Within holding time? N/A
Date(s) analyzed 7/20/90, 7/21/90
Within holding time? yes

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? 0.52 ppm M.C. No Impact

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004374

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7087
Report Date 7/31/90

Checked by PS
Date 10/26/90

Date(s) collected 7/6/90
Date submitted 7/9/90
Date(s) extracted 7/11/90
Within holding time? YES
Date(s) analyzed 7/22/90
Within holding time? YES

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
007/008	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004375

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

341
CC35-20

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7120
Report Date 8/2/90

Checked by PS
Date 10/23/90

Number of Samples 2 (S.1)
Date(s) Collected 7/5/90
Date Submitted 7/10/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	X		Submitted in cold code
Chain-of-custody Form Complete	X		Lab signed off in wrong place.
Samples received in good condition	X		According to ATI note
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

PS 10/23/90

MCK0004376

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7120
Report Date 8/2/90

Checked by PS
Date

Date(s) collected 7/5/90
Date submitted 7/10/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed
Within holding time? Yes, Report Date 8/2/90

Number of Samples 2(Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Pet HC Method IR Technique EPA 418.1 (Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0071201	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004377

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7120
Report Date 8/2/90

Checked by PS
Date

Date(s) collected 7/5/90
Date submitted 7/10/90
Date(s) extracted 7/12/90
Within holding time? N/A
Date(s) analyzed 7/19/90
Within holding time? N/A

Number of Samples 2 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015 (Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0072303 Reagent Soil	Limits Not Available			

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004378

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7120
Report Date 8/2/90

Checked by PS (SP)
Date 12-26-90

Date(s) collected 7/5/90
Date submitted 7/10/90
Date(s) extracted 7/12/90
Within holding time? NA
Date(s) analyzed 7/19/90
Within holding time? YES

Number of Samples 2(Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? TR < 0.3 ppm M.C. No Impact

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004379

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7120
Report Date 8/2/90

Checked by PS
Date

Date(s) collected 7/5/90
Date submitted 7/10/90
Date(s) extracted 7/11/90
Within holding time? YES
Date(s) analyzed 7/22/90
Within holding time? YES

Number of Samples 2(Soil)
Number of Duplicates ∅

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
0 07/2001	N	N	Y	1,2,4-Trichlorobenzene, Acenaphthene
				2,4-Dinitro toluene, Pyrene, 4-Chloro
				-3-Methyl phenol outside of W.L.
				2,4-Dinitro toluene out of C.L.
				due to sample matrix interference.

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 0 ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004380

3.4.1

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7171
Report Date 8/9/90

Checked by PS
Date 10/23/90

Number of Samples 6 (Soil)
Date(s) Collected 7/11 & 7/12/90
Date Submitted 7/12/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in coldcooler
Chain-of-custody Form Complete	X		lab signed off in wrong place
Samples received in good condition	X		According to ATI notes
Laboratory QC confirmed	X		
Field/Equipment/Trip Blanks checked	~~X~~		None
Duplicate samples checked	~~X~~		None

MCK0004381

PS 10/23/90

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7171
Report Date 8/9/90

Checked by PS (SP)
Date 12-26-90

Date(s) collected 7/11 & 7/12/90
Date submitted 7/12/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed 7/17/90 (TPH)
Within holding time? yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Pet HC Method 418 Technique EPA 418.1 (Mo.

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH) yes	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
007 17003	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004382

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7171
Report Date 8/9/90

Checked by PS
Date

Date(s) collected 7/11 & 7/12/90
Date submitted 7/12/90
Date(s) extracted 7/17/90
Within holding time? N/A
Date(s) analyzed 7/20/90
Within holding time? N/A

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Glycols Method GC/FID Technique EPA 8015 (Mod)

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil		No Limits	Available	
00723003				
00725703				

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004383

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7171
Report Date 8/9/90

Checked by PS
Date

Date(s) collected 7/11 & 7/12/90
Date submitted 7/12/90
Date(s) extracted 7/13/90
Within holding time? N/A
Date(s) analyzed 7/25, 7/26
Within holding time? yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Soil	Y	Y	Y	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? Y(3) (Y/N) (See back of sheet for listing.)
Significance? 0.48 ppm M.C., 0.7 ppm M.C., 0.5 ppm M.C. No IMPACT

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004384

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7171
Report Date 8/9/90

Checked by PS
Date

Date(s) collected 7/11 & 7/12/90
Date submitted 7/12/90
Date(s) extracted 7/13/90
Within holding time? yes
Date(s) analyzed 8/2, 8/3/90
Within holding time? yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method GC/MS Technique EPA 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00707203	N	Y		4-Nitrophenol outside W.L, W/in C.L. - No IMPACT

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø ~~(Y/N)~~
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? Trace <0.17 Bis(2-ethyl hexyl) phthalate, NO IMPACT not detected in other samples analyzed during this analytical run.

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004385

3.4.1

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7230
Report Date 8/13/90

Checked by PS
Date 10/23/90

Number of Samples 6 (Soil)
Date(s) Collected 7/13/90
Date Submitted 7/16/90

Number of Field Blanks Ø
Number of Trip/Equipment Blanks Ø

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
SEE ~~ATTACHED~~		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	X ~~[illegible]~~ PS		submitted in coldsoda
Chain-of-custody Form Complete	X		Lab signed off in wrong place
Samples received in good condition	X		According to ATI notes
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	~~[illegible]~~ X		None
Duplicate samples checked	~~[illegible]~~ X		None

PS 10/23/90

MCK0004386

DATA VALIDATION CHECKLIST

Laboratory ATE

Report No. 7230
Report Date 8/13/90

Checked by PS
Date 10/26/90

Date(s) collected 7/13/90
Date submitted 7/16/90
Date(s) extracted ?
Within holding time? N/A
Date(s) analyzed 9/19/90 (TPH)
Within holding time? ~~NA~~ yes

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Chem Method See attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH)	~~NA~~ ✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00221703	NO	NO		Chloride out of C.L. ~~NO HAPIC~~
00728306	Y	Y		~~Samples not analyzed of Cl~~
00723003	Y	Y		
00722202	Y	Y		
00723608	Y	Y		
00728302	Y	Y		

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004387

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATE

Report No. 7230
Report Date 8/13/90

Checked by PS
Date 10/26/90

Date(s) collected 7/13/90
Date submitted 7/16/90
Date(s) extracted
Within holding time?
Date(s) analyzed Not know
Within holding time? yes Report Date 8/13/90

Number of Samples 6 (Soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique EPA 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00728301	N	Y		Sodium outside W.L., within C.L.
				No impact

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004388

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 109149
Report Date SEPT. 26, 1991

Checked by LMF
Date 12-16-91

Date(s) collected SEPT. 10 1991
Date submitted SEPT. 11, 1991
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed SEPT 18, 19, 1991
Within holding time? Y (<40)

Number of Samples 5
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis VOLATILE ORGANICS Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		MCK0004389

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
10-19 → MSMSD* #22095	NO: DCE, CHB	Y	Y	% REC: 100-123%, RPD: 0-2%
10-15 → BLANK SPIKE #17277	Y	Y	N/A	% REC: 91-105%

* NO MSMSD RUN FOR 10-18-1991, AND MSMSD & BLANK SPIKE RUN ON DIFFERENT DAYS

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? OK

CHECKED W/ ATI BLANK SAM AS SAMPLE OK

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance? OK

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? OK (NOTE: % RECOVERY FOR SURROGATES HIGH, TOLUENE = 111, LIMIT = 110)

Were any duplicates run? Y (Y/N) MK-CPT-10-091091D
How did the duplicates compare? 4 COMPOUNDS DETECTED IN SAMPLE & DUPLICATE. RPD RANGED FROM 0 FOR CIS 1,2-DCE & 1,1,1-TCA TO 19.61% FOR 1,1-DCE

SURROGATES: SAMPLES 1 (091091) AND 5 (EQUIP. BLANK) SHOWED SURROGATES > RECOVERY LIMITS

SAMPLE	% REC	REC. LIMIT	
1	115	114	1,2 DCA-D4 > W.L.
	110	110	TOLUENE > W.L
5	116	114	1,2 DCA-D4 > W.L.
	112	110	TOLUENE > W.L

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

Figure 4-4

DATA VALIDATION CHECKLIST SUMMARY

Laboratory ATI

Report No. 110061
Report Date OCT 17, 1991

Checked by LMF
Date 12-16-1991
HLA JOB#: 17333,165.11

Number of Samples 9
Date(s) Collected OCT 2, 1991
Date Submitted OCT 3, 1991

Number of Field Blanks 1 (EQUIPMENT)
Number of Trip/Equipment Blanks 2 (1 TRIP, 1 EQUIPMENT)

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
VOC	8240	GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	—	—	
Samples properly perserved	✓	—	WATER SAMPLES → HCl SOIL SAMPLES → UNPRESERVED
Chain-of-Custody Form Complete	✓	—	
Samples received in good condition	✓	—	CUSTODY SEALS NOT PRESENT ON VOLATILE CONTAINERS
Laboratory QC confirmed	✓	—	
Field/Equipment/Trip Blanks checked	✓	—	
Duplicate samples checked	✓	—	

MCK0004390

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 110061
Report Date OCT 17, 1991

Checked by LMF
Date 12-6-91

Date(s) collected 10-2-1991
Date submitted 10-3-1991
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 10-8-1991
Within holding time? YES (< 40)

Number of Samples 6
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis VOLATILE ORGANICS ON WATER SAMPLES Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓	—	MCK0004391
Laboratory QC data checked?	✓	—	

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MS/MSD #23263 10-8	Y	Y	Y ✓	RPD = 6%, % REC. = 96, 104% 110%
BLANK #19012 10-8	Y	Y	N/A	% REC = 95-101%

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? OK

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? OK

Were method blanks run? Y (Y/N) 10-7 & 10-8
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? OK

Were any duplicates run? Y (Y/N) MK-MP-8-100491D
How did the duplicates compare? 8 COMPOUNDS DETECTED IN SAMPLE & IN DUPLICATE RPD RANGED FROM 0% FOR METHYLENE CHLORIDE & 1,1-DCE TO 25.57% FOR TOLUENE (SEE ATTACHED FOR RPD)

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

SURROGATES 96 109% RECOVERY
WITHIN REC LIMITS

	% REC	R.L
[illegible]	[illegible]	[illegible]

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 110453
Report Date 11-12-1991

Checked by LMF
Date 12-16-1991

Date(s) collected 10-28-1991
Date submitted 10-29-1991
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 11-1-1991, 11-2-1991
Within holding time? Y (< 40)

Number of Samples 10
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis VOLATILE ORGANICS Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		MCK0004392

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
[illegible]	TCE TWL	Y	Y	% REC = 77% 118% RPD = 5.7%
[illegible]	Y	Y	N/A	% REC = ~~75 126~~ 102-116%
[illegible]	Y	Y	N/A	% REC = 85% 117%
[illegible]	TCE TWL	Y	N/A	% REC = 75% 120%

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? [illegible] (Y/N)
How did the duplicates compare? [illegible]

SURROGATES: [illegible]

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

Figure 4-4

DATA VALIDATION CHECKLIST SUMMARY

Laboratory ATI

Report No. 110453
Report Date 11-12-1991

Checked by LMF
Date 12-16-1991
UCA JOB# 17333.165.11

Number of Samples 10
Date(s) Collected 10-28-1991
Date Submitted 10-29-1991

Number of Field Blanks 1 (EQUIPMENT)
Number of Trip/Equipment Blanks 2
1 TRIP
1 EQUIPMENT

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
VOC	8240	GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	—	—	
Samples properly perserved	✓	—	
Chain-of-Custody Form Complete	✓	—	
Samples received in good condition	✓	—	SEALS NOT INTACT ON SAMPLE CONTAINERS, BUT [illegible]
Laboratory QC confirmed	✓	—	
Field Equipment/Trip Blanks checked	✓	—	
Duplicate samples checked	✓	—	

MCK0004393

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 7283
Report Date 8/13/90

Checked by SP
Date 12-26-90

Date(s) collected 7/17/90, 7/18/90
Date submitted 7/18/90
Date(s) extracted 7/19/90
Within holding time? YES
Date(s) analyzed 8/5/90 8/9/90
Within holding time? YES

Number of Samples 8 (soil) 2 (water)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Semi Volatiles Method GC/MS Technique 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Water	N	Y	N	All spikes w/in C.L. NO IMPACT
OCT 18303	N	Y	Y	All spikes w/in C.L NO IMPACT

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? N (Y/N)
Were any compounds present in blank? N/A (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y(2) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004394

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8636
Report Date 8/29/90

Checked by PS
Date 10/23/90

Number of Samples 13 (Water)
Date(s) Collected 8/1 & 8/2/90
Date Submitted 8/2/90

Number of Field Blanks 2
Number of Trip/Equipment Blanks 2

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

MCK0004395

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		Submitted in cold cooler [illegible]
Chain-of-custody Form Complete	X		[illegible]
Samples received in good condition	X		[illegible]
Laboratory QC confirmed	✓		According to ATI notes
Field/Equipment/Trip Blanks checked	X		
Duplicate samples checked	X		

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8036
Report Date 8/29/90

Checked by SP
Date 12-21-90

Date(s) collected 8/1/90, 8/2/90
Date submitted 8/2/90
Date(s) extracted ?
Within holding time? N/A
Date(s) analyzed ?
Within holding time? ~~N/A~~ Yes, Report date 8/29/90

Number of Samples 13 (Water)
Number of Duplicates 2

ANALYSIS SCHEDULE

Analysis Gen. Chem. Method See Attached. Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	~~N/A~~ ✓		MCK0004396
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00803600	Y	Y		
00803801	Y	Y		
00803610	Y	Y		
00804901	Y	Y		
00805801				

SEE BACK

Was there a trip blank? Y (2) (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.) ?
Significance? No Impact

How many equipment blanks? Y (2) (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.)
Signifcance? Chloride 100 mg/l No impact.

Were method blanks run? N (Y/N)
Were any compounds present in blanks? ~~Y~~ N/A (Y/N) (See back of sheet for listing.)
Significance? ~~Chloride 100 mg/l No impact~~ SP

Were any duplicates run? Y (2) (Y/N)
How did the duplicates compare? ~~Similar Results~~
Ave RPD ranged 0 to 17% for most analytes - NO IMPACT
RPD for Nitrate = 37%
RPD for Surfactants = 78% } Levels detected in samples generally low NO IMPACT

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATL

Report No. 8036
Report Date 8/29/90

Checked by SP
Date 12-21-90

Date(s) collected 8/1/90, 8/2/90
Date submitted 8/2/90
Date(s) extracted Not Known
Within holding time? _____
Date(s) analyzed Not Know
Within holding time? Yes Report Date 8/29/90

Number of Samples 13 (water)
Number of Duplicates 2

ANALYSIS SCHEDULE

Analysis Metals Method 6010 Technique ~~6010~~ SP

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

MCK0004397

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00803606	Y	Y		
00803610	Y	Y		

Was there a trip blank? Y (2) (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.)
Significance? No impact

How many equipment blanks? Y (2) (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.)
Signifcance? No impact

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____ (Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? Y (2) (Y/N)
How did the duplicates compare? ~~Similar Results~~

Ave. RPD ranged 0 to 9% for most analytes - No impact
Ave RPD for Iron = 67%
Ave. RPD for Manganese = 34%
Ave. RPD for Zinc = 37%
} amounts of these analytes detected in site samples were generally low to nondetected - ∴ No IMPACT

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8036
Report Date 8/29/90

Checked by SP
Date 12-21-90

Date(s) collected 8/1/90, 8/2/90
Date submitted 8/2/90
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 8/21/90
Within holding time? NA

Number of Samples 13 (water
Number of Duplicates 2

ANALYSIS SCHEDULE

Analysis Glycols Method Mod - 8015 Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

MCK0004398

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
cc803601	Limits Not Available from ATI			
cc803611				

Was there a trip blank? Y(2) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Y(2) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y(2) (Y/N)
How did the duplicates compare? IDENTICAL RESULTS RPD = 0%
No compounds detected in Dups.

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8036
Report Date 8/29/90

Checked by SP
Date 12-21-90

Date(s) collected 8/1/90, 8/2/90
Date submitted 8/2/90
Date(s) extracted
Within holding time? NA
Date(s) analyzed 8/15/90
Within holding time? YES

Number of Samples 13 (water)
Number of Duplicates 2

ANALYSIS SCHEDULE

Analysis Volatiles ~~8240~~ Method GC/MS ~~8240~~ Technique 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

MCK0004399

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00E03E13	Y	Y	Y	

Was there a trip blank? Y (2) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? Y (2) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (3) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? Trace < 5 ppb M.C. - No Impact.

Were any duplicates run? 2 (Y/N)
How did the duplicates compare? ~~similar results~~ RPD range 0 - 24% - No impact (where data available (all RPD values w/in Limits))

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8036
Report Date 8/29/90

Checked by SP
Date 12-25-90

Date(s) collected 8/1/90, 8/2/90
Date submitted 8/2/90
Date(s) extracted 8/6/90
Within holding time? YES
Date(s) analyzed 8/10, 8/11
Within holding time? YES

Number of Samples 13 (water)
Number of Duplicates 2

ANALYSIS SCHEDULE

Analysis Semi Volatiles Method GC/MS ~~8270~~ Technique 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
060310	N	N	N	1,2,4-TRICHLOROBENZENE
Reagent Water	N	Y	Y	2,4-DINITROTOLUENE
				Pyrene
				Acenaphthene
				N-Nitroso-Di-N-propylamine, Pentachlorophenol, phenol etc.

out of limits because of sample matrix interference.

Was there a trip blank? Y(2) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? Y(2) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y(2) (Y/N)
How did the duplicates compare? ~~Similar results~~ Are RPD values range 0 to > 90 where calculated. - No impact.

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004400

DATA VALIDATION CHECKLIST

341

Laboratory ATI

Report No. 8049
Report Date 8/29/90

Checked by PS
Date 10/23/90

Number of Samples 8 (water)
Date(s) Collected 8/3/90
Date Submitted 8/3/90

Number of Field Blanks 1
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		[illegible]
Chain-of-custody Form Complete	X		[illegible]
Samples received in good condition	X		[illegible]
Laboratory QC confirmed	✓		According to ATI
Field/Equipment/Trip Blanks checked	X		
Duplicate samples checked	X		

MCK0004401

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8049
Report Date 8/29/90

Checked by PS (SP)
Date 12-26-90

Date(s) collected 8/3/90
Date submitted 8/3/90
Date(s) extracted
Within holding time? N/A
Date(s) analyzed
Within holding time? ~~N/A~~

Number of Samples 8 (Water)
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis General Chem Method See Attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times? (TPH) ~~N/A~~	✓		
Laboratory QC data checked?	✓		MCK0004402

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00S0490/	Y	Y		

Was there a trip blank? Y(1) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 1 ~~(Y/N)~~
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? ~~Y~~ N (Y/N)
Were any compounds present in blanks? ~~N/A~~ (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y(1) (Y/N)
How did the duplicates compare? RPD range from 0% to 12%, except for Nitrate in which RPD = 111% (values 3.4 & 1.9 ppm) & Petro. H.C. in which RPD = 50% (values 0.06 & <0.05) Little Impact

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8049
Report Date 8/29/90

Checked by PS (SP)
Date 12-26-90

Date(s) collected 8/3/90
Date submitted 8/3/90
Date(s) extracted ?
Within holding time?
Date(s) analyzed ?
Within holding time? YES, Report Date 8/29/90

Number of Samples 8 (Water)
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Metals Method ICAP Technique 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00804901	Y	Y		

Was there a trip blank? Y(1) (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.)
Significance? 0.29 ppm Manganese - No Impact

How many equipment blanks? 1 ~~(Y/N)~~
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N/A (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y(1) (Y/N)
How did the duplicates compare? RPD ranges 0 to ~~65%~~ 17% No IMPACT
~~Manganese values~~

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004403

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8049
Report Date 8/29/90

Checked by PS (SP)
Date 12-27-90

Date(s) collected 8/3/90
Date submitted 8/3/90
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 8/21/90
Within holding time? N/A

Number of Samples 8 (Water)
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Glycols Method ~~GC/MS~~ GC/FID Technique 8015-Mod

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	N/A		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
oc804901	WARNING	LIMITS	NOT AVAILABLE	

Was there a trip blank? Y(1) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 1 ~~(Y/N)~~
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y(1) (Y/N)
How did the duplicates compare? RPD = 0% No analytes detected

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004404

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8049
Report Date 8/29/90

Checked by PS (SP)
Date 12-27-90

Date(s) collected 8/3/90
Date submitted 8/3/90
Date(s) extracted 8/7/90
Within holding time? YES
Date(s) analyzed 8/11 8/12/90
Within holding time? YES

Number of Samples 8 (Water)
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Semi-Volatiles Method GC/MS Technique 8270

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00804905	N	N	N	Pyrene RPD outside limits,
				Pyrene Outside of C.L. due to
				sample matrix interference,
				No impact

Was there a trip blank? Y(1) (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 1 ~~(Y/N)~~
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y(1) (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? 13 ppb Bis (2-Ethylhexyl) Phthalate No impact - not detected in other samples.

Were any duplicates run? Y(1) (Y/N)
How did the duplicates compare? Where checked RPD ranges 0 to 12%, No impact

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004405

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 8049
Report Date 8/29/90

Checked by PS (SP)
Date 12-27-90

Date(s) collected 8/3/90
Date submitted 8/3/90
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 8/16/90
Within holding time? yes

Number of Samples 8 (Water)
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Volatiles Method GC/MS Technique 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
00743702	N	Y	Y	Benzene out side W.L., W/in C.L.
00503613	Y	Y	Y	No Impact.

Was there a trip blank? Y(1) (Y/N)
Were any compounds present in blank? Y (Y/N) (See back of sheet for listing.)
Significance? 2 ppb 1,2 DCE, 2 ppb Toluene

How many equipment blanks? 1 ~~(Y/N)~~
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? (Y) 2 (Y/N)
Were any compounds present in blanks? Y (Y/N) (See back of sheet for listing.)
Significance? M.C. TR < 5 ppb No Impact

Were any duplicates run? Y(1) (Y/N)
How did the duplicates compare? RPD range 0 to 25% No IMPACT (within allowable range where information is available).

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004406

342

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010334
Report Date 11-5-90

Checked by TH
Date 11-15-90

Number of Samples 10
Date(s) Collected 10-24-90
Date Submitted 10-25-90

Number of Field Blanks 1
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See Attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		
Chain-of-custody Form Complete	X		
Samples received in good condition	X		
Laboratory QC confirmed	X		
Field/Equipment/Trip Blanks checked	X		
Duplicate samples checked	X		

MCK0004407

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010334
Report Date 11-5-90

Checked by TH
Date 11-15-90

Date(s) collected 10-24-90
Date submitted 10-25-90
Date(s) extracted ___
Within holding time? N/A
Date(s) analyzed ___
Within holding time? Yes

Number of Samples 4
Number of Duplicates 1

ANALYSIS SCHEDULE

See Attached

Analysis Gen. Minerals Method ___ Technique ___

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	X		
Laboratory QC data checked?	X		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Spike 1 010334	Y	Y	N/A	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? ___ (Y/N) (See back of sheet for listing.)
Significance? ___

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance? ___

Were method blanks run? N (Y/N)
Were any compounds present in blanks? ___ (Y/N) (See back of sheet for listing.)
Significance? ___

Were any duplicates run? Y (Y/N)
How did the duplicates compare? ~~Ave RPD = 29%~~ TRC 11/19 ~~1,1DCE RPD = 32.8%~~ TRC 11/19 Ave RPD = 2.8%

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004408

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010334
Report Date 11-5-90

Checked by TH
Date 11-15-90

Date(s) collected 10-24-90
Date submitted 10-25-90
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 10-26-90
Within holding time? Y

Number of Samples 10
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Volatile Organics Method EPA 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	X		
Laboratory QC data checked?	X		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Spike 1	Y	Y	Y	

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y (Y/N)
How did the duplicates compare?
Ave RPD = 29%
1,1 DCE high @ 32.8%

MCK0004409

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010334
Report Date 11-5-90

Checked by TH
Date 11-15-90

Date(s) collected 10-24-90
Date submitted 10-25-90
Date(s) extracted /
Within holding time? / NA
Date(s) analyzed /
Within holding time? Yes

Number of Samples 4
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Cd, Cu, Fe, Mg, Mn, K, Na, Zn Method ICAP Technique EPA 6010

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	X		
Laboratory QC data checked?	X		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Spike 1	N	Y	N/A	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____(Y/N) (See back of sheet for listing.)
Significance? _____

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? _____(Y/N) (See back of sheet for listing.)
Signifcance? _____

Were method blanks run? N (Y/N)
Were any compounds present in blanks? _____(Y/N) (See back of sheet for listing.)
Significance? _____

Were any duplicates run? Y (Y/N)
How did the duplicates compare? Ave RPD = 4%

MCK0004410

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

3 of 2

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010336
Report Date 11-8-90

Checked by TH
Date 11-19-90

Number of Samples 8
Date(s) Collected 10-25-90
Date Submitted 10-25-90

Number of Field Blanks 1
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See Attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	X		
Samples properly perserved	X		
Chain-of-custody Form Complete	X		
Samples received in good condition	X		
Laboratory QC confirmed	X		
Field/Equipment/Trip Blanks checked	X		
Duplicate samples checked	X		

MCK0004411

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010336
Report Date 11-8-90

Checked by TH
Date 11-19-90

Date(s) collected 10-25-90
Date submitted 10-25-90
Date(s) extracted /
Within holding time? / NA
Date(s) analyzed
Within holding time? Yes

Number of Samples 8
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Metals Method EPA-6010 Technique ICAP

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	X		
Laboratory QC data checked?	X		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Spike 1	N	N	N/A	See Attached - Mn out of limits

Was there a trip blank? N (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? — (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004412

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010336
Report Date 11-8-90

Checked by TH
Date 11-19-90

Date(s) collected 10-25-90
Date submitted 10-25-90
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed 10/31-11/2
Within holding time? Yes

Number of Samples 8
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Volatile Organics Method EPA 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	X		
Laboratory QC data checked?	X		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
21022702	Spike 1	Y	Y	Y	
21024801	Spike 2	Y	Y	Y	

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? Y (Y/N)
How did the duplicates compare? Ave RPD = 17.5%
Range 0% - 52% for 7 compounds detected
1,1 DCE High @ 52% RPD

MCK0004413

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 010336
Report Date 11-7-90

Checked by TH
Date 11-19-90

Date(s) collected 10-25-90
Date submitted 10-25-90
Date(s) extracted
Within holding time? See Report Date 11/5
Date(s) analyzed
Within holding time? ~~11-7~~ TAC
Yes

Number of Samples 8
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Gen Min Method See Attached Technique

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	X		
Laboratory QC data checked?	X		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Spike 1	N	Y	N/A	See attached

Was there a trip blank? N (Y/N)
Were any compounds present in blank? N4 (Y/N) (See back of sheet for listing.)
Significance?

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? N4 (Y/N) (See back of sheet for listing.)
Signifcance?

Were method blanks run? N (Y/N)
Were any compounds present in blanks? N4 (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? N (Y/N)
How did the duplicates compare?

MCK0004414

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

Soil Porosity 15 Feder

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 10127
Report Date 2/21/91

Checked by B. Chadwick
Date 2/25/91

Number of Samples 13 (Soil)
Date(s) Collected Jan 23, 1991
Date Submitted Jan 24, 1991

Number of Field Blanks 0
Number of Trip/Equipment Blanks 0

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	NA soil		Samples recieved cold by lab
Chain-of-custody Form Complete	✓		
Samples received in good condition	✓		w/ custody seals intact on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	NA		MCK0004415
Duplicate samples checked	✓ LAB Dups	NA	

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 101271
Report Date 2/21/91

Checked by B. Chadwick
Date 2/25/91

Date(s) collected Jan 22, 1991
Date submitted Jan 24, 1991
Date(s) extracted Jan 25, 1991
Within holding time? NA
Date(s) analyzed Feb 1, 1991 VOCs / Ions not indicated (28 days general holding time)
Within holding time? yes Report date within 28 days ∴ yes

Number of Samples 13 (soil)
Number of Duplicates 0

ANALYSIS SCHEDULE

Soil Ions EPA 6010, ect (see attached) ICAP/Colorimetric

Analysis Volatile Organics Method EPA 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Dup MS	yes	yes	NA	
MSMSD →	No	No*		Chl.> WL SO4*
Blank #101271	Yes	yes		
Surrogate	No 1,2DCA/Tol	yes	NA	
MSMSD #10247	yes	yes	yes	
Reagent 10199	yes	yes	NA	

MSMSD, IONS, VOCs

*out of limits due to sample matrix interf.

Was there a trip blank? N (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Y (Y/N) Reagent blank
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? —

Were any duplicates run? Y (Y/N) Lab dups.
How did the duplicates compare? RPD = 0-6

Note: W.L = Warning Limit
C.L = Control Limit
NA = Not Applicable

MCK0004416

Soil 39/40/41/42
10 footers

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 10280
Report Date 2/14/91

Checked by B. Chadwick
Date 2/21/91

Number of Samples 21
Date(s) Collected 1/25/91
Date Submitted 1/25/91

Number of Field Blanks 0
Number of Trip/Equipment Blanks 0

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	NA Soil		samples recieved cold by lab.
Chain-of-custody Form Complete	✓		Lab signed in wrong location
Samples received in good condition	✓		No custody seals on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	NA	NA	
Duplicate samples checked	✓ Lab dups.		

MCK0004417

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 101280
Report Date 2/14/91

Checked by B. Chadwick
Date 2/21/91

Date(s) collected 1/25/91
Date submitted 1/25/91
Date(s) extracted 1/26/91 & 1/28/91
Within holding time? NA
Date(s) analyzed 2/1/91 & 2/2/91 & 2/5/91 & 2/6/91
Within holding time? yes

Number of Samples 21
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis Volatile Organics Method EPA 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Surrogate #	101280	No	yes	NA	1,2DCA, ~~BFB~~ Toluene (one analysis only)
MS/MSD #s	10249/10269/10347	No	No* (DCE only)	yes	Benzene, 1,1DCE*, Toluene
Blank #	10052/10057	yes	yes	NA	

* out of control due to sample matrix interference

Was there a trip blank? N (Y/N)
Were any compounds present in blank? NA (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? NA (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Yes (Y/N) Reagent blank
Were any compounds present in blanks? No (Y/N) (See back of sheet for listing.)
Significance? —

Were any duplicates run? Y (Y/N) Lab dups
How did the duplicates compare? 0 to 14 = RPD

Note: W.L. = Warning Limit
C.L. = Control Limit
NA = Not Applicable

MCK0004418

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 101339
Report Date 2/13/91

Checked by B. Chadwick
Date 2/21/91

Number of Samples 7
Date(s) Collected 1/25/91 & 1/29/91
Date Submitted 1/30/91

Number of Field Blanks 0
Number of Trip/Equipment Blanks 0

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	NA soil		samples received cold by lab.
Chain-of-custody Form Complete	✓		
Samples received in good condition	✓		Intact custody seals on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	NA	NA	
Duplicate samples checked	✓ lab dups.		

MCK0004419

Soil 23A @ 128 ft

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 102043
Report Date 2/18/91

Checked by B. Chadwick
Date 2/21/91

Number of Samples 1 (soil)
Date(s) Collected 2/4/91
Date Submitted 2/4/91

Number of Field Blanks ~~0~~
Number of Trip/Equipment Blanks ~~0~~

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	NA soil		samples recieved cold by lab
Chain-of-custody Form Complete	✓		
Samples received in good condition	✓		No custody seals on cooler
Laboratory QC confirmed	✓		NR
Field/Equipment/Trip Blanks checked		NA	
Duplicate samples checked	✓ lab dups.	NA	

MCK0004420

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 102043
Report Date 2/18/91

Checked by B. Chadwick
Date 2/21/91

Date(s) collected 2/4/91
Date submitted 2/4/91
Date(s) extracted 2/5/91
Within holding time? NA
Date(s) analyzed 2/8/91
Within holding time? yes

Number of Samples 1 (Soil)
Number of Duplicates 0

ANALYSIS SCHEDULE

Analysis Volatile Organics Method GC/MS Technique EPA 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
	~~Reagent Soil~~				
Surrogate	# 102043	No	yes	NA	1,2 DCA-D4 / Toluene D-8 (No impact)
MSMSD	# 10411	yes	yes	yes	
Blank	# 10158	~~NA~~ yes	~~NA~~ yes	~~yes~~ NA	

Was there a trip blank? NA (Y/N)
Were any compounds present in blank? NA (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? NA (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Y (Y/N) Reagent blank
Were any compounds present in blanks? ____ (Y/N) ~~(See back of sheet for listing.)~~
Significance? No impact Methlyene Chloride 0 = 0.37 mg/kg

Were any duplicates run? Y (Y/N) Lab dups.
How did the duplicates compare?
0-18 RPD 18 = 1,1 DCE

Note: W.L. = Warning Limit
C.L. = Control Limit
NA = Not applicable

MCK0004421

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 102107
Report Date Feb 25, 1991
Checked by B. Chadwick
Date 2/27/91

Number of Samples 2 (Composite Soil)
Date(s) Collected 2/7/91
Date Submitted 2/7/91

Number of Field Blanks 0
Number of Trip/Equipment Blanks 0

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	NA soil		Samples recieved cold by Lab.
Chain-of-custody Form Complete	✓		
Samples received in good condition	✓		Intact custody seals on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	NA		
Duplicate samples checked	✓ Lab dups.	NA	

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 102107
Report Date Feb. 25, 1991

Checked by B Chadwick
Date 2/27/91

Date(s) collected Feb 7, 1991
Date submitted 2/7/91
Date(s) extracted 2/9/91
Within holding time? yes 8240
Date(s) analyzed 2/13/91 (8240) & 2/13/91 & 2/18/91 (8270)
Within holding time? yes

Number of Samples 2 (composite soil)
Number of Duplicates Ø

ANALYSIS SCHEDULE

Volatile Organics EPA 8240 GC/MS
Semi Volatile Organics EPA 8270 GC/MS
Analysis Petrol. Hydrocarbons Method EPA 418.1 Technique IR

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

	Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
102116-13	MSMSD 418.1	yes	yes	NA	
10278	Blank 418.1	yes	yes	NA	
10364 surrog	Reagent 8240	~~NA~~ yes	~~NA~~ yes	NA	Surrogate Recoveries
10599	MSMSD 8240	yes	yes	yes	
10218	Blank 8240	yes	yes	NA	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Significance? —

(Continued pg 3)

How many equipment blanks? Ø (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Y (Y/N) Reagent Soil
Were any compounds present in blanks? Y (Y/N) ~~(See back of sheet for listing.)~~
Significance? 0.3 mg/kg Methylene Chl. NO impact

Were any duplicates run? Y (Y/N) Lab Dups
How did the duplicates compare? within RPDs

Note: W.L. = Warning Limit
C.L. = Control Limit
NA = Not Applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 102107 (con't)
Report Date 2/25/91

Checked by B. Chadwick
Date 2/27/91

Date(s) collected 2/7/91
Date submitted 2/7/91
Date(s) extracted 2/9/91
Within holding time? yes
Date(s) analyzed 2/13 & 18/91
Within holding time? yes

Number of Samples 2 (composite soil)
Number of Duplicates 0

ANALYSIS SCHEDULE

Analysis Semi Volatile Organics Method EPA 8270 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

(8270)

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Reagent Surrogate #10417	yes	yes	NA	
MS/MSD #10658	No	yes	yes	W.L. Pentachlorophenol only
Blank 10252	yes	yes	NA	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Y (Y/N) Reagent Blank
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? —

Were any duplicates run? Y (Y/N) Lab dups
How did the duplicates compare?

Note: W.L = Warning Limit
C.L. = Control Limit
N.A = Not Applicable

MCK0004424

DATA VALIDATION CHECKLIST
SUMMARY

Laboratory ATI

Report No. 102139
Report Date Feb 28, 1991

Checked by TAK / BChadwick
Date 3/20/91 / 3/27/91

Number of Samples 9
Date(s) Collected 2/11/91
Date Submitted 2/11/91

Number of Field Blanks 1
Number of ~~Trip~~ Temp/Equipment Blanks ~~X~~ 2 1 Temp Tank

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See attached schedule		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	✓		and recieved cold by lab.
Chain-of-Custody Form Complete	✓		
Samples received in good condition	✓		w/intact custody seal on cooler
Laboratory QC confirmed	✓		
Field Equipment Trip Blanks checked	✓		
Duplicate samples checked	✓		

MCK0004425

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATI

Report No. 102139
Report Date 2/28/91

Checked by TAK
Date 3/21/91

Date(s) collected 2/11/91
Date submitted 2/11/91
Date(s) extracted NA
Within holding time? NA
Date(s) analyzed 2/15-20/91
Within holding time? YES

Number of Samples 9
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis VOLATILE ORGANICS Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MS MSD* 10845	Y	Y	Y	
10341	Y	Y	NA	
10343	Y	Y	NA	
10369	Y	Y	NA	
10378	Y	Y	NA	
10418	Y	Y	NA	

Was there a trip/field blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? —

Were there equipment blanks? Y (Y/N)
Were any compounds present in blank(s)? N (Y/N) (See back of sheet for listing.)
Significance? —

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? Y (Y/N) (See back of sheet for listing.)
Significance? * 10464 (2/15/91) 6 ppb MEthylene Cl – Detection limit = 5 ppb – No sig. finding

Were any duplicates run? Y (Y/N)
How did the duplicates compare?
Six Compounds Detected
RPD Range from 20-44: Ha, 44 1,1 DCE (Recov 35)

Surrogate Recoveries Checked? Y (Y/N)
W/in C.L.? N (Y/N) (Comments on Back)

MK-SE-04-021191E

C.L.	Recovery	
122	123	1,2 DCE-D4
115	116	BFB
113	112	Toluene-D8

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATL

Report No. 102139
Report Date 2/28/91

Checked by B Chalwak
Date 3/27/91

Date(s) collected 2/11/91
Date submitted 2/11/91
Date(s) extracted UA ~~Not reported~~ NA
Within holding time? UA NA
Date(s) analyzed 2/13 – 22/91 ~~Not reported~~ – Date of Report 2/28/91 / Date Submitted 2/11/91
Within holding time? Yes ? ∴ w/in holding time

Number of Samples 2
Number of Duplicates 0

ANALYSIS SCHEDULE

Analysis ~~General Chemistry~~ Mineral Method see attached Technique see attached

ACTION		YES	NO	AFFIRMATION	COMMENTS
Blank Spike 10410/10412 Samples tested within holding times?	Y	Y		NA	
MSMSD 102125-02 Laboratory QC data checked?	Y	Y		NA	
Blank Spike 10283/10332/10456	Y	Y		NA	

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MSMSD 102155-07	Y	Y	NA	
50-01 MSMSD 102139-02/102150-02	NA/Y/No	NA/Y/	Y	102139-02 Zinc 3% over WL
MSMSD 102099-01	Y	yes	NA	
MSMSD 102149-01	Y	Y	NA	
MSMSD 102139-01	N	Y		Sulfate 4% under WL

Was there a trip field blank? N (Y/N) not for Gen Mins
Were any compounds present in blank? / (Y/N) (See back of sheet for listing.)
Significance? /

Were there equipment blanks? N (Y/N) not for Gen Mins
Were any compounds present in blank(s)? / (Y/N) (See back of sheet for listing.)
Significance? /

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? Y (Y/N) (See back of sheet for listing.)
Significance? None

Were any duplicates run? MSMSD (Y/N)
How did the duplicates compare? within all CL 2 fell 3-4% out of WL

Surrogate Recoveries Checked? NA (Y/N)
W/in C.L.? ___ (Y/N) (Comments on Back)
Surrogates not run w/ Gen Mins

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST
SUMMARY

Laboratory ATI

Report No. 102158
Report Date 3/7/91

Checked by JAK / B Chadwick
Date 3/31/91 3/27/91

Number of Samples 7
Date(s) Collected 2/12/91
Date Submitted 2/12/91

Number of Field Blanks 1
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
	See attached	

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	✓		and received cold by lab
Chain-of-Custody Form Complete	✓		
Samples received in good condition	✓		w/intact custody seals on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	✓		
Duplicate samples checked	✓		

MCK0004428

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory HTI

Report No. 102158
Report Date 3/7/91

Checked by TAC
Date 3/21/91

Date(s) collected 2/12/91
Date submitted 2/12/91
Date(s) extracted NA
Within holding time? NA
Date(s) analyzed 2/14-15/91
Within holding time? Y

Number of Samples 7
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Volatile Organics Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MS/MSD # 10844	Y	Y	Y	
Blk Spike # 10341	Y	Y	NA	
BIL Spike # 10342	Y	Y		

Was there a ~~trip~~ field blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? —

Were there equipment blanks? Y (Y/N)
Were any compounds present in blank(s)? N (Y/N) (See back of sheet for listing.)
Significance? —

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? N (Y/N) (See back of sheet for listing.)
Significance? —

Were any duplicates run? Y (Y/N)
How did the duplicates compare?
4 compounds RPDs 22% 197.
Not significant - Low level detect. 1→4 µg/L

Surrogate Recoveries Checked? Y (Y/N)
W/in C.L.? Y (Y/N) (Comments on Back)

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

MCK0004429

— MK-SB-17B · 021291 had 33 µg/L TCE

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATI

Report No. 102158
Report Date March 7, 1991

Checked by BChadwick
Date 3/27/91

Date(s) collected 2/~~24~~ 12/91
Date submitted 2/12/91
Date(s) extracted _____ Not Reported
Within holding time? ?
Date(s) analyzed Feb 13-22-91 ~~Not Reported~~ Report date 3/7/91 - Dates collected 2/12/91 within 28 days general holding ∴ OK
Within holding time? Yes?

Number of Samples 2
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis General Minerals Method 6010 & others Technique ICAP & others

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	?		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Blank Spike 10412	Y	Y	NA	
MSMSD 102125-02	Y	Y	NA	Manganese at L.W.L.
MSMSD 102158-07/06	Y	Y	NA	
MSMSD 102175-01	Y	Y	NA	
MSMSD 102194-02	Y	Y	NA	
MSMSD 102149-05	N	Y	NA	Sulfate 2% under W.L.
Blank Spk 10283/10332/10697	Y	Y	NA	

Was there a trip field blank? N (Y/N) not for Gen Mins
Were any compounds present in blank? ___ (Y/N) (See back of sheet for listing.)
Significance? ___

Were there equipment blanks? N (Y/N) not for Gen Min
Were any compounds present in blank(s)? ___ (Y/N) (See back of sheet for listing.)
Significance? ___

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? Y (Y/N) (See back of sheet for listing.)
Significance? None

Were any duplicates run? N (Y/N)
How did the duplicates compare? Not for Gen Mins

Surrogate Recoveries Checked? NA (Y/N)
W/in C.L.? ___ (Y/N) (Comments on Back)
Surrogates Not run on Gen Mins

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST
SUMMARY

Laboratory ATI

Report No. 102178
Report Date 3/5/91

Checked by TAK / BChatwick
Date 3/5/91 3/20/91

Number of Samples 7
Date(s) Collected 2/13/91
Date Submitted 2/13/91

Number of Field Blanks 1
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
See Attached		

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	✓		Also received cold by lab
Chain-of-Custody Form Complete	✓		
Samples received in good condition	✓		w/ intact custody seals on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	✓		
Duplicate samples checked	✓		

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATI

Report No. 102172
Report Date 3/5/91

Checked by TAK
Date 3/21/91

Date(s) collected 2/13/91
Date submitted 2/15/91
Date(s) extracted NA
Within holding time? NA
Date(s) analyzed 2/15-19/91
Within holding time? Y

Number of Samples 7
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Volatile Organics General Mins.

Method 8240 6010 and others

Technique GC/MS ICAP and others

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

MSMSD 102178-01 102178-01 102194-02

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
	Y	Y	NA	
MSMSD # 10879	Y	Y	Y	
Blank Spike 10368	Y	Y	NA	
Blank Spike 10369	Y	Y	NA	
Blank Spike 10379	Y	Y	NA	
Blank Spike 10332/10337/10532	Y	Y	NA	

Was there a trip/field blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? —

Were there equipment blanks? N (Y/N)
Were any compounds present in blank(s)? N (Y/N) (See back of sheet for listing.)
Significance? —

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? N (Y/N) (See back of sheet for listing.)
Significance? —

Were any duplicates run? Y (Y/N)
How did the duplicates compare?
7 Detect RPD 0-8%

Surrogate Recoveries Checked? Y (Y/N)
W/in C.L.? Y (Y/N) (Comments on Back)

From detected in Sample @ 250 µg/L - ND in Dup (Run @ higher dilution factor - [300 vs 250] dl=250

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATI

Report No. 102176
Report Date March 5, 1991

Checked by BC
Date

Date(s) collected Feb 13 1991
Date submitted Feb 13, 1991
Date(s) extracted Not reported
Within holding time? Report date March 5, 1991 collected 2/13/91 within 28 days general holding ∴ OK
Date(s) analyzed ~~Feb 14 March 4~~ ~~Not reported~~
Within holding time? ? yes

Number of Samples
Number of Duplicates

ANALYSIS SCHEDULE

Analysis General Mins. Method 6010 & others Technique ICAP & others

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?			testing times Not reported
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MS MSD 102149-01	y	y	NA	
MS MSD 102176-01	y	y	NA	
Blank Spike 10403	y	y	NA	
Blank Spike 10445	y	y	NA	

Was there a trip/field blank? N (Y/N) not for Gen Mins
Were any compounds present in blank? NA (Y/N) (See back of sheet for listing.)
Significance?

Were there equipment blanks? N (Y/N) not for Gen Mins
Were any compounds present in blank(s)? (Y/N) (See back of sheet for listing.)
Significance?

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? N (Y/N) (See back of sheet for listing.)
Significance?

Were any duplicates run? MS MSD Y (Y/N)
How did the duplicates compare? within all warning limits

Surrogate Recoveries Checked? (Y/N)
W/in C.L.? (Y/N) (Comments on Back)
Note: Surrogates are not run w/ Gen Mins.

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST
SUMMARY

Laboratory ATI

Report No. 102195
Report Date 3/8/91

Checked by TAK / Bchadwick
Date 3/21/91 3/27/91

Number of Samples 4
Date(s) Collected 2/14/91
Date Submitted 2/14/91

Number of Field Blanks 1
Number of ~~Trip~~/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
	See attached	

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved			
Chain-of-Custody Form Complete	✓		
Samples received in good condition			
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	✓		
Duplicate samples checked	✓		

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATI

Report No. 10219 5
Report Date 3/8/91

Checked by TAK
Date 3/21/91

Date(s) collected 2/14/91
Date submitted 2/14/91
Date(s) extracted NA
Within holding time? NA
Date(s) analyzed 2/20-21/91
Within holding time? Yes

Number of Samples
Number of Duplicates

ANALYSIS SCHEDULE

Analysis Volatile Organics Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MSMSD # 10923	Y	Y	Y	
Blank Spk # 10418	Y	Y	NA	
Blank Spk # 10426	Y	Y		
Blank Spk # 10437	Y	Y		

Was there a trip/field blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? —

Were there equipment blanks? Y (Y/N)
Were any compounds present in blank(s)? Y (Y/N) (See back of sheet for listing.)
Significance? Low [PCE 30 µg/L; Toluene 2 µg/L; TCA 25 µg/L; TCE 1 µg/L] PCE = 0.07% of sample value

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? Y (Y/N) (See back of sheet for listing.)
Significance? Low - Methyl Chloride in two of three blanks @ 10 & 8 µg/L

Were any duplicates run? Y (Y/N)
How did the duplicates compare?
9 compounds RPD ranged from 7% to 26%

Surrogate Recoveries Checked? Y (Y/N)
W/in C.L.? Y (Y/N) (Comments on Back)

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST
LABORATORY RESULTS

Laboratory ATI

Report No. 102195
Report Date 3/8/91

Checked by B. Chatwick
Date 3/27/91

Date(s) collected 2/14/91
Date submitted 2/14/91
Date(s) extracted NA ~~Not reported~~
Within holding time? ? NA
Date(s) analyzed Feb 15-Mar 8 91 ~~Not reported~~ Report date 3/8/91 - Collected dates 2/14/91 within 28 day general holding ∴ OK
Within holding time? ? Yes

Number of Samples 3
Number of Duplicates Ø

ANALYSIS SCHEDULE

Analysis ~~General Chemistry~~ Mineral Chemistry

Method 6010/& others

Technique ICAP & others

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	?		
Laboratory QC data checked?	✓		

Blank Spike 10491/10492* Y/N*

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
MS/MSD 102195-06/04	Y	Y	NA	
MS/MSD 102197-01/				Surfactants ?
MS/MSD 102199-01	Y	Y	NA	
MS/MSD 102191-07	Y	Y	NA	
Blank Spk 10374/10395/105322	Y	Y	NA	

Y/Yes NA *Cu/Mg 110 vs 105 & 108 over W.L.

Was there a trip field blank? N (Y/N) not for Gen Minerals
Were any compounds present in blank? — (Y/N) (See back of sheet for listing.)
Significance? —

Were there equipment blanks? N (Y/N) not for Gen Minerals
Were any compounds present in blank(s)? — (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Y (Y/N)
Were any compounds present in blank(s)? Y (Y/N) (See back of sheet for listing.)
Significance? 5.0 mg/L Chlorite at or near detection limit NONE

Were any duplicates run? MS/MSD Y (Y/N)
How did the duplicates compare? within W.L. & C.L.

Surrogate Recoveries Checked? NA (Y/N)
W/in C.L.? ___ (Y/N) (Comments on Back)
No Surrogates run w/ Gen Minerals

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 104152
Report Date April 23, 1991

Checked by B. Chadwick
Date 5/2/91

Number of Samples 6
Date(s) Collected 4/9/91
Date Submitted 4/9/91

Number of Field Blanks 1
Number of Trip/Equipment Blanks 1

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
Volatile Organics	~~8240~~ GC/MS	8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	✓		
Chain-of-custody Form Complete	✓		
Samples received in good condition	✓		No custody seal on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	✓		
Duplicate samples checked	✓		

MCK0004437

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 104152
Report Date April 23, 1991

Checked by Bchadwick
Date 5/2/91

Date(s) collected 4/9/91
Date submitted 4/19/91
Date(s) extracted NA
Within holding time? NA
Date(s) analyzed 4/17 through 4/19/91
Within holding time? YES

Number of Samples 6
Number of Duplicates 0

ANALYSIS SCHEDULE

Analysis Volatile Organics Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		MCK0004438
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Surrogates	Y	Y	NA	
MS/MSD 104152-54	Y	Y	Y	
Blank Spike 11504	Y ~~NABC~~	Y ~~NABC~~	NA	
Blank Spike 12284	Y	Y	NA	
Blank Spike 12080	Y	Y	NA	

Was there a trip blank? Yes (Y/N)
Were any compounds present in blank? No (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? No (Y/N) (See back of sheet for listing.)
Signifcance? —

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? Y (Y/N) (See ~~back of sheet for listing~~ Below.)
Significance? No Significance

Were any duplicates run? None ~~No~~ (Y/N)
How did the duplicates compare?
Within control & warning limits

Reagent # 11551 = 25 ppb Methylene Chl.
Reagent # 11610 — None detected
Reagent # 11649 = 8 ppb Methylene Chl.
Reagent # 11655 = 7 ppb Methylen Chl

Note: W.L. = Warning Limit
C.L. = Control Limit

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 104179
Report Date April 24, 1991

Checked by B Chadwick
Date 5/2/91

Number of Samples 2
Date(s) Collected 4/10/91
Date Submitted 4/10/91

Number of Field Blanks 0
Number of Trip/Equipment Blanks 0

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
Volatile Organics	GC/MS	Method 8240

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	✓		
Samples properly perserved	✓		
Chain-of-custody Form Complete	✓		
Samples received in good condition	✓		cold in container, Custody seals intact on cooler
Laboratory QC confirmed	✓		
Field/Equipment/Trip Blanks checked	NA		
Duplicate samples checked	✓		

MCK0004439

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 104179
Report Date April 24, 1991

Checked by B. Chadwick
Date 5/2/91

Date(s) collected 4/10/91
Date submitted 4/10/91
Date(s) extracted NA
Within holding time? ~~4/19/91~~ NA
Date(s) analyzed 4/19/91
Within holding time? YES ✓

Number of Samples 1
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis Volatile Organics Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
Surrogates	✓	✓	NA	
MS MSD 104-02-04	✓	✓	✓	

Was there a trip blank? N (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance? —

How many equipment blanks? 0 (Y/N)
Were any compounds present in blank? _____ (Y/N) (See back of sheet for listing.)
Significance?

Method & Reagent
Were method blanks run? ✓ (Y/N)
Were any compounds present in blanks? ✓ (Y/N) (See back of sheet for listing.)
Significance? Methylene Chloride @ 8 ppb — No Significance

Were any duplicates run? ✓ (Y/N)
How did the duplicates compare? 9.5 vs 35 RPD
→ 1,1,1 TCA

MCK0004440

Note: W.L. = Warning Limit
C.L. = Control Limit

Figure 4-4

DATA VALIDATION CHECKLIST SUMMARY

Laboratory ATI

Report No. 109149
Report Date SEPT. 26, 1991

Checked by LMF
Date 12-16-1991
HLA JOB #. 17333.165.11

Number of Samples 5
Date(s) Collected SEPT. 10, 1991
Date Submitted SEPT. 11, 1991

Number of Field Blanks 1 (EQUIPMENT)
Number of Trip/Equipment Blanks 2 - 1 TRIP, 1 EQUIPMENT

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
VOC	8240	GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	—	✓	
Samples properly perserved	✓	—	(HCl) REQ'D COLD
Chain-of-Custody Form Complete	✓	—	
Samples received in good condition	✓*	—	*COOLER BLOCKS AT FREEZING ON SAMPLE CONTAINERS BUT WERE INTACT ON COOLER
Laboratory QC confirmed	✓	—	
Field Equipment/Trip Blanks checked	✓	—	
Duplicate samples checked	✓	—	

MCK0004441

DATA VALIDATION CHECKLIST

Laboratory ATI

Report No. 109149
Report Date SEPT. 26, 1991

Checked by LMF
Date 12-16-91

Date(s) collected SEPT. 10, 1991
Date submitted SEPT. 11, 1991
Date(s) extracted N/A
Within holding time? N/A
Date(s) analyzed SEPT 18, 19, 1991
Within holding time? Y (<40)

Number of Samples 5
Number of Duplicates 1

ANALYSIS SCHEDULE

Analysis VOLATILE ORGANICS Method 8240 Technique GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Samples tested within holding times?	✓		
Laboratory QC data checked?	✓		MCK0004442

Spiked data	W/in W.L.?	W/in C.L.?	<RPD limit?	Comments
10-19 → MSMSD* #22095	ND: DCE, CHB	Y	Y	% REC: 100-123%, RPD: 0-2%
10-18 → BLANK SPIKE #17277	Y	Y	N/A	% REC: 91-105%

* NO MSMSD RUN FOR 10-18-1991, AND MSMSD & BLANK SPIKE RUN ON DIFFERENT DAYS

Was there a trip blank? Y (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? OK

CHECKED W/ ATI BLANK SAM AS SAMPLE OK

How many equipment blanks? 1 (Y/N)
Were any compounds present in blank? N (Y/N) (See back of sheet for listing.)
Significance? OK

Were method blanks run? Y (Y/N)
Were any compounds present in blanks? N (Y/N) (See back of sheet for listing.)
Significance? OK (NOTE: % RECOVERY FOR SURROGATES HIGH, TOLUENE = 111, LIMIT = 110)

Were any duplicates run? Y (Y/N) MK-CPT-10-091091D
How did the duplicates compare? 4 COMPOUNDS DETECTED IN SAMPLE & DUPLICATE. RPD RANGED FROM 0 FOR CIS,2-DCE & 1,1,1-TCA TO 19.61% FOR 1,1-DCE

SURROGATES: SAMPLES 1 (091091) AND 5 (EQUIP. BLANK) SHOWED SURROGATES > RECOVERY LIMITS

SAMPLE	% REC	REC. LIMIT		
1	115	114	1,2 DCA-D4	> W.L.
	110	110	TOLUENE	> W.L.
5	116	114	1,2 DCA-D4	> W.L.

Note: W.L. = Warning Limit
C.L. = Control Limit
N/A = Not applicable

Figure 4-4

DATA VALIDATION CHECKLIST SUMMARY

Laboratory ATI

Report No. 110061
Report Date OCT 17, 1991

Checked by LMF
Date 12-16-1991
HLA JOB#: 17333.165.11

Number of Samples 9
Date(s) Collected OCT 2, 1991
Date Submitted OCT 3, 1991

Number of Field Blanks 1 (EQUIPMENT)
Number of Trip/Equipment Blanks 2 (1 TRIP, 1 EQUIPMENT)

ANALYSIS SCHEDULE

Analysis	Technique	Reference/Method
VOC	8240	GC/MS

ACTION	AFFIRMATION YES	AFFIRMATION NO	COMMENTS
Field Logs Verified	—	—	
Samples properly perserved	✓	—	WATER SAMPLES > HCl SOIL SAMPLES, → UNPRESERVED
Chain-of-Custody Form Complete	✓	—	
Samples received in good condition	✓	—	CUSTODY SEALS NOT PRESENT ON VOLATILE CONTAINERS
Laboratory QC confirmed	✓	—	
Field Equipment/Trip Blanks checked	✓	—	
Duplicate samples checked	✓	—	

APPENDIX N

MCK0004444

MCK000444S

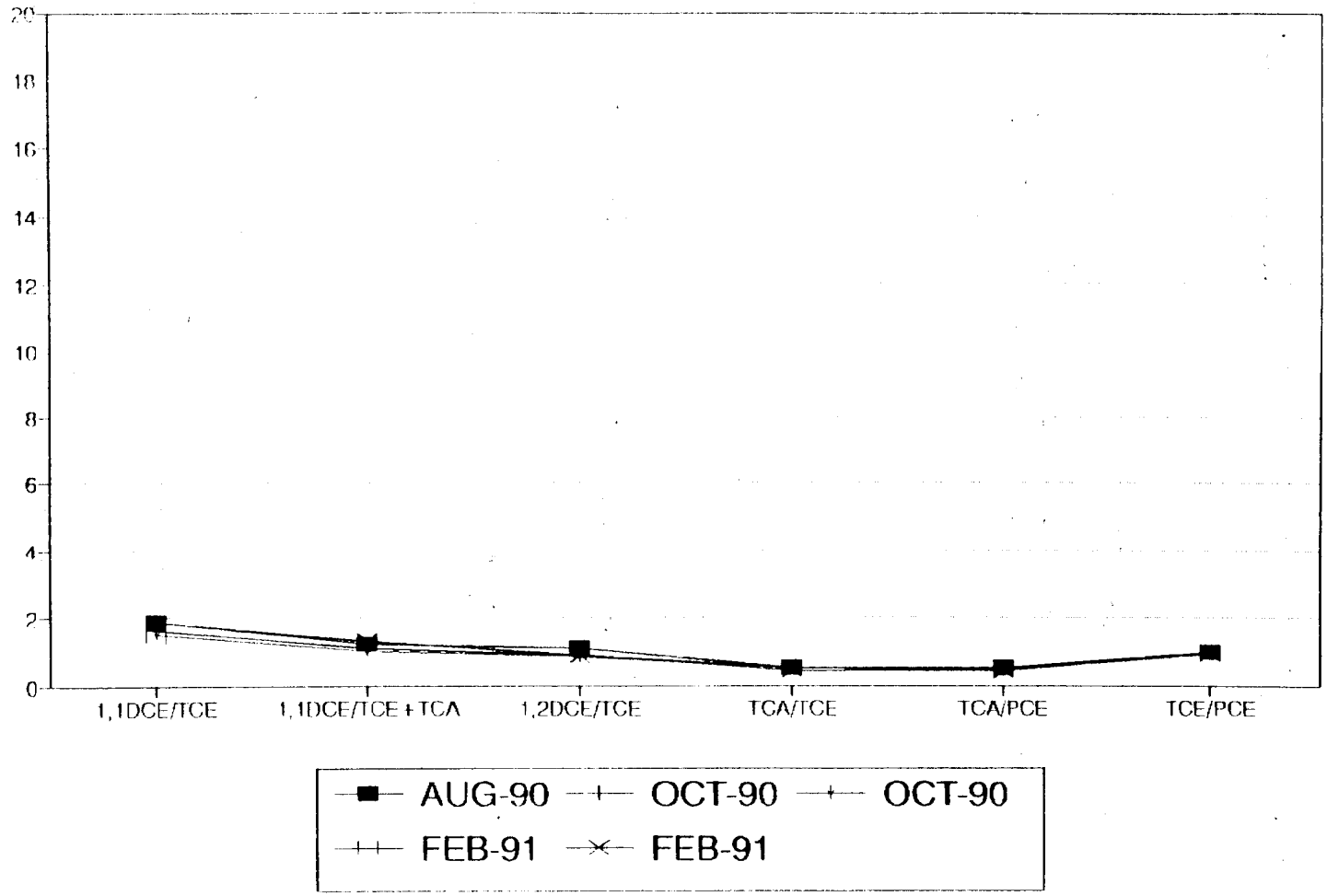
APPENDIX N

PLUME CHARACTERIZATION RATIO PLOTS

Printed on Recycled Paper.

HDT\17333068\DIA1

MW-01



MCK0004446

Harding Lawson Associates
Engineering and Environmental Services

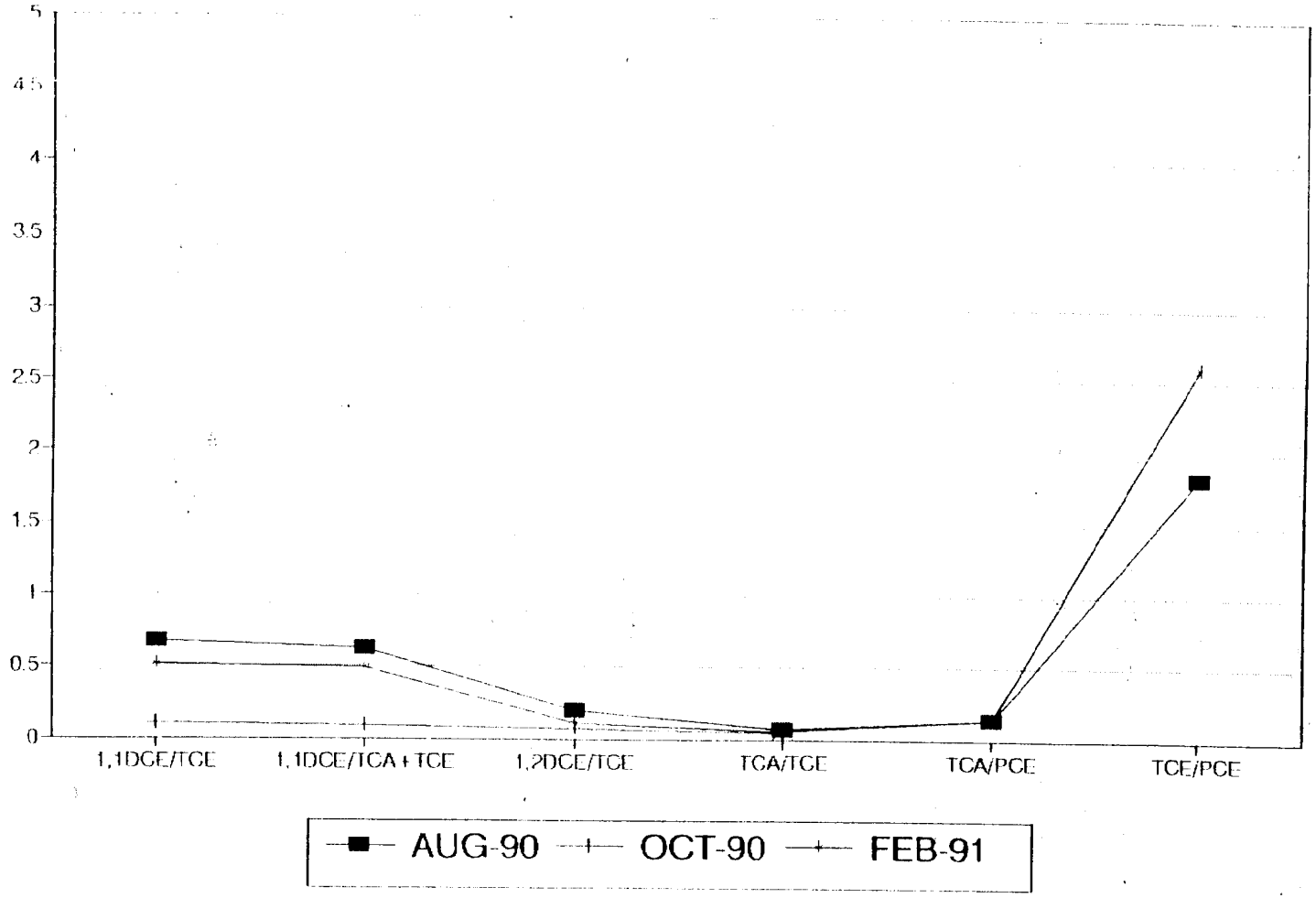
MW-01 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N1

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JIL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

MW-02



MCK0004447

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Engineering and Environmental Services

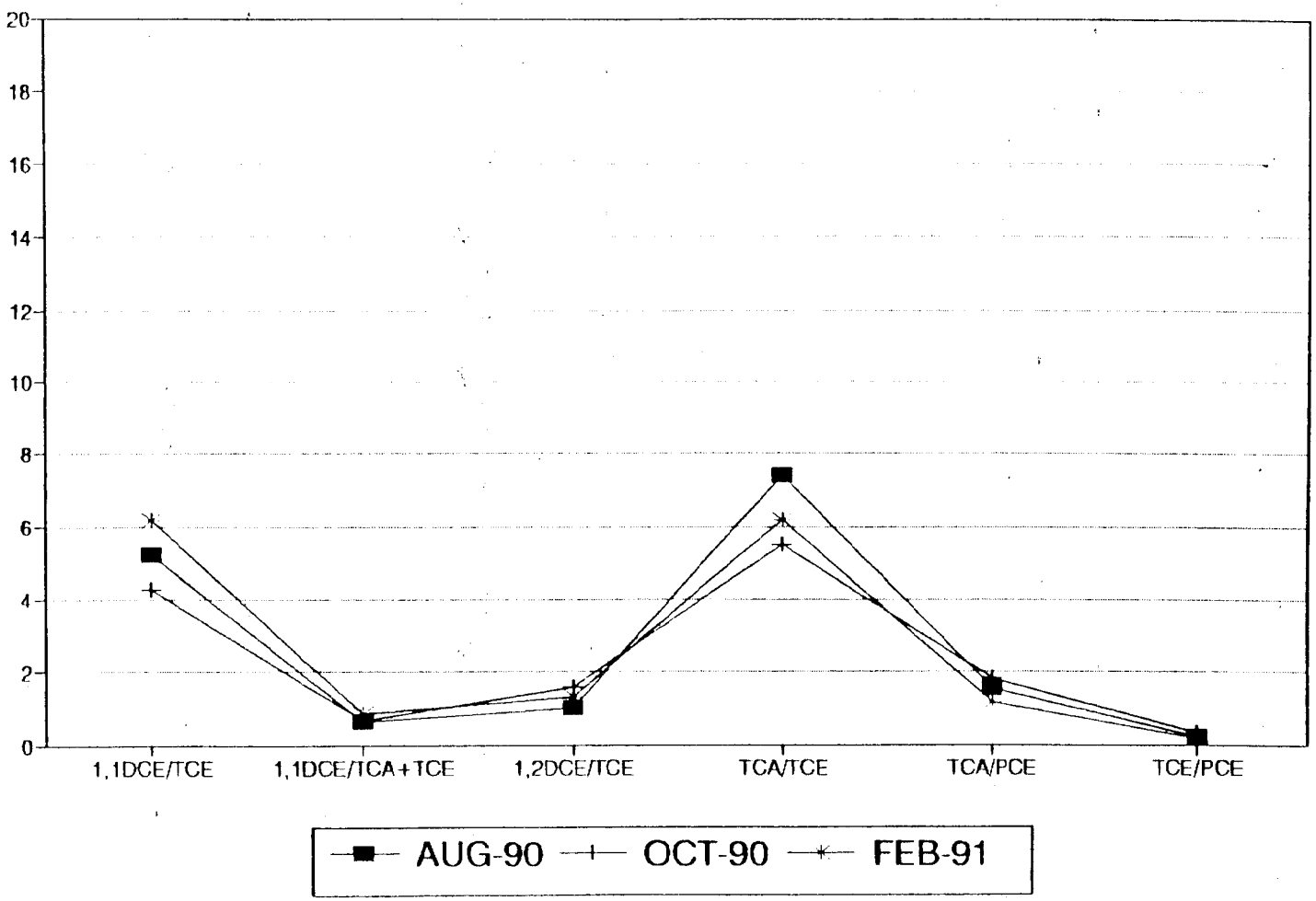
MW-02 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N2

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

MW-03



MCK0004448

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Engineering and Environmental Services

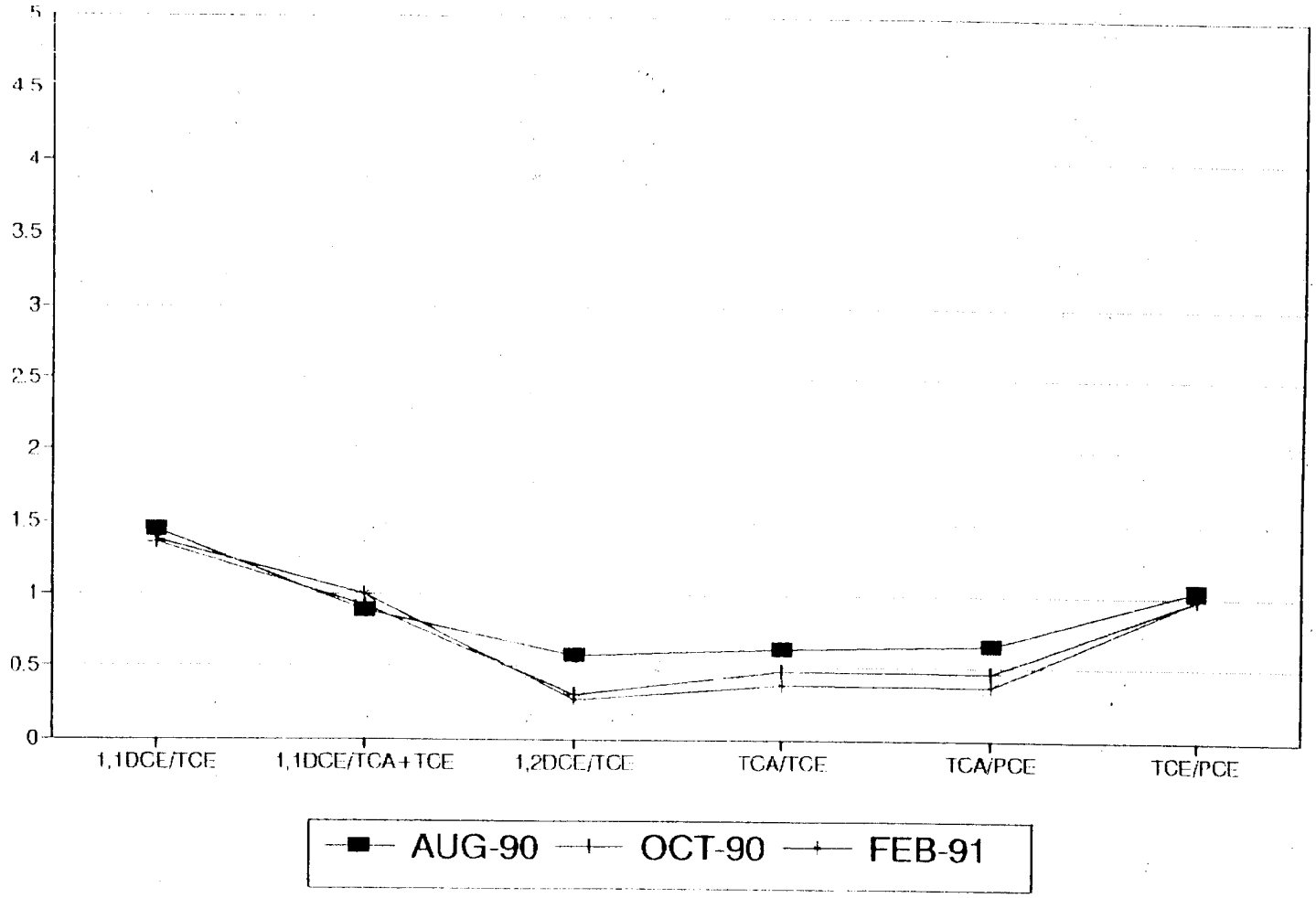
MW-03 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N3

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DA1

SB-04



MCK0004449

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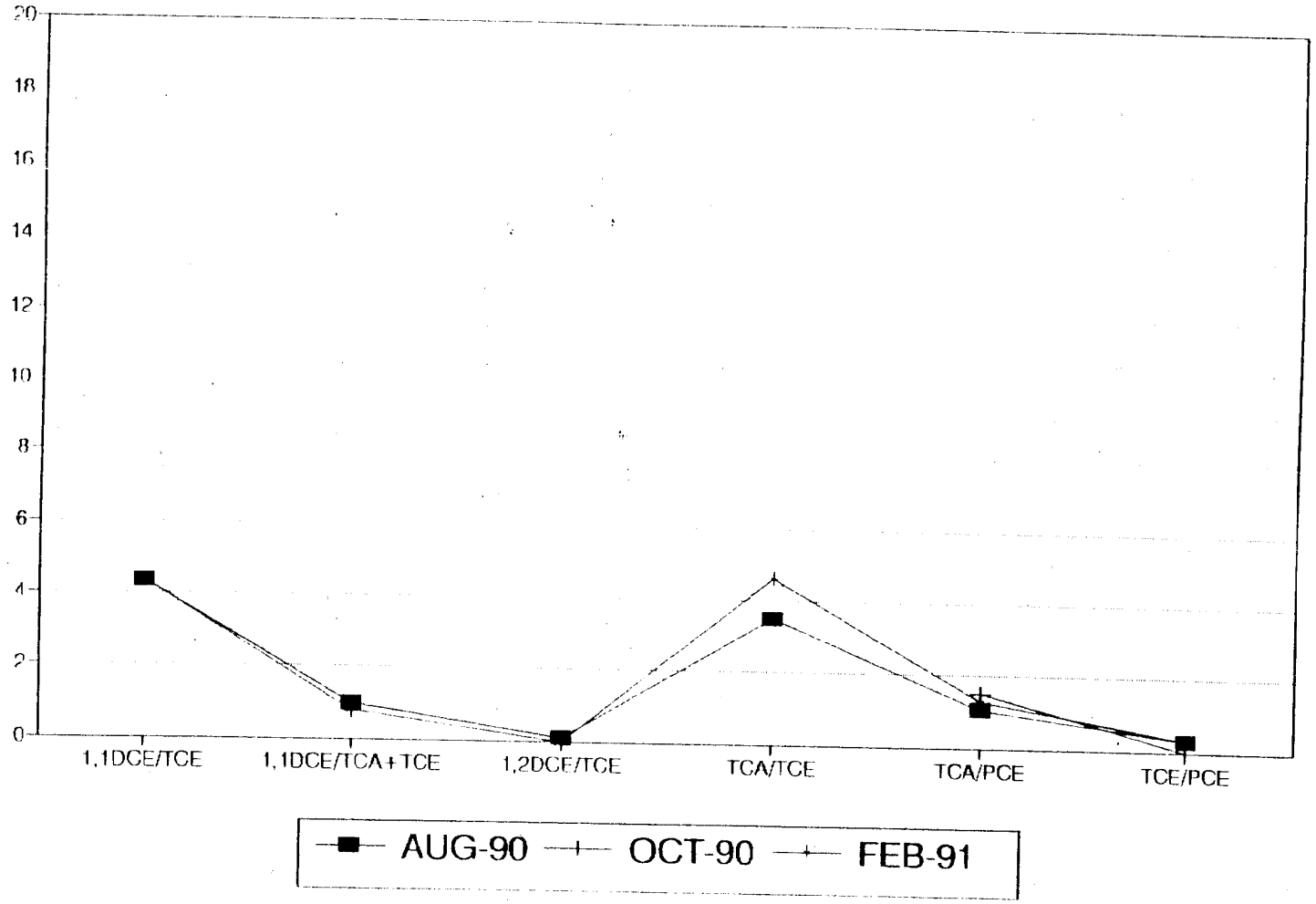
SB-04 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N4

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TMK	1/92		

HDT\17333068\DIA1

SB-10



MCK0004450

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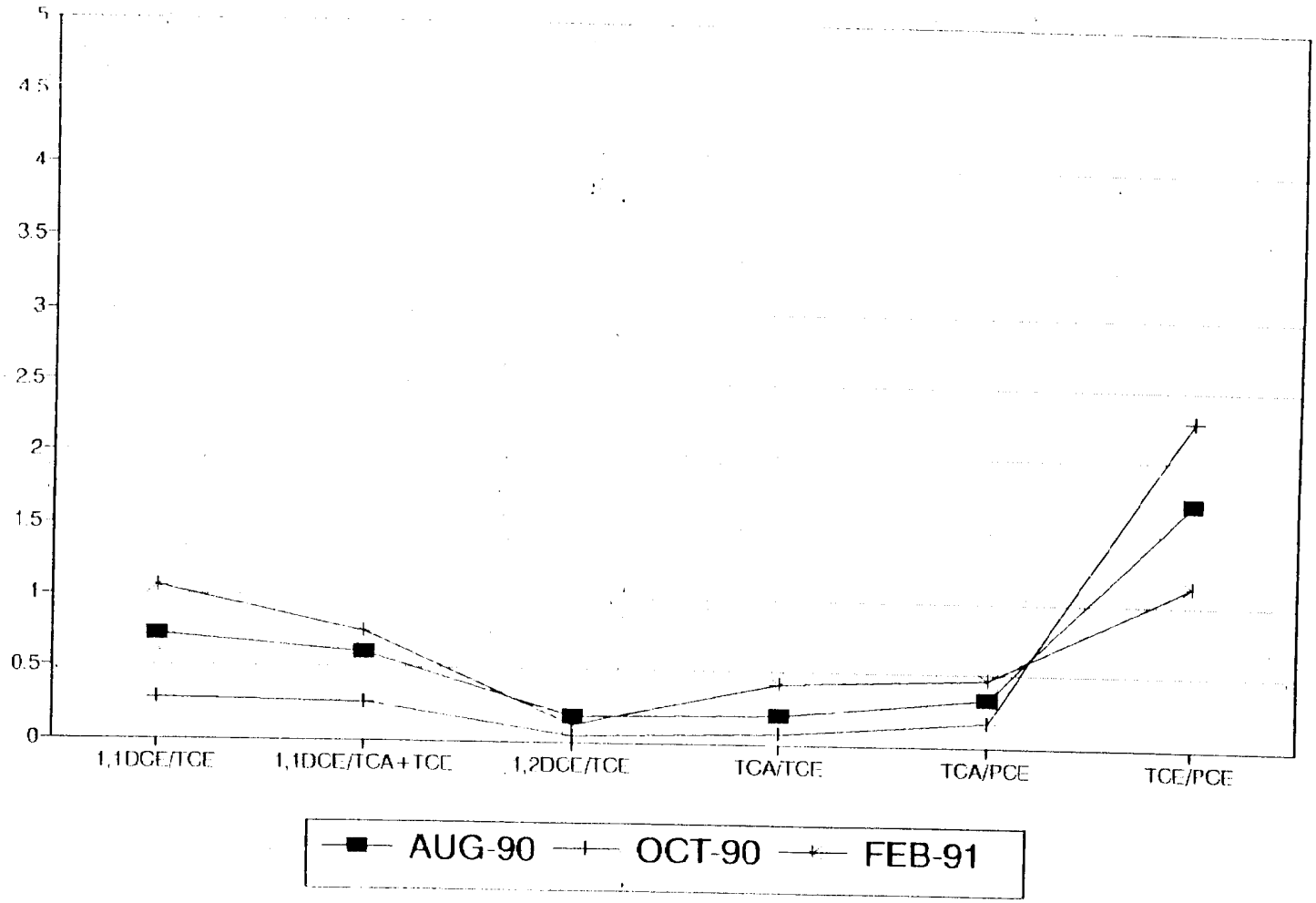
SB-10 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JIL	17333,168.11	JAC	1/92		

HDT\17333068\DIA1

SB-13



MCK0004451

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Engineering and Environmental Services

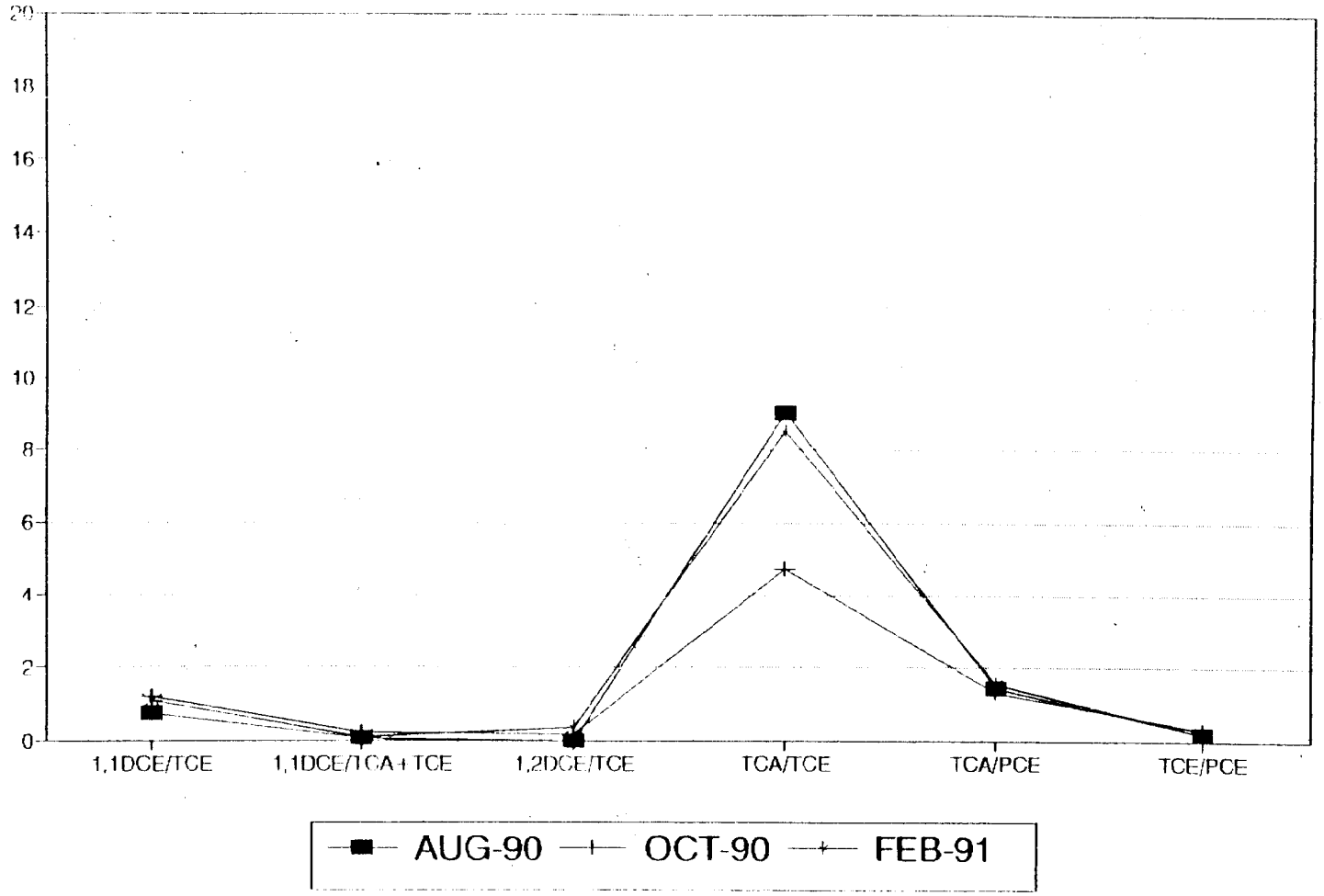
SB-13 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N6

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JIL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

SB-17



MCK0004452

Harding Lawson Associates
Engineering and Environmental Services

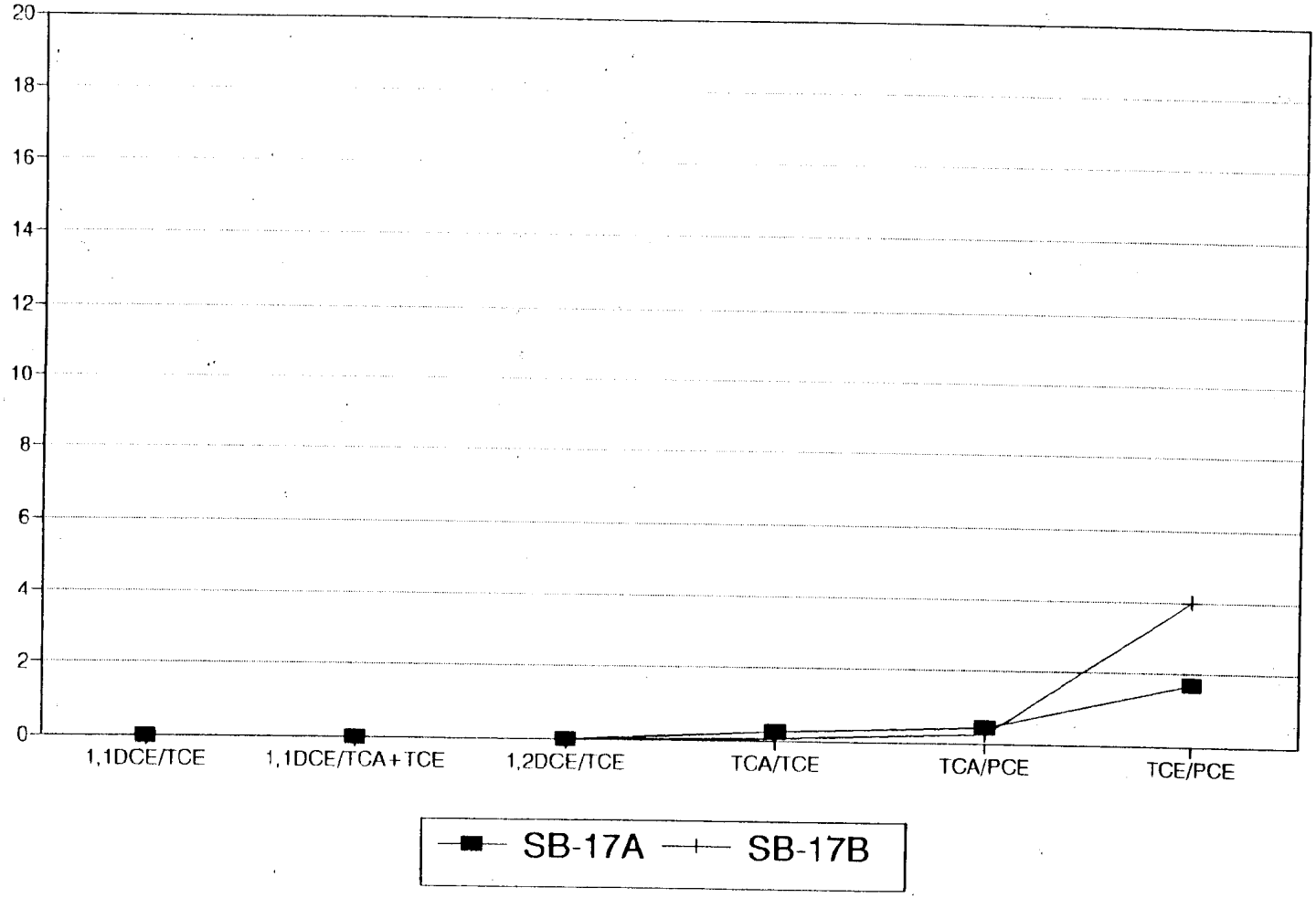
SB-17 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE **N7**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JIL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

SB-17 A&B



MCK0004453

Harding Lawson Associates
Engineering and Environmental Services

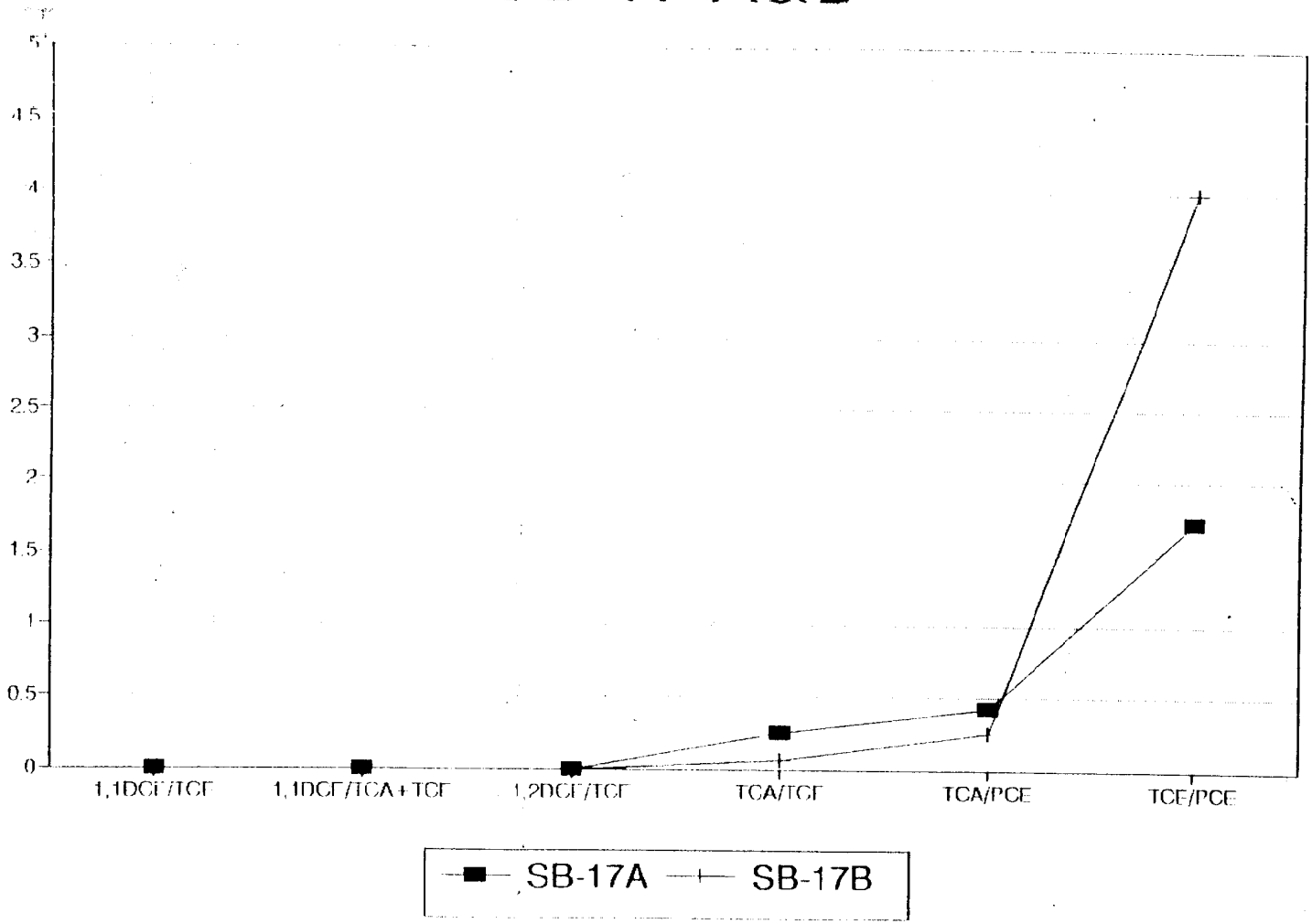
SB-17 A&B ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N8

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	MK	1/92		

HDT\17333068\DIA1

SB-17 A&B



MCK0004454

Harding Lawson Associates
Engineering and Environmental Services

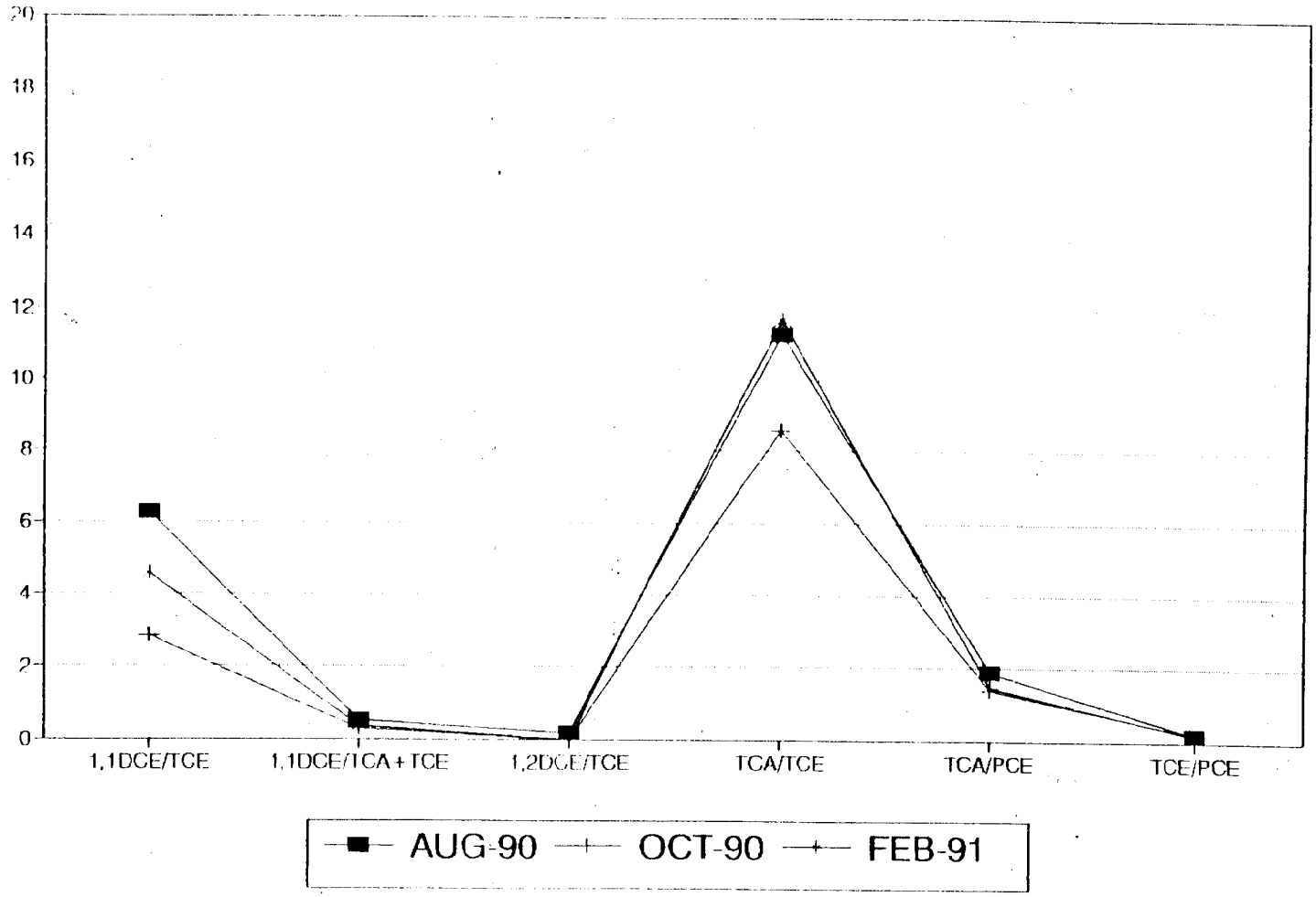
SB-17 A&B ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N9

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

SB-20



MCK0004455

Harding Lawson Associates
Engineering and Environmental Services

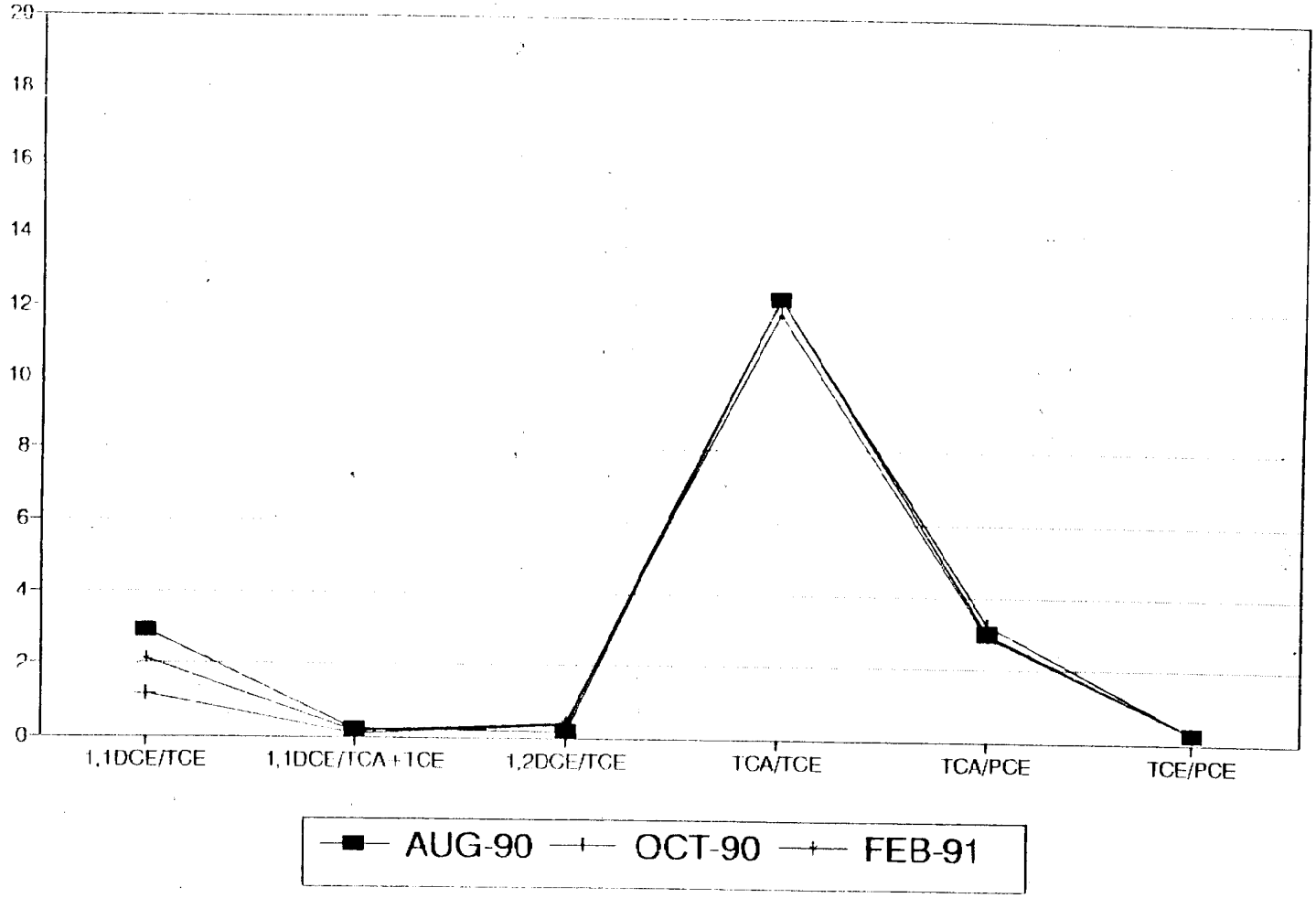
SB-20 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE **N10**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

SB-23



MCK0004456

Harding Lawson Associates
Engineering and Environmental Services

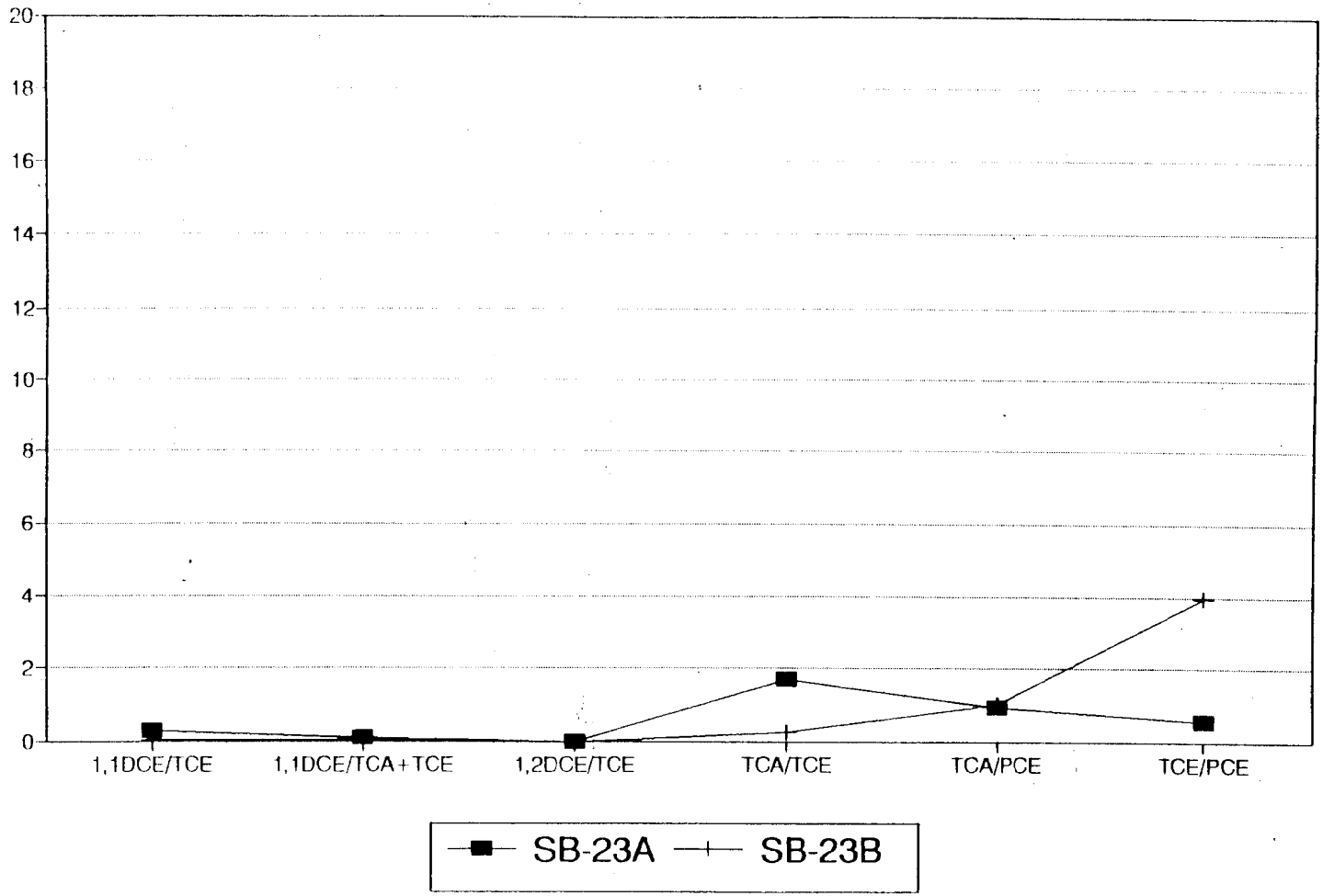
SB-23 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N11

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAL	1/92		

HDT\17333068\DIA1

SB-23 A&B



MCK0004457

Harding Lawson Associates
Engineering and Environmental Services

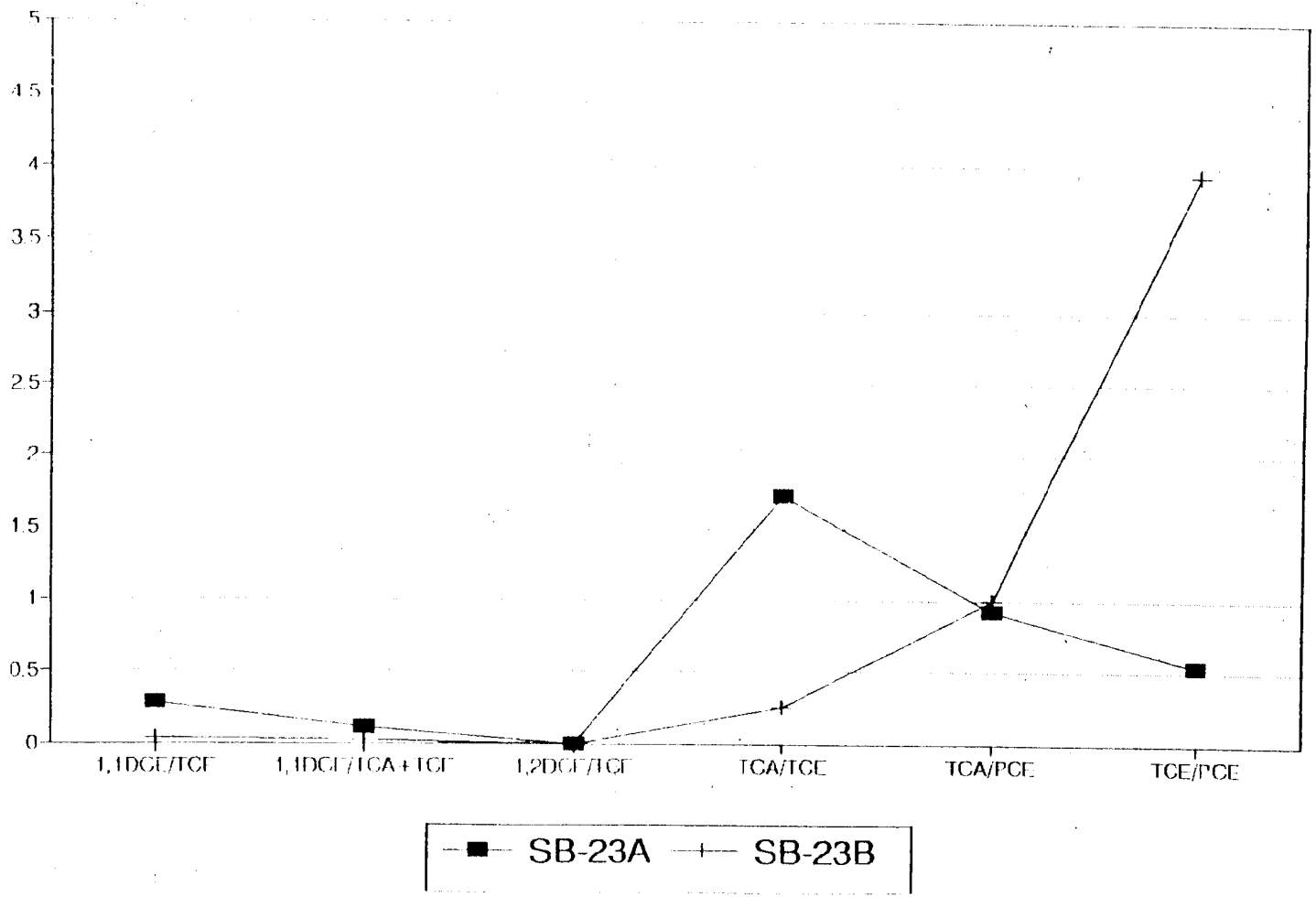
SB-23 A&B ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N12

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

SB-23 A&B



MCK0004458

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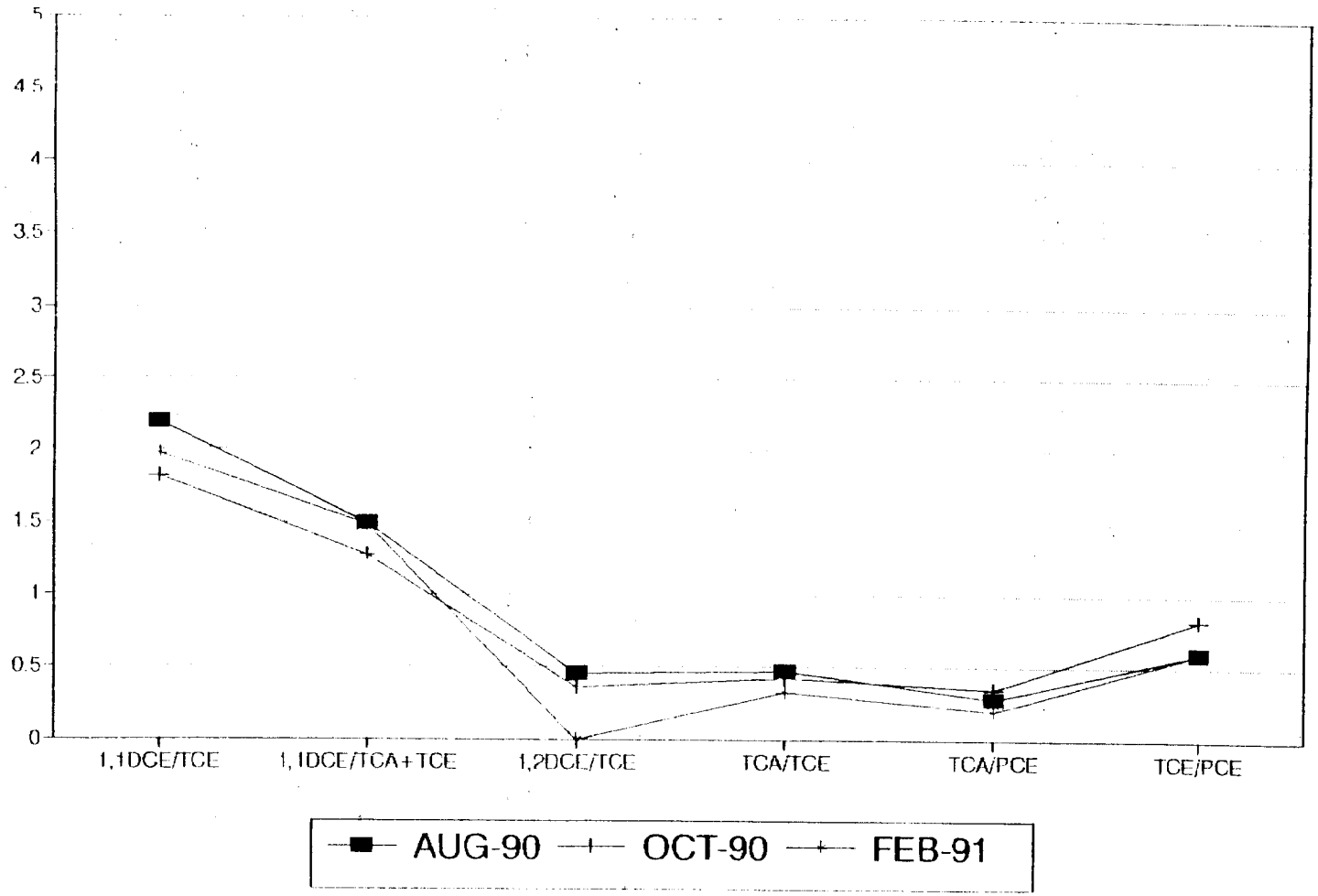
SB-23 A&B ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N13

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JIL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

SB-25



MCK0004459

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Engineering and Environmental Services

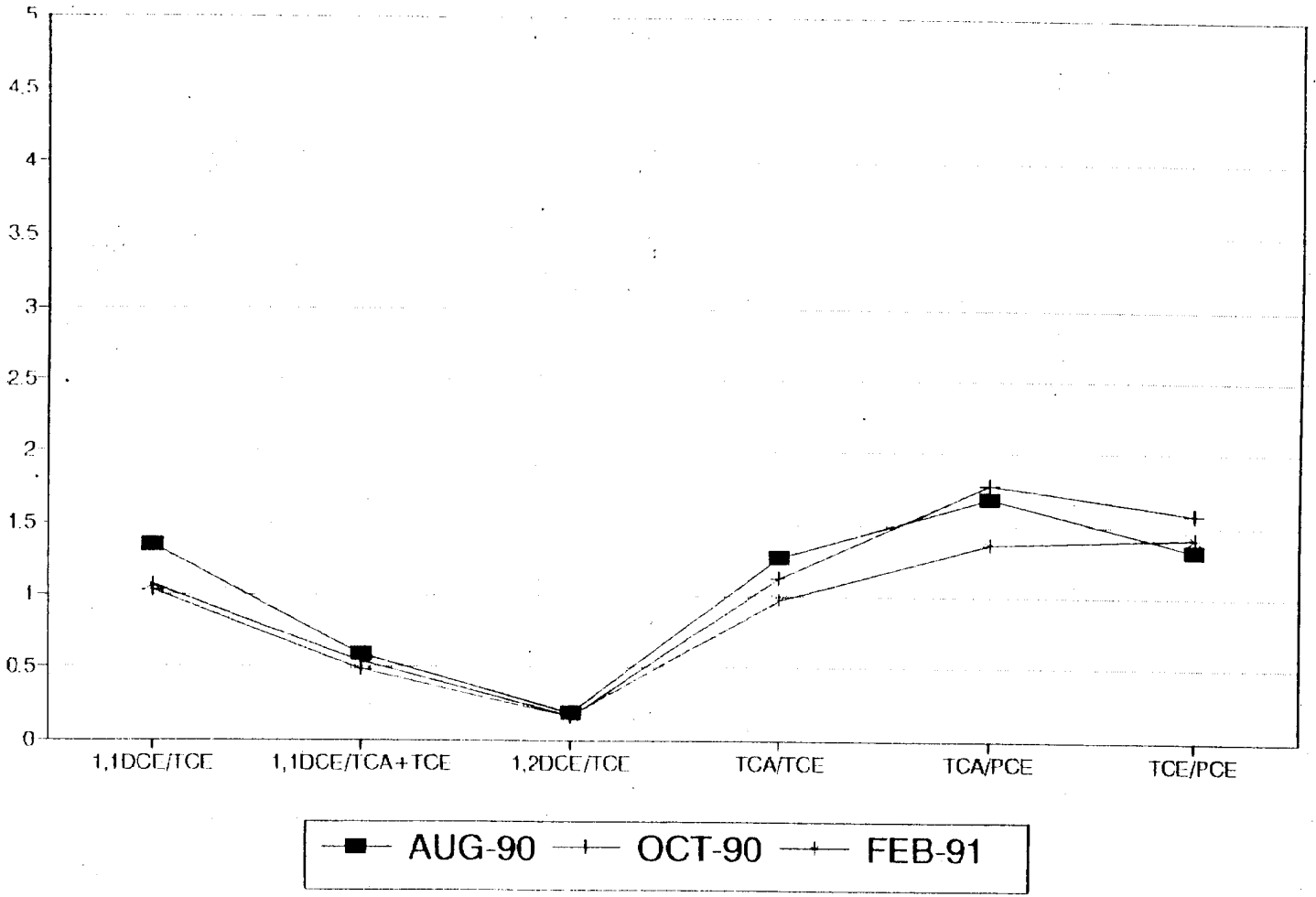
SB-25 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N14

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

SB-32



MCK0004460

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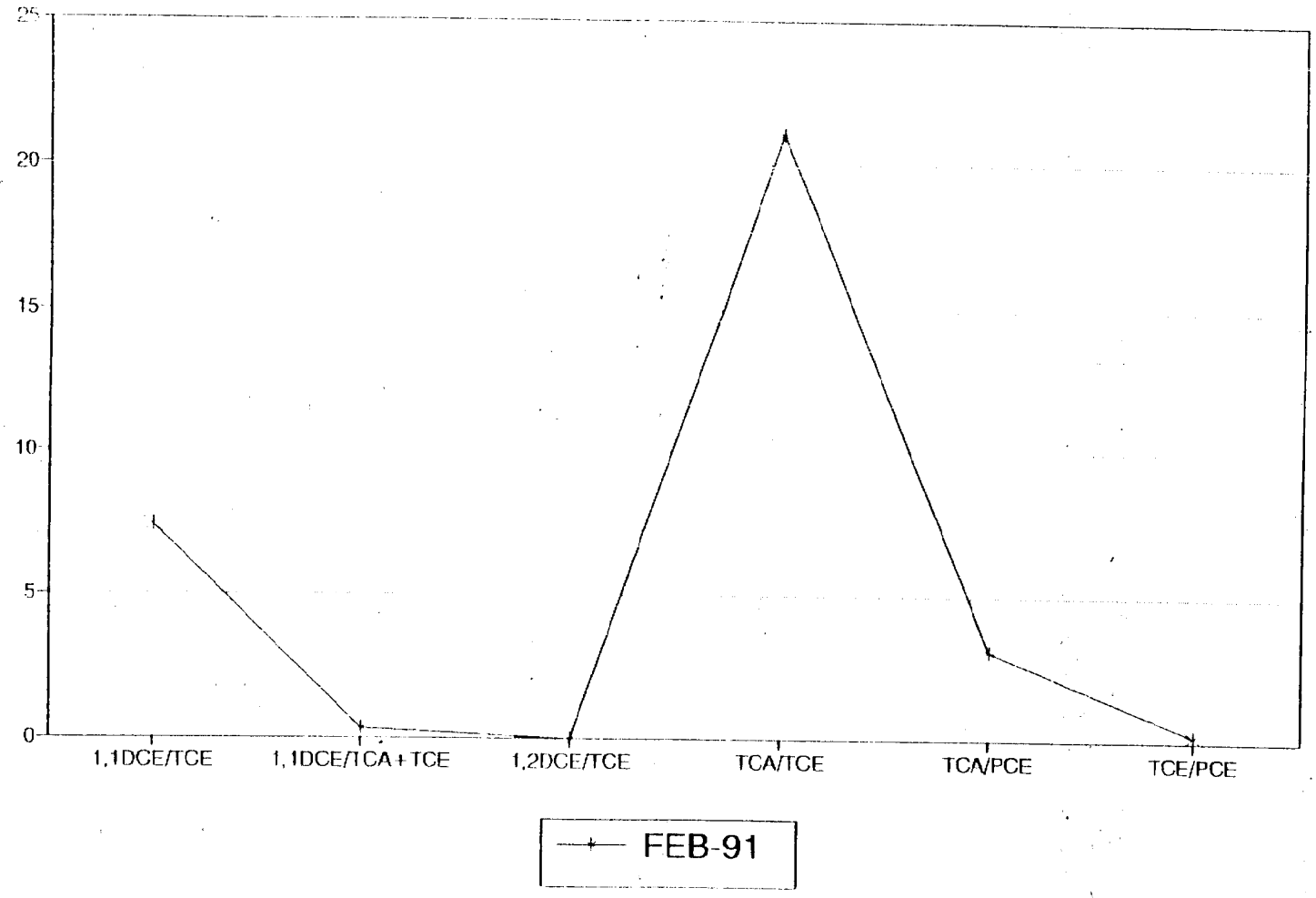
SB-32 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N15

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THC	1/92		

HDT\17333068\DIA1

SB-36



MCK0004461

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Engineering and Environmental Services

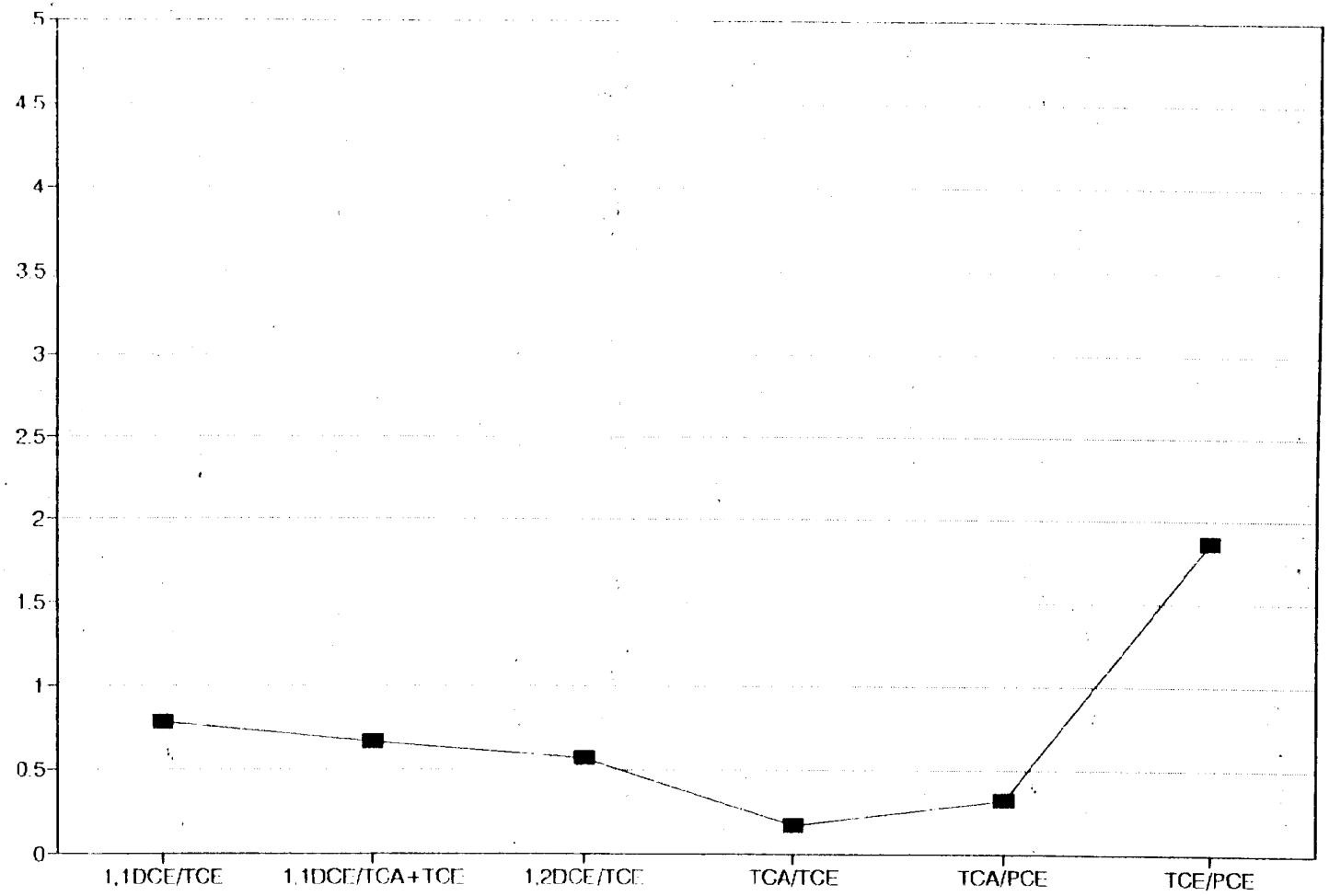
SB-36 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N16

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAL	1/92		

HDT\17333068\DIA1

CPT-01



MCK0004462

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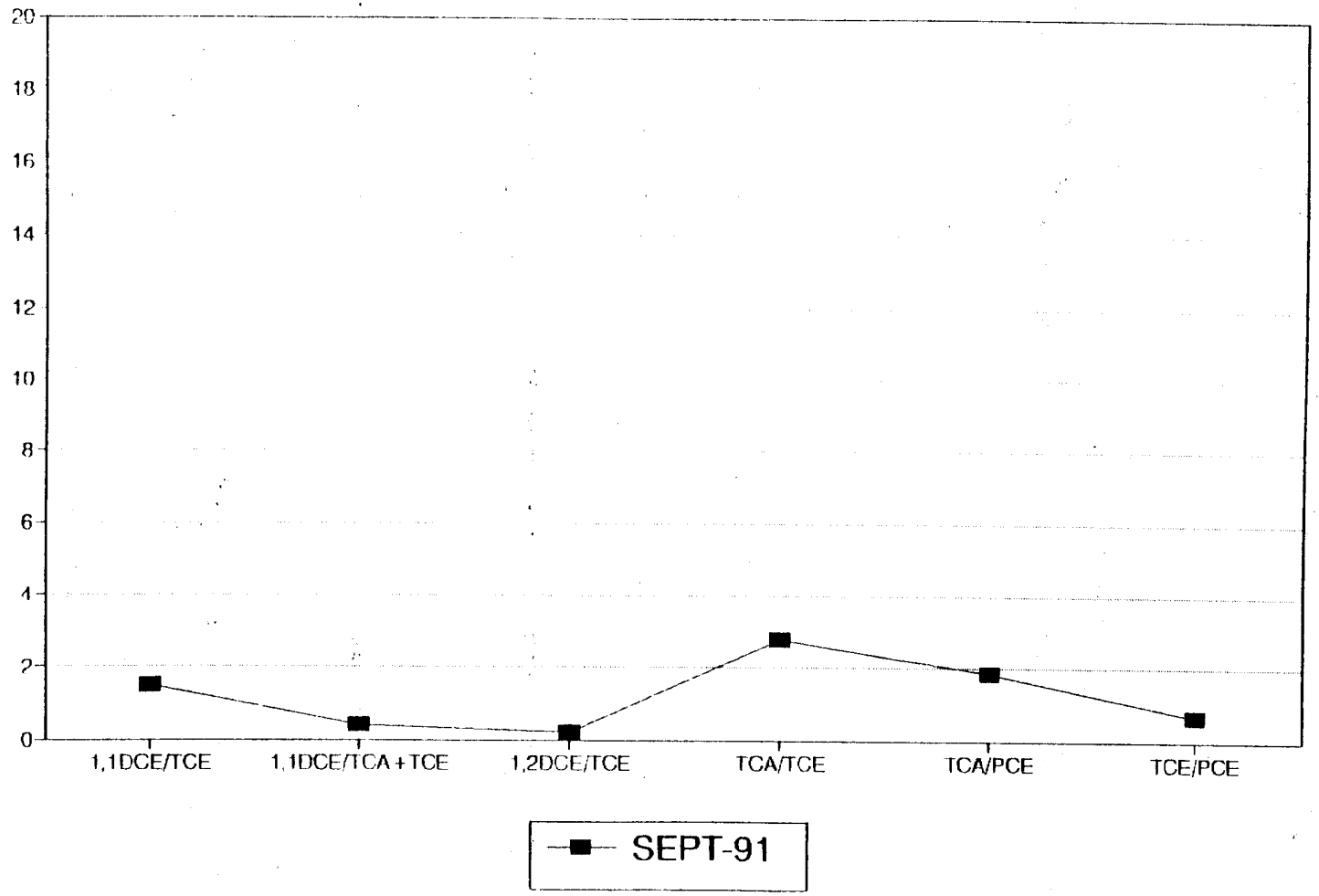
CPT-01 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N17

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THL	1/92		

HDT\17333068\DIA1

CPT-02



MCK0004463

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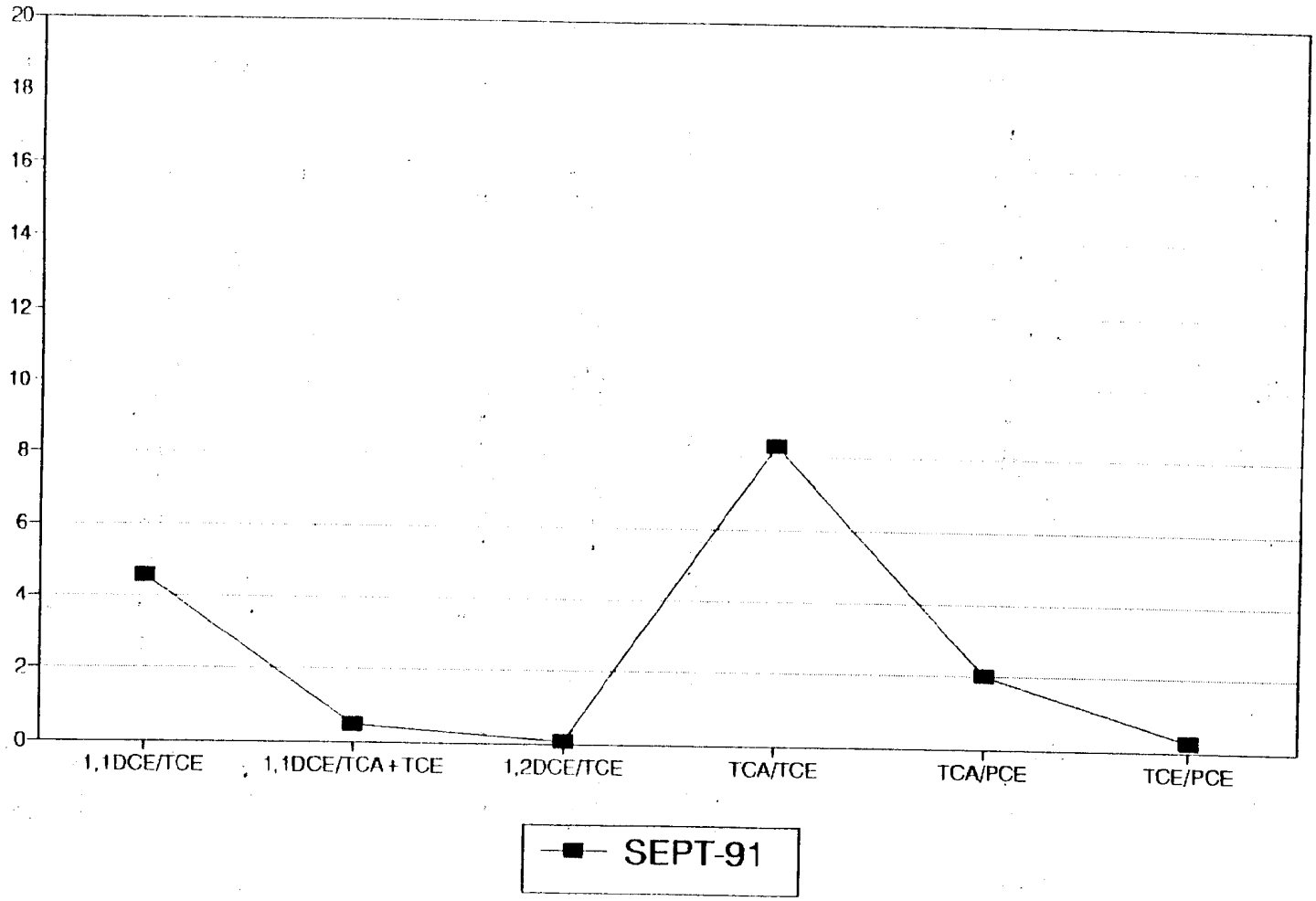
CPT-02 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N18

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAC	1/92		

HDF\17333068\DIA1

CPT-04



MCK0004464

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Engineering and Environmental Services

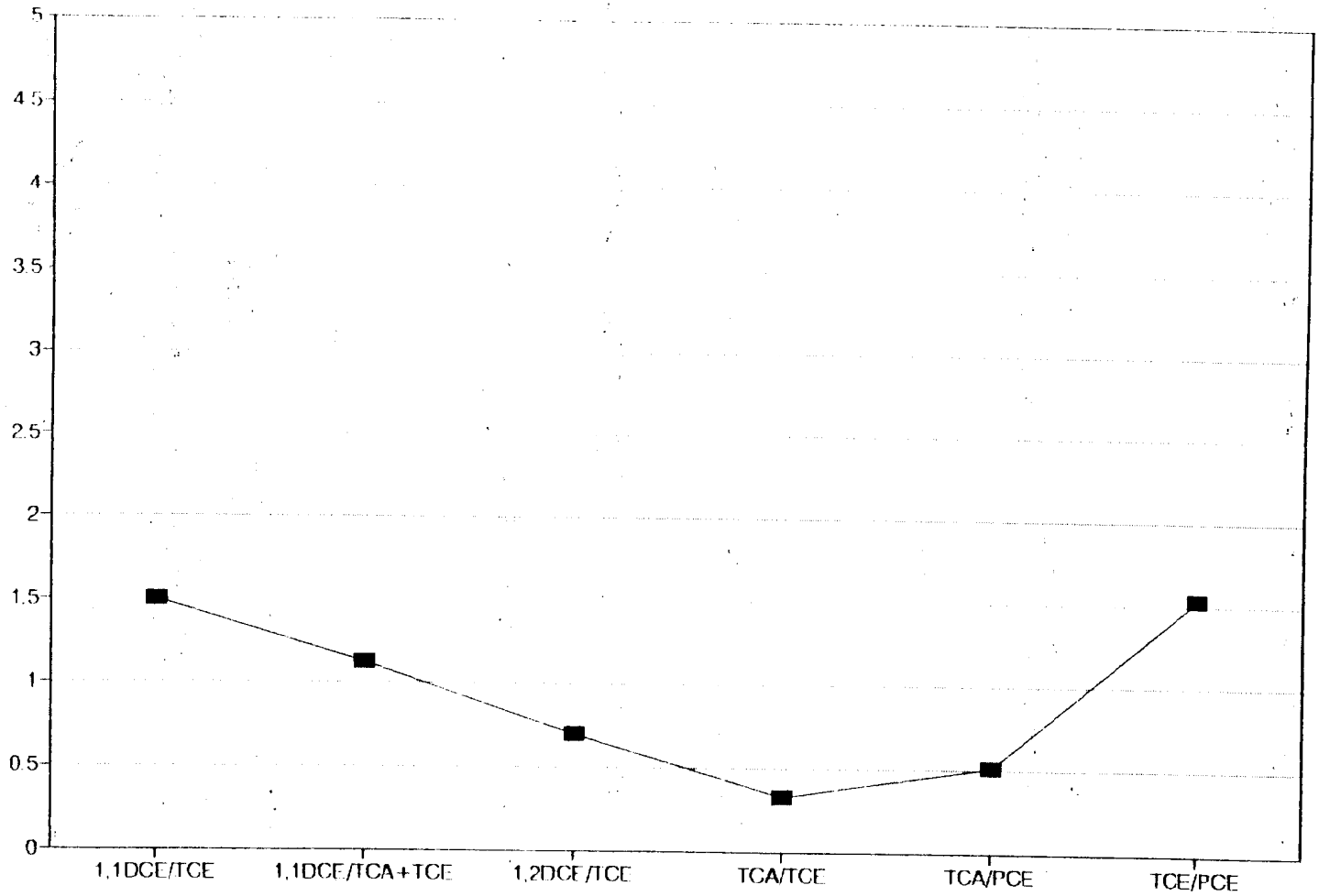
CPT-04 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N19

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

CPT-06



MCK0004465

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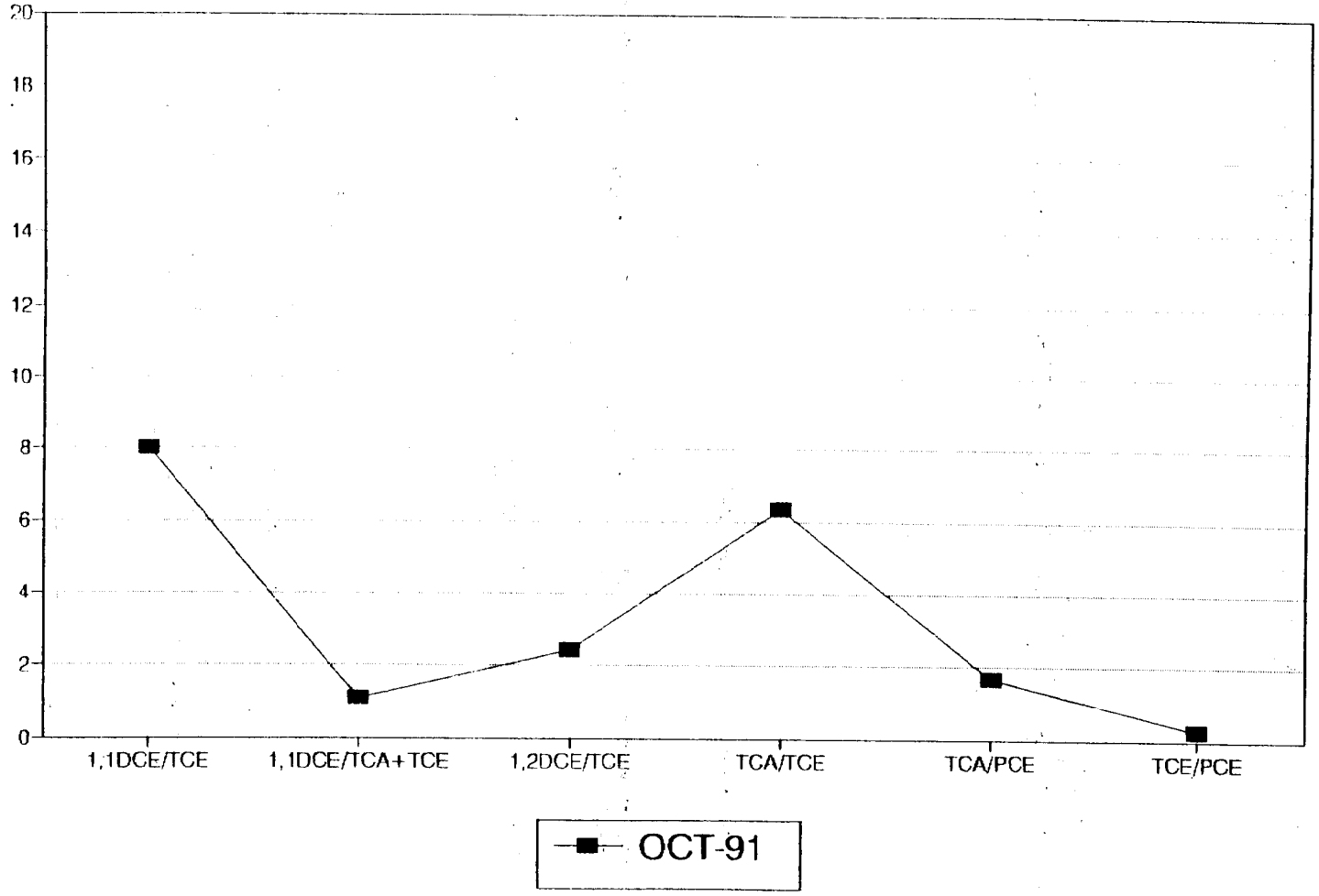
CPT-06 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N20

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	JAK	1/92		

HDT\17333068\DIA1

CPT-07



MCK0004466

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Engineering and Environmental Services

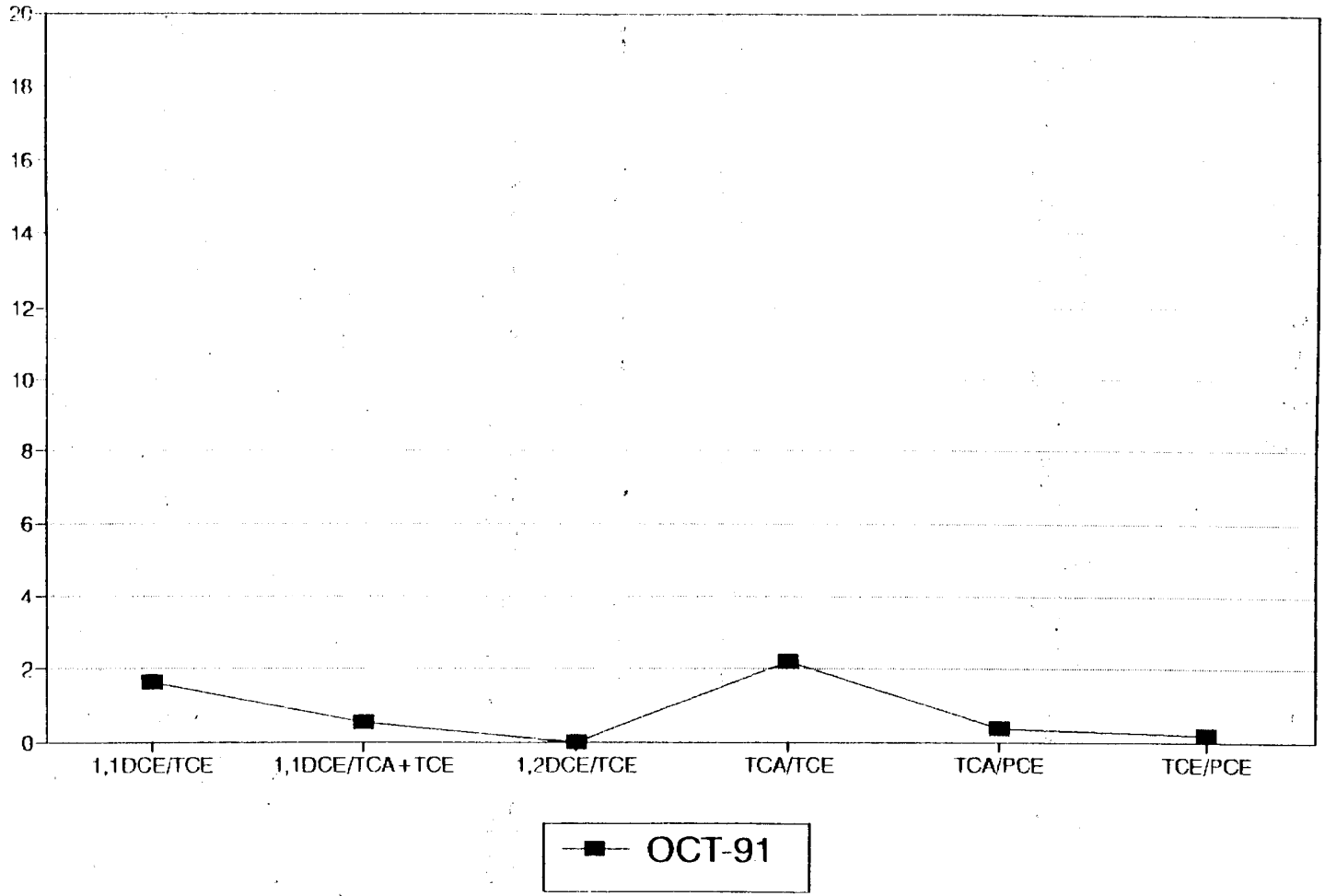
CPT-07 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N21

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

CPT-08



MCK0004467

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Engineering and Environmental Services

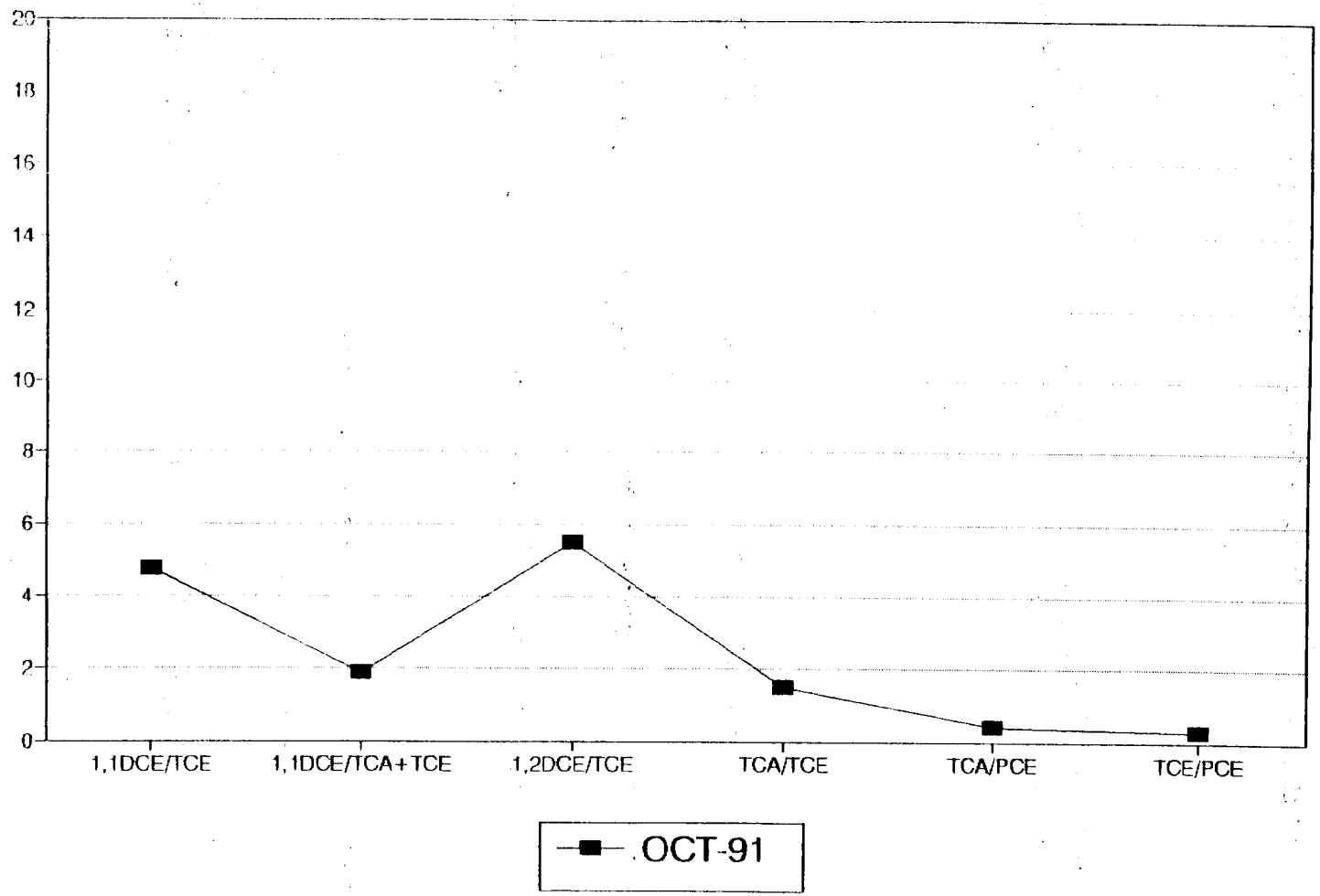
CPT-08 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N22

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

CPT-09



MCK0004468

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Engineering and Environmental Services

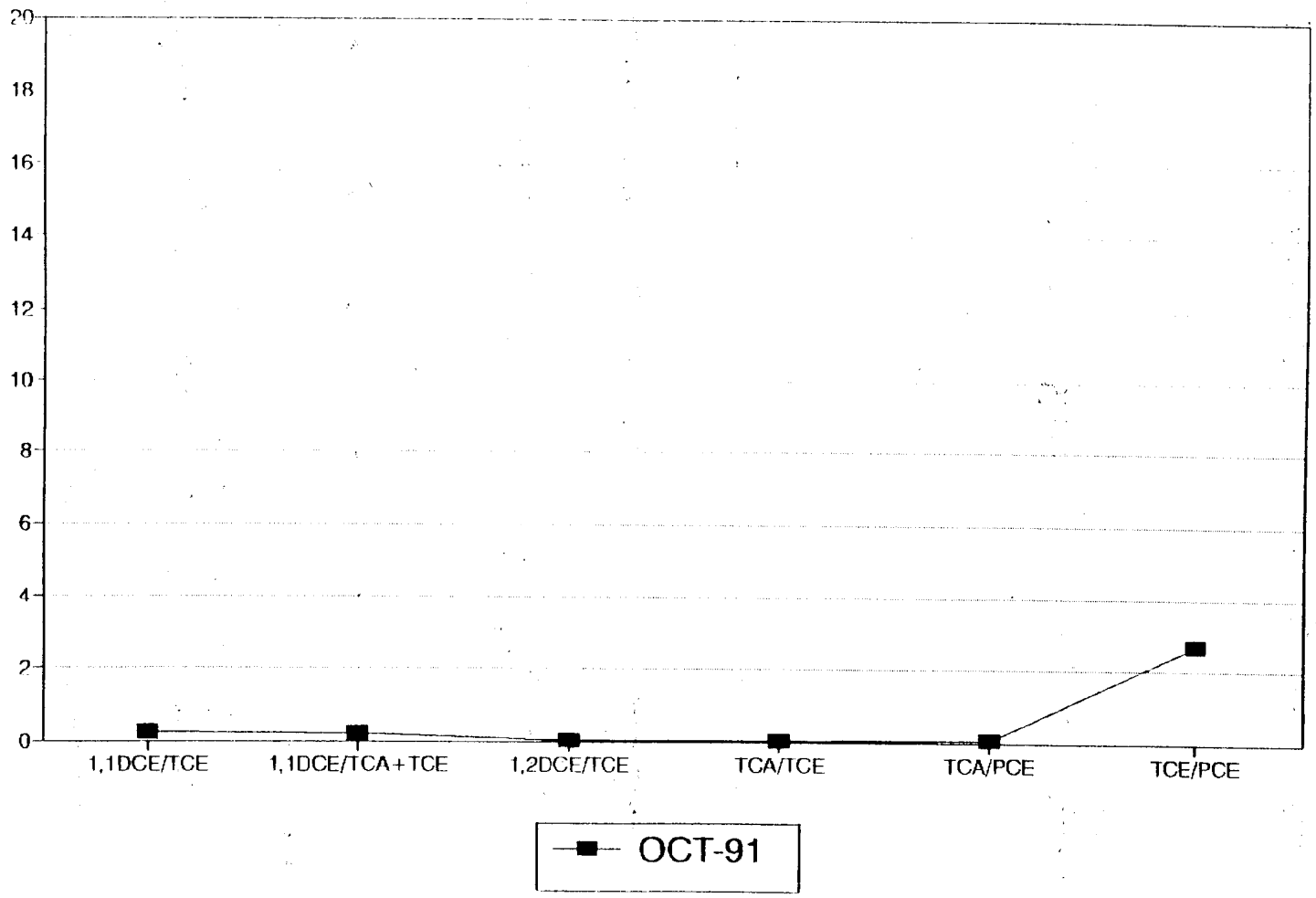
CPT-09 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N23

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

CPT-10



MCK0004469

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Engineering and Environmental Services

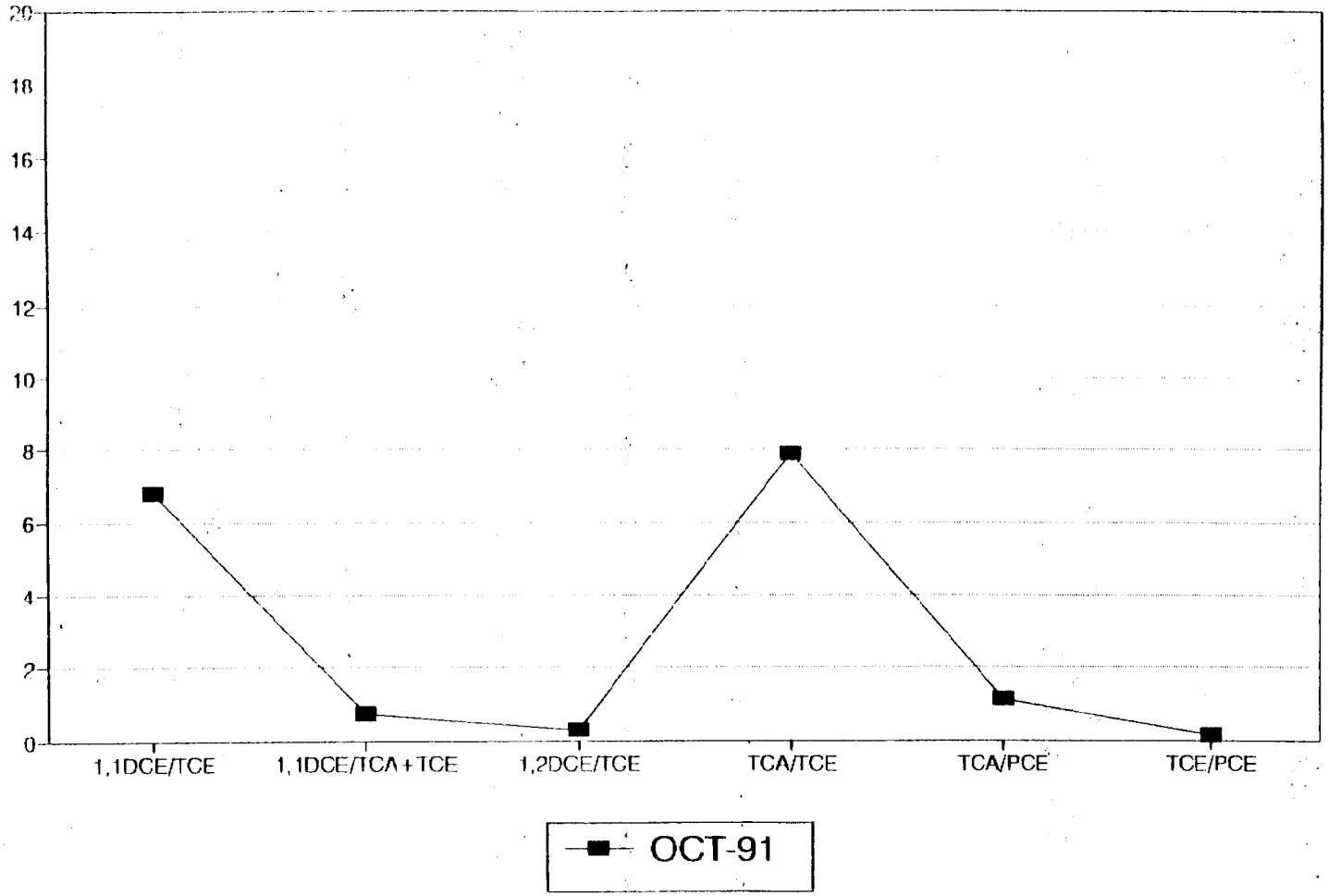
CPT-10 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N24

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	MK	1/92		

HDT\17333068\DIA1

CPT-11



MCK0004470

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Engineering and Environmental Services

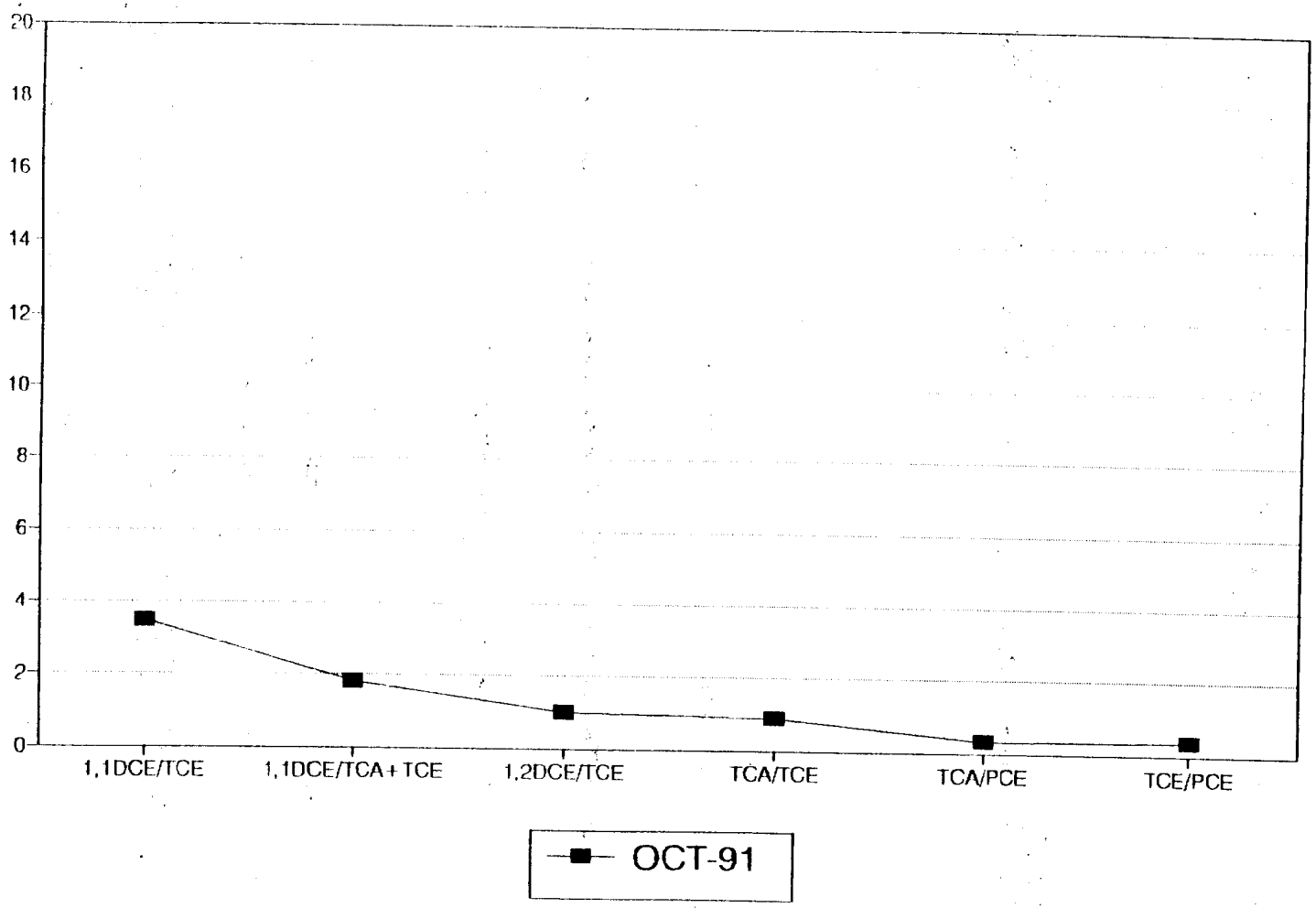
CPT-11 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N25

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

CPT-12



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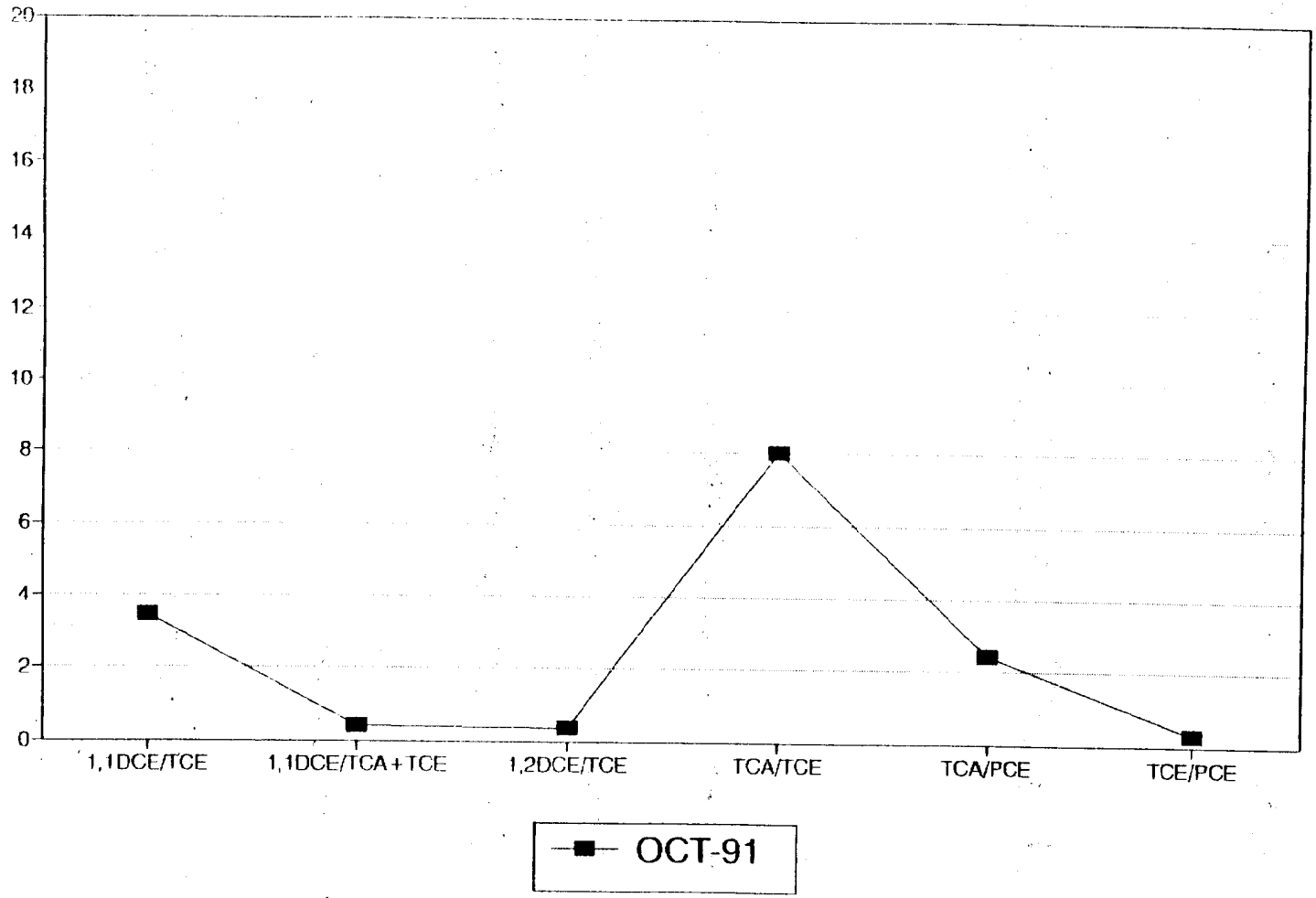
CPT-12 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE **N26**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

CPT-13



MCK0004472

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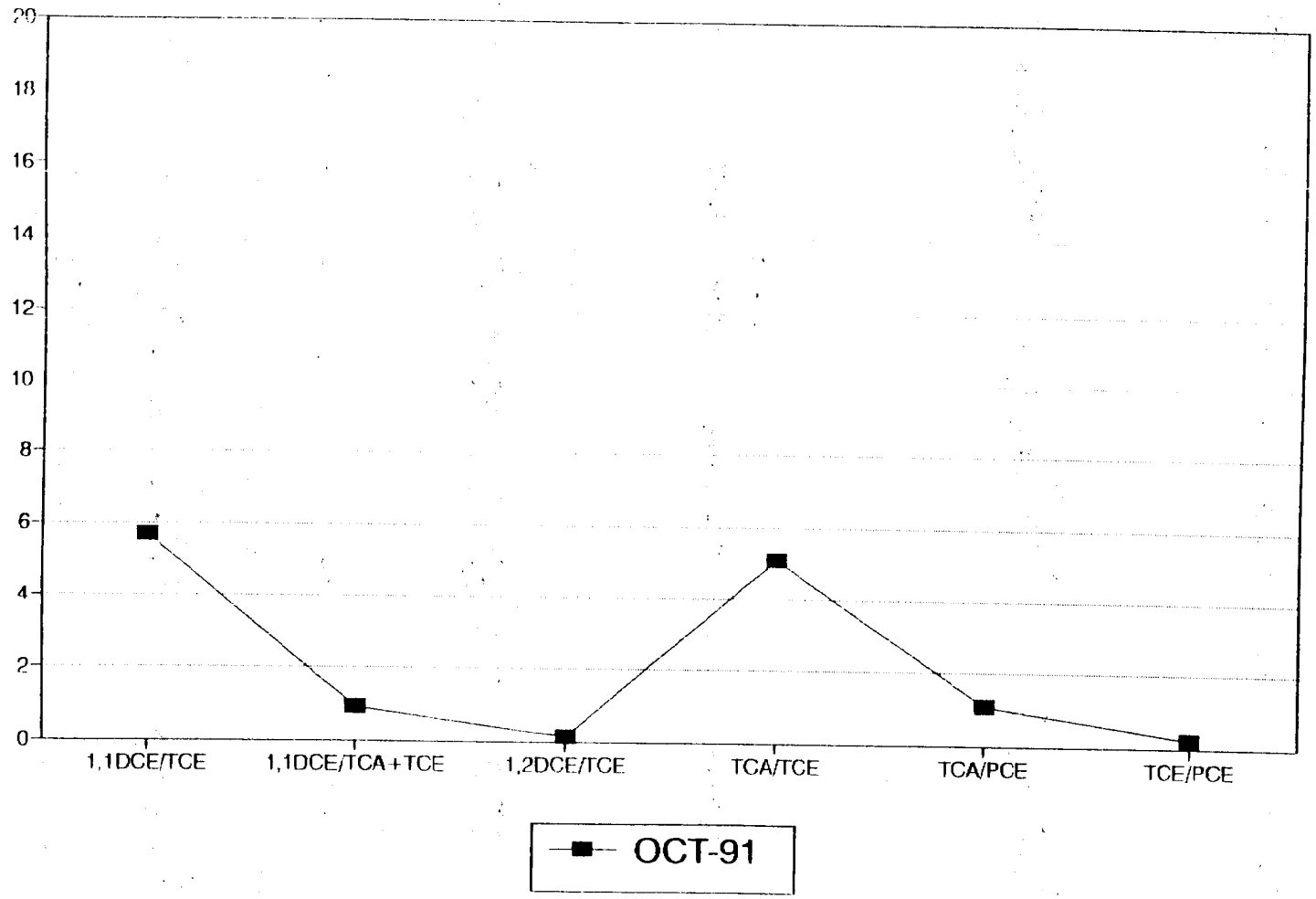
CPT-13 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N27

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

CPT-14



MCK0004473

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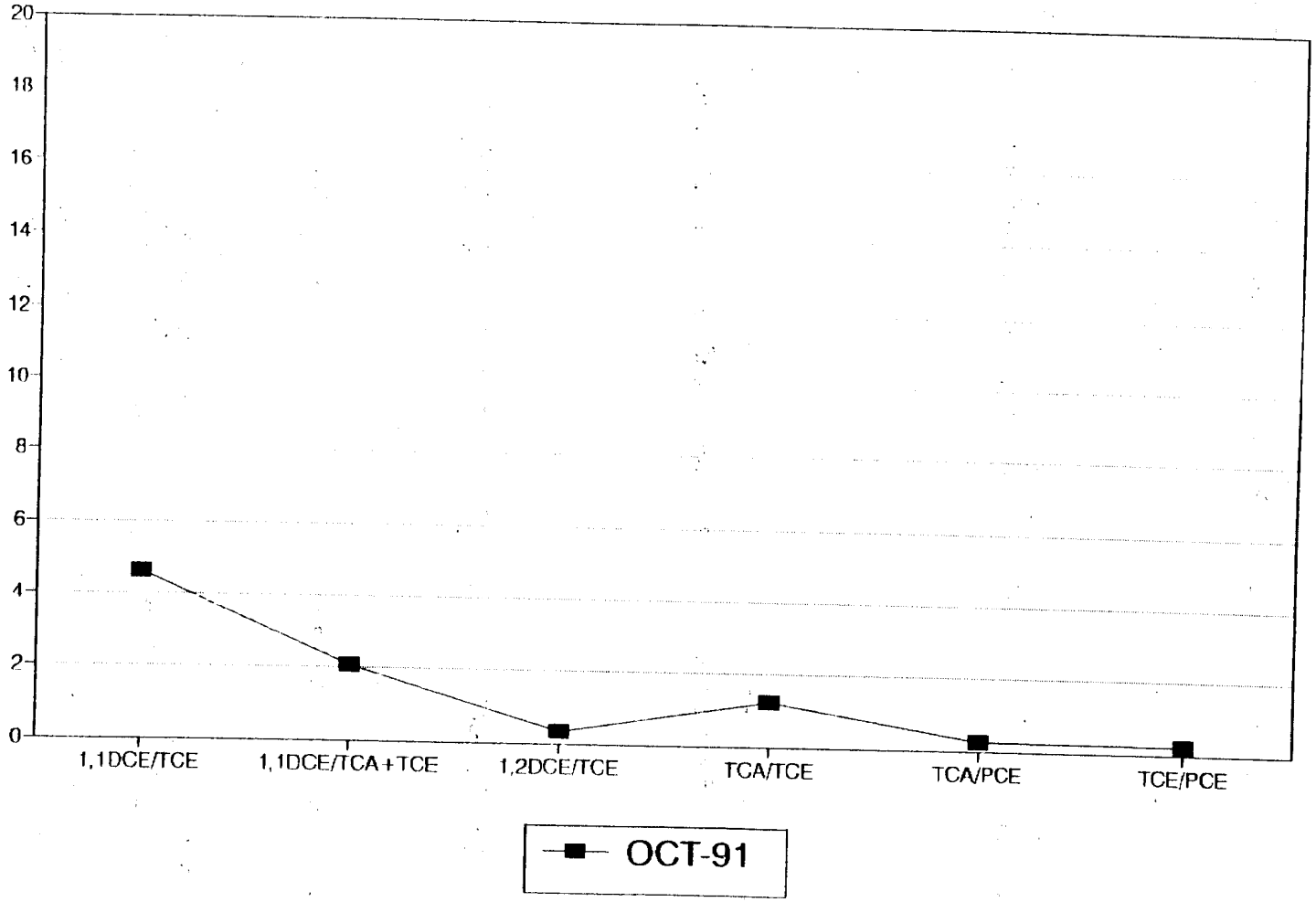
CPT-14 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N28

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	MAK	1/92		

HDT\17333068\DIA1

CPT-15



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Engineering and Environmental Services

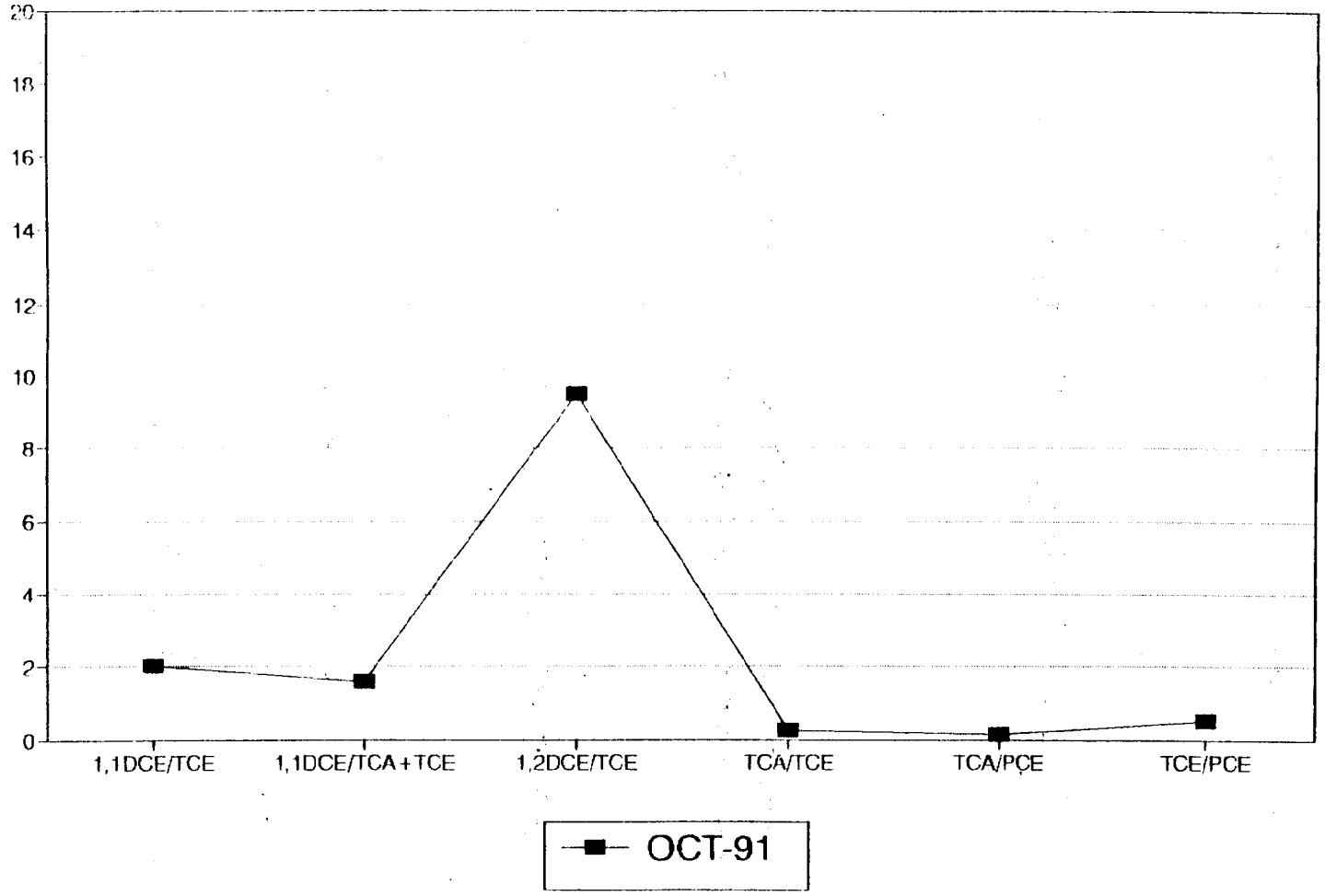
CPT-15 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N29

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

CPT-16



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Harding Lawson Associates
Engineering and Environmental Services

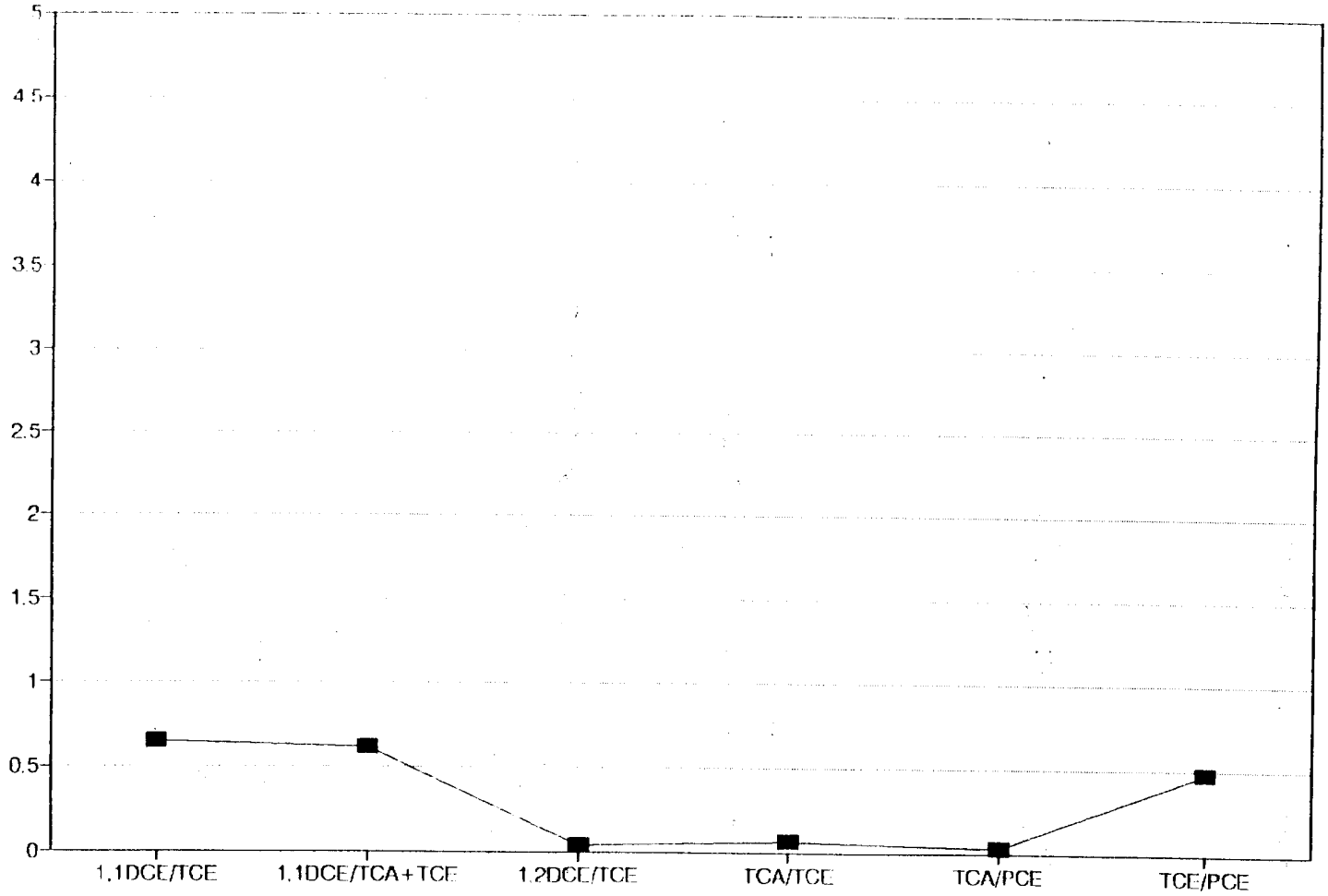
CPT-16 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N30

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	TAK	1/92		

HDT\17333068\DIA1

CPT-17



MCK0004476

Harding Lawson Associates
Engineering and Environmental Services

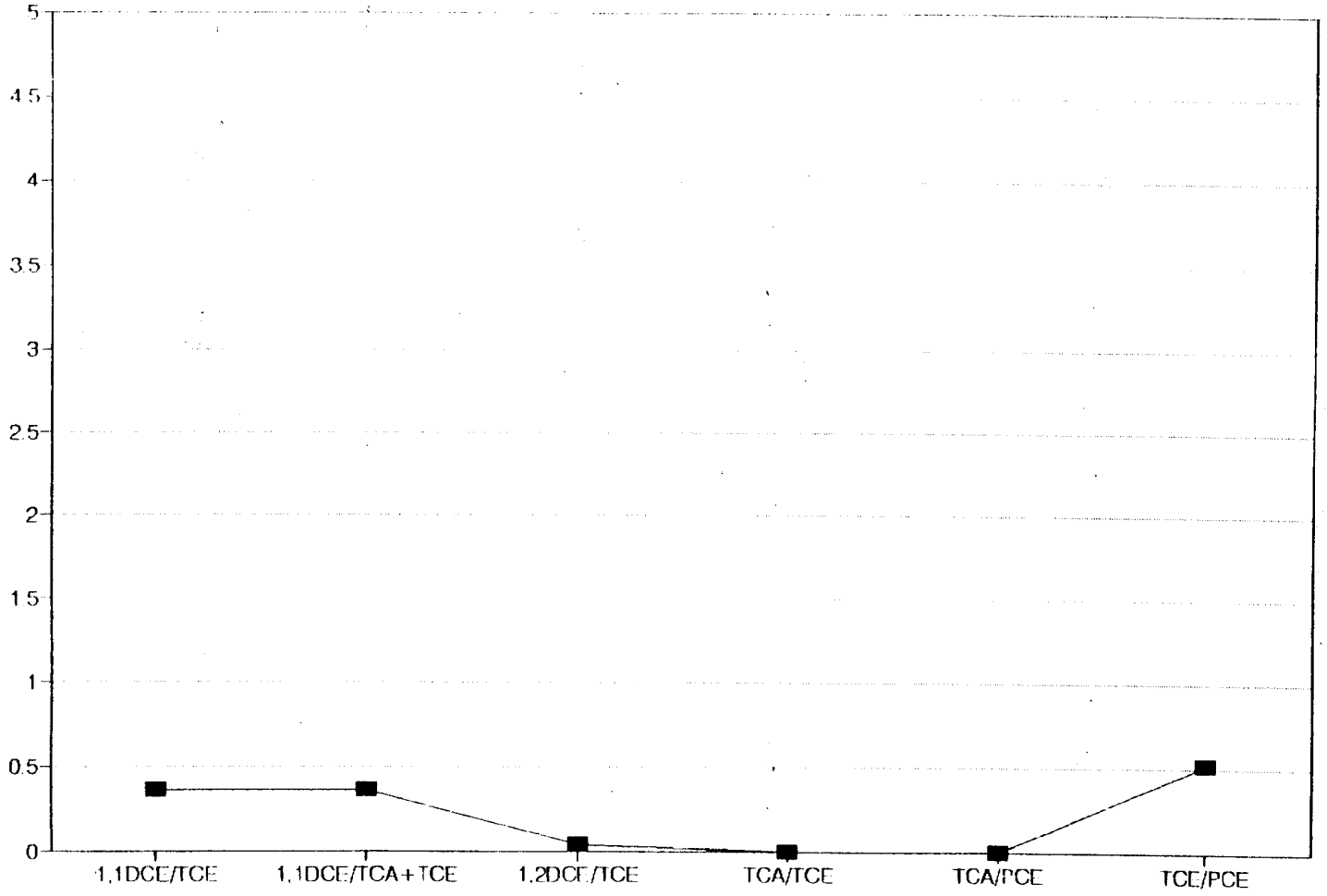
CPT-17 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE N31

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	MK	1/92		

HDT\17333068\DIA1

CPT-18



MCK0004477

Harding Lawson Associates
Engineering and Environmental Services

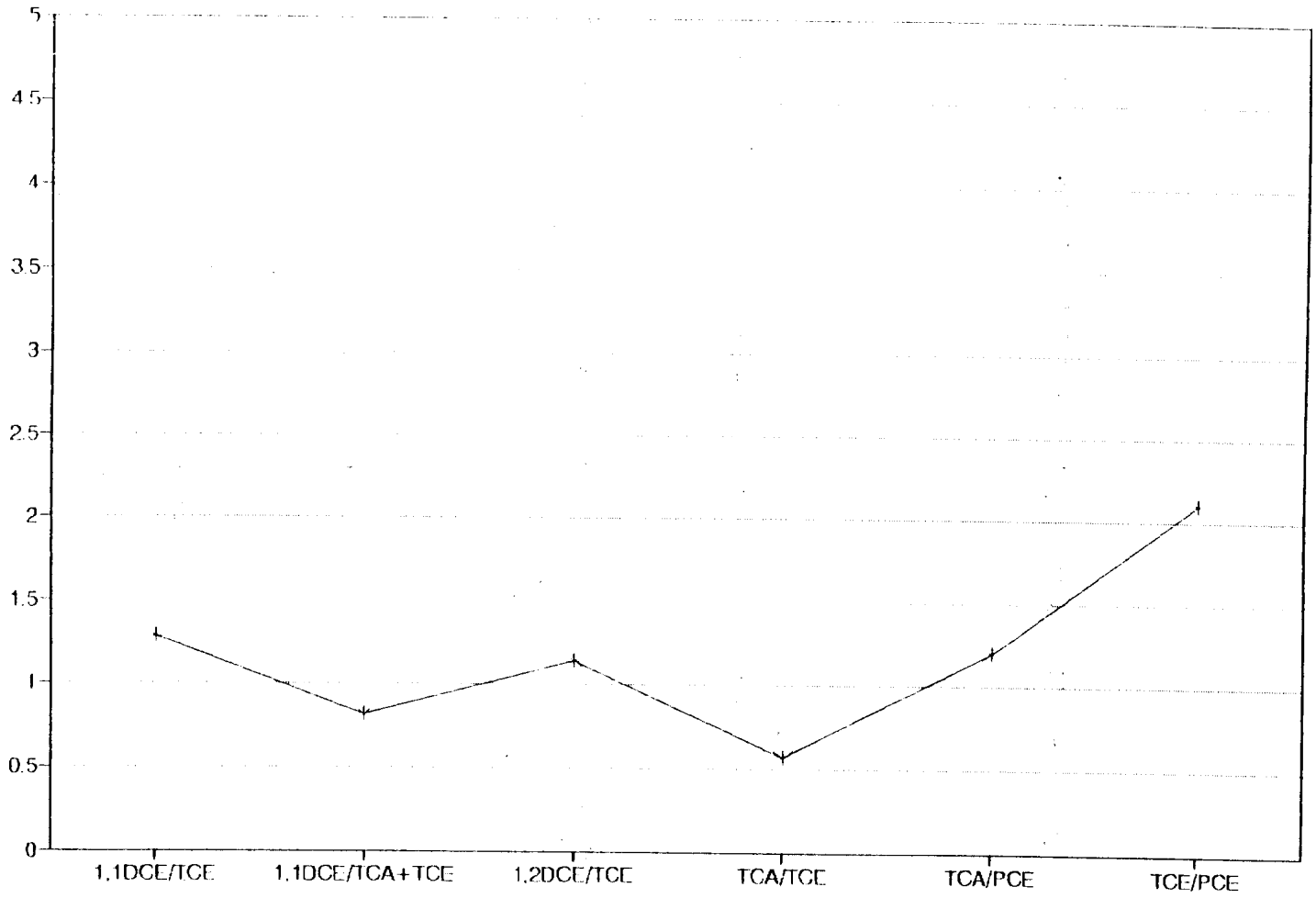
CPT-18 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N32

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	MHC	1/92		

HDT\17333068\DIA1

ANGELES MW-01



MCK0004478

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Engineering and Environmental Services

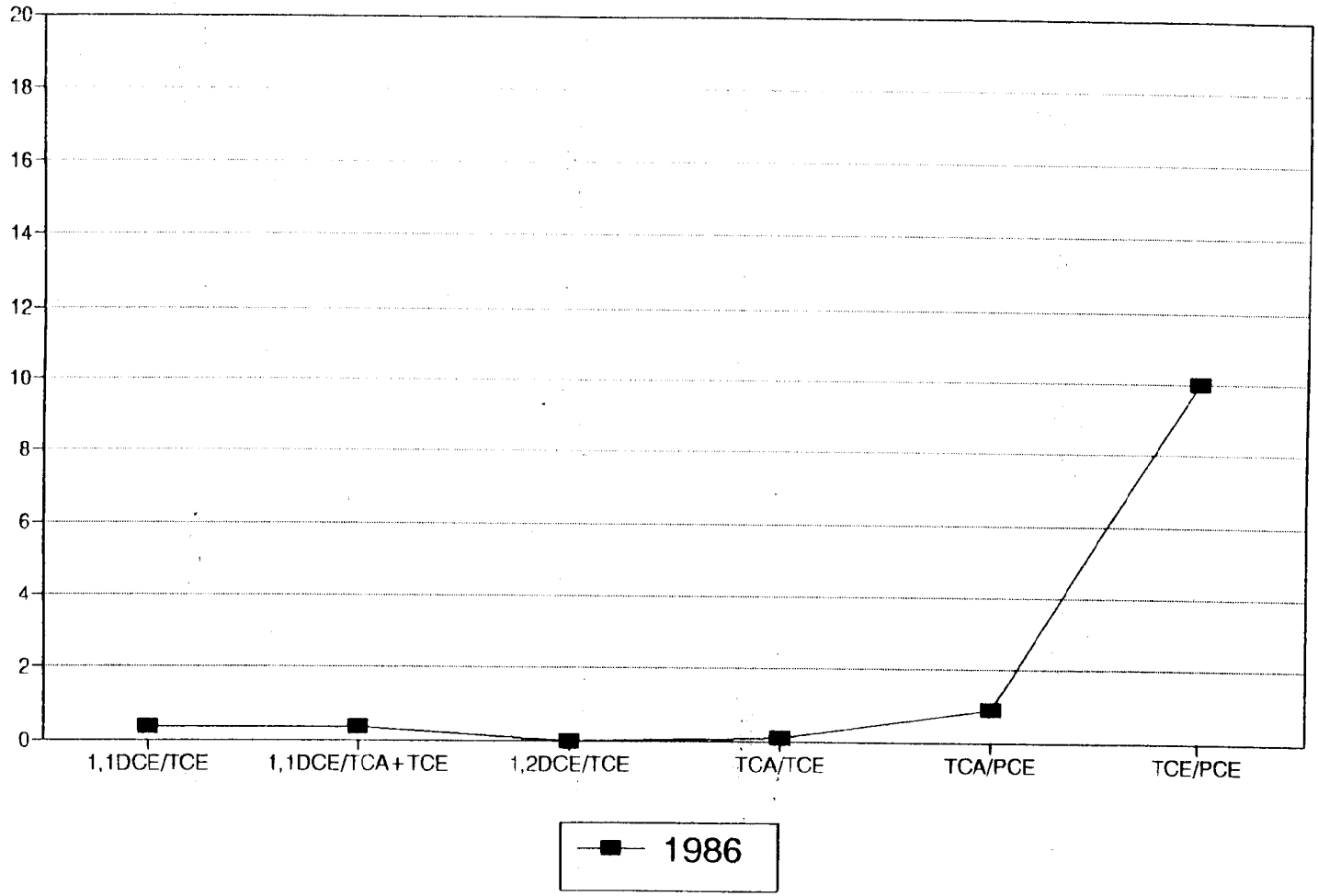
ANGELES MW-01 ORGANIC CONTAMINANTS RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE **N33**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	THK	1/92		

HDT\17333068\DIA1

DIVERSEY



MCK0004479

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DIVERSEY ORGANIC CONTAMINANTS
RATIO PLOT
McKesson Corporation Property
Santa Fe Springs, California

PLATE
N34

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
JTL	17333,168.11	MK	1/92		

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Civil Engineer - 22026

TH/TAK/BS/DWQ/lf

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