

February 11, 2000

Former Magic Cleaners

D&M Job 42368-179-189

Seattle, Washington TCP I.D. # NW0081

Groundwater Investigation/Remediation Report

and Monitored Natural Attenuation Work Plan

500 Market Place Tower 2025 First Avenue Seattle, Washington 98121 206 728 0744 Tel 206 727 3350 Fax

Mr. Nnamdi Madakor Department of Ecology Northwest Regional Office 3190 160<sup>th</sup> Avenue SE Bellevue, Washington 98008-5452

#### RECEIVED

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DEPT. OF ECOLOGY

Dear Mr. Madakor:

#### 1.0 INTRODUCTION AND BACKGROUND

Provided herein is Dames & Moore's Groundwater Investigation/Remediation Report and Monitored Natural Attenuation Work Plan for the former Magic Cleaners Coin-Operated Dry Cleaner site located at the Lake Forest Park Town Center (site). As described below, Dames & Moore submitted a number of documents regarding the history and investigation of the former Magic Cleaners Coin-Operated Dry Cleaner site prior to a conversation with Ecology personnel regarding the site in June 1998. Following the June 1998 conversation Dames & Moore submitted a Groundwater Remediation Work Plan dated August 31, 1998 which proposed additional delineation sampling, to be followed by remediation using in-situ chemical oxidation. The in-situ chemical oxidation approach proposed in the August 1998 Work Plan consisted of hydrogen peroxide gravity injection wells installed in the vicinity of MW-3, the location of previous PCE detection exceeding MTCA cleanup levels. After the additional delineation sampling which was conducted as proposed in the August 1998 Work Plan revealed that a larger area was impacted by low level VOCs than was originally suspected, Dames & Moore determined that in-situ chemical oxidation was likely to be ineffective and therefore impractical. Therefore, a revised Work Plan ("Revision #1") was submitted to Ecology on December 3, 1998, after which dual phase vacuum extraction remediation and additional investigation were implemented.

This report presents the groundwater investigation/remediation activities which have been implemented since the August 31, 1998 Work Plan was submitted. This report also outlines the proposed groundwater and surface water monitoring associated with monitored natural attenuation to obtain a conditional no further action in association with a proposed Restrictive Covenant applied to the property consistent with the requirement for institutional controls outlined in the Model Toxics Control Act (MTCA) regulations (WAC 173-340-440). The Restrictive Covenant will be executed by Seattle LFP Associates, L.P and recorded with the Register of Deeds for King County. The Restrictive Covenant will prohibit on-site groundwater use and require monitoring of groundwater and surface water, until MTCA Method A/B cleanup levels are achieved or Ecology otherwise determines that the Restrictive Covenant is no longer necessary.



#### 2.0 OBJECTIVE – MONITORED NATURAL ATTENUATION

Pursuant to the MTCA regulations (WAC 173-340-440), institutional controls can be implemented at a property to minimize the potential for exposure to hazardous substances. The institutional controls proposed for the Former Magic Cleaners site will consist of a groundwater use restriction and monitoring of surface water and groundwater, which will be agreed to in a Restrictive Covenant. The objectives of the proposed monitoring program will be as follows:

- Provide a groundwater monitoring network, sample collection and analytical program to assess the progress of natural attenuation which is occurring at the site and to determine when the Restrictive Covenant is no longer necessary.
- Monitor the surface water quality (Lyons Creek) downgradient of the affected groundwater to assure additional remedial actions are not needed to protect surface water.
- Provide analytical data to support lifting the groundwater use restriction and discontinuing monitoring of surface water and groundwater.

#### 3.0 SITE INVESTIGATION AND REMEDIATION

#### 3.1 SUMMARY OF PREVIOUS GROUNDWATER AND SURFACE WATER DATA

Below is a list of the Dames & Moore documents and submittals previously provided to Ecology:

- Site Characterization Report dated January 11, 1996
- Supplemental Site Characterization Report dated April 28, 1998
- Request for Assistance under the Voluntary Cleanup Program dated May 21, 1998
- Work Plan Groundwater Remediation Voluntary Cleanup Program dated August 31, 1998
- Work Plan Revision # 1 Groundwater Remediation Voluntary Cleanup Program dated December 3, 1998

Information regarding the original dry cleaning solvent release, initial investigation and remediation, and supplemental investigation findings is provided in our January 1996 and April 1998 reports. In addition, a copy of the Ecova Corporation October 23, 1989 report titled "Report of Findings Lake Forest Park Town Center Remedial Investigation" was provided in our Request for Assistance under the Voluntary Cleanup Program. Ecology assigned the Former Magic Cleaners site TCP ID #NW0081 on May 22, 1998.

Previous analytical data provided to Ecology in the above referenced documents are shown for convenience on Figure 1 and included on Figure 2.



#### 3.2 SUPPLEMENTAL PRE-REMEDIATION GROUNDWATER SAMPLING

Dames & Moore implemented additional groundwater investigation in September 1998, as proposed in the August 31, 1998 work plan. The objective of this investigation was to assess the distribution of volatile organic compounds (VOCs) in the groundwater upgradient of MW-3 (Figure 3, P-1 through P-11). Transglobal Environmental Geosciences, Inc. (TEG) performed the StrataProbe hydraulic-push drilling and sampling to obtain the groundwater samples. The groundwater samples were collected by driving the sampler to the target depth and extracting a two foot section of screen across the saturated zone. The groundwater sampling depths are summarized in Table 1. Logs of the borings are provided in Appendix A. Dedicated polyethylene tubing connected to the well screen and a peristaltic pump were used to collect the groundwater samples from each boring location. The groundwater samples were analyzed for VOCs (EPA Method 8260) and the laboratory analytical reports are provided in Appendix B.

The groundwater analytical results are summarized on Table 1 and are shown on Figure 3. Tetrachlorethene (PCE) concentrations were detected at levels slightly exceeding the MTCA method A cleanup level of 5 ug/l over a larger area than was originally suspected. Based on the results of the sampling, Dames & Moore determined that in-situ chemical oxidation was likely to be ineffective and therefore impractical, and revised the Remediation Work Plan (Revision #1, dated December 3, 1998) to implement groundwater extraction. As proposed in Revision #1, monitoring well MW-6 was installed in December 1998 to provide both water quality information and a location for groundwater extraction. The monitoring well log is provided in Appendix A.

#### 3.3 GROUNDWATER REMEDIATION

A discussion of the original 1989 source removal conducted at the former Magic Cleaners coin-operated dry cleaner (within the current Rite-Aid building location which was occupied by Payless after Magic Cleaners) can be found in Dames & Moore's January 1996 and April 1998 reports.

The groundwater remediation performed in 1998/1999 entailed pumping groundwater from MW-3 and MW-6 using a vacuum truck. A stinger pipe and coupling was placed into each well to allow for both dewatering of the well and removal of VOC vapors from within the cone of depression created by pumping. This pumping method is referred to as dual phase vacuum extraction. The truck was equipped with a vacuum pump capable of generating vacuums as high as 26 inches of mercury and had a tank capacity of 5000 gallons.

The dual phase vacuum extraction was performed from December 30, 1998 to March 4, 1999. A summary of the duration of groundwater extraction and the total volume of groundwater pumped is provided in Table 2. A total of approximately 17,130 gallons and 18,464 gallons of groundwater were pumped from MW-3



and MW-6, respectively. The pumped groundwater was discharged to the sanitary sewer in conformance with the King County Industrial Waste Section (Metro) discharge approval dated November 25, 1998.

During the initial start up period of pumping, groundwater level data was collected from adjacent monitoring wells to assess the radius of influence of the dual phase vacuum extraction. The water levels at MW-4 were monitored using a Hermit data logger and pressure transducer during pumping of MW-3 on December 30, 1998. MW-4 is located approximately 125 feet southwest of MW-3 (Figure 2). The groundwater level data is provided in Appendix C. The MW-3 was pumped for approximately 3.7 hours at an approximate pump rate of 9.9 gallons per minute (gpm). A drawdown of 0.15 feet was observed at MW-4 after approximately 2 hours of pumping. The data indicates that the radius of influence extends to greater than 125 feet based on the drawdown observed at MW-4. We also measured the vacuum radius of influence on February 23, 1999 by measuring the vacuum in the well head at MW-4 during pumping of MW-3. A magnehelic gauge was attached to the top of the well riser and a vacuum of 0.1 inches of water was observed at MW-4. Monitoring well MW-6, which is located approximately 225 feet upgradient of MW-3, was also assessed and no vacuum was registered or drawdown observed at this well during pumping at MW-3. In summary, the radius of influence during the dual phase vacuum extraction was between 125 and 225 feet.

During the period of remedial pumping, groundwater samples were collected from MW-3 and MW-6 on January 28<sup>th</sup> and March 8<sup>th</sup>, 1999 to assess the affects of the dual phase vacuum extraction process on the groundwater quality. Prior to groundwater sampling, these wells were allowed to equilibrate from four to seven days. The groundwater samples were collected using low-flow purging techniques in general conformance with EPA protocols (EPA, 1996). The groundwater sampling results are summarized in Table 3 and are shown on Figure 2. PCE concentrations ranged from 49 ug/l to 52.7 ug/l at MW-6 and from 24.1 ug/l to 32 ug/l at MW-3. The degradation products, trichloroethene (TCE) and cis-1,2 dichloroethene (DCE) were also detected in the groundwater at both monitoring wells. Groundwater samples collected from MW-2 during these two sampling events did not detect VOCs which is consistent with previous sampling events (Figure 2).

In summary, no significant fluctuations in VOC concentrations were evident in the groundwater samples collected from MW-3 or MW-6 during or as a result of dual phase vacuum extraction.

#### 3.4 POST REMEDIATION GROUNDWATER SAMPLING

Additional groundwater assessment was subsequently conducted in June and July 1999 to further evaluate the peripheral areas of the groundwater VOC plume (Figure 4, P-13 through P-31). In addition, groundwater samples were collected adjacent to and directly downgradient of the former source area (P-32, P-33 and P-34). The primary purpose of these borings was to further assess if residual levels of PCE could exist beneath the Rite Aid store (formerly Payless and before that occupied by Magic Cleaners). GeoProbe borings were



drilled and groundwater samples collected by Cascade Drilling. The groundwater samples were collected by the same procedures and tested for the same parameters as the StrataProbe sampling referenced above. However, borings conducted within the Rite-Aid building were completed using hand held GeoProbe sampling equipment. The boring logs are provided in Appendix A and the laboratory analytical reports are provided in Appendix B. An additional round of groundwater samples was also collected from monitoring wells MW-3 through MW-6 on June 10, 1999. The monitoring well sampling was performed consistent with the methods described above.

The results of the June/July 1999 GeoProbe groundwater sampling event are summarized on Table 1 and are shown on Figure 4.//VOCs were not detected in the groundwater at the sample locations directly adjacent to the former source area (P-33 and P-34). PCE was detected at a concentration of 2.41 ug/l at boring P-32 located downgradient of the former source area (Figure 4). The results indicate that residual levels of PCE are not present in the soil/water interface at the former source area.

The additional borings completed in the peripheral areas of the VOC plume served to define the lateral extent of the VOC concentrations in groundwater (Figure 4). The highest level of PCE detected was at boring P-26 (81.3 ug/l), located directly south of the Rite-Aid building (Figure 4). The levels of PCE were shown to decline down gradient from the boring with the highest detection (P-26). It was also noted that the degradation products of PCE (TCE, DCE and VC) increased in concentration further downgradient from the highest PCE detection. The increase in concentration of TCE, DCE and VC was evident in the groundwater samples collected in the middle to southern portion of the plume. These findings are consistent with the additional groundwater sampling conducted in the monitoring wells MW-3 and MW-6 in June 1999. In addition, the non detection of VOC in the groundwater samples from MW-4 and MW-5 also were consistent with the results of the GeoProbe samples collected in the vicinity of these wells.

Based on the additional groundwater characterization it is apparent that attenuation and biodegradation of the chlorinated VOCs is occurring within the plume and is more evident towards its southern extent. The highest concentration of PCE in the groundwater was detected south of the Rite Aid building (P-26, 81.3 ug/l) and a steady decline in PCE concentrations is evident downgradient from this location. Correspondingly, the biodegradation products increase in concentration with distance from the former source area. The VOC plume appears to measure approximately 570 feet in length and at its widest extent is less than 200 feet. The width of the leading edge of the plume was found to be greatly reduced in size to less. than approximately 80 feet in width.



#### 4.0 PROPOSED MONITORED NATURAL ATTENUATION

#### 4.1 CURRENT CONDITIONS

Natural attenuation (also referred to as intrinsic remediation or natural restoration) has been defined by the Environmental Protection Agency (EPA) as the "naturally-occurring process in soil and groundwater environments that act without human intervention to reduce the mass, toxicity, mobility, volume or concentration of contaminants in those media" (EPA, 1998). The processes occurring can include biodegradation, dispersion, dilution, adsorption, volatilization and chemical or biological stabilization or destruction of contaminants. These processes have been shown to be capable of reducing contaminant levels at sites containing low concentrations of chlorinated VOCs and ultimately attaining applicable cleanup levels. Chlorinated VOCs are amenable to natural attenuation and can degrade chemically or biologically by direct oxidation, reductive dehalogenation and co-metabolism. In anaerobic environments, the degradation of PCE proceeds to TCE; DCE; VC and eventually to ethene and ethane. VC has been shown to degrade in the subsurface under both anaerobic and aerobic conditions. Based on the current observed distribution of chlorinated VOCs detected in the groundwater (Figures 2 and 3), it is apparent that dechlorination of PCE is occurring at this site. Thus, natural attenuation is expected to continue to reduce the groundwater VOC concentrations over time. Groundwater monitoring will be utilized to assess the progress of the natural attenuation processes.

#### 4.2 GROUNDWATER & SURFACE WATER MONITORING PROGRAM

If agreed to by Ecology, a conditional no further action in association with a Restrictive Covenant will be granted for this site. The Restrictive Covenant will prohibit on-site groundwater use and require monitoring of groundwater and surface water.

Groundwater sampling will be conducted using low flow purging techniques and groundwater field parameters will be continuously monitored until stabilized readings, as appropriate, are obtained per EPA guidelines (EPA, 1996). The groundwater field parameters will include dissolved oxygen (DO), pH, temperature and specific conductivity. The measurements will be made using a flow through cell and calibrated multi meter. The surface water samples will be collected directly into laboratory supplied glassware. The pH and temperature of the surface water will be taken directly at the creek sample location. The field parameter data will be recorded on sampling log forms which will include the sample location, been date, time, weather conditions, field data and other general observations.

Disposable nitrile gloves will be worn during sampling and changed between each well location. Appropriate quality assurance/quality control (QA/QC) measures will be instituted during the groundwater sampling. Samples will be stored in cooled ice chests and transported to the analytical laboratory under chain-of-custody protocol.

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The groundwater and surface water analytical testing program will be conducted by North Creek Analytical of Bothell, Washington, or another Ecology-accredited laboratory. The samples will be analyzed for VOCs by EPA Method 8260B. In addition, groundwater samples collected from MW-2, MW-3 and MW-6 will also be analyzed for chloride, nitrate, ethane/ethene and sulfate. These inorganic parameters will be used for baseline data to evaluate the effectiveness of attenuation (EPA, 1998). These parameters will be analyzed on an annual basis.

Quarterly water sampling has been previously conducted at the site per Ecology guidance (Figure 2). Thus, biannual monitoring is proposed to assess changes to the VOC concentrations over time. Groundwater samples will be collected from wells MW-2, MW-3, MW-4 and MW-6 (Figure 1). A surface water sample (designated LC-1) will be collected in Lyons Creek directly downgradient of MW-3 (Figure 4). The surface water sample will be collected during the groundwater sampling event. We are proposing to conduct the sampling on a biannual basis during the winter (generally high water table) and the summer (generally lowest water table) until MTCA Cleanup Level Method A/B levels are achieved or Ecology otherwise determines that the Restrictive Covenant is no longer necessary.

#### 5.0 REPORTING

The results of the groundwater sampling will be provided to Ecology in an annual report. The report will contain a summary of the analytical data and a copy of the laboratory reports. The report will also **pr**ovide any other relevant data required by the Restrictive Covenant.

#### 6.0 **REFERENCES**

EPA, 1996, Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures; EPA/540/S-95/504.

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Please do not hesitate to contact us if you have any questions or require any additional information.

Very truly yours,

DAMES & MOORE 1.

David R. Raubvogel Senior Geologist

Copy: Ms. Rebecca Coles

Attachments:

Figures 1 through 4 Tables 1 through 3 Appendix A - Log of Borings Appendix B - Laboratory Reports Appendix C – Aquifer Data Log

## Table 1 Summary of Groundwater Analytical Results Former Magic Cleaners

	Sample ID	P-1-W	P-1-W (DUP)	P-2-W	P-3-W	P-4-W	P-5-W	P-6-W	P-7-W	P-8-W	P-9-W	P-10-W	P-11-W	P-12-W	P-13-5W	P-13- 12W	MTCA Method
Analyte	Sample Depth (feet, bgs)	8~10	8~10	8~10	8~10	8~10	8~10	8~10	8~10	8~10	8~10	8~10	8~10	8~10	4~6	10~12	A or B Groundwater
	Sample Date	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	06/07/99	06/07/99	Cleanup Level
Volatile Organi	c Compounds <sup>(1)</sup> (µg/L)													i -			
Tetrachloroethen	e	2.6	2.9	ND	9.8	5.2	1.6	ND	8.1	3.1	5.8	ND	2.0	3.7	ND	ND	5.0 (A)
Trichloroethene		ND	ND	0.87	0.91	ND	ND	ND	ND	4.0	2.0	ND	0.76	ND	ND	ND	5.0 (A)
1,1-Dichloroethe	ne	ND	ND	ND	ND	0.48	1.2	ND	0.073 (B)								
cis-1,2-Dichloroe	thene	ND	ND	ND	0.50	ND	4.2 .	ND	ND	3.6	1.6	ND	0.49	ND	ND	ND	80 (B)
trans-1,2-Dichlor	roethene	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND	ND	ND	ND	ND	ND	160 (B)
Vinyl chloride		ND	ND	ND	ND	ND	ND	ND	NÐ	ND	ND	ND	. ND	ND	ND	ND	0.2 (A)
Ehtylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND	ND	30 (A)
Toluene		1.7	0.84	0.69	1.0	0.59	1.1	2.2	ND	3.4	0.81	ND	0.35	ND	ND	ND	40 (A)
Xylenes		0.43	0.67	7.3	1.0	2.1	2.0	2.2	2.2	2.8	3.3	ND	0.94	ND	ND	ND	20 (A)

#### Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

bgs = below ground surface

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in bold font indicate that the reporting limit exceeds the MTCA cleanup level.

## Table 1 Summary of Groundwater Analytical Results Former Magic Cleaners

	Sample ID	P-14-5W	P-14-12W	P-14-17W	P-15-5W	P-15-12W	P-16-5W	P-16-9W	P-17-20W	P-18-5W	P-18-12W	P-19-5W	P-19-12W	MTCA Method
Analyte	Sample Depth (feet, bgs)	4-6	10~12	16~18	4~6	10~12 .	4~6	8~10	18~20	4~6	10~12	4~6	10~12	A or B Groundwater
	Sample Date	06/07/99	06/07/99	07/09/99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	Cleanup Level
Volatile Organic	c Compounds <sup>(1)</sup> (µg/L)			•										
Tetrachloroethen	e ·	ND	22.8	16.7	11.6	ND	ND	ND	ND	ND	ND	17.2	ND	5.0 (A)
Trichloroethene		ND ·	2.46	ND	5.0 (A)									
1,1-Dichloroether	ne	ND	ND	ND	ND	ND	ND	ND '	ND	ND	ND	ND	ND	0.073 (B)
cis-1,2-Dichloroe	thene	ND	1.88	ND	80 (B)									
trans-1,2-Dichlor	oethene	ND	160 (B)											
Vinyl chloride		0.72	ND	0.2 (A)										
Ehtylbenzene		ND	30 (A)											
Toluene		ND	40 (A)											
Xylenes		ND	20 (A)											

Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

bgs = below ground surface

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

#### Table 1 Summary of Groundwater Analytical Results Former Magic Cleaners

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	Sample ID	P-20-5W	P-20-12W	P-20-17W	P-21-5W	P-21-12W	P-22-5W	P-22-12W	P-23-5W	P-23-12W	P-24-5W	P-24-12W	P-25-5W	P-25-12W	P-26-5W	MTCA Method
Analyte	Sample Depth (feet, bgs)	4~6	10~12	16~18	4~6	10~12	4~6	10~12	4~6	10`12	4`6	10~12	- 4~6	10~12	4~6	A or B Groundwater
	Sample Date	06/07/99	06/07/99	06/07/99	06/0 <b>7</b> /99	06/07/99	06/07/99	06/07/99	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	Cleanup Level
Volatile Organi	c Compounds <sup>(1)</sup> (µg/L)															
Tetrachloroethen	е	47.3	27.4	1.99	ND	ND	ND	ND	ND	35.8	ND	ND	5.01	10.0	81.3	5.0 (A)
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	24.7	ND	ND	ND	ND	ND	5.0 (A)
1,1-Dichloroethe	ne	ND	ND	ND	ND	ND	ND	ND	ND	ND	ŃD	ND	ND	ND	ND	0.073 (B)
cis-1,2-Dichloroe	ethene	ND	ND	ND	ND	ND	1.46	ND	ND	· 18.7	ND	ND	ND	ND	ND	80 (B)
trans-1,2-Dichlor	roethene	ND	ND ·	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160 (B)
Vinyl chloride		ND	ND	ND	ND	ND	ND	ND	3.01	0.301	ND	ND	ND	ND	ND	0.2 (A)
Ehtylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30 (A)
Toluene		ND	ND	1.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40 (A)
Xylenes		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20 (A)

Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

bgs = below ground surface

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

## Table 1Summary of Groundwater Analytical ResultsFormer Magic Cleaners

	Sample ID	P-26-12W	P-27-3W	P-27-9W	P-28-5W	P-28-12W	P-29-5W	P-29-12W	P-30-5W	P-30-12W	P-31-5W	P-31-12W	P-32-6	P-33-6	P-34-2.5	P-34-6	MTCA Method
Analyte	Sample Depth (feet, bgs)	10~12	2~4	8~10	4~6	10~12	4~6	10~12	4~6	10~12	4~6	10~12	4~6	4~6	2~-4	4~6	A or B Groundwater
	Sample Date	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	07/12/99	07/12/99	07/12/99	07/12/99	07/12/99	<sup>.</sup> 07/12/99	07/12/99	07/29/99	07/29/99	07/29/99	Cleanup Level
Volatile Organic																	
Tetrachloroethen	e	ND	2.41	ND	ND	ND	5.0 (A)										
Trichloroethene		ND	ND	ND	ND	ND	5.0 (A)										
1,1-Dichloroether	ne	ND	ND	ND	ND	ND	0.073 (B)										
cis-1,2-Dichloroe	ethene	ND	ND	ND	ND	ND	80 (B)										
trans-1,2-Dichlor	roethene	ND	ND	ND	ND	ND	160 (B)										
Vinyl chloride		ND	ND	ND	ND	ND	0.2 (A)										
Ehtylbenzene		ND	ND	ND	ND	ND	30 (A)										
Toluene		ND	ND	ND	ND	ND	40 (A)										
Xylenes		ND	ND	ND	ND	ND	20 (A)										

#### Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

bgs = below ground surface

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

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#### Table 2 **Dual Phase Groundwater Pumping** Former Magic Cleaners

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		MW-3		MW-6					
Pumping Date	Total Gallons Pumped	# of Hours Pumped	Approx. GPM	Total Gallons Pumped	# of Hours Pumped	Approx. GPM			
12/30/98	2080	3.50	9.90	595	3.00	3.31			
12/31/98	900	3.50	4.29	2200	4.00	9.17			
01/06/99	1522	4.00	6.34	2086	4.00	8.69			
01/08/99	1305	4.00	5.44	217	3.00	1.21			
01/13/99	824	3.50	3.92	1231	3.60	5.70			
01/14/99	1209	4.00	5.04	170	4.00	0.71			
01/20/99	865	3.50	4.12	1210	4.00	5.04			
01/21/99	880	4.00	3.67	1325	3.50	6.31			
02/23/99	575	8.00	1.20	0	0.00	N/A			
02/24/99	0	0.00	N/A	1975	8.00	4.11			
02/25/99	2790	8.00	5.81	0	0.00	N/A			
02/26/99	0	0.00	N/A	2210	8.00	4.60			
03/01/99	0.	0.00	N/A	2560	8.00	5.33			
03/02/99	2090 .	8.00	4.35	0	0.00	N/A			
03/03/99	0	0.00	N/A	2685	8.00	5.59			
03/04/99	2090	8.00	4.35	0	. 0.00	N/A			
Total Pumped	17130	62	4.60	18464	61.1	5.04			

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<u>Notes:</u> 1) Groundwater pumping conducted using a vacuum truck connected to a stinger pipe within the well.

# Table 3Summary of Groundwater Analytical DataFormer Magic Cleaners

Monitoring Well	Sample Date			anic Compounds <sup>1</sup> µg/L)	
		PCE	ТСЕ	cis1,2-DCE	Vinyl Chloride
	01/30/97	ND	ND	ND	ND
	05/30/97	ND	ND	ND	ND
	09/12/97	ND	ND	ND	ND
MW-2	12/10/97	ND	ND	ND	ND
	01/28/99 <sup>2</sup>	ND	ND	ND	ND
	03/8/99 <sup>3</sup>	ND	ND	ND	ND
	06/10/99	ND	ND	ND	ND
	01/30/97	27.90	2.42	3.54	ND
	05/30/97	37.30	3.41	2.68	ND
	09/12/97	18.70	3.72	3.28	ND
	12/10/97	33.60	2.97	2.85	ND
MW-3	09/22/98	11.00	3.20	2.80	ND
	01/28/99 <sup>2</sup>	32.00	3.17	2.87	ND
	3/8/1999 <sup>3</sup>	24.10	2.65	2.53	0.437
	06/10/99	23.7	3.72	2.68	ND
	01/28/99 <sup>2</sup>	49.50	4.48	3.67	ND
MW-6	3/8/1999 <sup>3</sup>	52.70	3.83	3.30	ND
	06/10/99	43.70	5.53	4.65	0.212
MTCA Method A or B Groundwater Cleanup Level		5.00	5.00	80.0	0.20

Notes:

MTCA - Model Toxics Control Act

Method A and B values are reported with the same concentration units as the sample results.

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

ND - Not detected above the reporting limit.

<sup>1</sup> Analyses performed by using EPA Method 8010B (1997, 1998) and EPA Method 8260B

<sup>2</sup> Sample collected following periodic groundwater extraction from monitoring wells MW-3 and MW-6 from 12-30-98 to 01-12-99.

<sup>3</sup> Sample collected following periodic groundwater extraction from monitioring wells MW-3 & MW-6 from 02-23-99 to 03-04-99.



Job No. 42368-179-189



Job No. 42368-179-189

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#### LEGEND Property boundary \_\_\_\_\_ MW-1-Monitoring well location Former Magic Cleaners coin-operated 777 dry cleaner remediation area ſ Stormwater retention pond VOC Volatile organic compound Bold Results exceeded the MTCA Method A groundwater cleanup levels \* Sample collected during remedial pumping period

Concentrations in µg/L



Approximate Scale in Feet

## Figure 2 VOC CONCENTRATIONS IN GROUNDWATER MONITORING WELLS

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#### LEGEND Property boundary \_\_\_\_\_ MW-1-Monitoring well location P-1 • StrataProbe location (2.6) (PCE concentration µg/L) Exceeds MTCA Method A cleanup Bold level of 5 µg/L Former Magic Cleaners coin-operated dry cleaner remediation area $\overline{}$ $\int$ Stormwater retention pond

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### Figure 3 STRATAPROBE VOC CONCENTRATIONS IN GROUNDWATER (SEPTEMBER 22, 1998)



#### LEGEND

	Property boundary
MW-1 <del>\$</del> (11)	Monitoring well location (PCE concentration µg/L, sampled 6/10/99 other detections where noted)
P-13 ©	StrataProbe location sampled on 6/7/99
P-23 ⊙	GeoProbe location sampled in 7/99
Depth Depth PCE	PCE concentration (other detections where noted)
Bold	Exceeds MTCA Method A cleanup level of 5 $\mu$ g/L for PCE and TCE and 0.2 $\mu$ g/l for VC
	Former Magic Cleaners coin-operated dry cleaner remediation area
	Stormwater retention pond
<b>A</b>	Proposed surface water sample location
	N



# Figure 4 STRATAPROBE VOC CONCENTRATIONS IN GROUNDWATER JUNE-JULY 1999

#### APPENDIX A

#### LOG OF BORINGS

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Geologist: VDA Drilling method: HSA Sampling method:



Drill contractor: Cascade Drill date: 12/21/98

## MW-6 GEOLOGIC BORING LOG





Drill contractor: TEG Northwest Drill date: 9/22/98

## P-1 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189



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Drill contractor: TEG Northwest Drill date: 9/22/98

## P-2 GEOLOGIC BORING LOG

Job No. 42368-179-189





Drill contractor: TEG Northwest Drill date: 9/22/98

## P-3 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Drill contractor: TEG Northwest Drill date: 9/22/98

## P-4 GEOLOGIC BORING LOG

Job No. 42368-179-189

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Drill contractor: TEG Northwest Drill date: 9/22/98

## P-5 GEOLOGIC BORING LOG





Drill contractor: TEG Northwest Drill date: 9/22/98

## P-6 GEOLOGIC BORING LOG

Job No. 42368-179-189







GROUP A DAMES & MOORE GROUP COMPANY

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Drill contractor: TEG Northwest Drill date: 9/22/98

## P-8 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189





Drill contractor: TEG Northwest Drill date: 9/22/98

### P-9 GEOLOGIC BORING LOG





Drill contractor: TEG Northwest Drill date: 9/22/98

## P-10 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Drilling method: StrataProbe Sampling method: Split Spoon



Drill date: 9/22/98

## P-11 **GEOLOGIC BORING LOG**

Job No. 42368-179-189





Drill contractor: TEG Northwest Drill date: 9/22/98

## P-12 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189



Geologist: VDA Drilling method: StrataProbe Sampling method: StrataProbe 2' Water Sampler



Drill contractor: TEG Northwest Drill date: 6/7/99

## P-13 **GEOLOGIC BORING LOG**



Geologist: VDA Drilling method: StrataProbe

Sampling method: Split Spoon/StrataProbe 2' Water Sampler



Drill contractor: TEG Northwest Drill date: 6/7/99

## P-14A GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189



Geologist: VDA Drilling method: StrataProbe





A DAMES & MOORE GROUP COMPANY

Drill contractor: TEG Northwest Drill date: 6/7/99

## P-14 **GEOLOGIC BORING LOG**




Drill contractor: TEG Northwest Drill date: 6/7/99

## P-15 GEOLOGIC BORING LOG

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Drill contractor: TEG Northwest Drill date: 6/7/99

## P-16 GEOLOGIC BORING LOG

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Drill contractor: TEG Northwest Drill date: 6/7/99

## P-17 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

42368B19.CDF





Drill contractor: TEG Northwest Drill date: 6/7/99

## P-18 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Geologist: VDA Drilling method: StrataProbe

Sampling method: Split Spoon/StrataProbe 2' Water Sampler



Drill contractor: TEG Northwest Drill date: 6/7/99

## P-19 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Drill contractor: TEG Northwest Drill date: 6/7/99

## P-20 GEOLOGIC BORING LOG



Geologist: VDA

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Drilling method: StrataProbe

Sampling method: Split Spoon/StrataProbe 2' Water Sampler



Drill contractor: TEG Northwest Drill date: 7/9/99

## P-20A GEOLOGIC BORING LOG





Drill contractor: TEG Northwest Drill date: 6/7/99

## P-21 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189



Drilling method: StrataProbe





Drill contractor: TEG Northwest Drill date: 6/7/99

## P-22 **GEOLOGIC BORING LOG**

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Drill contractor: TEG Northwest Drill date: 7/9/99

## P-23 GEOLOGIC BORING LOG

Job No. 42368-179-189

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Drill contractor: TEG Northwest Drill date: 7/9/99

## P-24 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Drill contractor: TEG Northwest Drill date: 7/9/99

## P-25 GEOLOGIC BORING LOG





Drill contractor: TEG Northwest Drill date: 7/9/99

## **P-26 GEOLOGIC BORING LOG**

Job No. 42368-179-189

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Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington





Drill contractor: TEG Northwest Drill date: 7/9/99

### P-27 GEOLOGIC BORING LOG



Drilling method: GeoProbe Sampling method: Temporary Screen



Drill date: 7/9/99

## **P-28 GEOLOGIC BORING LOG**

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189

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Drilling method: GeoProbe Sampling method: Temporary Screen



Drill contractor: TEG Northwest Drill date: 7/12/99

## P-29 **GEOLOGIC BORING LOG**

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington

Job No. 42368-179-189



Drilling method: GeoProbe

Sampling method: Temporary Screen



Drill contractor: TEG Northwest Drill date: 7/12/99

## P-30 GEOLOGIC BORING LOG

Former Magic Cleaners Coin-Operated Dry Cleaner Site Lake Forest Park Town Center, Seattle, Washington





Drill contractor: TEG Northwest Drill date: 7/12/99

## P-31 GEOLOGIC BORING LOG

#### APPENDIX B

### LABORATORY REPORTS

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#### 7110 38th Drive SE Lacey, Washington 98503

#### Mobile Environmental Laboratories Environmental Sampling Services

Telephone: 360-459-4670 Fax: 360-459-3432

September 28, 1998

David Raubvogel Dames & Moore 500 Market Place Tower 2025 First Avenue Seattle, WA 98121

46.24

Re: Project No. SEA-R-0998-0520

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Lake Forest Park – Magic Cleaners Project in Seattle, Washington. StrataProbe and Mobile Lab work was conducted at the Project site on September 22, 1998. Water samples were analyzed on and off site for Specific Halogenated Hydrocarbons and BTEX by EPA Method 8021B.

The results of these analyses are summarized in the attached table. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided geosampling and analytical services to Dames and Moore for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael a Konora

Michael A. Korosec (President)

#### **QA/QC FOR ANALYTICAL METHODS**

#### **GENERAL**

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at  $4^{\circ}$  C.

#### ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

#### Purgeable Volatile Halocarbons (Chlorinated Hydrocarbons, EPA 601/8021B)

A calibration standard is run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

Page 1

LAKE FOREST PARK-MAGIC CLEANERS PROJECT Lake Forest Park, Washington Dames & Moore Project No.: 28171-927-005

#### Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	Method Blank	P-1-W	P-1-W Dup	MW-3	P-2-W	P-3-W
Date		09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	1	nd	nd	nd	nd	nd	nd
Benzene	1	nd	nd	nd	nd	nd	nd
Toluene	1	nd	1.7	0.84	0.63	0.69	1.0
Ethylbenzene	1	nd	nd	, nd	nd	. nd	nd
Total-Xylene	1	nd	0.43	0.67	1.3	7.3	1.0
1,1 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	2.8	nd	0.50
Chloroform	1	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	3.2	0.87	0.91
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	2.6	2.9	11	, 4.8	9.8
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)			81	82	127	66	117

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

Page 2

#### LAKE FOREST PARK-MAGIC CLEANERS PROJECT Lake Forest Park, Washington Dames & Moore

Project No.: 28171-927-005

#### Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

							======
Sample-Number	MDL	P-4-W	P-5-W	P-6-W	P-7-W	P-8-W	P-9-W

Date	ug/l	09/22/98 ug/l	09/22/98 ug/l	09/22/98 ug/l	09/22/98 ug/l	09/22/98 ug/l	09/22/98 ug/l
Vinylchloride	1	nd	nd	nd	nd	nd	nd
Benzene	1	nď	nd	nd	nd	nd	nd
Toluene	1	0.59	1.1	2.2	nd	3.4	0.81
Ethylbenzene	1	nd	nd	nd	nd	nd	0.53
Total-Xylene	1	2.1	2	2.2	2.2	2.8	3.3
1,1 Dichloroethene	1	0.48	1.2	nd	nd	$\mathbf{nd}$	nd
Dichloromethane	1	nd	nd	nd	nď	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	0.28	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	0.42	nd	nd	3.6	1.6
Chloroform	1	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	4.0	2.0
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	5.2	1.6	nd	8.1	3.1	5.8
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		105	134	97	115	114	127

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

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Page 3

LAKE FOREST PARK-MAGIC CLEANERS PROJECT Lake Forest Park, Washington Dames & Moore Project No.: 28171-927-005

#### Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

======================================	MDL		<b>P-11-W</b>
Date		09/22/98 ug/I	
	1	nd	nd
Vinylchloride	1	nd	nd
Benzene	1	nd	0.35
Toluene	1	nd	0.55 nd
Ethylbenzene	1	nd	0.94
Total-Xylene	1	nd	nd
1,1 Dichloroethene Dichloromethane	1	nd	nd
	1	nd	nd
Trans-1,2 Dichloroethene 1,1 Dichloroethane	1	nd	nd
Cis-1,2 Dichloroethene	1	nd	0.49
Chloroform	1	nd	nd
	1	nd	nd
1,1,1 Trichloroethane Carbon Tetrachloride	1	nd	nd
1,2 Dichloroethane	1	nd	nd
Trichloroethene	1	nd	0.76
1,1,2 Trichloroethane	1	nd	nd
Tetrachloroethene	1	nd	2.0
1,1,1,2-Tetrachloroethane	1	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd
Spike Recovery (%)		94	83

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

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Page 4

LAKE FOREST PARK-MAGIC CLEANERS PROJECT Lake Forest Park, Washington Dames & Moore Project No.: 28171-927-005

Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	MS (P-10-W)	MSD (P-10-W)	RPD
Date .	ug/l	09/22/98 %	09/22/98 %	09/22/98 %
Benzene	1		97	11.7%
Toluene	1	107	96	10.8%
Ethylbenzene	1	103	96	7.0%
Total-Xylene	1	114	113	0.9%
1,1 Dichloroethene	1	109	90	19.1%
Trans-1,2 Dichloroethene	1	95	85	11.1%
Cis-1,2 Dichloroethene	1	99	83	17.6%
Trichloroethene	1	116	101	13.8%
Tetrachloroethene	1	83	82	1.2%
Spike Recovery (%)		110	117	6.2%

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

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#### 7110 38th Drive SE Lacey, Washington 98503

Mobile Environmental Laboratories Environmental Sampling Services Telephone:360-459-4670Fax:360-459-3432

October 21, 1998

David Raubvogel Dames & Moore 500 Market Place Tower 2025 First Avenue Seattle, WA 98121

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Lake Forest Park-Magic Cleaners Project located in Lake Forest Park, Washington. Soil samples were analyzed for pH, TOC, and Iron on October 2, 1998.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Dames and Moore for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

michael a Korosae

Michael A. Korosec President

ANALYTICAL & ENVIRONMENTAL CHEMISTS 4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (253)922-2310 - FAX (253)922-5047

Report To: TEG Northwest, Inc	·.	Date: Octo	ber 9, 1998
Report On: Analysis of Solid		Report No.:	75999
<u>IDENTIFICATION:</u> Samples received on 09-30-98 Project: Lake Forest Park -			
ANALYSIS:			
. Gei	neral Chemistry	<b>,</b>	
Lab Sample No. 75999-1		Client ID:	P-9-4
Parameter	Method	Result	PQL
PH	EPA 9045	7.06	N/A
Total Organic Carbon, mg/kg	PSEP	750	100
Lab Sample No. 75999-2		Client ID:	P-11-4
Parameter	Method	<u>Result</u>	- <u>POL</u>
На	EPA 9045	6.11	N/A
Total Organic Carbon, mg/kg	PSEP	1,700	100

ND - Not Detected PQL - Practical Quantitation Limit

This report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with industry acceptable practice. In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any kind or in any amount.

Client Name Client ID: Lab ID: Date Received: Date Prepared: Date Analyzed: Dilution Factor % Solids TEG Northwest, Inc. P-9-4 75999-01 9/30/98 10/2/98 10/2/98 1 88.72

#### Metals by ICP - USEPA Method 6010

Sample results are on a dry weight basis.

	Result		
Analyte	(mg/kg)	PQL	Flags
Iron	11000	20	

Client Name Client ID: Lab ID: Date Received: Date Prepared: Date Analyzed: Dilution Factor % Solids TEG Northwest, Inc. P-11-4 75999-02 9/30/98 10/2/98 10/2/98 1 81.62

4

#### Metals by ICP - USEPA Method 6010

Sample results are on a dry weight basis.

Analyte Iron	Result (mg/kg) 17000	PQL 22	Flags

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (253)922-2310 - FAX (253)922-5047

#### QUALITY CONTROL REPORT

General Chemistry

Client: TEG Northwest, Inc. Lab No: 75999q Units: mg/kg

QC Batch No. TOC 468 Sample No. 75933-2 Date Analyzed: 10-8-98

Parameter	Result	PQL
Total Organic Carbon	ND	1.00

 $N\dot{D} = Not Detected$ 

PQL = Practical Quantitation Limit

							-		
Parameter	Sample Result	MS Amount	MS Result	MS %R	MSD Amount	MSD Result	MSD %R	RPD	Flag
Total Organic Carbon	13,700	20,000	33,800	100	20,000	33,500	99	1.5	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

%R = Percent Recovery

MS = Matrix Spike

RPD = Relative Percent Difference MSD = Matrix Spike Duplicate

Lab ID: Date Received: Date Prepared: Date Analyzed: Dilution Factor Method Blank - S983

10/2/98 10/2/98 1

#### Metals by ICP - USEPA Method 6010

Sample results are on an as received basis.

;

<b>Ana</b> Iron	yte	Result (mg/kg) ND	PQL 20	Flags
				·

#### **Duplicate Report**

Client Sample ID: Lab ID: Date Prepared: Date Analyzed: QC Batch ID:

MCS-02 76031-01 10/2/98 10/2/98 S983

#### Metals by ICP - USEPA Method 6010

	Sample Result	Duplicate Result	RPD	
<b>Parameter Name</b>	<b>(mg/kg)</b>	<b>(mg/kg)</b>	%	Flag
Iron	89000	99000	-11.0	

#### Matrix Spike Report

Client Sample ID: Lab ID: Date Prepared: Date Analyzed: QC Batch ID: MCS-02 76031-01 10/2/98 10/2/98 S983

8

#### Metals by ICP - USEPA Method 6010

	Sample Result (mg/kg) 89000	Spike Amount (mg/kg) 572	MS Result (mg/kg) 86400	MS % Rec. -407	Flag X7a
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#### Blank Spike/Blank Spike Duplicate Report

Lab ID: Date Prepared: Date Analyzed: QC Batch ID: S983 10/2/98 10/2/98 S983

#### Metals by ICP - USEPA Method 6010

		Blank	Spike	BS		BSD			
		Result	Amount	Result	BS	Result	BSD	•	
Compound	Name	(mg/kg)	(mg/kg)	(mg/kg)	% Rec.	(mg/kg)	% Rec.	RPD	Flag
Iron		0	400	421	105	416	104	-0.96	
# SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

# DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be  $\leq 40\%$ .
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be > 40%. The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not<sup>1</sup>Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be \_\_\_\_\_\_.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was reanalyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

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CLIENT PROJE	CT #: 2	20171-	<u>927-0</u>	PROJE	СТ М	ANAGE	R:	$\mathcal{R}$	No0	109	<u>جد .</u>		С	OLL	ECI	OR	A	TF	ديم						DA CO	TE OF LLECTIO	N 9/2	2/98
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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Paced
 OR 97008-7132 20256 Empire Avenue, Suite B, Paced OR 97708 1882

Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled: 6/7/99	٦
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58	

# **ANALYTICAL REPORT FOR SAMPLES:**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
P-13-5W	B906212-01	Water	6/7/99
P-13-12W	B906212-02	Water	6/7/99
P-14-5W	B906212-03	Water	6/7/99
P-14-12W	B906212-04	Water	6/7/99
P-15-5W	B906212-06	Water	6/7/99
P-15-12W	B906212-07	Water	6/7/99
P-16-5W	B906212-08	Water	6/7/99
P-16-9W	B906212-09	Water	6/7/99
P-17-20W	B906212-10	Water	6/7/99
P-18-5W	· B906212-11	Water	6/7/99
P-18-12W	B906212-12	Water	6/7/99
P-19-5W	B906212-14	Water	6/7/99
P-19-12W	B906212-15	Water	6/7/99
P-20-5W	B906212-16	Water	· 6/7/99
P-20-12W	B906212-17	Water	6/7/99
P-21-5W	B906212-18	Water	6/7/99
P-21-12W	B906212-19	Water	6/7/99
P-22-5W	B906212-20	Water	6/7/99
P-22-12W	B906212-21	Water	6/7/99

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Joy B Chang, Project Manager



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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.905.9200 fax 503.906.9210

 Band
 0.9361 Emic Avenue, Suite B, B Pand, OR 97008 1892

Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

<u> </u>	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit .	Result	Units	Notes*
		<u> </u>						
<u>P-13-5W</u>			<u>B9062</u>	<u>12-01</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l	
Benzene	*1	11	11		1.00	ND	н	
Bromobenzene	n	11	Ir.		1.00	ND	u	
Bromochloromethane	11	11	17		1.00	ND	u.	
Bromodichloromethane	*1	14	0		1.00	ND	"	
Bromoform	11	14	ti -		1.00	ND		
Bromomethane	"				10.0	ND	17	
2-Butanone	и	11	"		25.0	ND	14	
n-Butylbenzene	u	H	71		1.00	ND	**	
sec-Butylbenzene	n		*1		1.00	ND	"	
tert-Butylbenzene	n	*	11		1.00	ND	"	
Carbon disulfide	**	ш	II		10.0	ND		
Carbon tetrachloride	"	н	IF		2.00	ND		
Chlorobenzene		u	17		1.00	ND		
Chloroethane	II.		H		2.00	ND	"	
Chloroform	U .	"			1.00	ND		
Chloromethane	U.	н	11		5.00	ND	u	
2-Chlorotoluene	0	*1	71		1.00	ND		
4-Chlorotoluene	11	*1	**		1.00	ND	u	
1,2-Dibromo-3-chloropropane		11	11		1.00	ND	0	
Dibromochloromethane		11	н		1.00	ND		
1,2-Dibromoethane	IF.	IF	6 <del>9</del>		1.00	ND	**	
Dibromomethane	н		99		1.00	ND	**	
1,2-Dichlorobenzene	U	n	0		1.00	ND	H	
1,3-Dichlorobenzene	"	U .			1.00	ND	u	
1,4-Dichlorobenzene	н	*1			1.00	ND	u.	-
Dichlorodifluoromethane	W	11	н		5.00	ND		
1,1-Dichloroethane	14	n	"		1.00	ND	н	
1,2-Dichloroethane	11	17	16		1.00	ND	••	
1,1-Dichloroethene	U	17	69		1.00	ND		
cis-1,2-Dichloroethene	"	11			1.00	ND	II	
trans-1,2-Dichloroethene	n	*1	U		1.00	ND	18	
1,2-Dichloropropane	u	11	*1		1.00	ND	11	
1,3-Dichloropropane	11	и	"		1.00	ND	U U	
2,2-Dichloropropane	0	u	11		1.00	ND	ri	
1,1-Dichloropropene	"	0	ır		1.00	ND	11	
cis-1,3-Dichloropropene	"	U			1.00	ND	*1	
trans-1,3-Dichloropropene		*1			1.00	ND	н	
nans-1,5-Diemotopropene					1.00	110		

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420.9200
 fax 425,420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509.924.9200

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383.9310
 fax 541.382.7588

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			<u> </u>
Analyte	Number	Prepared	Analyzed	Limits	Limit .	Result	Units	Notes*
P-13-5W (continued)			<u>B9062</u>	<u>12-01</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	н		IF		2.00	ND	11	·
2-Hexanone	11	н			10.0	ND	*1	
Isopropylbenzene	.,	"	11		1.00	ND	н	
p-Isopropyltoluene	18	18	0	,	1.00	ND	n	
4-Methyl-2-pentanone	11	61	17		5.00	ND	н	
Methylene chloride	".	U	17		5.00	ND	н	
Naphthalene	0	U	11		1.00	ND	n.	
n-Propylbenzene	11	"	<b>t1</b>		1.00	ND	н	
Styrene	*1	"	11		1.00	ND		
1,1,1,2-Tetrachloroethane	н	u	н		1.00	ND	11	
1,1,2,2-Tetrachloroethane		u	11		1.00	ND		
Tetrachloroethene	11	n	и.,		1.00	ND		
Toluene	н	14	14		1.00	ND		
1,2,3-Trichlorobenzene	u	11	0		1.00	ND	"	
1,2,4-Trichlorobenzene	11	11	u.		1.00	ND	**	
1,1,1-Trichloroethane	*1	11	17		1.00	ND	11	
1,1,2-Trichloroethane	н	11	".		1.00	ND	11	
Trichloroethene	н		18		1.00	ND	н	
Trichlorofluoromethane		11	н		1.00	ND	U	
1,2,3-Trichloropropane	0	11	. "		1.00	ND	**	
1,2,4-Trimethylbenzene	11	"	17		1.00	ND		
1,3,5-Trimethylbenzene	· 11	U	17		1.00	ND	U	
Vinyl chloride	**	*1	U		0.500	ND	н	1
o-Xylene		"	n		1.00	ND	н	
m,p-Xylene	**	н	11		2.00	ND	н	_
Surrogate: 4-BFB	"	"	"	75.0-135	÷-	100	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		109	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		108	"	
Surrogate: Toluene-d8	u	"	"	80.0-120		98.5	"	

North Creek Analytical - Bothell

Joy B Chang Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9200

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9210
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 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

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500 Market Place Tower, 2025 1st Ave Project Number: 28171-934-005	
110jeet Ruinber. 20171994-005	Received: 6/8/99
Seattle, WA 98121 Project Manager: David Raubvogel	Reported: 6/11/99 15:58

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#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

r	Batch	Date	Date	Surrogate	Reporting	-		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-13-12W</u>			<u>B9062</u>	<u>12-02</u>			Water	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l	
Benzene	n	11	"		1.00	ND	IF.	
Bromobenzene	ti	0	14		1.00	ND	IT	
Bromochloromethane	**	ri -			1.00	ND	H.	
Bromodichloromethane	11	*7	11		1.00	ND	11	
Bromoform	10	11	r)		1.00	ND	н	•
Bromomethane	14	21	0		10.0	ND	"	
2-Butanone	"	<b>*</b> 1	11		25.0	ND	0	
n-Butylbenzene	11	**	н		1.00	ND	17	
sec-Butylbenzene	"	14	11		1.00	ND	11	
tert-Butylbenzene	*1		н		1.00	ND	9	
Carbon disulfide	*1	0	н		10.0	ND		
Carbon tetrachloride	11	D	н		2.00	ND	*1	
Chlorobenzene		H			1.00	ND	и	
Chloroethane	и		17		2.00	ND	н	
Chloroform	и	**	u.		1.00	ND	u	
Chloromethane	"	н	**	•	5.00	ND	и .	
2-Chlorotoluene	11	н	U		1.00	ND	H .	·
4-Chlorotoluene	"	n	91		1.00	ND		
1,2-Dibromo-3-chloropropane	u	14	91		1.00	ND	<b>U</b> .	
Dibromochloromethane		U .	н		1.00	ND		
1,2-Dibromoethane	14	u	н		1.00	ND		
Dibromomethane	U				1.00	ND	*1	
1,2-Dichlorobenzene	U		17		1.00	ND	и	•
1,3-Dichlorobenzene	"	и	n		1.00	ND	п	
1,4-Dichlorobenzene	"	14	11		1.00	ND	ш	
Dichlorodifluoromethane			"		5.00	ND		
,	v	11	*1		1.00	ND		
1,1-Dichloroethane	u.	11			1.00	ND		
1,2-Dichloroethane	0				1.00	ND	н	
1,1-Dichloroethene	**	II.	H.		1.00	ND		
cis-1,2-Dichloroethene							tt.	
trans-1,2-Dichloroethene					1.00	ND	17	
1,2-Dichloropropane	"		11		1.00	ND	11	
1,3-Dichloropropane		0			1.00	ND		
2,2-Dichloropropane	0	U	"		1.00	· ND	"	
1,1-Dichloropropene	**	*1	н		1.00	ND	11	
cis-1,3-Dichloropropene	u u	"	u		1.00	ND	*1	
trans-1,3-Dichloropropene	It	11	14		1.00	ND	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 509.924.920

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-13-12W (continued)			<u>B9062</u>	<u>12-02</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	*1		0		2.00	ND	н	
2-Hexanone	н	H	U		10.0	ND		
Isopropylbenzene		0	11		1.00	ND	u	
p-Isopropyltoluene		0	"		1.00	ND		
4-Methyl-2-pentanone		"	11		5.00	ND	17	
Methylene chloride	U	"	17		5.00	ND		
Naphthalene	*1	11	11		1.00	ND	"	
n-Propylbenzene	н		11		1.00	ND	n	
Styrene	11	11 .	a		1.00	ND	t1	
1,1,1,2-Tetrachloroethane		U .	n		1.00	ND	11	
1,1,2,2-Tetrachloroethane	n	н	"		1.00	ND		
Tetrachloroethene	U	**	11		1.00	ND	17	
Toluene	н	91	и		1.00	ND	11	
1,2,3-Trichlorobenzene	*1	91			1.00	ND	11	
1,2,4-Trichlorobenzene	*1		n		1.00	ND		
1,1,1-Trichloroethane		u.	U .		1.00	ND	"	
1,1,2-Trichloroethane	14	н	*1		1.00	ND	**	
Trichloroethene	u	11	"		. 1.00	ND	"	
Trichlorofluoromethane	"	"	и		1.00	ND	"	
1,2,3-Trichloropropane		н	IP.		1.00	ND		
1,2,4-Trimethylbenzene	19	н	0		1.00	ND	U .	
1,3,5-Trimethylbenzene	U	n.	"		1.00	ND	"	
Vinyl chloride	11	11	*1		0.500	ND	"	1
o-Xylene	"	"	н		1.00	ND	u	
m,p-Xylene		н			2.00	ND	и	
Surrogate: 4-BFB	"	"		75.0-135	• <del>-</del>	100	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		111	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		111	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		97.5	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

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\*Refer to end of report for text of notes and definitions.



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Dames and Moore-Seattle	Project:	Magic Cleaners		Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005		Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	•	Reported:	6/11/99 15:58

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-14-5W			<u>B9062</u>	17_03			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99	12-05	25.0	ND	ug/l	
Benzene	"	U/10/ <i>33</i>	"		1.00	ND	" "	
Bromobenzene	17	Ir			1.00	ND -	н	
Bromochloromethane		17	*1		1.00	ND	11	
Bromodichloromethane			*1		1.00	ND	11	
Bromoform	u.	14	*1		1.00	ND	11	
Bromomethane	u	U.	н		10.0	ND	"	
2-Butanone	U	11	н		25.0	ND	11	
n-Butylbenzene	` н	u	н		1.00	. ND	11	
sec-Butylbenzene	11	11	и		1.00	ND	**	
-	*1	11	u		1.00	ND ND	11	
tert-Butylbenzene Carbon disulfide		11			10.0	ND		
			и				"	
Carbon tetrachloride					2.00	ND	н	
Chlorobenzene			17		1.00	ND ND		
Chloroethane				,	2.00	-	W	
Chloroform					1.00	ND		
Chloromethane					5.00	ND	R.	
2-Chlorotoluene				1 1	1.00	ND		
4-Chlorotoluene	**				1.00	ND		
1,2-Dibromo-3-chloropropane	n	. "			1.00	ND		
Dibromochloromethane			11		1.00	ND		
1,2-Dibromoethane	11	**	"		1.00	ND		
Dibromomethane		н			1.00	ND		
1,2-Dichlorobenzene		11			1.00	ND		
1,3-Dichlorobenzene		lt.	u .		1.00	ND	"	
1,4-Dichlorobenzene	**	"	11 12		1.00	ND	"	
Dichlorodifluoromethane		17			5.00	ND	"	
1,1-Dichloroethane			0		1.00	ND		
1,2-Dichloroethane	н	n .			1.00	ND		
1,1-Dichloroethene	"	11	н		1.00	ND	14	
cis-1,2-Dichloroethene	"	п	"		1.00	ND	н	
trans-1,2-Dichloroethene	11	н	н		1.00	ND	n	
1,2-Dichloropropane	11	IF	11		1.00	ND	U.	
1,3-Dichloropropane	**	11	n		1.00	ND		
2,2-Dichloropropane	"		17		1.00	ND	*1	
1,1-Dichloropropene	H	11	11		1.00	ND	4	
cis-1,3-Dichloropropene	"	*1	u		1.00	ND	*1	
trans-1,3-Dichloropropene	17	11	U.		1.00	ND	*1	

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509.924,9290

 Portland
 9405 SW Nimbus Avenue, Beaveron, OR 97008-7132

 503,906,9200
 fax 503.906,9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383,9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 6/7/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58	

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-14-5W (continued)			<b>B9062</b> 1	12-03			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene		"	11		2.00	ND		
2-Hexanone		11	н		10.0	ND	U	
Isopropylbenzene		11	н		1.00	ND	a	
p-Isopropyltoluene		*1	н		1.00	. ND	U	
4-Methyl-2-pentanone	**	*1	11		5.00	ND	v	
Methylene chloride		*1	и.		5.00	ND	0	
Naphthalene	**	н	11		1.00	ND	0	
n-Propylbenzene	17	*1	11		1.00	ND	17	
Styrene		*1	и		1.00	ND	U .	
1,1,1,2-Tetrachloroethane		11	н		1.00	ND	U	
1,1,2,2-Tetrachloroethane		"	11		1.00	ND	0	
Tetrachloroethene	17	11	н	ŗ	1.00	ND	U	
Toluene		н	17		1.00	ND	0	
1,2,3-Trichlorobenzene		и	11		1.00	ND	17	
1,2,4-Trichlorobenzene	и	n	10		1.00	ND	11	
1,1,1-Trichloroethane	U U	17	"		1.00	ND		
1,1,2-Trichloroethane	u	н	11		1.00	ND	U	
Trichloroethene	0	U	17		1.00	ND	11	
Trichlorofluoromethane	"		R		1.00	ND	"	
1,2,3-Trichloropropane	"	17	υ.		1.00	ND	**	
1,2,4-Trimethylbenzene	••	n	U U		1.00	ND		
1,3,5-Trimethylbenzene	11	19	U.		1.00	ND		
Vinyl chloride		, u	n		0.500	0.720		
o-Xylene	14	"	11		1.00	ND	"	
m,p-Xylene	67	11	"		2.00	ND	"	
Surrogate: 4-BFB	"	"	"	75.0-135		101	%	-
Surrogate: 1,2-DCA-d4	"	. "	"	70.0-135		113	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		111	"	
Surrogate: Toluene-d8	"	<i>n</i>	"	80.0-120		96.5	"	

North Creek Analytical - Bothell

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oject Manager Joy B Chang, P n

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			-					
<u>P-14-12W</u>			<u>B9062</u>	<u>12-04</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l	
Benzene	17	17	11		1.00	ND	**	
Bromobenzene	14	14	11		1.00	ND	"	
Bromochloromethane	11	17	0		1.00	ND	11	
Bromodichloromethane	14	17	U		1.00	ND	*1	
Bromoform	"	17	U		1.00	ND	"	
Bromomethane	U	11	н		10.0	ND	11	
2-Butanone	*1	U U	n		25.0	ND	Ħ	
n-Butylbenzene	n	U	*1		1.00	ND	*1	
sec-Butylbenzene	а	11	"		1.00	ND	"	
tert-Butylbenzene	н	41	**		1.00	ND	11	
Carbon disulfide	11	*1	11		10.0	ND	11	
Carbon tetrachloride	11	"	18		2.00	ND	н	
Chlorobenzene	н	и	11		1.00	ND	н	
Chloroethane	14	11	11		2.00	ND	н	
Chloroform			н		1.00	ND	н	
Chloromethane	"	17	14		5.00	ND	"	
2-Chlorotoluene	н		18		1.00	ND	н	
4-Chlorotoluene	u	11	14		1.00	ND	"	
1,2-Dibromo-3-chloropropane	"		17		1.00	ND	11	
Dibromochloromethane	н	0	v		1.00	ND	"	
1,2-Dibromoethane	"	n	U		1.00	ND	"	
Dibromomethane		n .	U		1.00	ND		
1,2-Dichlorobenzene	11	*1	*1		1.00	ND	17	
1,3-Dichlorobenzene	11	н	*1		1.00	ND	n	
1,4-Dichlorobenzene	11		11		1.00	ND	U	
Dichlorodifluoromethane	11	u .	н		5.00	ND		
1,1-Dichloroethane	"	17	11		1.00	ND	*1	
1,2-Dichloroethane	u		IR		1.00	ND	11	
1,1-Dichloroethene	11	17			1.00	ND	**	
cis-1,2-Dichloroethene	II.	tı	17		1.00	1.88		
trans-1,2-Dichloroethene	u ,	н .	0		1.00	ND		
1,2-Dichloropropane	n	11	н		1.00	ND	17	
1,3-Dichloropropane	ti.	н	ti		1.00	ND		
2,2-Dichloropropane	*1	u	a .		1.00	ND	, ·	
1,1-Dichloropropene	"	u	*1		1.00	ND	17	
cis-1,3-Dichloropropene	и	IF	11		1.00	ND	U.	
trans-1,3-Dichloropropene	и		н		1.00	ND	0	
uans-1,3-Diemoropropene					1.00			

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.324.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Batch	Date	Date	Surrogate	Reporting			
Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		<b>B9062</b> 1	12-04			<u>Water</u>	
0690282	6/10/99	6/10/99		1.00	ND		
		*1		2.00	ND	"	
"	11	п		10.0	ND	"	
U U	"	"		1.00	ND	**	
	"	"		1.00	ND	**	
0	"	•1		5.00	ND	**	
U	"	*1		5.00	ND	**	
'n	н	"		1.00	ND	"	
"	н	"		1.00	ND	**	
"	H	"		1.00	ND	"	
*1	"	14		1.00	ND	**	
11	"			1.00	ND	**	
н	"	17		1.00	22.8	"	
	0	17		1.00	ND	**	
		11		1.00	ND		
v	"	u		1.00	ND		
	11	11		1.00	ND	и	
	"	11		1.00	ND		
0	n	11		1.00	2.46	н	
*1	u	*1		1.00	ND		
н		*1		1.00	ND		
	17	н		1.00	ND	17	
	11	11		1.00	ND		
19	"			0.500	ND	U	1
U	ŧ1	11		1.00	ND		
	11	U		2.00	ND	**	
"	"	"	75.0-135	·	104	%	
"	"	"	70.0-135		116	"	
"	"	"	80.0-125		114	"	
"	"	"	80.0-120		99.5	"	
	Number 0690282 " " " " " " " " " " " " " " " " " " "	Number         Prepared           0690282         6/10/99           n         n           n <td>Number         Prepared         Analyzed           0690282         6/10/99         6/10/99           "         "         6/10/99           "         "         "           "<td>Number         Prepared         Analyzed         Limits           0690282         6/10/99         6/10/99         """"""""""""""""""""""""""""""""""""</td><td>Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/10/99         1.00         1.00           """"""""""""""""""""""""""""""""""""</td><td>Number         Prepared         Analyzed         Limits         Limit         Result           0690282         6/10/99         6/10/99         1.00         ND           "         "         "         2.00         ND           "         "         "         2.00         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         1.00         ND</td><td>Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/10/99         1.00         ND         ug/1           "         "         2.00         ND         "           "         "         1.00         ND         "           "         "</td></td>	Number         Prepared         Analyzed           0690282         6/10/99         6/10/99           "         "         6/10/99           "         "         "           " <td>Number         Prepared         Analyzed         Limits           0690282         6/10/99         6/10/99         """"""""""""""""""""""""""""""""""""</td> <td>Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/10/99         1.00         1.00           """"""""""""""""""""""""""""""""""""</td> <td>Number         Prepared         Analyzed         Limits         Limit         Result           0690282         6/10/99         6/10/99         1.00         ND           "         "         "         2.00         ND           "         "         "         2.00         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         1.00         ND</td> <td>Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/10/99         1.00         ND         ug/1           "         "         2.00         ND         "           "         "         1.00         ND         "           "         "</td>	Number         Prepared         Analyzed         Limits           0690282         6/10/99         6/10/99         """"""""""""""""""""""""""""""""""""	Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/10/99         1.00         1.00           """"""""""""""""""""""""""""""""""""	Number         Prepared         Analyzed         Limits         Limit         Result           0690282         6/10/99         6/10/99         1.00         ND           "         "         "         2.00         ND           "         "         "         2.00         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         1.00         ND	Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/10/99         1.00         ND         ug/1           "         "         2.00         ND         "           "         "         1.00         ND         "           "         "

North Creek Analytical - Bothell

Joy B Chang Project Manager

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420.9200
 fax 425,420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509,924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
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 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

Volatile Organic Compounds per EPA Method 8260B
North Creek Analytical - Portland

· · · · · · · · · · · · · · · · · · ·	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-15-5W</u>			<u>B9062</u>	12-06			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l "	
Benzene	11	"	11		1.00	ND		
Bromobenzene	, <b>n</b>	91	18		1.00	ND	**	•
Bromochloromethane	14	11	11		1.00	ND	**	
Bromodichloromethane	11	U	11		1.00	ND	11	
Bromoform	11 ·	"	11		1.00	ND	11	
Bromomethane	14	11	17		10.0	ND	n	
2-Butanone	τ <b>υ</b>	n	N.		25.0	ND	U	
n-Butylbenzene	11	52	н		1.00	ND	**	
sec-Butylbenzene	"	11	".		1.00	ND		
tert-Butylbenzene	н	ti -	**		1.00	ND	11	
Carbon disulfide	<b>11</b> •	11	"		10.0	ND	•	
Carbon tetrachloride	Ir	11			2.00	ND	11	•
Chlorobenzene	п	U	н		1.00	ND	n	
Chloroethane	u				2.00	ND	**	
Chloroform			H		1.00	ND	u	
Chloromethane		U	a a		5.00	ND	17	
2-Chlorotoluene	18	*1			1.00	ND	n	
4-Chlorotoluene	17				1.00	ND	*1	
1,2-Dibromo-3-chloropropane	n	*1	*1		1.00	ND	н	
			n		1.00	ND	н .	
Dibromochloromethane	ti				1.00	ND	e1	
1,2-Dibromoethane	*1		**		1.00	ND		
Dibromomethane	11		11		1.00	ND	U U	
1,2-Dichlorobenzene		11	19		1.00	ND	u	
1,3-Dichlorobenzene	17		*1		1.00	ND	IF.	
1,4-Dichlorobenzene	u u				5.00	ND		
Dichlorodifluoromethane		U	U		1.00	ND	91	
1,1-Dichloroethane				•	1.00	ND		
1,2-Dichloroethane					1.00	ND	••	
1,1-Dichloroethene					1.00	ND	11	
cis-1,2-Dichloroethene	. "		n			ND		
trans-1,2-Dichloroethene	"	lt.	"		1.00	-	*1	
1,2-Dichloropropane	11	"			. 1.00	ND	u .	
1,3-Dichloropropane		*1	"		1.00	ND		
2,2-Dichloropropane	"	17	"		1.00	ND	17	
1,1-Dichloropropene	11	11	11		1.00	ND		
cis-1,3-Dichloropropene	U	u	"		1.00	ND	97	
trans-1,3-Dichloropropene	*1	11	и.		1.00	ND	H	

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network Page

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 Spokane

Portland

503.906.9200 fax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Bend

	Dames and Moore-Seattle	Project:	Magic Cleaners		Sampled:	6/7/99
	500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005		Received:	6/8/99
	Seattle, WA 98121	Project Manager:	David Raubvogel	ı	Reported:	6/11/99 15:58
t.						

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes
P-15-5W (continued)			<b>B9062</b> 1	12-06			Water	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Iexachlorobutadiene	11	n			2.00	ND	n	
2-Hexanone		4	17		10.0	ND	*1	
sopropylbenzene	*1	18	11		1.00	ND	11	
-Isopropyltoluene		11 ·			1.00	ND	11	
I-Methyl-2-pentanone	14	**			5.00	ND	"	
Methylene chloride	n	"	0		5.00	ND	n .	
Naphthalene	"	11	n		1.00	ND	*1	
n-Propylbenzene	17	11	н		1.00	ND	**	
Styrene	н	H	и		1.00	ND	"	
I, 1, 1, 2-Tetrachloroethane	*1	**	a	•	1.00	ND	t#	
1,1,2,2-Tetrachloroethane	"	11			1.00	ND	11	
Tetrachloroethene	10	н	11		1.00	11.6	и.	
Toluene		, 11	10		1.00	ND	17	
1,2,3-Trichlorobenzene	11	11	n		1.00	ND		
1,2,4-Trichlorobenzene	17				1.00	ND	n	
1,1,1-Trichloroethane	14	11			1.00	ND	**	
1,1,2-Trichloroethane	п	n '	14		1.00	ND	11	
Trichloroethene	u	11	u		1.00	ND	17	
Trichlorofluoromethane	19	o	н		1.00	ND	н	
1,2,3-Trichloropropane	"	н	11		. 1.00	ND	н	
1,2,4-Trimethylbenzene	п	u ·			1.00	ND	17	
1,3,5-Trimethylbenzene	17	u		•.	1.00	ND		
Vinyl chloride		11	н		0.500	ND	17	1
o-Xylene	57				1.00	ND	11	
m,p-Xylene	17	м	"		2.00	ND		
Surrogate: 4-BFB	"	"	"	75.0-135		106	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		116	"	
Surrogate: 1,2-DCA-44 Surrogate: Dibromofluoromethane	"	n	"	80.0-125		113	**	
Surrogate: Toluene-d8	"	n	"	80.0-120		98.0	"	

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North Creek Analytical - Bothell

Joy B Charg, Project Manager

\*Refer to end of report for text of notes and definitions.

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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 15 1011			<u>B9062</u>	12.07			<u>Water</u>	
<u>P-15-12W</u>	0690282	6/10/99	6/10/99	12-07	25.0	ND	ug/l	
Acetone	0090282	0/10/99 n	0/10/33 H		1.00	ND	ug/1	
Benzene	0	"	11		1.00	ND		
Bromobenzene			н		1.00	ND	"	
Bromochloromethane		н	н		1.00	ND	н	
Bromodichloromethane					1.00	ND	и	
Bromoform		0			10.0	ND		
Bromomethane					25.0	ND		
2-Butanone		u U	"			ND	U	
n-Butylbenzene	*1				1.00			
sec-Butylbenzene	**	1) H	"		1.00	ND		
tert-Butylbenzene					1.00	ND	11	
Carbon disulfide	14	14	10		10.0	ND		
Carbon tetrachloride	84	U	u		2.00	ND		
Chlorobenzene	11	n	11		1.00	ND		
Chloroethane	ti	*1	*1		2.00	ND	"	
Chloroform	TI	11	н		1.00	ND	u.	
Chloromethane	н	И	11		5.00	ND	**	
2-Chlorotoluene	11	14	11		1.00	ND	**	
4-Chlorotoluene	"	17	17		1.00	ND	11	
1,2-Dibromo-3-chloropropane	*	U	*1		1.00	ND	н	
Dibromochloromethane	41	"	*1		1.00	ND	н	
1,2-Dibromoethane		**	91		1.00	ND	14	
Dibromomethane	0		н		1.00	ND	U U	
1,2-Dichlorobenzene	*1	0			1.00	ND		
1,3-Dichlorobenzene	"	n	u		1.00	ND	11	-
1,4-Dichlorobenzene		"			1.00	ND	и	
Dichlorodifluoromethane		н	"		5.00	ND	14	
1,1-Dichloroethane	"	11	"		1.00	ND		
1,2-Dichloroethane	11	0	"		1.00	ND	11	
1,1-Dichloroethene	н	п	11		1.00	ND	11	
cis-1,2-Dichloroethene	u	н	*1		1.00	ND	н	
trans-1,2-Dichloroethene	U U		н		1.00	ND	u	
1,2-Dichloropropane	н	0	н		1.00	ND	n	
1,3-Dichloropropane	u	"	U U		1.00	ND	0	
2,2-Dichloropropane	19	н	u.		1.00	ND	"	
		"	n		1.00	ND	".	
1,1-Dichloropropene	14				1.00	ND	н	
cis-1,3-Dichloropropene	18	0	н		1.00	ND	н	
trans-1,3-Dichloropropene					1.00	IND		

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 1115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

Volatile Organic Compounds per EPA Method 826	0B
North Creek Analytical - Portland	

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-15-12W (continued)			<b>B9062</b>	12-07			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene		11	11		<b>2.00</b>	ND		
2-Hexanone	н	*1	H		10.0	ND	*1	
Isopropylbenzene		17	11		1.00	ND	17	
p-Isopropyltoluene	18	17	н		1.00	ND	**	
4-Methyl-2-pentanone	"	n	w .		5.00	ND	11	
Methylene chloride	*1	11	67		5.00	ND	*1	
Naphthalene	11	11	11		1.00	ND	"	
n-Propylbenzene		н.	и .		1.00	ND	н	
Styrene	"		0		1.00	ND	Ħ	
1,1,1,2-Tetrachloroethane	0		11		1.00	ND	18	
1,1,2,2-Tetrachloroethane		"	18		1.00	ND	14	
Tetrachloroethene	*1	<b>11</b> .	"		1.00	ND	*1	
Toluene	IR	t <b>1</b>	н		1.00	ND	11	
1,2,3-Trichlorobenzene	ri H	e1	10		1.00	ND	**	•
1,2,3-Trichlorobenzene					1.00	ND		
1,1,1-Trichloroethane		n	*1		1.00	· ND	11	
1,1,2-Trichloroethane	n	*1	u.		1.00	ND	"	
Trichloroethene	11	11	**		1.00	ND	17	
Trichlorofluoromethane	11		и		1.00	ND	91	
	*1		u		1.00	ND	н	
1,2,3-Trichloropropane	11		11		1.00	ND		1
1,2,4-Trimethylbenzene	18	U	н		1.00	ND	11	
1,3,5-Trimethylbenzene	17	11	н		0.500	ND	19	1
Vinyl chloride		11	"		1.00	ND		
o-Xylene	"	н	17		2.00	ND	u.	
m,p-Xylene			"	75.0-135		104	%	
Surrogate: 4-BFB	"	"	"	70.0-135		114	"	
Surrogate: 1,2-DCA-d4	"	"	n	80.0-125		114	"	
Surrogate: Dibromofluoromethane	F#	"	"	80.0-120		96.0	"	
Surrogate: Toluene-d8				00.0-120				

North Creek Analytical - Bothell



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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383.9310
 fax 541.382.7588

500 Market Place Tower, 2025 1st AveProject Number: 28171-934-005Received: 6/8/99Seattle, WA 98121Project Manager: David RaubvogelReported: 6/11/99 15:58	Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
Seattle, WA 98121 Project Manager: David Raubvogel Reported: 6/11/99 15:58	500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
	Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-16-5W</u>			<u>B9062</u>	<u>12-08</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l "	
Benzene	"	н	u		1.00	ND		
Bromobenzene	11	"	n		1.00	ND	**	
Bromochloromethane	U	"	11		1.00	ND	11	
Bromodichloromethane	11	11	*1		1.00	ND	II	
Bromoform	11	0	11		. 1.00	ND	. <b>н</b>	
Bromomethane	"	81	11		10.0	ND	11	
2-Butanone	11	",	17		25.0	ND		
n-Butylbenzene	11	н	17		1.00	ND	11	
sec-Butylbenzene	и	u.	n		1.00	ND	H	
tert-Butylbenzene	U		n		1.00	ND	u.	
Carbon disulfide	0				10.0	ND	n	
Carbon tetrachloride	11		н		.2.00	ND	**	
Chlorobenzene	**	**	**		1.00	ND	*1	
Chloroethane	u u	н	11		2.00	ND	н	
Chloroform	"	17	ia.		1.00	ND	н	
Chloromethane	. "	17			5.00	ND	n	
2-Chlorotoluene	11	17	v		1.00	ND	u	
4-Chlorotoluene		U	*1		1.00	ND	10	
1,2-Dibromo-3-chloropropane	**		"		1.00	ND	0	
Dibromochloromethane	"		"		i.00	ND		
1,2-Dibromoethane	U	<b>II</b> .			1.00	ND	e e	
Dibromomethane	a	14	11		1.00	ND	**	
1,2-Dichlorobenzene	н	0	u		1.00	ND		
1,3-Dichlorobenzene		11	*1		1.00	ND	u	
1,4-Dichlorobenzene	u	n			1.00	ND	14	
Dichlorodifluoromethane	**	10	u.		5.00	ND	"	
1,1-Dichloroethane	**	14	н		1.00	ND		
1,2-Dichloroethane		U	u.		1.00	ND	н	
1,1-Dichloroethene	"	tı	n		1.00	ND	u	
cis-1,2-Dichloroethene	U	н	*1		1.00	ND	и	
	11	II.	11		1.00	ND	11	
trans-1,2-Dichloroethene	14	11	14		1.00	ND		
1,2-Dichloropropane					1.00	ND	U	
1,3-Dichloropropane			. "			ND		
2,2-Dichloropropane	0		"		1.00	ND ND	ч	
1,1-Dichloropropene					1.00		11	
cis-1,3-Dichloropropene	11		"		1.00	ND		
trans-1,3-Dichloropropene	11	H	17		1.00	ND		· •

North Creek Analytical - Bothell

Joy B Chang, Project Manager



Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-16-5W (continued)			<u>B9062</u>	<u>12-08</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	н	"			2.00	ND	. 41	
2-Hexanone	U	**	0		10.0	ND	71	
Isopropylbenzene		*1	11		1.00	ND		
p-Isopropyltoluene	"	II .	11		1.00	ND	н	
4-Methyl-2-pentanone	"		"		5.00	ND	н	
Methylene chloride	н		ч		5.00	ND		
Naphthalene	IF.	11	u		1.00	ND	"	
n-Propylbenzene	18	н	н		1.00	ND		
Styrene	0	н.	17		1.00	ND	17	
1,1,1,2-Tetrachloroethane	n				1.00	ND	17	
1,1,2,2-Tetrachloroethane	0	11	17		1.00	ND		
Tetrachloroethene	*1	11	u		1.00	ND		
Toluene			11		1.00	ND	**	
1,2,3-Trichlorobenzene	••	".	*1		1.00	ND	n	
1,2,4-Trichlorobenzene		0	91		1.00	ND	и	
1,1,1-Trichloroethane	17	U .	н		1.00	ND		
1,1,2-Trichloroethane		11			1.00	ND		
Trichloroethene	*1	"	0		1.00	ND		
Trichlorofluoromethane		н	0		1.00	ND		
1,2,3-Trichloropropane		н	0		1.00	ND		
1,2,4-Trimethylbenzene		17	*1		1.00	ND		
1,3,5-Trimethylbenzene		U .	н		1.00	ND		
Vinyl chloride			н		0.500	ND	*1	1
o-Xylene	**	"	u		1.00	ND	11	
m,p-Xylene	"	u.	14		2.00	ND	It	
Surrogate: 4-BFB	"	"	"	75.0-135		102	%	•
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		118	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		116	"	
Surrogate: Toluene-d8	<i>u</i>	"	"	80.0-120		99.5	"	

North Creek Analytical - Bothell

Joy B Chang Project Manager



Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99	7
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58	
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	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		· · · · · · · · · · · · · · · · · · ·	-					
<u>P-16-9W</u>			<u>B9062</u>	<u>12-09</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l	
Benzene		0	0		1.00	ND		
Bromobenzene	IF	0	8		1.00	ND	**	
Bromochloromethane	17	11			1.00	ND	*1	
Bromodichloromethane	19	н	*1		1.00	ND	*1	
Bromoform	"	*1	11		1.00	ND		
Bromomethane	tt	*1	11		10.0	ND	**	
2-Butanone	n	"			25.0	ND	**	
n-Butylbenzene	11				1.00	ND	*1	
sec-Butylbenzene	"	17	u		1.00	ND		
tert-Butylbenzene	н	17	н		1.00	ND	18	
Carbon disulfide	н	.,	10		10.0	ND		
Carbon tetrachloride	18		u.		2.00	ND	н	
Chlorobenzene	47	U.	19		1.00	ND		
Chloroethane	u	17	n		2.00	ND	17	
Chloroform		**	19		1.00	ND	H	
Chloromethane	U	*1	n		5.00	ND		
2-Chlorotoluene	*1	**	*1		1.00	ND		
4-Chlorotoluene	п	91	91		1.00	ND	U	
1,2-Dibromo-3-chloropropane		w	11		1.00	ND		
Dibromochloromethane	11	11	н		1.00	ND		
1,2-Dibromoethane		0	н		1.00	ND	**	
Dibromomethane	n	u	"		1.00	ND	14	
1,2-Dichlorobenzene		n			1.00	ND		
1,3-Dichlorobenzene		"			1.00	ND		
1,4-Dichlorobenzene	"	n	n		1.00	ND	0	
Dichlorodifluoromethane	"	н	ti		5.00	ND		
1,1-Dichloroethane	н	11			1.00	ND	н	
1,2-Dichloroethane	"	14	u		1.00	ND	**	
1,1-Dichloroethene		11	н		1.00	ND	*1	
cis-1,2-Dichloroethene	*1	11	ir .		1.00	ND	+1	
trans-1,2-Dichloroethene	*1	*1	U .		1.00	ND	H	
1,2-Dichloropropane	и	"			1.00	ND	и,	
1,3-Dichloropropane	It				1.00	ND	и	
2,2-Dichloropropane	u		"		1.00	ND	14	
1,1-Dichloropropene	17	19			1.00	ND	14	
cis-1,3-Dichloropropene	U	U			1.00	ND	11	
trans-1,3-Dichloropropene	u	U	11		1.00	ND	п	
nans-1,5-Diemotopropene					1.00	IND.		

North Creek Analytical - Bothell

Joy B Chang Project Manager

\*Refer to end of report for text of notes and definitions.



Dames and Moore, Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-16-9W (continued)			<b>B9062</b>	<u>12-09</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene		0	н		2.00	ND	"	
2-Hexanone	"	0			10.0	ND	н	
Isopropylbenzene	"	"	48		1.00	ND	н	
p-Isopropyltoluene	"		*1		1.00	ND	**	
4-Methyl-2-pentanone		11	*1		5.00	. ND	н	
Methylene chloride		**	н		5.00	ND	н	
Naphthalene		Ħ	"		1.00	ND		
n-Propylbenzene	17	"	11		1.00	ND		
Styrene		"	, <b>н</b>		1.00	ND	н	
1,1,1,2-Tetrachloroethane	u	"			1.00	ND	н	
1,1,2,2-Tetrachloroethane		н			1.00	ND	н	
Tetrachloroethene	۳.	н	17		1.00	ND	и	
Toluene	0	11	"		1.00	ND	н	
1,2,3-Trichlorobenzene	u	11	11		1.00	ND	R	
1,2,4-Trichlorobenzene	U U	11		÷	1.00	ND	н	
1,1,1-Trichloroethane	U U	11	"		1.00	ND		
1,1,2-Trichloroethane	"	11	"		1.00	ND	14	
Trichloroethene	11	11			1.00	ND	11	
Trichlorofluoromethane	п	U	0		1.00	ND	14	
1,2,3-Trichloropropane		*1	11		1.00	ND	17	
1,2,4-Trimethylbenzene			ti -		1.00	ND	ń	
1,3,5-Trimethylbenzene	11	"	ŤI		1.00	ND	0	
Vinyl chloride	n	"	ti .		0.500	ND	U	1
o-Xylene		n	"		1.00	ND	11	
m,p-Xylene			11	•	2.00	ND	11	
Surrogate: 4-BFB	"	11	"	75.0-135		104	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		119	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		114	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		99.5	"	

North Creek Analytical - Bothell

Joy B Chang Project Ma hager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled: 6/7/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58	

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

r	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		• .						
<u>P-17-20W</u>			<u>B9062</u>	<u>12-10</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l	
Benzene	u	11	tt.		1.00	ND	"	
Bromobenzene	"	n	U		1.00	ND	н	
Bromochloromethane	н	61	11		1.00	ND	n	
Bromodichloromethane	n	11 .	11		1.00	ND	u.	
Bromoform	"	н	"		1.00	ND	"	
Bromomethane	n	н	11		10.0	ND	U	
2-Butanone	n	14	14		25.0	ND	u	
n-Butylbenzene	*1	0			1.00	ND	"	
sec-Butylbenzene	н				1.00	ND	"	
tert-Butylbenzene	"	"	••		1.00	ND	"	
Carbon disulfide		11	и		10.0	ND	"	
Carbon tetrachloride	U	w			2.00	ND		
Chlorobenzene	**	17	11		1.00	ND	19	
Chloroethane	"	0	n		2.00	ND	u	
Chloroform	n	**			1.00	ND		
Chloromethane	If	и	••		5.00	ND	*1	
2-Chlorotoluene	u	н	u		1.00	ND	u	
4-Chlorotoluene	"		н		1.00	ND	н	
1,2-Dibromo-3-chloropropane	н				1.00	ND	н	
Dibromochloromethane		**	U		1.00	ND	U.	
1,2-Dibromoethane			*1		1.00	ND	11	
Dibromomethane					1.00	ND	"	
1,2-Dichlorobenzene	"				1.00	ND	н	
1,3-Dichlorobenzene	и				1.00	ND	u	
1,4-Dichlorobenzene		**	n		1.00	ND	u.	
Dichlorodifluoromethane	11	11	*1		5.00	ND	11	
1,1-Dichloroethane	"	u	11		1.00	ND	н	
1,2-Dichloroethane					1.00	ND	и	
1,1-Dichloroethene		11	17		1.00	ND	v	
cis-1,2-Dichloroethene	11		U		1.00	ND	u.	
trans-1,2-Dichloroethene	11	11	*1		1.00	ND	11	
-	н	17	91		1.00	ND	11	
1,2-Dichloropropane	16	11	"		1.00	ND	11	
1,3-Dichloropropane	14	*1			1.00	ND		
2,2-Dichloropropane	a	н	0		1.00	ND	U	
1,1-Dichloropropene	11		11		1.00	ND		
cis-1,3-Dichloropropene	11				1.00	ND	"	
trans-1,3-Dichloropropene					1.00	UN		

North Creek Analytical - Bothell

Joy B Chang, Project Manager

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290
 Spokane 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.2500 fax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Portland Bend

Dames and Moore-' Seattle	Project:	Magic Cleaners	Sampled: 6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-17-20W (continued)</u>			<b>B9062</b>	12-10			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	11	11	*1		2.00	ND	**	
2-Hexanone	11	a	Ħ		10.0	ND	*1	
Isopropylbenzene	u .	*1	*1		1.00	ND		
p-Isopropyltoluene	"	11	н		1.00	ND	*1	
4-Methyl-2-pentanone	U U	11	н		5.00	ND		
Methylene chloride		н	11		5.00	ND	**	
Naphthalene	11		17		1.00	ND		
n-Propylbenzene	н	0			1.00	ND	17	
Styrene	11	11	u		1.00	ND	и.,	
1,1,1,2-Tetrachioroethane	11		U.		1.00	ND	17	
1,1,2,2-Tetrachloroethane	н	**	*1		1.00	ND		
Tetrachloroethene	11	11	н		1.00	ND	п	
Toluene	u.	н	и		1.00	ND		
1,2,3-Trichlorobenzene	u	II .	и		1.00	ND		
1,2,4-Trichlorobenzene	н	н	н		1.00	ND	•	
1,1,1-Trichloroethane	н	H			1.00	ND	"	
1,1,2-Trichloroethane		11			1.00	ND	••	
Trichloroethene	11	n	0		1.00	ND	н	
Trichlorofluoromethane	U	н	н		1.00	ND	11	
1,2,3-Trichloropropane	*1	и	н		1.00	ND		
1,2,4-Trimethylbenzene	"	17	IF.		1.00	ND	"	
1,3,5-Trimethylbenzene		и	17		1.00	ND		
Vinyl chloride	u	11	v		0.500	ND	"	1
o-Xylene	17	11	n.		1.00	ND	u	
m,p-Xylene	••	н	*1		2.00	ND	**	
Surrogate: 4-BFB	"	"	"	75.0-135	· ·	104	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		118	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		112	"	
Surrogate: Toluene-d8	u	"	"	80.0-120		<i>98.5</i>	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509,924,9290

 at 509,924,9200
 fax 509,924,9200
 203.324.3240 1ax 203.324.3230 prtland 9405 SW Nimbus Avenue, Beaveron, OR 97008-7132 503.906.9200 fax 503.906.9210 Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Portland

500 Market Place Tower, 2025 1st AveProject Number:28171-934-005Received:6/8/99DescriptionDescriptionDescriptionDescriptionDescription	Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
		Project Number:	28171-934-005	Received:	6/8/99
	Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	· · · · · · · · · · · · · · · · · · ·	Batch	Date	Date	Surrogate	Reporting			
	Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
	<u>P-18-5W</u>			<u>B9062</u>	<u>12-11</u>			<u>Water</u>	
	Acetone	0690282	6/10/99	6/10/99		25.0	ND	ug/l	
r I	Benzene		*1	18		1.00	ND	*1	
i I	Bromobenzene	**		0		1.00	ND	11	
	Bromochloromethane	н		Ħ		1.00	ND	n	
	Bromodichloromethane		*1			1.00	ND	11	
į	Bromoform	11	11	n		1.00	ND	91	
1	Bromomethane	n		91		10.0	ND	H.	
	2-Butanone	"	*1	и		25.0	ND	U	
	n-Butylbenzene					1.00	ND		
	sec-Butylbenzene		"	71		1.00	ND	11	
	tert-Butylbenzene		"	11		1.00	ND		
	Carbon disulfide	- 10	11	11		10.0	ND	"	•
	Carbon tetrachloride		м	11		2.00	ND	н	
ļ	Chlorobenzene		*1	"		1.00	ND		
	Chloroethane	**	11	u.		2.00	ND		
i	Chloroform		n	11		1.00	ND	11	
	Chloromethane	18	11	17		5.00	ND	T#	
				u.		1.00	ND	υ.	
	2-Chlorotoluene			11		1.00	ND	4	
• •	4-Chlorotoluene					1.00	ND		
1	1,2-Dibromo-3-chloropropane		17	*1		1.00	ND	n	
	Dibromochloromethane		11	н		1.00	ND	н	
	1,2-Dibromoethane	0				1.00	ND	11	
	Dibromomethane	**		*1		1.00	ND	'n	
	1,2-Dichlorobenzene		u '	14		1.00	ND		
,	1,3-Dichlorobenzene	*	17	u –		1.00	ND	17	
	1,4-Dichlorobenzene	17	*1	u		5.00	ND	**	
	Dichlorodifluoromethane	n		"		1.00	ND		
	1,1-Dichloroethane	n.	*1	e		1.00	· ND	n	
1	1,2-Dichloroethane	14	и	14		1.00	ND	11	
ł	1,1-Dichloroethene	"	n -	0		1.00	ND		
	cis-1,2-Dichloroethene	11		11 ;		1.00	ND	n	
	trans-1,2-Dichloroethene	11		u, , ,		1.00	ND		
1	1,2-Dichloropropane		п	"		1.00	ND		
	1,3-Dichloropropane			н	•	1.00	ND	"	
-	2,2-Dichloropropane	**	n	14		1.00	ND		
ł	1,1-Dichloropropene	II.	**			1.00	ND		
1	cis-1,3-Dichloropropene		17			1.00	ND	*1	
	trans-1,3-Dichloropropene					1.00	КD		

North Creek Analytical - Bothell

Project Manager

Joy B Chang

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\*Refer to end of report for text of notes and definitions.

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# DAMES & MOORE

# **TRANSMITTAL SHEET**

500 MARKET PLACE TOWER, 2025 FIRST AVENUE, SEATTLE, WASHINGTON 98121 (206) 728-0744 FAX NO. 727-3350

TO:

Mr. Nnamdi Madakor Dept. of Ecology Northwest Regional Office 3190 160<sup>th</sup> Avenue SE Bellevue, WA 98008-5452

OUR JOB NO.

DATE:

42368-179

February 14, 2000

SUBJECT: Former Magic Cleaners Lake Forest Park Town Center Seattle, WA

ATTENTION: Mr. Madakor

FEB 1 5 2000

RECEIVED

We are sending you via UPS Over night the following: DEPT. OF ECOLOGY

Groundwater Investigation/Remediation Report and Monitored Natural Attenuation Work Plan Former Magic Cleaners Site TCP ID #NW0081

This is for your review and comment.

Copy: Rebecca Coles

DAMES & MOORE David Raubvoge

G:\LFPARK\Magic RA-1998\Ecologytrans2.DOC



 
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 18839 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.324.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners		Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	I.	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel		Reported:	6/11/99 15:58

#### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-18-5W (continued)			<u>B9062</u>	<u>12-11</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	н	11	н		2.00	ND		
2-Hexanone	11	10	н		10.0	ND	11	
Isopropylbenzene	11	16	и		1.00	ND	11	
p-Isopropyltoluene	14	17			1.00	ND		
4-Methyl-2-pentanone	17	н	. "		5.00	ND	н	
Methylene chloride	17	17	0		5.00	ND	н	
Naphthalene	n		17		1.00	ND	u.	
n-Propylbenzene	Ð	<b>T</b> I	n.		1.00	ND		
Styrene	*1	ti	11 ·		1.00	ND		
1,1,1,2-Tetrachloroethane	11	*1	"		1.00	ND		
1,1,2,2-Tetrachloroethane	н	11	11		1.00	ND	D	
Tetrachloroethene	и	R	н		1.00	ND	11	
Toluene	IF.	11	н		1.00	ND	U	
1,2,3-Trichlorobenzene	u	17	14		1.00	ND	**	
1,2,4-Trichlorobenzene	н,	н			1.00	ND	*1	
1,1,1-Trichloroethane	U .	н			1.00	ND		
1,1,2-Trichloroethane	11	"	U		1.00	ND	11	
Trichloroethene			n		1.00	ND	11	
Trichlorofluoromethane	н	н	11		1.00	ND	17	
1,2,3-Trichloropropane		н	11		1.00	ND	<b>H</b> ·	
1,2,4-Trimethylbenzene	<b>u</b> ,		н		1.00	ND	n	
1,3,5-Trimethylbenzene		17	11		1.00	ND	**	
Vinyl chloride		n	17		0.500	ND	11	. 1
o-Xylene	"	**	н		1.00	ND	11	
m,p-Xylene		11	n		2.00	ND	11	
Surrogate: 4-BFB	"		"	75.0-135		107	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		119	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		116	"	
Surrogate: Toluene-d8	<i>i</i>	"	"	80.0-120		<i>98.5</i>	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509.924,9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503,906,9200
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 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

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Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled: 6/7/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58	

## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

·	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
						_		
<u>P-18-12W</u>			<u>B9062</u>	<u>12-12</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/11/99		25.0	ND	ug/l	
Benzene	IT	14	".		1.00	ND	"	
Bromobenzene	67	U .			1.00	ND	н	
Bromochloromethane	0	ti -	n		1.00	ND	u	
Bromodichloromethane	"	*1	11		1.00	ND	17	
Bromoform	н	н	*1		1.00	· ND	U	
Bromomethane	IF	н			10.0	ND	H	
2-Butanone	n	11	u		25.0	ND	**	
n-Butylbenzene	**	н	14		1.00	ND	*1	
sec-Butylbenzene	u	*1	0		1.00	ND	11	
tert-Butylbenzene	u	11	**		1.00	ND	u	
Carbon disulfide		11	"		10.0	ND	14	
Carbon tetrachloride	tt.				2.00	ND	11	
Chlorobenzene	"		u		1.00	ND	U	
Chloroethane	н	н			2.00	ND	*1	
Chloroform	u	N			1.00	ND	"	
Chloromethane		и	.,		5.00	ND	u.	
2-Chlorotoluene	"	U .	"		1.00	ND	и	
4-Chlorotoluene	n	U	"		1.00	ND	U U	
1,2-Dibromo-3-chloropropane	u	11			1.00	ND	<b>ti</b>	
Dibromochloromethane	"	ш	"		1.00	ND	11	
1,2-Dibromoethane	*1	н			1.00	ND	11	
Dibromomethane	n	U			1.00	ND	0	
1,2-Dichlorobenzene	н	"			1.00	ND	11	
1,3-Dichlorobenzene	U	и	11		1.00	ND	11	
1,4-Dichlorobenzene	**	14	*1		1.00	ND	91	·
Dichlorodifluoromethane	11		Ħ		5.00	ND		
1,1-Dichloroethane	н	11	н		1.00	ND	H	
1,2-Dichloroethane		"	н		1.00	ND	*	
1,1-Dichloroethene	u .	11	n		1.00	ND	и.	
cis-1,2-Dichloroethene	н	11	11		1.00	ND	IF	
trans-1,2-Dichloroethene	н	*1	<b>"</b>		1.00	ND		
1,2-Dichloropropane	0	u	17		1.00	ND	u	
1,3-Dichloropropane			U		1.00	ND	"	
2,2-Dichloropropane	н	n	"		1.00	ND	н	
1,1-Dichloropropene	17	н	н		1.00	ND	и	
cis-1,3-Dichloropropene		u	II II		1.00	ND	19	
trans-1,3-Dichloropropene	11	"	U		1.00	ND	"	
trans-1,5-Diemotopropene					1.00			

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
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 fax 541.382.7588

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled: 6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58

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## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			<b>D</b> 00 (2)				<b>W</b> -4	
<u>P-18-12W (continued)</u>			<u>B9062</u>	[2-12			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/11/99		1.00	ND	ug/l "	
Hexachlorobutadiene	11	"	*1		2.00	ND		
2-Hexanone	"	14	18 -		10.0	ND		
Isopropylbenzene	**	"	14		1.00	ND	u	
p-Isopropyltoluene		a			1.00	ND	*1	
4-Methyl-2-pentanone	"	11	14		5.00	ND	91	
Methylene chloride		**	ti.		5.00	ND	91	
Naphthalene		11	*1		1.00	ND	11	
n-Propylbenzene	*1		11		1.00	ND	u	
Styrene	и .	11	IF.		1.00	ND	"	
1,1,1,2-Tetrachloroethane	н	11	H.		1.00	ND	18	
1,1,2,2-Tetrachloroethane		0	11		1.00	ND	P	
Tetrachloroethene		11	U.		1.00	ND	U	
Toluene		11			1.00	ND	11	
1,2,3-Trichlorobenzene	*1	н	"		1.00	ND	**	
1,2,4-Trichlorobenzene	11	14	11		1.00	ND	11	
1,1,1-Trichloroethane		17			1.00	ND	**	
1,1,2-Trichloroethane	Ð	17	11		1.00	ND	и	
Trichloroethene	u	*1			1.00	ND	11	
Trichlorofluoromethane	"	u			1.00	ND	tł.	
1,2,3-Trichloropropane	10				1.00	ND	"	
1,2,4-Trimethylbenzene	14	17	18		1.00	ND	**	
1,3,5-Trimethylbenzene	ti	a	11		1.00	ND	H	
Vinyl chloride	11	11	o		0.500	ND		1
o-Xylene	и		*1		1.00	ND	n	
m,p-Xylene	14		н		2.00	ND	ti.	
Surrogate: 4-BFB	"	"		75.0-135		106	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		121	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		114	"	
	"	"	"	80.0-120		100	"	
Surrogate: Toluene-d8				00.0-120		100		

North Creek Analytical - Bothell

Joy B Chang roject Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509,924,9290
 Spokane

Portland

 Bend
 2035/24-3230
 10X 509/324-3230

 0x1land
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906 9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383.9310
 fax 541.382.7588

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	Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
	500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
	Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

3	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes
D 10 5W			<u>B9062</u>	12-14			<u>Water</u>	
<u>P-19-5W</u>	0690282	6/10/99	6/11/99	12.14	25.0	ND	ug/l	
Acetone	"	"	"		1.00	ND .	n	
Benzene		91	н		1.00	ND	11	
Bromobenzene	11	17	17	,	1.00	ND	11	
Bromochloromethane	11	*1	14		1.00	ND	u	
Bromodichloromethane		11	11		1.00	ND		
Bromoform		14			10.0	ND		
Bromomethane		11			25.0	ND	n	
2-Butanone	11		17		1.00	ND	11	
n-Butylbenzene			W		1.00	ND	н	
sec-Butylbenzene					1.00	ND	11	
tert-Butylbenzene	**	"	". N		10.0	ND	14	
Carbon disulfide		" 9				ND	11	
Carbon tetrachloride		"	"		2.00		*1	
Chlorobenzene	U				1.00	ND	ч	
Chloroethane	**				2.00	ND	u	
Chloroform		11	n ñ		1.00	ND		
Chloromethane	<b>ti</b> ,	11			5.00	ND	11	
2-Chlorotoluene		"	t1		1.00	ND		
4-Chlorotoluene	**	17	11		1.00	ND		
1,2-Dibromo-3 chloropropane	*1	н	**		1.00	ND		
Dibromochloromethane	10	11	"		1.00	ND		
1,2-Dibromoethane	*1	14			1.00	ND		
Dibromomethane	*1	ti	16		1.00	ND	u	
1,2-Dichlorobenzene	IŤ	"	н		1.00	ND	#1	
1,3-Dichlorobenzene	N		11		1.00	ND		
1,4-Dichlorobenzene	"	n	"		1.00	ND	н	
Dichlorodifluoromethane	U	••	н		5.00	ND	11	
1,1-Dichloroethane	11	19	41		1.00	ND	11	
1,2-Dichloroethane	11	4	te ,		1.00	ND	H	
1,1-Dichloroethene	n	17			1.00	ND	11	
cis-1,2-Dichloroethene	"	11	"		1.00	ND	11	
trans-1,2-Dichloroethene	"	"	19		1.00	ND	*1	
1,2-Dichloropropane	"	11	"		1.00	ND ·	ч .	•
1,3-Dichloropropane	n	н		•	1.00	ND	u.	
2,2-Dichloropropane	u		17		1.00	ND	n	
1,1-Dichloropropene	**	0			1.00	ŅD	11	
cis-1,3-Dichloropropene		u			1.00	ND	14	
trans-1,3-Dichloropropene	"	11	17		1.00	ND	n .	•
nans-1,3-Dicinoropropene								

North Creek Analytical - Bothell

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\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. **Environmental Laboratory Network** 

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9230

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 6/7/99	٦
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58	

## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Batch	Date	Date	Surrogate	Reporting			
Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		<b>B9062</b>	<u>12-14</u>			<u>Water</u>	
0690282	6/10/99	6/11/99		1.00	ND	ug/l	
u	"			2.00	ND	n	
**		17		10.0	ND	u	
<b>19</b>	u	U .		1.00	ND	"	
u	14	н		1.00	ND	•	
61	и	11		5.00	ND	"	
11	17	н		5.00	ND	п	
**	ti -	11		1.00	ND	41	
"	0	и		1.00	ND	"	
14	"	и			ND		
11	11	0					
	11	u .			ND	17	
*1	11	TF				19	
17	u					a	
н	11	н					
	*1	н		1.00	ND	۳.	•
0	**			1.00	ND	"	
n		11			ND		•
11		n.			ND	14	
н	D.	*1			ND	U	
	н	н			ND		
	11	н			ND	*1	
*1	и	17				11	
"		17					1
IF.							
11					ND	17	
"		"	75.0-135		106	%	
"	"	"			124	"	
"	"	"			116	"	
**	"	"			98.0	"	
	Number 0690282 " " " " " " " " " " " " " " " " " "	Number         Prepared           0690282         6/10/99           "         "           " <td>Number         Prepared         Analyzed           0690282         6/10/99         6/11/99           "         "         "           "</td> <td>Number         Prepared         Analyzed         Limits           0690282         6/10/99         6/11/99         """"""""""""""""""""""""""""""""""""</td> <td>Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/11/99         1.00           "         "         2.00           "         "         10.0           "         "         2.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "</td> <td>Number         Prepared         Analyzed         Limits         Limit         Result           B906212-14           0690282         6/10/99         6/11/99         1.00         ND           "         "         "         2.00         ND           "         "         10.0         ND           "         "         1.00         <td< td=""><td>Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/11/99         1.00         ND         ug/l           "         "         2.00         ND         ug/l           "         "         1.00         ND         "           "         "&lt;</td></td<></td>	Number         Prepared         Analyzed           0690282         6/10/99         6/11/99           "         "         "           "	Number         Prepared         Analyzed         Limits           0690282         6/10/99         6/11/99         """"""""""""""""""""""""""""""""""""	Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/11/99         1.00           "         "         2.00           "         "         10.0           "         "         2.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "	Number         Prepared         Analyzed         Limits         Limit         Result           B906212-14           0690282         6/10/99         6/11/99         1.00         ND           "         "         "         2.00         ND           "         "         10.0         ND           "         "         1.00         ND           "         "         1.00 <td< td=""><td>Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/11/99         1.00         ND         ug/l           "         "         2.00         ND         ug/l           "         "         1.00         ND         "           "         "&lt;</td></td<>	Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/11/99         1.00         ND         ug/l           "         "         2.00         ND         ug/l           "         "         1.00         ND         "           "         "<

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420.9200
 fax 425,420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting	<b>.</b> .		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-19-12W			<u>B9062</u>	<u>12-15</u>			<u>Water</u>	
Acetone	0690282	6/10/99	6/11/99		25.0	ND	ug/l	
Benzene	n	14	**		1.00	ND	"	
Bromobenzene	n	11	4		1.00.	ND	"	
Bromochloromethane	н	.,	"		1.00	ND	**	
Bromodichloromethane	11	14	11		1.00	ND	11	
Bromoform	**				1.00	ND	17	
Bromomethane	11				10.0	ND	н	
2-Butanone	11	*1	14		25.0	ND	н	
n-Butylbenzene	"	11	.,		1.00	ND	u.	
sec-Butylbenzene	"	۳.	0		1.00	ND	11	
tert-Butylbenzene	U	"			1.00	ND	17	
Carbon disulfide	"		"		10.0	ND	**	
Carbon tetrachloride	"	17	*1		2.00	ND		
Chlorobenzene	11				1.00	ND	U	
Chloroethane	11	н	u		2.00	ND	n	
Chloroform	11		u		1.00	ND	n	
Chloromethane	u	**			5.00	ND	*1	
2-Chlorotoluene	"	*1			1.00	ND	"	
4-Chlorotoluene	н	*1	"		1.00	ND	н	
1,2-Dibromo-3-chloropropane	н	IF	n		1.00	ND	u	
Dibromochloromethane	"	14	8		1.00	ND		
1,2-Dibromoethane	u	11	"		1.00	ND	v	
Dibromomethane	U	ti			1.00	ND	11	
1,2-Dichlorobenzene	67 <sup>°</sup>	*1	n.		1.00	ND	19	
1,3-Dichlorobenzene		11	u		1.00	ND	••	
1,4-Dichlorobenzene	"		14		1.00	ND	".	
Dichlorodifluoromethane		17	11		5.00	· ND		
1,1-Dichloroethane		14			1.00	ND		
1,2-Dichloroethane	17	н			1.00	ND		
1,1-Dichloroethene	н.	u	"		1.00	ND	"	
cis-1,2-Dichloroethene	*1	11	"		1.00	ND		
trans-1,2-Dichloroethene		н	<b>u</b> .		1.00	ND		
1,2-Dichloropropane		It	14		1.00	ND	U	
1,3-Dichloropropane	58	"	U		1.00	ND	11	
2,2-Dichloropropane	11	n	n		1.00	ND	e1 .	
1,1-Dichloropropene	**	ti i	*1		1.00	ND	11	
cis-1,3-Dichloropropene	**	п	11		1.00	ND	11	
trans-1,3-Dichloropropene	и	*1	*1		1.00	ND	u	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383.9310
 fax 541.382.7588

Dames and Moore-	Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
1	ower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121		Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-19-12W (continued)			<u>B9062</u>	<u>12-15</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/11/99		1.00	ND	ug/l	
Hexachlorobutadiene	"	17			. 2.00	ND		
2-Hexanone	19	н ,	н		10.0	ND	11	4
Isopropylbenzene	**	<del>1</del> 1 ·	11		1.00	ND	tr.	
p-IsopropyItoluene		17	IF		.1.00	ND	n	
4-Methyl-2-pentanone	· H	11	U U		5.00	ND	**	
Methylene chloride	н	11	11		5.00	ND		
Naphthalene	18	n	u.		1.00	ND	**	
n-Propylbenzene	H		17		1.00	ND	п ,	
Styrene		*1			1.00	ND	u .	
1,1,1,2-Tetrachloroethane	11				1.00	ND	14	
1,1,2,2-Tetrachloroethane			v		1.00	ND	n	
Tetrachloroethene	11	*1			1.00	ND	11	
Toluene		17			1.00	ND	14	
1,2,3-Trichlorobenzene	()	n	w '		1.00	ND	n	
1,2,4-Trichlorobenzene	"	11			1.00	ND	н.	
1,1,1-Trichloroethane			17		1.00	ND		
1,1,2-Trichloroethane	11	n	It		1.00	ND	n	
Trichloroethene		11	Ħ		1.00	ND		•
Trichlorofluoromethane	и	U.	11		1.00	ND	n	
		11	0		1.00	ND	"	
1,2,3-Trichloropropane		u	п		1.00	ND		
1,2,4-Trimethylbenzene	н		14		1.00	ND	n	
1,3,5-Trimethylbenzene				•	0.500	ND	91	1
Vinyl chloride	n	n	"		1.00	ND	14	
o-Xylene	11	*1	"		2.00	ND	**	
m,p-Xylene		"	"	75.0-135		106	%	
Surrogate: 1,2 <sup>1</sup> DCA-d4	."	"	<b>n</b> '	70.0-135		123	11	
Surrogate: 1,2-DCA-a4 Surrogate: Dibromofluoromethane		"	"	80.0-125		118	"	
	"	"	"	80.0-120		99.5	<b>"</b>	
Surrogate: Toluene-d8								

North Creek Analytical - Bothell

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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 20 CW			<u>B9062</u>	10.16			<u>Water</u>	
<u>P-20-5W</u>	0690282	6/10/99	<u>169062</u> 6/11/99	12-10	25.0	ND	<u>water</u> ug/l	
Acetone	0090282	0/10/99	0/11/99		1.00	ND	ug/1	
Benzene			n		1.00	ND	11	
Bromobenzene			11		1.00	ND ND		
Bromochloromethane	11				1.00	ND	**	
Bromodichloromethane	1	11	11			ND ND	**	
Bromoform					1.00 10.0	-		
Bromomethane						ND	11	
2-Butanone	. "				25.0	ND		
n-Butylbenzene	"				1.00	ND	u .	
sec-Butylbenzene	"	"			1.00	ND		
tert-Butylbenzene	"	17 17			1.00	ND		
Carbon disulfide	"				10.0	ND		
Carbon tetrachloride	" ·	U	U		2.00	ND	11	
Chiorobenzene	U U	U			1.00	ND		
Chloroethane	**	e1			2.00	ND		
Chloroform	11	e1	"		1.00	ND	11-	
Chloromethane	н	*1	"		5.00	ND	H.	
2-Chlorotoluene	н	н	н		1.00	ND	14	
4-Chlorotoluene	17	н	н.		1.00	ND	v	
1,2-Dibromo-3-chloropropane	17	n	н		1.00	ND	u	
Dibromochloromethane		и.			1.00	ND	"	
1,2-Dibromoethane	U U	17	17		1.00	ND	".	
Dibromomethane			0		1.00	ND	"	
1,2-Dichlorobenzene	11	11	U		1.00	ND	**	
1,3-Dichlorobenzene	41	11	n		1.00	ND	п	
1,4-Dichlorobenzene	н	*1	11		1.00	ND	п	
Dichlorodifluoromethane	**	и	*1		5.00	ND	.,	
1,1-Dichloroethane	11		11		1.00	ND		
1,2-Dichloroethane	11	17	н		1.00	ND	<b>.</b> .	
1,1-Dichloroethene	*1	17	11		1.00	ND	a	
cis-1,2-Dichloroethene	"	n	17		1.00	ND	**	
trans-1,2-Dichloroethene	и	**	υ.		1.00	ND	н	
1,2-Dichloropropane	14	<b>*1</b>	н		1.00	ND	11	
1,3-Dichloropropane	17	11	11		1.00	ND	11	
2,2-Dichloropropane		н	"		1.00	ND	11	
1,1-Dichloropropene	a	u	н		1.00	ND		
cis-1,3-Dichloropropene	ч.	0	н		1.00	ND		
trans-1,3-Dichloropropene	"	17	и		1.00	ND	11	
nans-1,5-Diemoropropene					1.00	112		

North Creek Analytical - Bothell

Joy B Chang Project Manager



Seattle	18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
	425.420.9200 fax 425.420.9210
Snokane	East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

East 11115 Montgomery, Suite B, Spokane, WA 99205-509.924.9200 fax 509.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Portland

Bend

Dames and Moore	- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99	
500 Market Place	Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99	
Seattle, WA 9812	-	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58	
						-

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

P-20-5W (continued)         Ethylbenzene       069         Hexachlorobutadiene       "         Isopropylbenzene       "         Isopropylbenzene       "         p-Isopropylbenzene       "         4-Methyl-2-pentanone       "         Methylene chloride       "         Naphthalene       "         styrene       "         1,1,1,2-Tetrachloroethane       "	100282	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-20-5W (continued)         Ethylbenzene       061         Hexachlorobutadiene       "         2-Hexanone       "         Isopropylbenzene       "         p-Isopropylbenzene       "         4-Methyl-2-pentanone       "         Methylene chloride       "         Naphthalene       "         h-Propylbenzene       "         Styrene       "         1,1,2-Tetrachloroethane       "	90282							
Ethylbenzene       06'         Hexachlorobutadiene       "         2-Hexanone       "         sopropylbenzene       "         p-Isopropyltoluene       "         4-Methyl-2-pentanone       "         Methylene chloride       "         n-Propylbenzene       "         styrene       "         1, 1, 2-Tetrachloroethane       "	90282		<b>B9062</b> 1	12-16			<u>Water</u>	
Hexachlorobutadiene " 2-Hexanone " Isopropylbenzene " p-Isopropyltoluene " 4-Methyl-2-pentanone " Methylene chloride " Naphthalene " n-Propylbenzene " Styrene " 1,1,1,2-Tetrachloroethane "		6/10/99	6/11/99		1.00	ND	ug/l	
2-Hexanone " Isopropylbenzene " p-Isopropyltoluene " 4-Methyl-2-pentanone " Methylene chloride " Naphthalene " h-Propylbenzene " Styrene " 1,1,2-Tetrachloroethane "		"			2.00	ND	"	
sopropylbenzene " Isopropyltoluene " I-Methyl-2-pentanone " Methylene chloride " Naphthalene " h-Propylbenzene " Styrene " I, 1, 1, 2-Tetrachloroethane "		17	*1		10.0	ND	n	
o-Isopropyltoluene " 4-Methyl-2-pentanone " Methylene chloride " Naphthalene " h-Propylbenzene " Styrene " 1, 1, 1, 2-Tetrachloroethane "		ti	97		1.00	ND	97 97	
4-Methyl-2-pentanone " Methylene chloride " Naphthalene " n-Propylbenzene " Styrene " 1,1,1,2-Tetrachloroethane "		я (	10		1.00	ND	11	
Methylene chloride " Naphthalene " -Propylbenzene " Styrene " I, 1, 1, 2-Tetrachloroethane "		11	n		5.00	ND	н ,	
Naphthalene " n-Propylbenzene " Styrene " 1, 1, 1, 2-Tetrachloroethane "		11	*1		. 5.00	ND	*1	
n-Propylbenzene " Styrene " 1,1,1,2-Tetrachloroethane "		*1	11		1.00	ND	u	
Styrene " 1,1,1,2-Tetrachloroethane "		18	u.		1.00	ND		
1,1,1,2-Tetrachloroethane "		19	41		1.00	ND		
		11	11		1.00	ND	"	
177 Totrochloroathana			17		1.00	ND		
I,1,2,2-Tetrachloroethane " Tetrachloroethene "		19	п		1.00	47.3	14	
Foluene "		91	11		1.00	ND	"	
1,2,3-Trichlorobenzene "		17	14		1.00	ND	17	
1,2,3-1 richlorobenzene "		17			1.00	ND	**	
1,1,1-Trichloroethane		*1	и		1.00	ND	u	
		11			1.00	ND	77	
1,1,2-Trichloroethane "		17	*1		1.00	ND	11	
Trichloroethene "					1.00	ND	a	
Trichlorofluoromethane "		н	11		1.00	ND	11	
1,2,3-Trichloropropane		u	*1		1.00	ND		
1,2,4-Trimethylbenzene		н	11		1.00	ND	u	•
1,3,5-Trimethylbenzene "		14			0.500	ND	н	. 1
Vinyl chloride "		a	*1		1.00	ND		
o-Xylene					2.00	ND		
m,p-Xylene "			"	75.0-135		106	%	
Surrogate: 4-BFB "		"	"	70.0-135		126	"	
Surrogate: 1,2-DCA-a4						118	"	
Surrogate: Dibromofluoromethane " Surrogate: Toluene-d8 "		"	"	80.0-125		110		

North Creek Analytical - Bothell

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Joy B Chang,

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			700 (0)				<b>N</b> <i>L</i>	
<u>P-20-12W</u>			<u>B9062</u>	<u>12-17</u>	25.0		<u>Water</u>	
Acetone	0690282 "	6/10/99 "	6/11/99 "		25.0	ND	ug/l	
Benzene	u u	"	" "		1.00	ND		
Bromobenzene					1.00	ND		
Bromochloromethane	14				1.00	ND	**	
Bromodichloromethane	n	U	11		1.00	ND	"	
Bromoform	11	**	u		1.00	ND	ų,	
Bromomethane	n	*1	0		10.0	ND	и	
2-Butanone	ti	11	U		25.0	ND	ur.	
n-Butylbenzene	<b>17</b> .	"	*1		1.00	ND	11	
sec-Butylbenzene	14	и	*1		1.00	ND		
tert-Butylbenzene		IF.	н		1.00	ND	14	
Carbon disulfide	u	IF	11		10.0	ND	U	
Carbon tetrachloride	*1	17	н		2.00	ND	ti	
Chlorobenzene	**	*1			1.00	ND	*1	
Chloroethane	11	"	u.		2.00	ND	*1	
Chloroform	II.	ч	U .		1.00	ND	11	
Chloromethane	u	н	11		5.00	ND	**	
2-Chlorotoluene	"		*1		1.00	ND	11	
4-Chlorotoluen'e	e e		н		1.00	ND		
1,2-Dibromo-3-chloropropane	. 11	U .	n		1.00	ND	н	
Dibromochloromethane	н		н		1.00	ND	11	
1,2-Dibromoethane		n	17		1.00	ND	U	
Dibromomethane			U		1.00	ND		
1,2-Dichlorobenzene	u		ti i		1.00	ND	**	
1,3-Dichlorobenzene	91	0	**		1.00	ND	<b>.</b>	
1,4-Dichlorobenzene		**			1.00	ND	17	
Dichlorodifluoromethane	11	**			5.00	ND		
1,1-Dichloroethane	tł.	н			1.00	ND	"	
1,2-Dichloroethane		н	14		1.00	ND	"	
1,1-Dichloroethene		14	*1		1.00	ND		
cis-1,2-Dichloroethene		**			1.00	ND		
		ti -			1.00	ND	19	
trans-1,2-Dichloroethene	11		11		1.00	ND		
1,2-Dichloropropane					1.00	ND	U	•
1,3-Dichloropropane	"						U	
2,2-Dichloropropane			11		1.00	ND		
1,1-Dichloropropene	н				1.00	ND	**	
cis-1,3-Dichloropropene	11		11		1.00	ND	" "	
trans-1,3-Dichloropropene	17				1.00	ND		

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Part
 09264 Service Avenue, Science D, Brand, OR 97008-7132
 Spokane Portland 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Bend

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Dames and Moore-	Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place 1	Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121		Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			Doc 17					
<u>P-20-12W (continued)</u>			<u>B9062</u>	<u>12-17</u>			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/11/99		1.00	ND	ug/l	
Hexachlorobutadiene	17	11			2.00	ND	*1	
2-Hexanone	н	61	U		, 10.0	ND	*1	
Isopropylbenzene	u	"			1.00	ND	*1	
p-Isopropyltoluene	*1	11	*1		1.00	ND	11	
4-Methyl-2-pentanone	11	11	*1		5.00	ND	*1	
Methylene chloride	11	11	"		5.00	ND	11	
Naphthalene	4	и	"		1.00	, ND	"	
n-Propylbenzene	**	18	*1		1.00	ND	н	
Styrene	11	17	н		1.00	ND	н	
1,1,1,2-Tetrachloroethane	и	17	11		1.00	ND	11	
1,1,2,2-Tetrachloroethane	17	D	и		1.00	ND	11	
Tetrachloroethene	0	17	14		1.00	27.4	"	
Toluene	11	U	19		1.00	ND	"	
1,2,3-Trichlorobenzene	U		17	•	1.00	ND		
1,2,4-Trichlorobenzene	n	**	U.		1.00	ND		
1,1,1-Trichloroethane	11	11	U .		1.00	ND		
1,1,2-Trichloroethane	"		U.		1.00	ND	n.	
Trichloroethene	11		11		1.00	ND	0	
Trichlorofluoromethane		17	*1		1.00	ND	*1	
1,2,3-Trichloropropane	U	17	н		1.00	ND	*1	
1,2,4-Trimethylbenzene	"		н		1.00	ND	n	
1,3,5-Trimethylbenzene	п	**			1.00	ND		
Vinyl chloride	"	11	"		0.500	ND		1
o-Xylene		11			1.00	ND		
m,p-Xylene		11			2.00	ND	11	
Surrogate: 4-BFB	"	"	"	75.0-135	_ • ••	107	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		124	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		118	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		98.0	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. **Environmental Laboratory Network** 



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58

## Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

		Batch	Date	Date	Surrogate	Reporting	· · ·		
Actione06902826/10/996/11/9925.0NDug/Benzene""1.00ND"Bromoblizonethare""1.00ND"Bromochloromethare""1.00ND"Bromochloromethare""1.00ND"Bromoform"""1.00ND"Bromoform"""1.00ND"Bromoform"""1.00ND"Bromoform"""1.00ND"Bromoform""""""Bromoform""""""Bromoform""""""Bromoform""""""Bromoform""""""Bromoform""""""Bromoform""""""Bromoform""""""Bromoform""""""Carbon distlide""""""Carbon distlide""""""Carbon distlide""""""Carbon distlide""""""Chlorothane"""" <th>Analyte</th> <th>Number</th> <th>Prepared</th> <th>Analyzed</th> <th>Limits</th> <th>Limit</th> <th>Result</th> <th>Units</th> <th>Notes*</th>	Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Actome06902826/10/996/11/9925.0NDug/Benzene""1.00ND"Bromochloromethare""1.00ND"Bromochloromethare""1.00ND"Bromochloromethare""1.00ND"Bromochloromethare""1.00ND"Bromochloromethare""1.00ND"Bromochloromethare"""1.00ND"Bromochloromethare"""1.00ND"Bromochloromethare"""1.00ND"Bromochloromethare"""1.00ND"Bromochloromethare"""1.00ND"Bromochloromethare"""1.00ND"Bromochloromethare"""1.00ND"See-Butylbenzene"""1.00ND"Carbon distlifde"""1.00ND"Chlorobethare"""1.00ND"Chlorobethare"""1.00ND"1.00ND""""""1.00ND""""""1.00ND""""""1.00ND" <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Benzene1.00ND"Bromochloromethane1.00ND"Bromochloromethane1.00ND"Bromochloromethane1.00ND"Bromochloromethane1.00ND"Bromochloromethane1.00ND"Bromochloromethane1.00ND"Bromochloromethane1.00ND"2-Butanone1.00ND"n-Butylbenzene1.00ND"2-Butanone1.00ND"n-Butylbenzene1.00ND"carbon disulfide1.00ND"Carbon disulfide1.00ND"Carbon disulfide1.00ND"Chlorobenzene1.00ND"Chlorobenzene1.00ND"Chlorobenzene1.00ND"Chlorobenzene1.00ND"Chlorobenzene1.00ND"Chlorobenzene1.00ND"Chlorobenzene1.00ND"1.12-Dibrono-3-chloropopane1.00ND"1.2-Dibronochane1.00ND"1.2-Dibronomethane1.00ND"1.2-Dibronomethane1.00ND"1.2-Dibronomethane1.00ND"1.2-Dibronomethane1.00ND"1.2-Dibronomethane1.00ND"1.2-Dibronomethane1.00ND" <td< td=""><td><u>P-21-5W</u></td><td></td><td></td><td></td><td><u>12-18</u></td><td>_</td><td></td><td></td><td></td></td<>	<u>P-21-5W</u>				<u>12-18</u>	_			
Bd2zne         1.00         ND           Bromochloromethane         1.00         ND         "           Bromochloromethane         1.00         ND         "           Bromochloromethane         "         1.00         ND         "           Bromochloromethane         "         1.00         ND         "           Bromochloromethane         "         1.00         ND         "           Bromodichloromethane         "         1.00         ND         "           Bromodichloromethane         "         "         1.00         ND         "           Bromodichloromethane         "         "         1.00         ND         "           Bromodichloromethane         "         "         1.00         ND         "           Sec-Butylbenzene         "         "         1.00         ND         "           Carbon tettrachloride         "         "         1.00         ND         "           Chlorothane         "         "         1.00         ND         "           Chlorothane         "         "         1.00         ND         "           Chlorothane         "         "         1.00         ND </td <td>Acetone</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Acetone								
Bromochloromethane         -         -         1.00         ND           Bromochloromethane         -         -         1.00         ND         -           2-Butanone         -         -         1.00         ND         -           a-Butylbenzene         -         -         1.00         ND         -           cert-Butylbenzene         -         -         1.00         ND         -           carbon ettarchoride         -         -         1.00         ND         -           Carbon ettarchoride         -         -         1.00         ND         -           Chloroform         -         -         1.00         ND         -           Chloroform         -         -         1.00         ND         -           Chloroform         -         -         1.00         ND         -           1.2-Dibromo-3-chloropropane         -         -	Benzene								
Bromodelinative         1.00         ND           Bromodelinoromithane         "         1.00         ND          Butanone         "         "         1.00         ND           sec-Butylbenzene         "         "         1.00         ND         "           carbon disulfide         "         "         1.00         ND         "           Carbon disulfide         "         "         1.00         ND         "           Carbon disulfide         "         "         1.00         ND         "           Chlorobrane         "         "         1.00         ND         "           Chlorobrane         "         "         1.00         ND         "           Chlorobrane         "         "         1.00         ND         "           1,2-Dibromo-3-chloropropane <td"< td=""><td>Bromobenzene</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td"<>	Bromobenzene								
Bromotering         *         *         *         1.00         ND           Bromotering         *         *         10.0         ND         *           Bromotering         *         *         10.0         ND         *           2-Butanone         *         *         25.0         ND         *           -Butylbenzene         *         *         1.00         ND         *           sec-Butylbenzene         *         *         1.00         ND         *           carbon disulfide         *         *         1.00         ND         *           Carbon disulfide         *         *         1.00         ND         *           Carbon disulfide         *         *         1.00         ND         *           Chlorothenzene         *         *         1.00         ND         *           1_2-Dibromo-1         *         *         *	Bromochloromethane	ti			•				
Brommorthane         "         "         1.00         ND           2-Butanone         "         "         10.0         ND           2-Butanone         "         "         1.00         ND           2-Butanone         "         "         1.00         ND           see-Batylbenzene         "         "         1.00         ND           carbon disulfide         "         "         1.00         ND           Carbon disulfide         "         "         1.00         ND           Carbon disulfide         "         "         1.00         ND           Carbon tetrachloride         "         "         1.00         ND         "           Chloroethane         "         "         1.00         ND         "           Chloroethane         "         "         1.00         ND         "           2-Chloroothane         "         "         1.00         ND         "           1.00 totoluene         "         "         1.00         ND         "           1.2-Dibronosthane         "         "         1.00         ND         "           1.2-Dibronosthane         "         "         1.0	Bromodichloromethane								
Brommentatie         "         "         25.0         ND           2-Butanone         "         1.00         ND         "           n-Butylbenzene         "         1.00         ND         "           sec-Butylbenzene         "         1.00         ND         "           carbon disulfde         "         1.00         ND         "           Carbon disulfde         "         1.00         ND         "           Carbon disulfde         "         "         1.00         ND         "           Carbon disulfde         "         "         1.00         ND         "           Chlorothane         "         "         1.00         ND         "           Chlorothane         "         "         1.00         ND         "           Chlorothane         "         "         1.00         ND         "           2-Chlorotoluene         "         "         1.00         ND         "           1,2-Dibromo-3-chloropropane         "         "         1.00         ND         "           1,2-Dibromo-3-chloropropane         "         "         1.00         ND         "           1,2-Dibrhorobenzene	Bromoform	t1					ND		
n-Butylbenzene         1.00         ND         ND           sec-Butylbenzene         """"""""""""""""""""""""""""""""""""	Bromomethane	"	17	*1			ND		
see-Batylbenzene         1.00         ND           tert-Butylbenzene         1.00         ND           Carbon tetrachloride         1.00         ND           Carbon tetrachloride         2.00         ND           Chlorobenzene         1.00         ND           Chlorobethane         2.00         ND           Chlorobethane         2.00         ND           Chlorobethane         2.00         ND           2-Chlorotoluene         3.00         ND           Chlorobethane         3.00         ND           2-Chlorotoluene         3.00         ND           2-Dibromo-3-chloropopane         1.00         ND           1,2-Dibromoethane         1.00         ND           1,2-Dibromoethane         1.00         ND           1,2-Dichlorobenzene         1.00         ND           1,3-Dichlorobenzene         1.00         ND           1,4-Dichlorobenzene         1.00         ND           1,1-Dichloroethane <td>2-Butanone</td> <td>*1</td> <td>16</td> <td>17</td> <td></td> <td></td> <td>ND</td> <td>*1</td> <td></td>	2-Butanone	*1	16	17			ND	*1	
tert-Buylbenzene       1.00       ND         Carbon disulfide       10.0       ND         Carbon tetrachloride       2.00       ND         Chlorobenzene       1.00       ND         Chlorobenzene       1.00       ND         Chlorothane       1.00       ND         2-Chlorothane       1.00       ND         2-Chlorothane       1.00       ND         1,2-Dibromo-3-chloropropane       1.00       ND         1,2-Dibromo-dhane       1.00       ND         1,2-Dibromothane       1.00       ND         1,2-Dichlorobenzene       1.00       ND         1,2-Dichlorobenzene       1.00       ND         1,1-Dichlorobenzene       1.00       ND         1,1-Dichlorobenzene       1.00       ND         1,1-Dichlorothane       1.00       ND         1,1-Dichlorothane       1.00       ND	n-Butylbenzene	u •	14	14		1.00	ND	11	
Carbon isulfide       10.0       ND       "         Carbon tetrachloride       "       2.00       ND       "         Chlorobenzene       1.00       ND       "       "       1.00       ND       "         Chlorobenzene       "       1.00       ND       "       "       1.00       ND       "         Chlorobenzene       "       1.00       ND       "       "       1.00       ND       "         Chlorobenzene       "       "       1.00       ND       "	sec-Butylbenzene	н	17	14		1.00	ND	н	
Carbon tetrachloride       "       2.00       ND       "         Chlorobenzene       "       1.00       ND       "         Chloroethane       "       2.00       ND       "         Chloroethane       "       1.00       ND       "         Chloroethane       "       1.00       ND       "         Chloroethane       "       1.00       ND       "         2-Chlorotoluene       "       "       1.00       ND       "         2-Chlorotoluene       "       "       1.00       ND       "         2-Chlorotoluene       "       "       1.00       ND       "         1,2-Dibromo-3       "       "       1.00       ND       "         1,2-Dibromo-dhane       "       "       1.00       ND       "         1,2-Dibromoethane       "       "       1.00       ND       "         1,2-Dibromoethane       "       "       1.00       ND       "         1,2-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichloroethane	tert-Butylbenzene	U.	0	14		1.00	ND	11	
Chlorobenzene       """"""""""""""""""""""""""""""""""""	Carbon disulfide	0	**	0		10.0	ND	17	
Chlorothane       """""       1.00       ND       "         Chlorothane       """""       1.00       ND       "         Chlorothane       """""       1.00       ND       "         2-Chlorothuene       """"       1.00       ND       "         2-Chlorothuene       """"       1.00       ND       "         2-Chlorothuene       """"       1.00       ND       "         1.2-Dibromo-3-chloropropane       """"       1.00       ND       "         1.2-Dibromoethane       """"       1.00       ND       "         1.2-Dibromoethane       """"       1.00       ND       "         1.2-Dibromoethane       """""       1.00       ND       "         1.3-Dichlorobenzene       """"""       1.00       ND       "         1.4-Dichloroethane       """"""""       1.00       ND       "         1.1-Dichloroethane       """""""""""""       1.00       ND       "	Carbon tetrachloride	n	**	11		2.00	ND	n '	
Chloroberhane       1.00       ND         Chloroberhane       1.00       ND         2-Chlorobluene       1.00       ND         2-Chlorobluene       1.00       ND         4-Chlorobluene       1.00       ND         1,2-Dibromo-3-chloropropane       "       1.00       ND         1,2-Dibromo-3-chloropropane       "       1.00       ND         1,2-Dibromochloromethane       "       1.00       ND         1,2-Dibromochloromethane       "       1.00       ND         1,2-Dibromochloromethane       "       1.00       ND         1,2-Dibromochane       "       1.00       ND         1,2-Dichlorobenzene       "       "       1.00       ND         1,4-Dichlorobenzene       "       "       1.00       ND         1,1-Dichlorobenzene       "       "       1.00       ND         1,1-Dichlorobenzen	Chlorobenzene	**	н	*1		1.00	ND	n	
Chloroform       "       "       1.00       ND       "         Chloromethane       "       "       5.00       ND       "         2-Chlorotoluene       "       "       1.00       ND       "         4-Chlorotoluene       "       "       1.00       ND       "         4-Chlorotoluene       "       "       1.00       ND       "         1,2-Dibromo-3-chloropropane       "       "       1.00       ND       "         1,2-Dibromo-thane       "       "       1.00       ND       "         1,2-Dibromoethane       "       "       1.00       ND       "         1,2-Dibromoethane       "       "       1.00       ND       "         1,2-Dibromoethane       "       "       1.00       ND       "         1,2-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,1-Dichlorobenzene       " <td>Chloroethane</td> <td>"</td> <td>"</td> <td>**</td> <td></td> <td>2.00</td> <td>ND</td> <td>e1</td> <td></td>	Chloroethane	"	"	**		2.00	ND	e1	
2-Chlorotoluene       "       1.00       ND         2-Chlorotoluene       "       1.00       ND         1,2-Dibromo-3-chloropropane       "       1.00       ND         1,2-Dibromo-3-chloropropane       "       1.00       ND         1,2-Dibromo-3-chloropropane       "       1.00       ND         1,2-Dibromo-4-nee       "       1.00       ND         1,2-Dibromo-5-chloropropane       "       1.00       ND         1,2-Dibromo-5-chloropropane       "       "       1.00       ND         1,2-Dibromo-5-chloropropane       "       "       1.00       ND       "         1,2-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,2-Dichloroethane       "       "       1.00       ND       "         1,2-Dichloroethene       "       "       1.00       ND		"	II .	"		1.00	ND	**	
4-Chlorotoluene       """"       1.00       ND         4-Chlorotoluene       """"       1.00       ND         1,2-Dibromo-3-chloropropane       """"       1.00       ND         Dibromochloromethane       """"       1.00       ND         1,2-Dibromoethane       """"       1.00       ND         1,2-Dibromoethane       """""       1.00       ND         1,2-Dichlorobenzene       """""       1.00       ND         1,3-Dichlorobenzene       """"""       1.00       ND         1,4-Dichlorobenzene       """""""       1.00       ND         1,4-Dichlorobenzene       """""""""""       1.00       ND         1,4-Dichlorobenzene       """""""""""""""""""       1.00       ND         1,4-Dichlorobenzene       """"""""""""""""""""""""""""""""""""	Chloromethane					5.00	ND	**	
4-Chlorotoluene       """"       1.00       ND       "         1,2-Dibromo-3       Chloropropane       """"       1.00       ND       "         Dibromochloromethane       """""       1.00       ND       "         1,2-Dibromoethane       """"""       1.00       ND       "         1,2-Dibromoethane       """"""""""""""""""""""""""""""""""""	2-Chlorotoluene	0	0			1.00	ND	11	
1,2-Dibromo-3       chloropropane       "       "       1.00       ND       "         Dibromochloromethane       "       "       1.00       ND       "         1,2-Dibromoethane       "       "       1.00       ND       "         Dibromoethane       "       "       1.00       ND       "         1,2-Dichlorobenzene       "       "       1.00       ND       "         1,3-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethene       "       "       1.00       ND       "         1,2-Dichloroethene       "       "       1.00       ND       "         1	4-Chlorotoluene	u	и, .			1.00	ND	71	
Dibromochloromethane       """"""""""""""""""""""""""""""""""""		11	••			1.00	ND	н	
1,2-Dibromothane       "       "       1.00       ND       "         Dibromomethane       "       "       1.00       ND       "         1,2-Dichlorobenzene       "       "       1.00       ND       "         1,3-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethene       "       "       1.00       ND       "         1,2-Dichloropthene       "       "       1.00       ND       "         1,3-Dichloropropane       "       "       1.00       ND       "         1,1-Dichloropropane		11				1.00	ND		
Dibromomethane       "       "       1.00       ND       "         1,2-Dichlorobenzene       "       "       1.00       ND       "         1,3-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         Dichlorothane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,2-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethene       "       "       1.00       ND       "         rans-1,2-Dichloroethene       "       "       "       1.00       ND       "         1,2-Dichloropropane       "       "       "       1.00       ND       "         1,3-Dichloropropane       "       "       "       1.00       ND       "	1	11				1.00	ND		
1,2-Dichlorobenzene       "       "       1.00       ND       "         1,3-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         Dichlorodifluoromethane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,2-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,1-Dichloroethene       "       "       1.00       ND       "         1,2-Dichloroethene       "       "       1.00       ND       "         trans-1,2-Dichloroethene       "       "       1.00       ND       "         1,3-Dichloropropane       "       "       "       1.00       ND       "         1,1-Dichloropropane       "       "       "       1.00       ND       "	· · · · · · · · · · · · · · · · · · ·		н			1.00	ND	0	
1,3-Dichlorobenzene       "       "       1.00       ND       "         1,4-Dichlorobenzene       "       "       1.00       ND       "         Dichlorodifluoromethane       "       "       5.00       ND       "         Dichlorodifluoromethane       "       "       5.00       ND       "         1,1-Dichloroethane       "       "       1.00       ND       "         1,2-Dichloroethane       "       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       "       1.00       ND       "         1,1-Dichloroethane       "       "       "       1.00       ND       "         1,1-Dichloroethene       "       "       "       1.00       ND       "         cis-1,2-Dichloroethene       "       "       "       1.00       ND       "         1,2-Dichloroptopane       "       "       "       1.00       ND       "         1,3-Dichloropropane       "       "       "       1.00       ND       "         1,1-Dichloropropane       "       "       "       1.00       ND       "         1,1-Dichloropr			u .				ND	**	
I,4-Dichlorobenzene""1.00ND"Dichlorodifluoromethane""5.00ND"1,1-Dichloroethane""1.00ND"1,2-Dichloroethane""1.00ND"1,1-Dichloroethane"""1.00ND"1,1-Dichloroethane"""1.00ND"1,1-Dichloroethene"""1.00ND"cis-1,2-Dichloroethene"""1.00ND"trans-1,2-Dichloroethene"""1.00ND"1,2-Dichloroptopane"""1.00ND"1,3-Dichloropropane"""1.00ND"1,1-Dichloroptopane"""1.00ND"1,1-Dichloropropane"""1.00ND"1,1-Dichloropropane"""1.00ND"1,1-Dichloropropane"""1.00ND"1,1-Dichloropropene"""1.00ND"cis-1,3-Dichloropropene"""1.00ND"	-	н	*1	17				**	
Dichlorodifluoromethane       """""       5.00       ND       "         1,1-Dichloroethane       """"""       1.00       ND       "         1,2-Dichloroethane       """"""""""""""""""""""""""""""""""""			н	n				91	
1,1-Dichloroethane       """""       1.00       ND       "         1,2-Dichloroethane       """""       1.00       ND       "         1,1-Dichloroethane       """"""       1.00       ND       "         1,1-Dichloroethane       """"""""       1.00       ND       "         1,1-Dichloroethane       """"""""""""""""""""""""""""""""""""				0			ND	17	
1,2-Dichloroethane       """"       1.00       ND       "         1,1-Dichloroethane       """""       1.00       ND       "         1,1-Dichloroethane       """"""       1.00       ND       "         cis-1,2-Dichloroethane       """""""""       1.00       ND       "         trans-1,2-Dichloroethane       """"""""""""""""""""""""""""""""""""			17				ND	14	
1,1-Dichloroethene""1.00ND"cis-1,2-Dichloroethene""1.00ND"trans-1,2-Dichloroethene""1.00ND"1,2-Dichloropropane""1.00ND"1,3-Dichloropropane""1.00ND"2,2-Dichloropropane""1.00ND"1,1-Dichloropropane""1.00ND"cis-1,3-Dichloropropene""1.00ND"1,1-Dichloropropene"""1.00ND"	,	"	'n	н					
cis-1,2-Dichloroethene""1.00ND"trans-1,2-Dichloroethene""1.00ND"1,2-Dichloropropane""1.00ND"1,3-Dichloropropane""1.00ND"2,2-Dichloropropane""1.00ND"1,1-Dichloropropane""1.00ND"cis-1,3-Dichloropropene""1.00ND"	•	"	"	н			ND	*1	
trans-1,2-Dichloroethene       """"       1.00       ND       "         1,2-Dichloropropane       """"       1.00       ND       "         1,3-Dichloropropane       """"       1.00       ND       "         2,2-Dichloropropane       """"       1.00       ND       "         1,1-Dichloropropane       """"       1.00       ND       "         2,2-Dichloropropane       """"       1.00       ND       "         1,1-Dichloropropane       """"       "       1.00       ND       "         cis-1,3-Dichloropropene       """"       """       1.00       ND       "	-	н	*1	17			ND	11	
1,2-Dichloropropane       "       "       I.00       ND       "         1,3-Dichloropropane       "       "       1.00       ND       "         2,2-Dichloropropane       "       "       1.00       ND       "         1,1-Dichloropropane       "       "       1.00       ND       "         cis-1,3-Dichloropropene       "       "       1.00       ND       "	•		18	a			ND	It	
1,3-Dichloropropane       "       "       1.00       ND       "         2,2-Dichloropropane       "       "       1.00       ND       "         1,1-Dichloropropene       "       "       1.00       ND       "         cis-1,3-Dichloropropene       "       "       1.00       ND       "	-	u	11	н					
1,00     ND       2,2-Dichloropropane     "       1,1-Dichloropropene     "       "     "       1,3-Dichloropropene     "       "     "       1,00     ND       ND     "			U	11				n	
1,1-Dichloropropene       "       "       1.00       ND       "         cis-1,3-Dichloropropene       "       "       1.00       ND       "		"	"	н				u	
cis-1,3-Dichloropropene " " " 1.00 ND "								П	
cis-1,3-Dichloropropene								11	
trans-1,3-Dichloropropene 1.00 ND									
	trans-1,3-Dichloropropene					1.00	ND		

North Creek Analytical - Bothell

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Joy B Chang, Broject Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420.9200 fax 425.420.9210 Spokane

425,420,9200 fax 425,420,9210 Iokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509,924,9200 fax 509.924,9290 ortland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906,9200 fax 503.906,9210 Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 Portland

541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99	Γ
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58	

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-21-5W (continued)			<u>B9062</u>	(2-18			<u>Water</u>	
Ethylbenzene	0690282	6/10/99	6/11/99		1.00	ND	ug/l	
Hexachlorobutadiene	91	u	Ħ		2.00	ND	"	
2-Hexanone	"	n	н		10.0	ND	u	
Isopropylbenzene	0	17			1.00	ND	11	
p-Isopropyltoluene	11	U	17		1.00	ND	"	
4-Methyl-2-pentanone	*1	a	U		5.00	ND	u	
Methylene chloride	11	<b>.</b> .	*1		5.00	ND	u	
Naphthalene	ч	u	<del>1</del> 1		1.00	ND	u	
n-Propylbenzene		11	и		1.00	ND	17	
Styrene	n		14		1.00	ND	v	
1,1,1,2-Tetrachloroethane	"	U .	17		1.00	ND	**	
1,1,2,2-Tetrachloroethane	"	ti	11		1.00	ND	*1	
Tetrachloroethene	н		"		1.00	ND	н	
Toluene	11		11		1.00	ND	u	
1,2,3-Trichlorobenzene	17	0	н		1.00	ND	v	
1,2,4-Trichlorobenzene	*1		u		1.00	ND	U	
1,1,1-Trichloroethane	11	"			1.00	ND	0	
1,1,2-Trichloroethane	u	н	11		1.00	ND	11	
Trichloroethene		17	"		1.00	ND		
Trichlorofluoromethane	0	U U	н		1.00	ND	n	
1,2,3-Trichloropropane	*1	**	18		1.00	ND		
1,2,4-Trimethylbenzene	"	n	v		1.00	ND	0	
1,3,5-Trimethylbenzene	".	u	71		1.00	ND	"	
Vinyl chloride	u	11	"		0.500	ND		1
o-Xylene	11	0	H		1.00	ND	u	
m,p-Xylene	"	n	"		2.00	ND		
Surrogate: 4-BFB	"	_ ,,	"	75.0-135		108	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		126	н	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		118	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		98.0	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-21-12W</u>		<i></i>	<u>B9062</u>	12-19			<u>Water</u>	
Acetone	0690282	6/10/99	6/11/99		25.0	ND	ug/l	
Benzene	11	0	11		1.00	ND	11	
Bromobenzene	11	*1	II		1.00	ND	14	
Bromochloromethane	U	11	11		1.00	ND	8 <b>9</b>	
Bromodichloromethane	U	"	17		1.00	ND	14	
Bromoform	۳.	11	11		1.00	ND	10	
Bromomethane	"	11	11		10.0	ND	17	
2-Butanone	"				25.0	ND	**	
n-Butylbenzene	11		ti		1.00	ND		
sec-Butylbenzene	11	"	ti -		1.00	ND	17	
tert-Butylbenzene		Ħ	"		1.00	ND	11	
Carbon disulfide	и	11	11		10.0	ND		
Carbon tetrachloride	. 0	u	11		2.00	ND	н	
Chlorobenzene	"	н	н		1.00	ND	11	
Chloroethane	"	*1			2.00	ND	"	
Chloroform	11	и	17		1.00	ND	н	
Chloromethane	11	в	17		5.00	ND	11	
2-Chlorotoluene	н	н	U.		1.00	ND	n ,	
4-Chlorotoluene		17			1.00	ND		
1,2-Dibromo-3-chloropropane	"	0	*1		1.00	ND		
Dibromochloromethane		11	"		1.00	ND	t4	
1,2-Dibromoethane	**	**	н		1.00	ND		
Dibromomethane	п	н	н		1.00	ND	"	
1,2-Dichlorobenzene		н			1.00	ND	"	
1,3-Dichlorobenzene			U		1.00	ND	u	
1,4-Dichlorobenzene			u		1.00	ND	н	
Dichlorodifluoromethane	"				5.00	ND	u	
1,1-Dichloroethane		"	11		1.00	ND		
1,2-Dichloroethane		*1			1.00	ND	**	
1,1-Dichloroethene	17	н	u		1.00	ND	11	
cis-1,2-Dichloroethene		14	tt.		1.00	ND	91	
trans-1,2-Dichloroethene	*1	υ	U.		1.00	ND	н	
	11	U	н		1.00	ND	н	
1,2-Dichloropropane	11	*1	н		1.00	ND		
1,3-Dichloropropane					1.00	ND	и	
2,2-Dichloropropane		11					14	
1,1-Dichloropropene	n	"	"		1.00	ND	u	
cis-1,3-Dichloropropene			17 17		1.00	ND		
trans-1,3-Dichloropropene	41	17	IT.		1.00	ND		

North Creek Analytical - Bothell

Joy B Chang, ProjectManager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

425.420.9200 fax 425.420.9210 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 Spokane

503.906.9200 Tax 503.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 Tax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 Tax 541.382.7588 Portland Bend

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

Batch	Date	Date	Surrogate	Reporting			
Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
•		B9062	12-19			Water	
0690282	6/10/99			1.00	ND		
1	8	п		2.00	ND	"	
n	*1	н		10.0	ND	Ð	
"	н	ei		1.00	ND	н	
"	н	11		1.00	ND		
U .	11	u		5.00	ND	11	
n	0	11		5.00	ND	"	
11	н	0			ND		
14	*1	*1		1.00	ND	17	
		11			ND		
0					ND	U	
	11	17			ND	11	
"	n	0				11	
. 11	n	u				**	
14	n	"					
u	"	"				н	
	14	11			ND	U	
u	u.					0	
0	11	U U			ND	91	
17	н	"			ND	11	
	17	н			ND	14	
u					ND	11	
		n .			ND	*1	
a	н				ND	**	1
		11 ·				11	
н	17	"				н	
"	"	н	75.0-135		108	%	
"	"	n			127	"	
"	"	"	80.0-125		119	"	
"	"	"			98.5	"	
	Number 0690282 " " " " " " " " " " " " " " " " " "	Number         Prepared           0690282         6/10/99           n         n           n <td>Number         Prepared         Analyzed           D690282         6/10/99         6/11/99           n         n         6/10/91           n         n         0           n         n         n           n<td>Number         Prepared         Analyzed         Limits           D690282         6/10/99         6/11/99         """"""""""""""""""""""""""""""""""""</td><td>Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/11/99         1.00           "         "         2.00           "         "         10.0           "         "         2.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "</td><td>Number         Prepared         Analyzed         Limits         Limit         Result           0690282         6/10/99         6/11/99         1.00         ND           "         "         2.00         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         1.00         ND           "         "</td><td>Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/11/99         1.00         ND         ug/l           "         "         2.00         ND         "           "         "         1.00         ND         "           "         "</td></td>	Number         Prepared         Analyzed           D690282         6/10/99         6/11/99           n         n         6/10/91           n         n         0           n         n         n           n <td>Number         Prepared         Analyzed         Limits           D690282         6/10/99         6/11/99         """"""""""""""""""""""""""""""""""""</td> <td>Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/11/99         1.00           "         "         2.00           "         "         10.0           "         "         2.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "</td> <td>Number         Prepared         Analyzed         Limits         Limit         Result           0690282         6/10/99         6/11/99         1.00         ND           "         "         2.00         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         1.00         ND           "         "</td> <td>Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/11/99         1.00         ND         ug/l           "         "         2.00         ND         "           "         "         1.00         ND         "           "         "</td>	Number         Prepared         Analyzed         Limits           D690282         6/10/99         6/11/99         """"""""""""""""""""""""""""""""""""	Number         Prepared         Analyzed         Limits         Limit           0690282         6/10/99         6/11/99         1.00           "         "         2.00           "         "         10.0           "         "         2.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "         1.00           "         "	Number         Prepared         Analyzed         Limits         Limit         Result           0690282         6/10/99         6/11/99         1.00         ND           "         "         2.00         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         10.0         ND           "         "         1.00         ND           "         "	Number         Prepared         Analyzed         Limits         Limit         Result         Units           0690282         6/10/99         6/11/99         1.00         ND         ug/l           "         "         2.00         ND         "           "         "         1.00         ND         "           "         "

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509,924,9200
 fax 509,924,9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503,906,9200
 fax 503,906,9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541,383,9310
 fax 541,382,7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting	<b>.</b> .		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-22-5W</u>			<u>B9062</u>	12-20			<u>Water</u>	
Acetone	0690291	6/11/99	6/11/99		25.0	ND	ug/l	
Benzene	0		*1		1.00	ND	"	
Bromobenzene	"		**		1.00	ND		
Bromochloromethane	н		н		1.00	ND	**	
Bromodichloromethane		17	17		1.00	ND	11	
Bromoform	"	17	U.		1.00	ND	н	
Bromomethane		*1	ri -		10.0	ND		
2-Butanone	"	**	11		25.0	ND	н	
n-Butylbenzene		11	н		1.00	ND		
sec-Butylbenzene		17	It		1.00	ND	u	
tert-Butylbenzene		14	1 H		1.00	ND	a.	
Carbon disulfide	17	11			10.0	ND	<b>†</b> 1	
Carbon tetrachloride	U	"	u		2.00	ND	11	
Chlorobenzene		"	"		1.00	ND	н	
Chloroethane	*1	•1	"		2.00	ND	II.	
Chloroform	u	н	н		1.00	ND	19	
Chloromethane	11				5.00	ND		
2-Chlorotoluene	U	u .			1.00	ND	U	
4-Chlorotoluene	11	11	U		1.00	ND	*1	
1,2-Dibromo-3-chloropropane	11		"		1.00	ND	•	•
Dibromochloromethane	19		п		1.00	ND		
1,2-Dibromoethane	11		18		1.00	ND	n	
Dibromomethane	"	0	11		1.00	ND	*1	
1,2-Dichlorobenzene	н	41			1.00	ND	0	
1,3-Dichlorobenzene		u	"		1.00	ND	"	
1,4-Dichlorobenzene	**	н	н		1.00	ND		
Dichlorodifluoromethane	*1				5.00	ND		
1,1-Dichloroethane	п		11		1.00	ND	**	
1,2-Dichloroethane	U.		U U		1.00	ND	*1	
1,1-Dichloroethene	U	u	"		1.00	ND	н	
cis-1,2-Dichloroethene	**	11	п.		1.00	1.46	IT	
trans-1,2-Dichloroethene	п		It		1.00	ND	If.	
1,2-Dichloropropane	17	н	U.		1.00	ND	u	
1,3-Dichloropropane	. 0	н	n		1.00	ND	**	
2,2-Dichloropropane	41	U.	*1		1.00	ND	n	
1,1-Dichloropropene	н	U			1.00	ND	и	
· · ·		н	17		1.00	ND	17	
cis-1,3-Dichloropropene		н	u.		1.00	ND	u.	
trans-1,3-Dichloropropene					1.00			

North Creek Analytical - Bothell

Project Manager

Joy B Chang

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

### Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			D00/0				<b>NN</b> / - 4	
P-22-5W (continued)	0.000001	<i>c</i> /11/00	<u>B9062</u>	12-20	1.00		<u>Water</u>	
Ethylbenzene	0690291	6/11/99 "	6/11/99 "		1.00	ND	ug/l "	
Hexachlorobutadiene	"		U		2.00	ND		
2-Hexanone	"	14			10.0	ND		
Isopropylbenzene					1.00	ND		
p-Isopropyltoluene		14	н		1.00	ND	11	
4-Methyl-2-pentanone	14	11	н		5.00	ND	ti	
Methylene chloride	11	U U			5.00	ND	*1	
Naphthalene	17		11		1.00	ND	*1	
n-Propylbenzene	U U	11	U .		1.00	ND	11	
Styrene		**	U		1.00	ND	и	
1,1,1,2-Tetrachloroethane	n	17	11		1.00	ND	u	
1,1,2,2-Tetrachloroethane	"		*1		1.00	ND		
Tetrachloroethene	**	17	и		1.00	ND		
Toluene	14	17			1.00	ND	U	
1,2,3-Trichlorobenzene	17	U			1.00	ND	н	
1,2,4-Trichlorobenzene	v	**	17		1.00	ND	"	
1,1,1-Trichloroethane	*1	н .	U		1.00	ND	**	
1,1,2-Trichloroethane	н		0		1.00	ND	н	
Trichloroethene		14	11		1.00	ND	17	
Trichlorofluoromethane	14	0	м		1.00	ND	14	
1,2,3-Trichloropropane	u	**	17		1.00	ND		
1,2,4-Trimethylbenzene	n	*1	17		1.00	ND		
1,3,5-Trimethylbenzene			0		1.00	ND	n	
Vinyl chloride	11	10			0.500	ND	**	1
o-Xylene	11		41		1.00	ND	н	
m,p-Xylene	. 11	tt	**	s.	2.00	ND	u .	
Surrogate: 4-BFB		"	"	75.0-135		109	%	
Surrogate: 1,2-DCA-d4	"	"	"	70.0-135		128	"	
Surrogate: 1,2-DCA-a4 Surrogate: Dibromofluoromethane	"	"	"	80.0-125		120	"	
<b>.</b>	"	"	II.	80.0-120		98.0	"	
Surrogate: Toluene-d8				00.0-120		20.0		

North Creek Analytical - Bothell

Joy B Chang, Project Marlager



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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting		<b>* *</b> •.	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-22-12W			<u>B9062</u>	<u>12-21</u>			<u>Water</u>	
Acetone	0690291	6/11/99	6/11/99		25.0	ND	ug/l	
Benzene	18	14	**		1.00	ND	11	
Bromobenzene	11	U	17		1.00	· ND	U	
Bromochloromethane	U		14		1.00	ND	11	
Bromodichloromethane	11	11	11		1.00	ND	ti .	
Bromoform	"				1.00	ND	"	
Bromomethane	"	11	11		10.0	ND	11	
2-Butanone	11	н	11		25.0	ND	11	
n-Butylbenzene	11		**		1.00	ND	н	
sec-Butylbenzene		U .	It		1.00	ND	u	
tert-Butylbenzene	"	0	н		1.00	ND	н	
Carbon disulfide		п			10.0	ND	u	
Carbon tetrachloride	U	*1	14		2.00	ND		
Chlorobenzene		74	0		1.00	ND	U.	
Chloroethane	и		11		2.00	ND		
Chloroform	. и	n .	*1		1.00	ND	11	
Chloromethane	"	a a	"		5.00	ND	11	
2-Chlorotoluene	D	n	14		1.00	ND	n	
4-Chlorotoluene	u	11			1.00	- ND	D.	
1,2-Dibromo-3-chloropropane	*1	, H			1.00	ND		
Dibromochloromethane		11	ti -		1.00	ND	19	
1,2-Dibromoethane	17	0	*1		1.00	ND	*1	
Dibromomethane	U	11	11		1.00	ND	61	
1,2-Dichlorobenzene	u	11	u.		1.00	ND	**	
1,3-Dichlorobenzene	. "	11	17		1.00	ND	u	
1,4-Dichlorobenzene	11	н			1.00	ND	и ,	
Dichlorodifluoromethane	U		**		5.00	ND	u.	
1,1-Dichloroethane	u	17	11		1.00	ND	ti .	
1,2-Dichloroethane	**	۳.	н		1.00	ND	"	
1,1-Dichloroethene	11		14		1.00	ND	11	
cis-1,2-Dichloroethene	14	11			1.00	ND	11	
trans-1,2-Dichloroethene	11	17			1.00	ND	u -	
1,2-Dichloropropane	"	"	п		1.00	ND	u,	
1,3-Dichloropropane	n	*1	н		1.00	ND	P	
2,2-Dichloropropane	11	н			1.00	ND	n	
1,1-Dichloropropene		D.	U .		1.00	ND	Ħ	
cis-1,3-Dichloropropene	u.	U.	u		1.00	ND	"	
trans-1,3-Dichloropropene	*1		"		1.00	ND	11	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420,9200

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509,924,9200

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503,906,9200

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541,383,9310

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B North Creek Analytical - Portland

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-22-12W (continued)			<b>B9062</b>	12-21			<u>Water</u>	
Ethylbenzene	0690291	6/11/99	6/11/99		1.00	ND	ug/l	
Hexachlorobutadiene	"	11	ti		2.00	ND	"	
2-Hexanone	"	н	11		10.0	ND	0	
Isopropylbenzene	"	"	*1		1.00	ND		
p-Isopropyltoluene	"	11	н		1.00	ND	n	
4-Methyl-2-pentanone		"	**		5.00	ND	11	
Methylene chloride		"	**		5.00	ND		
Naphthalene		"	н		1.00	ND	u	
n-Propylbenzene	"	14			1.00	ND		
Styrene	"		11		1.00	ND		
1,1,1,2-Tetrachloroethane	"		и ·		- 1.00	ND	U .	
1,1,2,2-Tetrachloroethane	"	17			1.00	ND	U	
Tetrachloroethene	"	.,	н		1.00	ND	u.	
Toluene	"	17	"		1.00	ND	U .	
1,2,3-Trichlorobenzene	4	U U	17		1.00	ND	n	
1,2,4-Trichlorobenzene	11	v	н		. 1.00	ND	U	
1,1,1-Trichloroethane	"		11		1.00	ND	0	
1,1,2-Trichloroethane		ti -	17		1.00	ND		
Trichloroethene			17		1.00	ND	u	
Trichlorofluoromethane	v	*1	u .		1.00	ND	0	
1,2,3-Trichloropropane	ri -	*1	11		1.00	ND	"	
1,2,4-Trimethylbenzene	**	н	*1		1.00	ND	"	
1,3,5-Trimethylbenzene	n	и			1.00	ND	"	
Vinyl chloride		u	*1		0.500	ND	"	1
o-Xylene		17	11		1.00	ND	**	
m,p-Xylene	"	u	н		2.00	ND	••	
Surrogate: 4-BFB	"	"		75.0-135		106	%	
Surrogate: 1,2-DCA-d4	"	n	"	70.0-135		129	"	
Surrogate: Dibromofluoromethane	"	"	"	80.0-125		119	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		101	"	

North Creek Analytical - Bothell

Joy B Chang/Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle		Magic Cleaners	Sampled: 6/7/99					
500 Market Place Tower, 2025 1st Ave	Project Number:		Received: 6/8/99					
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15	5:58				
Dry Weight Determination North Creek Analytical - Bothell								
Sample Name	Lab ID	Matrix	Result	Units				
P-14-4	B906212-05	Soil	As received	%				
P-19-4	B906212-13	Soil	As received	%				
1								

North Creek Analytical - Bothell

Joy B Chang, Project Manager

North Creek Analytical, Inc. Environmental Laboratory Network



503.906.9200 fax 503.906.9210 Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

Dames and Moore Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

.

# Volatile Organic Compounds per EPA Method 8260B/Quality Control North Creek Analytical - Portland

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 0690282	Date Prepa	red: 6/10/9	99		Extrac	tion Method: GC	/MS Vol	atiles		
Blank	0690282-BI									
Acetone	6/10/99			ND	ug/l	25.0				
Benzene	"			ND	"	1.00				
Bromobenzene	17			ND	u	1.00		•		
Bromochloromethane	n			ND	u	1.00				
Bromodichloromethane	"			ND		1.00	•			
Bromoform	"			ND		1.00				
Bromomethane				ND	u .	10.0				
2-Butanone				ND	U	25.0				
n-Butylbenzene	14			ND	11	1.00				
sec-Butylbenzene	u			ND	н	1.00				
tert-Butylbenzene	*1			ND	н	1.00				
Carbon disulfide	*1			ND	· "	10.0				
Carbon tetrachloride	н			ND	11	2.00				
Chlorobenzene				ND		1.00				
Chloroethane	17			ND	0	2.00				
Chloroform	n			ND	11	1.00				
Chloromethane	*1			ND	н	5.00				
2-Chlorotoluene	**			ND	н	1.00				
4-Chlorotoluene	0		-	ND	n	1.00				
1,2-Dibromo-3-chloropropane	n			ND	4	1.00				
Dibromochloromethane	и			ND	0	1.00				
1,2-Dibromoethane	11			ND	11	1.00				
Dibromomethane	14			ND	н	1.00				
1,2-Dichlorobenzene	u			ND	н	1.00				
1,3-Dichlorobenzene	**			ND	14	1.00				
1,4-Dichlorobenzene	н			ND	u.	1.00	•			
Dichlorodifluoromethane	14			ND	U	5.00				
1,1-Dichloroethane	и			ND	**	1.00				
1,2-Dichloroethane	11			ND	н	1.00				
1,1-Dichloroethene	11			ND	11	1.00			·	
cis-1,2-Dichloroethene	17			ND	U	1.00				
trans-1,2-Dichloroethene	U			ND	0	1.00			•	
1,2-Dichloropropane	"			ND	*1	1.00				
1,3-Dichloropropane	11			ND	"	1.00				
2,2-Dichloropropane				ND		1.00				
1,1-Dichloropropene	ч			ND		1.00				
cis-1,3-Dichloropropene	*1			ND	11	1.00				

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Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58

# Volatile Organic Compounds per EPA Method 8260B/Quality Control North Creek Analytical - Portland

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
					-					_
Blank (continued)	<u>0690282-B</u>	<u>LK1</u>								
trans-1,3-Dichloropropene	6/10/99			ND	ug/l	1.00				
Ethylbenzene	. " .			ND	11	1.00				
Hexachlorobutadiene				ND	11	2.00				
2-Hexanone	"			ND	14	10.0				
Isopropylbenzene	u.			ND	11	1.00				
p-Isopropyltoiuene	14			ND	0	1.00				
4-Methyl-2-pentanone	11			ND	11	5.00				
Methylene chloride	n		,	ND	U	5.00				
Naphthalene	63			ND	U	1.00				
n-Propylbenzene	11	•		ND	U	1.00				
Styrene	**			· ND	0	1.00				
1,1,1,2-Tetrachloroethane	н			ND	"	1.00				
1,1,2,2-Tetrachloroethane				ND	н	1.00				
Tetrachloroethene	ir .			ND	11	1.00			•	
Toluene	17			ND	и	1.00				
1,2,3-Trichlorobenzene				ND	u	1.00				
1,2,4-Trichlorobenzene	u			ND	14	1.00				
1,1,1-Trichloroethane	**			ND		1.00				
1,1,2-Trichloroethane	"			ND		1.00				
Trichloroethene				ND		1.00				
Trichlorofluoromethane	11			ND		1.00				
1,2,3-Trichloropropane	11			ND	*1	1.00				
1,2,4-Trimethylbenzene	"			ND		1.00				
1,3,5-Trimethylbenzene	ч			ND	и	1.00				
Vinyl chloride	н			ND	14	0.500				1
o-Xylene	o			ND		1.00				
m,p-Xylene	17			ND	U	2.00				
Surrogate: 4-BFB	"	20.0		20.4	"	75.0-135	102			
Surrogate: 1,2-DCA-d4	"	20.0		22.8	"	70.0-135	114			
Surrogate: Dibromofluoromethane	"	20.0		22.4	"	80.0-125	112			
Surrogate: Toluene-d8	"	20.0		19.9	"	80.0-120	<i>99.5</i>			
5										
LCS	<u>0690282-B</u>	<u>S1</u>								
Benzene	6/10/99	20.0		21.6	ug/l	80.0-125	108			
Chlorobenzene	н	20.0		18.9	0	80.0-125	94.5			
1,1-Dichloroethene		20.0		23.4	n	70.0-135	117			
Toluene	11	20.0		19.5	11	. 80.0-125	97.5			
Trichloroethene	0	20.0		20.7		70.0-130	104			
-										

North Creek Analytical - Bothell

Joy B Chang, Managðr



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210 Spokane

- 425.420.9200 1ax 425.420.9210 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Portland
- Bend

Dames and Moore-Seattle	Project:	Magic Cleaners	Sampled:	6/7/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58	

Volatile Organic Compounds per EPA Method 8260B/Quality Control North Creek Analytical - Portland 

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	_%	Limit	% Notes*
	0/00202 00	1							
LCS (continued)	<u>0690282-BS</u>			10.7		75 0 125	98.5		
Surrogate: 4-BFB	6/10/99	20.0		19.7	ug/l	75.0-135			
Surrogate: 1,2-DCA-d4	"	20.0		21.8	"	70.0-135	109		
Surrogate: Dibromofluoromethane	"	20.0		21.4	"	80.0-125	107		
Surrogate: Toluene-d8	"	20.0		19.4	"	80.0-120	97.0		
	•								
LCS Dup	<u>0690282-B</u>	<u>SD1</u>							0
Benzene	6/10/99	20.0		21.5	ug/l	80.0-125	108	25.0	0
Chlorobenzene	81	20.0		19.2	**	80.0-125	96.0	25.0	1.57
1,1-Dichloroethene	• и	20.0		23.3	11	70.0-135	116	25.0	0.858
Toluene	17	20.0		19.8	0	80.0-125	99.0	25.0	1.53
Trichloroethene	"	20.0		21.6	*1	70.0-130	108	25.0	3.77
Surrogate: 4-BFB	"	20.0		20.1	"	75.0-135	101		
Surrogate: 1,2-DCA-d4	"	20.0		22.2	"	70.0-135	111		
Surrogate: Dibromofluoromethane	"	20.0		21.7	"	80.0-125	109		
Surrogate: Toluene-d8	"	20.0		19.9	"	80.0-120	99.5		

Batch: 0690291		Date Prepared: 6/11/99		Extraction Metho	d: GC/MS Volatiles
Blan <u>k</u>		0690291-BLK1			
Acetone		6/11/99	ND	ug/l	25.0
Benzene		"	ND	11	1.00
Bromobenzene		11	ND		1.00
Bromochlorometha	ine	TI	ND	"	1.00
Bromodichloromet		11	ND	11	1.00
Bromoform		11	ND		1.00
Bromomethane		"	ND	11	10.0
2-Butanone		п	ND	ur .	25.0
n-Butylbenzene		U	ND	11	1.00
sec-Butylbenzene		"	ND	н	1.00
tert-Butylbenzene		0	ND	н	1.00
Carbon disulfide		11	ND	*1	10.0
Carbon tetrachlori	de	n.	ND		2.00
Chlorobenzene		11	ND	u .	1.00
Chloroethane		11	NÐ	н	2.00
Chloroform		11	ND	U .	1.00
Chloromethane		IT	ND	"	5.00
2-Chlorotoluene		0	ND	н	1.00
4-Chlorotoluene		u	ND	u.	1.00
1,2-Dibromo-3-ch	loronronane	u	ND	n	1.00
1,2-D10101110-5-01	ioropropano				

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 6/7/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received: 6/8/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 6/11/99 15:58	

Volatile Organic Compounds per EPA Method 8260B/Quality Control North Creek Analytical - Portland

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
Blank (continued)	<u>0690291-BI</u>	<u>_K1</u>							
Dibromochloromethane	6/11/99			ND	ug/l	1.00			
1,2-Dibromoethane	u.			ND	11	1.00			
Dibromomethane				ND	u	1.00			
1,2-Dichlorobenzene	**			ND	10	1.00			
1,3-Dichlorobenzene	**			ND	16	1.00			
1,4-Dichlorobenzene	**			ND	11	1.00			
Dichlorodifluoromethane	*1			ND	11	5.00			
1,1-Dichloroethane	**			ND	11	1.00			
1,2-Dichloroethane	n			ND	17	1.00			
1,1-Dichloroethene	**			ND	17	1.00			
cis-1,2-Dichloroethene	*1			ND	14	1.00			
trans-1,2-Dichloroethene	11			ND	17	1.00			
1,2-Dichloropropane	**			ND		1.00			
1,3-Dichloropropane	**			ND	U	1.00			
2,2-Dichloropropane	н			ND		1.00			
1,1-Dichloropropene				ND	"	1.00			
cis-1,3-Dichloropropene	"			ND	"	1.00			
trans-1,3-Dichloropropene				ND	*1	1.00			
Ethylbenzene	11			ND	*1	1.00			
Hexachlorobutadiene	*1			ND	"	2.00			
2-Hexanone	"			ND	"	10.0			
Isopropylbenzene	*1			ND	н	1.00	•		
p-Isopropyltoluene	. "			ND	**	1.00			
4-Methyl-2-pentanone	16			ND	"	5.00			
Methylene chloride	11			· ND	14	5.00			
Naphthalene	U			ND		1.00			
n-Propylbenzene				ND	17	1.00			
Styrene	*1			ND		1.00			
1,1,1,2-Tetrachloroethane	11			ND		1.00			
1,1,2,2-Tetrachloroethane	"			ND	*1	1.00			
Tetrachloroethene	11			ND	41	1.00			
Toluene	11			ND	*1	1.00			
1,2,3-Trichlorobenzene	n			ND	н	1.00			
1,2,4-Trichlorobenzene	n			ND	*1	1.00			
1,1,1-Trichloroethane	u			ND	11	1.00			
1,1,2-Trichloroethane	"			ND	11	1.00			
Trichloroethene	н			ND	"	1.00			
Trichlorofluoromethane	н			ND	"	1.00			

North Creek Analytical - Bothell

Joy B Chán Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509,924,9290

 509.924.9200
 Tax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

 541.383.9310
 fax 541.382.7588

1

	Project: Magic Cleaners	Sampled: 6/7/99
Dames and Moore Seattle		Received: 6/8/99
	Project Number: 28171-934-005	Reported: 6/11/99 15:58
Seattle, WA 98121	Project Manager: David Raubvogel	

Volatile Organic Compounds per EPA Method 8260B/Quality Control North Creek Analytical - Portland, 

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Analyte	T mary 200									
<u>Blank (continued)</u>	<u>0690291-B</u>	<u>LK1</u>	,			1.00				
1,2,3-Trichloropropane	6/11/99			ND	ug/l	1.00				
1,2,4-Trimethylbenzene	"			ND	14	1.00				
1,3,5-Trimethylbenzene	**			NĎ	н	1.00				
Vinyl chloride	e			ND		0.500				]
-				ND	. "	1.00				
o-Xylene	14			ND	f1	2.00				
m,p-Xylene		20.0		21.7	"	75.0-135	109			
Surrogate: 4-BFB		20.0		25.7	"	70.0-135	129			
Surrogate: 1,2-DCA-d4	"	20.0		24.0	"	80.0-125	120			
Surrogate: Dibromofluoromethane	"	20.0		20.2	"	80.0-120	101			
Surrogate: Toluene-d8		20.0								
LCS	<u>0690291-B</u>	<u>S1</u>				00 0 <b>10</b> 5	104			
Benzene	6/11/99	20.0		20.9	ug/l	80.0-125				
Chlorobenzene	11	20.0		19.5	11	80.0-125				
1,1-Dichloroethene	11	20.0		24.5	0.	70.0-135				
-	н	20.0		19.8		80.0-125				
Toluene Trichloroethene	н	20.0		21.9	11	70.0-130				
		20.0		21.4	"	75.0-135				
Surrogate: 4-BFB	"	20.0		24.8	"	70.0-135				
Surrogate: 1,2-DCA-d4	"	20.0		23.5	"	80.0-125				
Surrogate: Dibromofluoromethane	"	20.0		20.2	"	80.0-120	) 101			
Surrogate: Toluene-d8										
LCS Dup	<u>0690291-</u>	<u>BSD1</u>				aa a 10	5 104	25.0	0	
Benzene	6/11/99	20.0		20.8	ug/l	80.0-12:	_	25.0	2.07	
Chlorobenzene	U	20.0		19.1	17	80.0-12		25.0 25.0	1.64	
1,1-Dichloroethene	H.	20.0		24.1	17	70.0-13		25.0 25.0	1.04	
Toluene		20.0		19.6	11	80.0-12			1.02	
Trichloroethene	"	20.0		21.8		70.0-13		25.0		
Surrogate: 4-BFB		20.0		21.3	"	75.0-13.				
Surrogale: 4-DID	"	20.0		25.0	"	70.0-13.				
Surrogate: 1,2-DCA-d4	"	20.0		23.7	"	80.0-12				
Surrogate: Dibromofluoromethane	"	20.0		19.8	"	80.0-12	0 99.0			
Surrogate: Toluene-d8		20.0								

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 1115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310
 fax 541.382.7588

Dames and	d Moore- Seattle	Project:	Magic Cleaners	Sampled:	6/7/99
500 Marke	et Place Tower, 2025 1st Ave	Project Number:	28171-934-005	Received:	6/8/99
Seattle, W	A 98121	Project Manager:	David Raubvogel	Reported:	6/11/99 15:58
		No	tes and Definitions		
#	Note				
1	Data evaluated to instrument M	DL of 0.201ug/L. Sam	ple is Non Detect.		
DET	Analyte DETECTED				
ND	Analyte NOT DETECTED at o	r above the reporting lin	nit		
NR	Not Reported				
dry	Sample results reported on a dr	y weight basis			
Recov.	Recovery				
RPD	Relative Percent Difference				

North Creek Analytical - Bothell

Joy B Chang, Project Manager

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(503) 906-9200	FAX 906-9210
(541) 383-9310	FAX 382-7588

Work Order #: 6906 212

CHA	<b>IN OF</b>	<b>CUSTODY</b>	REPORT

North Creek Analytical, Inc. Environmental Laboratory Network www.ncalabs.com

V	OF	<b>CUSTODY</b>	REPORT

CLIENT D MA					CE TO:		·			_				TURN	IAROUNI	D REQUE	ST in Bu	siness Da	.ys*
CLIENT. Amas + 1/100124 -				-							Organic & Inorganic Analyses								
REPORT TO: DAVID RAUBUSGEL																<1			
ADDRESS: 2025 157 /	AU3 6500			•	5.									STD.	Petrole	um Hydrocar	bon Analy	ses	
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PROJECT NUMBER: 28171	-934-005													**	<del>معمد م</del> ا	less than stand			
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CLIENT SAMPLE	SAMPLING	032 032												MATRIX	# OF				NCA WO
IDENTIFICATION	DATE/TIME	82												(W, S, O)	CONT.	СО	MMENT	S .	ID
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2. P-13-12W	0900													1	2			~	2
3.P-14-5W	53														3				03
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5. P-14-4	575													S	2	Hao		~	05
0.P-15-5W	1010													W	3				06
7. P-15-12W	1020													·	3				07.
8. P-16-5W	1125													· ]	3		~ .	·	٧
9. P-16-94	1200														3		·	-	19
10. P.17-20W	1310														3		·		10
11. P-18-5W	1235														3				11
12. P-18-12W	1345		1												3	ļ		_	121
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# **CHAIN OF CUSTODY REPORT**

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North Creek Analytical, Inc. Environmental Laboratory Network

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# Work Order #:

ADDRESS: 5= 007 cs	:1
ADDRESS: 5= sortes	
- SFD. Petroleum Hydrocarbon Analyses	
PHONE: COC 725 - 0795 FAX: 7 073 \$30 PO. NUMBER:	
PROJECT NAME: LFP-MINGIC CLUANINS REQUESTED ANALYSES STD. Please Specify OTHER	
PROJECT NUMBER: 28 171-137-003	
SAMPLED BY: ATV2, -3	
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IDENTIFICATION DATE/TIME S	ID
1. P-20.5W 47/99-1515 W 3 B906212-11	
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 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

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 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/13/99 14:27

# **ANALYTICAL REPORT FOR SAMPLES:**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
P-23-5W	B907190-01	Water	7/9/99
P-23-12W	B907190-02	Water	7/9/99
P-14A-17W	B907190-03	Water	7/9/99
P-24-5W	B907190-04	Water	7/9/99
P-24-12W	B907190-05	Water	7/9/99
P-25-5W	B907190-06	Water	7/9/99
P-25-12W	B907190-07	Water	7/9/99

North Creek Analytical - Bothell

Joy B Chang, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/13/99 14:27

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-23-5W</u>			<u>B9071</u>	90-01			Water	
Acetone	0790310	7/9/99	7/10/99	<u>, , , , , , , , , , , , , , , , , , , </u>	10.0	ND	ug/l	
Benzene	"	11 21 2 2	11		1.00	ND		
Bromobenzene	"	U	11		1.00	ND	12	
Bromochloromethane	R	11	u		1.00	ND		
Bromodichloromethane	18	"			1.00	ND	u	
Bromoform		11	0		1.00	ND		
Bromomethane			n		1.00	ND		
2-Butanone			"		10.0	ND	u	
n-Butylbenzene		u	"		1.00	ND	11	
sec-Butylbenzene		• U			1.00	ND	U.	
tert-Butylbenzene		н	u		1.00	ND	19	
Carbon disulfide	"	11	D		1.00	ND	u	
Carbon tetrachloride	**	н	0		1.00	ND	**	
Chlorobenzene	"	11	11		1.00	ND		
Chloroethane	**	17	*1		1.00	ND		
Chloroform	11	U	"		1.00	ND		
Chloromethane			и		5.00	ND		
2-Chlorotoluene			u		1.00	ND	U	
4-Chlorotoluene	U	II			1.00	ND	"	
Dibromochloromethane	11	11	11		1.00	ND	**	
1,2-Dibromo-3-chloropropane		0	*1		5.00	ND		
1,2-Dibromoethane	u	"	11		1.00	ND		
Dibromomethane	ti -		u.		1.00	ND	п	
1,2-Dichlorobenzene	i i	II			1.00	ND	11	
1,3-Dichlorobenzene	"	11	0		1.00	ND	11	
1,4-Dichlorobenzene	11	17	*1		1.00	ND	11	
Dichlorodifluoromethane		11	н		1.00	ND	"	
1,1-Dichloroethane	п	11	11		1.00	ND	u –	
1.2-Dichloroethane	"	н	и		1.00	ND	"	
1,1-Dichloroethene	н		н		1.00	ND	н	
cis-1,2-Dichloroethene	"	17	11		1.00	ND	u	
trans-1,2-Dichloroethene			*1		1.00	ND	11	
	*1	н	н		1.00	ND	17	
1,2-Dichloropropane	**	II .	IT		1.00	ND	u	
1,3-Dichloropropane		17			1.00	ND	*1	
2,2-Dichloropropane		0			1.00	ND	11	
1,1-Dichloropropene	11	*1	11		1.00	ND ND		
cis-1,3-Dichloropropene					1.00	ND ND		
trans-1,3-Dichloropropene					1.00	UM		

North Creek Analytical - Bothell

Joy B Chan Project Manager



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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-23-5W (continued)			<u>B9071</u>	<u>90-01</u>			<u>Water</u>	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	"	н	II		1.00	ND	0	
2-Hexanone	"	"	It		10.0	ND	ti	
Isopropylbenzene	11	n	н		1.00	ND	0	
p-Isopropyltoluene		"	17		1.00	ND	0	
Methylene chloride		H	11		5.00	ND	u	
4-Methyl-2-pentanone	н	"	17		10.0	ND	n	
Naphthalene	н	н	11		1.00	ND	**	
n-Propylbenzene	n		11		1.00	ND	*1	
Styrene		17	11		1.00	ND	"	
1,1,1,2-Tetrachloroethane		11	u		1.00	ND	*1	
1,1,2,2-Tetrachloroethane	n		11		1.00	ND	"	
Tetrachloroethene	u		11		1.00	ND	"	
Toluene		11	U .		1.00	ND	n	
1,2,3-Trichlorobenzene			11		1.00	ND	**	
1,2,4-Trichlorobenzene	17	11	17		1.00	ND	"	
1,1,1-Trichloroethane		0	U U		1.00	ND	"	
1,1,2-Trichloroethane			0		1.00	ND	11	
Trichloroethene		11	11		1.00	ND	11	
Trichlorofluoromethane	*1	"	u .		1.00	ND	11	
1,2,3-Trichloropropane	*1	0	*1		1.00	ND		
1,2,4-Trimethylbenzene	и	11	11		1.00	ND	u '	
1,3,5-Trimethylbenzene	II.	"	"		1.00	ND	17	
Vinyl chloride	II .	n	7/13/99		0.200	3.01	14	
m,p-Xylene	"	11	7/10/99		2.00	ND	17	
o-Xylene	11	u	II II		1.00	ND		
Surrogate: 2-Bromopropene	"	"	"	80.0-120		111	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		106	"	
Surrogate: Toluene-d8	и .	"	"	80.0-120 ~		98.0	"	
Surrogate: 4-BFB	"	"	"	80.0-120		. 99.5	"	

North Creek Analytical - Bothell



Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			<u>B9071</u>	on n <del>'</del>			<u>Water</u>	
<u>P-23-12W</u>	0790310	7/9/99	7/10/99	<u>90-02</u>	10.0	ND	ug/l	
Acetone	0790310	// <i>9</i> /99 "	//10/99 #		1.00	ND	"	
Benzene	11		17		1.00	ND	ન	
Bromobenzene	11		U		1.00	ND		
Bromochloromethane					1.00	ND	17	
Bromodichloromethane					1.00	ND	61	
Bromoform	**				1.00	ND		
Bromomethane	11 14						н	
2-Butanone		"			10.0	ND	н	
n-Butylbenzene	11		** .		1.00	ND		
sec-Butylbenzene		**			1.00	ND	U	
tert-Butylbenzene	"	"	14		1.00	ND	n	
Carbon disulfide	17	Ir	ti		1.00	ND	u	
Carbon tetrachloride	U	U	*1		1.00	ND	"	
Chlorobenzene	ч	n	11		1.00	ND		
Chloroethane	u	91	11		1.00	ND	"	
Chloroform	U.				1.00	ND	<b>11</b>	
Chloromethane	U	17	11		5.00	ND	н	
2-Chlorotoluene	91	11	11		1.00	'ND	n	
4-Chlorotoluene	"	11			1.00	ND	11	
Dibromochloromethane	14	14	n		1.00	ND	"	
1,2-Dibromo-3 <sup>+</sup> chloropropane	*1	0	*1		5.00	ND	н	
1,2-Dibromoethane	11	11	11	•	1.00	ND	14	
Dibromomethane	17	11			1.00	ND	**	
1,2-Dichlorobenzene	Π.	17	U U		1.00	ND	**	
1,3-Dichlorobenzene	11	11	*1		1.00	ND	12	
1,4-Dichlorobenzene		u	n		1.00	ND	0	
Dichlorodifluoromethane	п	u .	11		1.00	ND	••	
1,1-Dichloroethane	11		0		1.00	ND	n	
1,2-Dichloroethane	14	n	*1		1.00	ND		
1,1-Dichloroethene	u	u	11		1.00	ND		
cis-1,2-Dichloroethene	"	.,	11		1.00	18.7	н	
trans-1,2-Dichloroethene	11	11	"		1.00	ND	и	
1,2-Dichloropropane	"		н		1.00	ND	14	
1,3-Dichloropropane	н	11			1.00	ND	u	
2,2-Dichloropropane	11	n	U		1.00	ND	11	
	U	11	*1		1.00	ND	14	
1,1-Dichloropropene			11		1.00	ND	n .	
cis-1,3-Dichloropropene			11		1.00	ND	u	
trans-1,3-Dichloropropene					1.00	ND		

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

.

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-23-12W (continued)			<u>B90719</u>	<u>90-02</u>			<u>Water</u>	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	u		17		1.00	ND	U	
2-Hexanone	u	n			10.0	ND	*1	
Isopropylbenzene	"	11	11		1.00	ND	91	
p-Isopropyltoluene	**		*1		1.00	ND	18	
Methylene chloride	19	U	14		5.00	ND	11	
4-Methyl-2-pentanone	11	0	17		10.0	ND	U.	
Naphthalene	п	и			1.00	ND	*	
n-Propylbenzene		н	"		1.00	ND	11	
Styrene		11	u		1.00	ND	11	
1,1,1,2-Tetrachloroethane		0	н		1.00	ND	14	
1,1,2,2-Tetrachloroethane	n	11	и		1.00	ND	U	
Tetrachloroethene	**	н	U		1.00	35.8	"	
Toluene	**	и	11		1.00	ND	"	
1,2,3-Trichlorobenzene	U.	0	и		1.00	ND	"	
1,2,4-Trichlorobenzene	U .	u .	u .		1.00	ND	17	
1,1,1-Trichloroethane	11	н	19		1.00	ND	u	
1,1,2-Trichloroethane	н	и	0		1.00	ND	**	
Trichloroethene	"	н	11		1.00	24.7	w	
Trichlorofluoromethane	11	n	11		1.00	ND		
1,2,3-Trichloropropane	**	**	"		1.00	ND	0	
1,2,4-Trimethylbenzene	IÉ	14	u		1.00	ND	*1	
1,3,5-Trimethylbenzene		0	t1		1.00	ND	11	
Vinyl chloride	*1	*1	7/13/99		0.200	0.301	H.	
m,p-Xylene	и	н	7/10/99		2.00	ND	0	
o-Xylene	"	11	n		1.00	ND	11	
Surrogate: 2-Bromopropene	"	н	"	80.0-120		109	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		106	"	
Surrogate: Toluene-d8	"		"	80.0-120		<i>99.5</i>	"	
Surrogate: 4-BFB	"	"	"	80.0-120		101	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-14A-17W</u>			<u>B9071</u>	<del>90-03</del>			<u>Water</u>	
Acetone	0790310	7/9/99	7/10/99		10.0	ND	ug/l	
Benzene	**	*1	14		1.00	ND	u	
Bromobenzene	u	11	19		1.00	ND	*1	
Bromochloromethane	11	14	u		1.00	ND	*1	
Bromodichloromethane	n	σ	91		1.00	ND	14	
Bromoform	"	ti	н		1.00	ND	18	
Bromomethane	**	11			1.00	ND	11	
2-Butanone		11	U		10.0	ND	*1	
n-Butylbenzene		11	*1		1.00	ND	**	
sec-Butylbenzene	*1	u –	"		1.00	ND	u	
tert-Butylbenzene	*1	n	н		1.00	ND	U	
Carbon disulfide	U	n	11		1.00	ND	17	
Carbon tetrachloride		и	u.		1.00	ND	U	
Chlorobenzene	*1	U .	"		1.00	ND	"	
Chloroethane	11	*1			1.00	ND	N	
Chloroform		н	17		1.00	ND	11	
Chloromethane	0	и	U		5.00	ND	U	
2-Chlorotoluene	n	II.	71		1.00	ND	*1	
4-Chlorotoluene	11	11	"		1.00	ND	"	
Dibromochloromethane	17		н		1.00	ND	и	
1,2-Dibromo-3-chloropropane	n	н	U .		5.00	ND	"	
1,2-Dibromoethane	u		u		1.00	ND	0	
Dibromomethane		11	n		1.00	ND	"	
1,2-Dichlorobenzene	u	н	14		1.00	ND	"	
1,3-Dichlorobenzene	"	11	19		1.00	ND	II.	
1,4-Dichlorobenzene	11	н	"		1.00	ND		
Dichlorodifluoromethane	17	n	11		1.00	ND	11	
1,1-Dichloroethane	*1	Ħ			1.00	ND	"	
1.2-Dichloroethane	"	17	17		1.00	ND	n	
1,1-Dichloroethene		a	11		1.00	ND	17	
cis-1,2-Dichloroethene	H	"	н		1.00	ND	U U	
trans-1,2-Dichloroethene	**	н	IF ,		1.00	ND	н	
-	18	"	u .		1.00	ND		
1,2-Dichloropropane		U	n		1.00	ND	v	
1,3-Dichloropropane		н	н		1.00	ND		
2,2-Dichloropropane		tt	W		1.00	ND	11	
1,1-Dichloropropene					1.00	ND		
cis-1,3-Dichloropropene		"	11		1.00	ND		
trans-1,3-Dichloropropene	••				1.00	ND.		

North Creek Analytical - Bothell

Joy B Chang Manager Prøject



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200
 fax 509.924.9200

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200
 fax 503.906.9210

 Bend
 20322 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-14A-17W (continued)</u>			<u>B90719</u>	<u>90-03</u>			<u>Water</u>	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	11	17	u		1.00	ND	41	
2-Hexanone	u.	0	11		10.0	ND	u	
Isopropylbenzene	IF.	"	н		1.00	ND	11	
p-Isopropyltoluene	п	11	u –		1.00	ND	H	
Methylene chloride	11	н			5.00	ND	U .	
4-Methyl-2-pentanone	*1	17	11		10.0	ND	"	
Naphthalene	н	"	п ,		1.00	ND	"	
n-Propylbenzene	IT		н		1.00	ND		
Styrene	U U	"	u		1.00	ND	11	
1,1,1,2-Tetrachloroethane	"		11		1.00	ND		
1,1,2,2-Tetrachloroethane	*1		17		1.00	ND	н	
Tetrachloroethene	u.		n		1.00	16.7	**	
Toluene	II.	"	н		1.00	ND	u	
1,2,3-Trichlorobenzene		н .	11		1.00	ND	11	
1,2,4-Trichlorobenzene	"		и <sup>.</sup>		1.00	ND	11	
1,1,1-Trichloroethane			17		1.00	ND	n	
1,1,2-Trichloroethane		н	17		1.00	ND	*1	
Trichloroethene	11	"	н		1.00	ND	18	
Trichlorofluoromethane	"	u	11		1.00	ND	11	
1,2,3-Trichloropropane		C#	17		1.00	ND	11	
1,2,4-Trimethylbenzene	17		0		1.00	ND	u	
1,3,5-Trimethylbenzene	*1	*1	**		1.00	ND	*1	
Vinyl chloride		11	7/13/99		0.200	ND	II.	
m,p-Xylene	**	n	7/10/99		2.00	ND	11	
o-Xylene	п	u	11		1.00	ND	Ð	
Surrogate: 2-Bromopropene		"	"	80.0-120		109	%	
Surrogate: 1,2-DCA-d4	<i>"</i> .	"	"	80.0-120		104	"	
Surrogate: Toluene-d8	"		·#	80.0-120		101	"	
Surrogate: 4-BFB	"	n	"	80.0-120		101	"	

North Creek Analytical - Bothell

Project Manager Joy B Chang

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			_
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-24-5W			<u>B9071</u>	90-04			<u>Water</u>	
Acetone	0790310	7/9/99	7/10/99	<u>10_04</u>	10.0	ND	ug/l	
Benzene	"	"	"		1.00	ND		
Bromobenzene	II.	a	н		1.00	ND	n	
Bromochloromethane		"	н		1.00	ND	*1	
Bromodichloromethane	u	*1			1.00	ND	*1	
Bromoform	"	"	17		1.00	ND	11	
Bromomethane		n			1.00	ND	11	
2-Butanone			U U		10.0	ND	IF.	
n-Butylbenzene	н				1.00	ND	н	
sec-Butylbenzene	п		н		1.00	ND	н	
tert-Butylbenzene	**		н		1.00	ND		
Carbon disulfide	11	41	u		1.00	ND	ú	
Carbon tetrachloride	17	*1	u		1.00	ND	U .	
Chlorobenzene	U.		" u		1.00	ND	**	
Chloroethane	**	11	P		1.00	ND	11	
Chloroform	21	11	0		1.00	ND	н	
Chloromethane	11	11	U		5.00	ND	н	
2-Chlorotoluene	n	и.	"		1.00	ND	11	
4-Chlorotoluene		U	"		1.00	ND		
Dibromochloromethane		U	u		1.00	ND	U.	
1,2-Dibromo-3-chloropropane	Ħ	11	"		5.00	ND	н	
1,2-Dibromoethane		It			1.00	ND	н	
Dibromomethane	н	18			1.00	ND	"	
1,2-Dichlorobenzene	19	11			1.00	ND	18	
1,3-Dichlorobenzene	17	u	*1		1.00	ND	11	
1,4-Dichlorobenzene	U	*1			1.00	ND		
Dichlorodifluoromethane	*1	11	11		1.00	ND		•
1,1-Dichloroethane	11	11	u		1.00	ND	n	
1,2-Dichloroethane	11	u .	11		1.00	ND	"	
1,1-Dichloroethene	и	и	U.		1.00	ND	"	
cis-1,2-Dichloroethene	n	n	U		1.00	ND	11	
trans-1,2-Dichloroethene	<b>KI</b>	0.	11		1.00	ND		
1,2-Dichloropropane	11	9	11		1.00	ND	14	
1,3-Dichloropropane	u –	11	и		1.00	ND	U	
2,2-Dichloropropane	"	It	и		1.00	ND	17	
1,1-Dichloropropene	U	11	U .		·1.00	ND	"	
cis-1,3-Dichloropropene	n	11	11		1.00	ND	*1	
trans-1,3-Dichloropropene	*1	0	*1		1.00	ND	н	

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spekane
 East 11115 Montgomery, Suite B, Spekane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore	Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
		Project Number:	_	Received:	7/9/99
			David Raubvogel	Reported:	7/13/99 14:27
Seattle, WA 9812	<u> </u>	110jeet Manager	24110-1111-1-8-		

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting		<b></b>	<b>NT</b> , ±
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
							<u>Water</u>	
P-24-5W (continued)			<u>B9071</u>	<u>90-04</u>	1.00	ND	<u>vvater</u> ug/l	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00		ug/1	
Hexachlorobutadiene	"	"	11		1.00	ND		
2-Hexanone	18	11	U		10.0	ND	11	
sopropylbenzene	*1	. 0	II		1.00	ND	14	
-Isopropyltoluene	17	H			1.00	ND	"	
Methylene chloride	11		"		5.00	ND		
4-Methyl-2-pentanone	11	17	17		10.0	ND		
Naphthalene	"		11		1.00	ND	н	
n-Propylbenzene	11	18			1.00	ND	W	
Styrene	11	11	н		1.00	ND	*1	
1,1,1,2-Tetrachloroethane			n,		1.00	ND	"	
1,1,2,2-Tetrachloroethane	*1	41	n		1.00	ND	11	
Fetrachloroethene	"		n		1.00	· ND <sup>,</sup>	"	
Foluene	**	*1	н		1.00	ND	"	
1,2,3-Trichlorobenzene		17	11		1.00	ND	17	
1,2,4-Trichlorobenzene	11	**			1.00	ND	н	
	u		**		1.00	ND		
1,1,1-Trichloroethane	и	18			1.00	ND	н	
1,1,2-Trichloroethane		a.	*1		1.00	ND	17	
Trichloroethene			11		1.00	ND	n	
Trichlorofluoromethane	*1	u	н		1.00	ND	0	
1,2,3-Trichloropropane	17	11	17		1.00	ND	**	
1,2,4-Trimethylbenzene	11	"	*1		1.00	ND		
1,3,5-Trimethylbenzene			7/13/99		0.200	ND		
Vinyl chloride					2.00	ND	11	
m,p-Xylene			7/10/99 "		1.00	ND	н	
o-Xylene	"			80.0-120	1.00	109	%	
Surrogate: 2-Bromopropene		"	"	80.0-120 80.0-120		107	"	
Surrogate: 1,2-DCA-d4	"		"		•	104	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		100		
Surrogate: 4-BFB	"	"	"	80.0-120		100		

North Creek Analytical - Bothell



 
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 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99	,
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27	

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	<b>_</b> .	<u>.</u>	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-24-12W			<u>B9071</u>	90-05			Water	
Acetone	0790310	7/9/99	7/10/99		10.0	ND	ug/l	
Benzene		11	"		1.00	ND	"	
Bromobenzene	11	11	U .		1.00	ND	le .	
Bromochloromethane	D	*1	17		1.00	ND	e.	
Bromodichloromethane	U.	11	0		1.00	ND	n	
Bromoform	n	91	U		1.00	ND	U	
Bromomethane	п.	н	"		1.00	ND		
2-Butanone	11	и	"		10.0	ND	'n	
n-Butylbenzene	11		11		1.00	ND	"	
sec-Butylbenzene	11	14	11		1.00	ND	11	
tert-Butylbenzene	11		91		1.00	ND	4	
Carbon disulfide	IR	U U	11		1.00	ND	u.	
Carbon tetrachloride		н			1.00	ND	11	
Chlorobenzene	11	н	II .		1.00	ND	н	
Chloroethane	H				1.00	ND	11	
Chloroform	11	**	17		1.00	ND	19	
Chloromethane	11	11	и		5.00	ND	0	
2-Chlorotoluene	н	11	0		1.00	ND	H	
4-Chlorotoluene	u	11			• 1.00	ND	11	
Dibromochloromethane	n	17	11		1.00	ND	**	
1,2-Dibromo-3 <sup>1</sup> / <sub>-</sub> chloropropane	L1	11	41 ·		5.00	ND	н	
1,2-Dibromoethane	P	U	н		1.00	ND	н	
Dibromomethane	**		u		1.00	ND	и	
1,2-Dichlorobenzene	n				1.00	NĎ	11	
1,3-Dichlorobenzene	п	11	11		1.00	ND	17	
1,4-Dichlorobenzene			u.		1.00	ND		
Dichlorodifluoromethane			n		1.00	ND	U	
1,1-Dichloroethane		10	n.	,	1.00	ND	*1	
1,2-Dichloroethane	"	17	11		1.00	ND	11	
1,1-Dichloroethene	U	11	a		1.00	ND	н	
cis-1,2-Dichloroethene	*1	11	н		1.00	ND	11	
trans-1,2-Dichloroethene	"	*1	IF.		1.00	ND	· u	
1,2-Dichloropropane	"	11			1.00	ND	n	
1,3-Dichloropropane	"	n	17		1.00	ND	17	
2,2-Dichloropropane	U	11	U .		1.00	ND		
1,1-Dichloropropene	U	u	u		1.00	ND	υ.	
cis-1,3-Dichloropropene	*1	11	u		1.00	ND	u	
trans-1,3-Dichloropropene	"	U.	н		1.00	ND	"	
nans-1,3-Diemoropropene					1.00			

North Creek Analytical - Bothell

Joy B Chang, Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 Spokane 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.905.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588 Portland

Bend

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-24-12W (continued)			<u>B90719</u>	<u>90-05</u>			<u>Water</u>	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	11	H	11		1.00	ND	11	
2-Hexanone	11	n	*1		10.0	ND	11	
sopropylbenzene	11	11	*1		1.00	ND	н	
-Isopropyltoluene	н	*1	"		1.00	ND	11	
Methylene chloride	н	11	"		5.00	ND	11	
4-Methyl-2-pentanone	н	11	11		10.0	ND	11	
Naphthalene	"	н	11		1.00	ND	17	
n-Propylbenzene	н	"	"		1.00	ND		
Styrene		u			1.00	ND	0	
,1,1,2-Tetrachloroethane	U	II	17		1.00	ND	u .	
,1,2,2-Tetrachloroethane	0	н	17		1.00	ND	11	
Tetrachloroethene	*1	17	ti .		1.00	ND	*1	
Foluene	"	U	n		1.00	ND	"	
1,2,3-Trichlorobenzene	н	H	n		1.00	ND	н	
,2,4-Trichlorobenzene		n	"		1.00	ND	н	
1,1,1-Trichloroethane	н	н.	н		1.00	ND	n	
1,1,2-Trichloroethane	u	н	"		1.00	ND		
Frichloroethene	11	н	н		1.00	ND		
Frichlorofluoromethane	11	н	ur.		1.00	ND		
1,2,3-Trichloropropane	"	17			1.00	ND	υ.	
1,2,4-Trimethylbenzene	н .	14	17		1.00	ND		
1,3,5-Trimethylbenzene	н	U .			1.00	ND	"	
Vinyl chloride	u	U	7/13/99		0.200	ND	"	
m,p-Xylene	u.	u	7/10/99		2.00	ND	"	
o-Xylene		"	11		1.00	ND	"	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		109	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		104	11	
Surrogate: Toluene-d8	"	"	"	80.0-120		100	"	
Surrogate: 4-BFB	и	"	"	80.0-120		101	"	

North Creek Analytical - Bothell

Joy B Chang roject Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- SeattleProject:PLFP-Magic CleanersSampled:7/9/99500 Market Place Tower, 2025 1st AveProject Number:42368-063-005Received:7/9/99Seattle, WA 98121Project Manager:David RaubvogelReported:7/13/99 14:27

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Allalyte								
<u>P-25-5W</u>			<u>B9071</u>	90 <u>-06</u>			<u>Water</u>	
Acetone	0790310	7/9/99	7/10/99		10.0	ND	ug/l	
Benzene	11	11	17		1.00	ND	17	
Bromobenzene	"	u.	0		1.00	ND		
Bromochloromethane	"	11	11		1.00	ND	U	
Bromodichloromethane		0	0		1.00	ND	н	
Bromoform		11	14		1.00	ND	11	
Bromomethane	a '	n	11		1.00	ND	11	
2-Butanone	**	"			10.0	ND	11	
n-Butylbenzene	11	N	"		1.00	ND	и	
sec-Butylbenzene	11	11	14		1.00	ND	11	
tert-Butylbenzene	н	11	*1		1.00	, ND	"	
Carbon disulfide	u .	11	"		1.00	ND	*1	
Carbon tetrachloride	11	11	11		1.00	ND	IF.	
Chlorobenzene	17	U	17		1.00	ND	"	
Chloroethane	u	11	н		· 1.00	ND		
Chloroform	11	11	11		1.00	ND	n	
Chloromethane	IF		н		5.00	ND	"	
2-Chlorotoluene	11	11			• 1.00	ND	"	
4-Chlorotoluene					1.00	ND	U	
Dibromochloromethane	10	н	**		1.00	ND	11	
1,2-Dibromo-3-chloropropane	"		v		5.00	ND	11	
1,2-Dibromoethane	11	н	н		1.00	ND	II.	
Dibromomethane	11	11			1.00	ND	**	
1,2-Dichlorobenzene	"	II	н		1.00	ND	17	
1,3-Dichlorobenzene	17	"	11		1.00	ND	11	
1,4-Dichlorobenzene	*1	17	11		1.00	ND	11	
Dichlorodifluoromethane	11	u	"		1.00	ND	41	
1,1-Dichloroethane	н	H			1.00	ND	**	
1,2-Dichloroethane	11	н			1.00	ND	IF 1	
1,1-Dichloroethene	u.	"	U		1.00	ND	**	
cis-1,2-Dichloroethene	"		n		1.00	ND	11	
trans-1,2-Dichloroethene		Ħ	*1		1.00	ND	11	
		U			1.00	ND	U.	
1,2-Dichloropropane	**	н	11		1.00	ND	и	
1,3-Dichloropropane	"	11	11		1.00	ND	0	
2,2-Dichloropropane	*1	II.			1.00	ND	н	
1,1-Dichloropropene	17	*1	11		1.00	ND	U	
cis-1,3-Dichloropropene	н	U	u		1.00	ND	ш	
trans-1,3-Dichloropropene								

North Creek Analytical - Bothell




 
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Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/13/99 14:27

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-25-5W (continued)		•	<u>B9071</u>	<u>90-06</u>			<u>Water</u>	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	11	u	n		1.00	ND	"	
2-Hexanone	11	н			10.0	ND	*	
Isopropylbenzene		u '	ø		1.00	ND		
p-Isopropyltoluene	н.,	0			1.00	ND	u	
Methylene chloride	11	0	u		5.00	ND	н	
4-Methyl-2-pentanone		17	U		10.0	ND	н	
Naphthalene		11			1.00	ND	н	
n-Propylbenzene		0			1.00	ND	u	
Styrene	11	0	"		1.00	ND	n	
1,1,1,2-Tetrachloroethane		H			1.00	ND	u	
1,1,2,2-Tetrachloroethane	IR.	**	"		1.00	ND	11	
Tetrachloroethene		"			1.00	5.01		
Toluene	"	*1	"		1.00	ND	11	
1,2,3-Trichlorobenzene		*1	"		1.00	ND	н	
1,2,4-Trichlorobenzene		11			1.00	ND	11	
1,1,1-Trichloroethane	U	"	"		1.00	ND	11	
1,1,2-Trichloroethane		**			1.00	ND	11	
Trichloroethene		н	17		1.00	ND	17	
Trichlorofluoromethane	"	u	14		1.00	ND	17	
1,2,3-Trichloropropane	п	17			1.00	ND		
1,2,4-Trimethylbenzene	"	18	18		1.00	ND	. "	
1,3,5-Trimethylbenzene	"	11			1.00	ND		
Vinyl chloride	u .	17	7/13/99		0.200	ND	e e	
m,p-Xylene			7/10/99		2.00	ND	n	
o-Xylene		u			1.00	ND		
Surrogate: 2-Bromopropene	н	"	"	80.0-120		107	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		103	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		99.5	"	
Surrogate: 4-BFB	<i>n</i>	ır	"	80.0-120		101	"	

.

North Creek Analytical - Bothell



 
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Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	n -	<b></b>	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-25-12W</u>			B90 <u>71</u>	90-07			<u>Water</u>	
Acetone	0790310	7/9/99	7/10/99		10.0	ND	ug/l	
Benzene	"	11			1.00	ND	"	
Bromobenzene	n		u		1.00	ND	17	
Bromochloromethane	"	11			1.00	ND	u.	
Bromodichloromethane	II .	n			1.00	ND	U .	
Bromoform		п	"		1.00	ND	U	
Bromomethane	18	*1	u		1.00	ND	*1	
2-Butanone	U	н	14		10.0	ND	91	
n-Butylbenzene	n	11	17		1.00	ND	11	
sec-Butylbenzene	**	11	U		1.00	ND		
tert-Butylbenzene	п	U.	u		1.00	ND	U.	
Carbon disulfide	14	*1	н		1.00	ND	n	
Carbon tetrachloride		*1	II		1.00	ND	**	
Chlorobenzene	"	11	II .		1.00	ND	*1	
Chloroethane	"		17		1.00	ND	11	
Chloroform	и	u	۳.		1.00	ND	"	
Chloromethane	II	U	11		5.00	ND	11	
2-Chlorotoluene	u.	9	н		1.00	ND	п	
4-Chlorotoluene	**	н	н		· 1.00	ND	"	
Dibromochloromethane	*1	н	11		1.00	ND	н	
1,2-Dibromo-3-chloropropane	н	11	U		5.00	ND	11	
1,2-Dibromoethane	"	0	11		1.00	ND	11	
Dibromomethane		11	**		1.00	ND	D	
1,2-Dichlorobenzene		"	н		1.00	ND	U	
1,3-Dichlorobenzene	н		н		1.00	ND		
1,4-Dichlorobenzene		и,	"		1.00	ND	"	
Dichlorodifluoromethane	17	U II	u.		1.00	ND		
1,1-Dichloroethane	"	n	11		1.00	ND	14	
1,2-Dichloroethane	n	*1	н		1.00	ND	19	
1,1-Dichloroethene	н	11	u		1.00	ND		
cis-1,2-Dichloroethene	n		0		1.00	ND	"	
trans-1,2-Dichloroethene			**		1.00	ND	"	
1,2-Dichloropropane	"	u	"		1.00	ND		
1,3-Dichloropropane	н	11	11		1.00	ND		
2,2-Dichloropropane	н	н	н		1.00	ND	и	
1,1-Dichloropropene		14			1.00	ND		
cis-1,3-Dichloropropene	U	0	0		1.00	ND	*1	
ois 1,5-Diemotopiopone		**			1.00	ND	11	

North Creek Analytical - Bothell

Joy B Ch Frdject/Manager



Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 25 12W (			D00714	00.07			<u>Water</u>	
P-25-12W (continued)	0790310	7/9/99	<u>B90719</u> 7/10/99	<u>90-07</u>	1.00	ND	<u>water</u> ug/l	
Ethylbenzene	0790310	//9/99 "	//10/99 "		1.00	ND	ug/1	
Hexachlorobutadiene	· · ·	II .	II.		10.0	ND	11	
2-Hexanone	n	6	n		1.00	ND	11	
Isopropylbenzene	1	0	H		1.00	ND		
p-Isopropyltoluene			n		5.00			
Methylene chloride						ND	u .	
4-Methyl-2-pentanone					10.0	ND	и	
Naphthalene	"		". H		1.00	ND		
n-Propylbenzene					1.00	ND	"	
Styrene					1.00	ND		
1,1,1,2-Tetrachloroethane	u.	11	u		1.00	ND	0	
1,1,2,2-Tetrachloroethane	n	"	n	• .	1.00	ND	11	
Tetrachloroethene	"	**	"		1.00	10.0	0	
Toluene	U	μ	н		1.00	ND	*1	
1,2,3-Trichlorobenzene	**	14	"		1.00	ND		
1,2,4-Trichlorobenzene	11	14			1.00	ND	**	
1,1,1-Trichloroethane	*1	17	н		1.00	ND	u	
1,1,2-Trichloroethane	*1	19	17		1.00	ND	"	
Trichloroethene	п '	u –	14		1.00	ND	н	
Trichlorofluoromethane	18	*1	u		1.00	ND	u	
1,2,3-Trichloropropane	II .	11	0		1.00	ND	11	
1,2,4-Trimethylbenzene	U	11	U.		1.00	ND	II.	
1,3,5-Trimethylbenzene	0		11		1.00	ND	U.	
Vinyl chloride	11		7/13/99		0.200	ND	ti.	
m,p-Xylene	n	I)	7/10/99		2.00	ND	11	
o-Xylene	и	17	11		1.00	ND	"	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		107	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		101	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		103	"	
Surrogate: 4-BFB	11	"	"	80.0-120		99.5	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

- Spokane 509.924.9200 fax 509.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 Portland
- 503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588 Bend

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	<u>%</u> 1	Notes*
					-			115/2011		
Batch: 0790310	<u>Date Prepa</u>		2		<u>Extrac</u>	tion Method: EP	<u>A 5030B</u>	[ <u>P/T]</u>		
<u>Blank</u>	<u>0790310-BI</u>	<u>_K1</u>				10.0		•		
Acetone	7/9/99			ND	ug/l	10.0				
Benzene	*1			ND		1.00				
Bromobenzene	н			ND	н	1.00				
Bromochloromethane	` 4			ND	0	1.00				
Bromodichloromethane	17			ND	*1	1.00				
Bromoform	н			ND	11	1.00				
Bromomethane	11			ND	U	1.00				
2-Butanone	U II			ND	*	10.0				
n-Butylbenzene	<b>†1</b>			ND	н	1.00				
sec-Butylbenzene	11			ND	17	1.00				
tert-Butylbenzene	и			ND	a a	1.00				
Carbon disulfide	**			ND	11	1.00				
Carbon tetrachloride	11			ND	14	1.00				
Chlorobenzene				ND	0	1.00				
Chloroethane	0			ND		1.00				
Chloroform	"			ND	"	1.00			•	
Chloromethane	u.			ND		5.00				
2-Chlorotoluene	"			ND ·		1.00				
4-Chlorotoluene				ND	*1	1.00				
Dibromochloromethane				ND	11	1.00				
1,2-Dibromo-3-chloropropane	n			ND	U.	5.00				
1,2-Dibromoethane	u			ND	11	1.00				
Dibromomethane	11			ND	14	1.00				
1,2-Dichlorobenzene				ND	11	1.00				
1,3-Dichlorobenzene	11	_		ND	11	1.00				
1,4-Dichlorobenzene				ND	н	1.00				
Dichlorodifluoromethane	· •			ND	11	1.00				
1,1-Dichloroethane	II.			ND	"	1.00				
1,2-Dichloroethane	V			ND	11	1.00				
1,1-Dichloroethene	11			ND		1.00				
cis-1,2-Dichloroethene	u			ND	0	1.00				
trans-1,2-Dichloroethene	· H			ND	"	1.00				
1,2-Dichloropropane	11			ND	"	1.00				
1,3-Dichloropropane	11			ND		1.00				
2,2-Dichloropropane	U U			ND	*1	1.00				
1,1-Dichloropropene	11			ND	IF	1.00				
cis-1,3-Dichloropropene				ND	u.	1.00				
cis-1,3-Dicinoropropene				1.10						

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B. Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

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 2032 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

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Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
Blank (continued)	<u>0790310-BI</u>	<b>K</b> 1							
trans-1,3-Dichloropropene	<u>0/90310-Bi</u> 7/9/99	<u> </u>		ND	ug/l	1.00			
Ethylbenzene	"			ND	"	1.00			
Hexachlorobutadiene	U			ND	11	1.00			
2-Hexanone	*1			ND	*1	10.0			
Isopropylbenzene				ND	11	1.00			
p-Isopropyltoluene	н			ND	11	1.00			
Methylene chloride				ND	11	5.00			
4-Methyl-2-pentanone	и			ND	я	10.0			
Naphthalene	и			ND	я	1.00			
-	и			ND	н	1.00			
n-Propylbenzene	u			ND	u	1.00			
Styrene				ND ND		1.00			
1,1,1,2-Tetrachloroethane		•							
1,1,2,2-Tetrachloroethane				ND		1.00			
Tetrachloroethene				ND	u u	1.00			
Toluene	17			ND		1.00			
1,2,3-Trichlorobenzene	0 10			ND		1.00			
1,2,4-Trichlorobenzene				ND		1.00			
1,1,1-Trichloroethane	. "			ND	11	1.00			
1,1,2-Trichloroethane				ND		1.00			
Trichloroethene	11			ND		1.00			
Trichlorofluoromethane	11			ND	**	1.00			
1,2,3-Trichloropropane	11			ND	11	1.00			
1,2,4-Trimethylbenzene	U			ND	11	1.00			·
1,3,5-Trimethylbenzene	11			ND		1.00			•
Vinyl chloride	7/12/99			ND	"	0.200			
m,p-Xylene	7/9/99			ND	11	2.00			
o-Xylene	11 			ND	U	1.00			
Surrogate: 2-Bromopropene	"	20.0		22.2	"	80.0-120	111		
Surrogate: 1,2-DCA-d4	"	20.0		21.2	"	80.0-120	106		
Surrogate: Toluene-d8	"	20.0		19.7	"	80.0-120	98.5		
Surrogate: 4-BFB	"	20.0		19.8	"	80.0-120	99.0		
LCS	<u>0790310-BS</u>	21							
	<u>0/90310-68</u> 7/10/99	10.0		9.47	ug/l	80.0-120	94.7		
Benzene	//10/99			9.47 9.22	ug/1	80.0-120	94.7		
Chlorobenzene	u u	10.0			u .		92.2 109		
1,1-Dichloroethene		10.0		10.9		80.0-120			
Toluene		10.0		9.41		80.0-120	94.1		
Trichloroethene	u	10.0		8.75	Ħ	80.0-120	87.5		

North Creek Analytical - Bothell

Joy B Chang, Project Manager Λ



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

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 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

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Spokane

Portland

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell Sing

Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
0500210 DO1									
			22.6	/1	00.0.120				
"	20.0		19.9	"	80.0-120	99.5		•	
<u>0790310-MS</u>	<u>1 B</u>	<u>907190-01</u>							
7/10/99	10.0	ND	9.28	ug/l	80.0-120	92.8			
**	10.0	ND	8.77	n	80.0-120	87.7			
и	10.0	ND	10.6		80.0-120	106			
11	10.0		10.0	Ħ	80.0-120	100			
11		ND	8.45		80.0-120	84.5			
"			22.6	"	80.0-120	113			
"			20.9	"	80.0-120	104			
"			19.7	"	80.0-120	98.5			
"				"	80.0-120	99.5			
<u>0790310-MS</u>	<u>D1 B</u>	<u> 8907190-01</u>							
7/10/99	10.0	ND	8.71	ug/l	80.0-120	87.1	15.0	6.34	
91	10.0	ND	8.30	14	80.0-120	83.0	15.0	5.51	
IF.	10.0	ND	9.81	H	80.0-120	98.1	15.0	7.74	
		ND	9.42	u –	80.0-120	94.2	15.0	5.97	
"	10.0	ND	7.87	**	80.0-120	78.7	15.0	7.11	1
"	20.0		22.6	"	80.0-120	113			
			20.8	"	80.0-120	104			
"			20.0	"	80.0-120	100			
"	20.0		19.7	"	80.0-120	98.5			
-	Analyzed 0790310-BSI 7/10/99 " " " " " " " " " " " " " " " " " "	Analyzed         Level           0790310-BS1         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         10.0           "         10.0           "         10.0           "         10.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         10.0           "         10.0           "         10.0           "         10.0           "         10.0           "         10.0           "         20.0           "         20.0           "         20.0 </td <td>Analyzed         Level         Result           0790310-BS1         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         10.0         ND           "         10.0         ND           "         10.0         ND           "         20.0         "           "         20.0         "           "         20.0         "           "         20.0         "           "         20.0         "           "         10.0         ND           "         10.0         ND<td>Analyzed         Level         Result         Result           0790310-BS1         20.0         22.6           "         20.0         21.2           "         20.0         19.7           "         20.0         19.7           "         20.0         19.9           0790310-MS1         B907190-01         9.28           "         10.0         ND         9.28           "         10.0         ND         8.77           "         10.0         ND         10.6           "         10.0         ND         10.0           "         10.0         ND         8.45           "         20.0         22.6           "         20.0         22.6           "         20.0         10.9           "         10.0         ND         8.45           "         20.0         20.9         19.9           "         20.0         19.7           "         20.0         19.7           "         20.0         19.9           "         20.0         19.9           "         10.0         ND           "</td><td>Analyzed         Level         Result         Result         Units           0790310-BS1         20.0         22.6         ug/l           "         20.0         21.2         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         ND         19.7         "           "         10.0         ND         9.28         ug/l           "         10.0         ND         8.77         "           "         10.0         ND         10.0         "           "         20.0         22.6         "           "         20.0         22.6         "           "         20.0         19.7         "           "         20.0         19.7         "           "         10.0         ND         8.30</td><td>Analyzed         Level         Result         Result         Units         Recov. Limits           0790310-BS1         7/10/99         20.0         22.6         ug/l         80.0-120           "         20.0         21.2         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         ND         9.28         ug/l         80.0-120           "         10.0         ND         8.77         "         80.0-120           "         10.0         ND         10.6         "         80.0-120           "         10.0         ND         8.45         "         80.0-120           "         20.0         22.6         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.9         "         <td< td=""><td>Analyzed         Level         Result         Result         Units         Recov. Limits         %           0790310-BS1        </td><td>Analyzed         Level         Result         Result         Units         Recov. Limits         %         Limit           0790310-BS1        </td><td>Analyzed         Level         Result         Units         Recov. Limits         %         Limit         %           0790310-BS1        </td></td<></td></td>	Analyzed         Level         Result           0790310-BS1         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         20.0           "         10.0         ND           "         10.0         ND           "         10.0         ND           "         20.0         "           "         20.0         "           "         20.0         "           "         20.0         "           "         20.0         "           "         10.0         ND           "         10.0         ND <td>Analyzed         Level         Result         Result           0790310-BS1         20.0         22.6           "         20.0         21.2           "         20.0         19.7           "         20.0         19.7           "         20.0         19.9           0790310-MS1         B907190-01         9.28           "         10.0         ND         9.28           "         10.0         ND         8.77           "         10.0         ND         10.6           "         10.0         ND         10.0           "         10.0         ND         8.45           "         20.0         22.6           "         20.0         22.6           "         20.0         10.9           "         10.0         ND         8.45           "         20.0         20.9         19.9           "         20.0         19.7           "         20.0         19.7           "         20.0         19.9           "         20.0         19.9           "         10.0         ND           "</td> <td>Analyzed         Level         Result         Result         Units           0790310-BS1         20.0         22.6         ug/l           "         20.0         21.2         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         ND         19.7         "           "         10.0         ND         9.28         ug/l           "         10.0         ND         8.77         "           "         10.0         ND         10.0         "           "         20.0         22.6         "           "         20.0         22.6         "           "         20.0         19.7         "           "         20.0         19.7         "           "         10.0         ND         8.30</td> <td>Analyzed         Level         Result         Result         Units         Recov. Limits           0790310-BS1         7/10/99         20.0         22.6         ug/l         80.0-120           "         20.0         21.2         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         ND         9.28         ug/l         80.0-120           "         10.0         ND         8.77         "         80.0-120           "         10.0         ND         10.6         "         80.0-120           "         10.0         ND         8.45         "         80.0-120           "         20.0         22.6         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.9         "         <td< td=""><td>Analyzed         Level         Result         Result         Units         Recov. Limits         %           0790310-BS1        </td><td>Analyzed         Level         Result         Result         Units         Recov. Limits         %         Limit           0790310-BS1        </td><td>Analyzed         Level         Result         Units         Recov. Limits         %         Limit         %           0790310-BS1        </td></td<></td>	Analyzed         Level         Result         Result           0790310-BS1         20.0         22.6           "         20.0         21.2           "         20.0         19.7           "         20.0         19.7           "         20.0         19.9           0790310-MS1         B907190-01         9.28           "         10.0         ND         9.28           "         10.0         ND         8.77           "         10.0         ND         10.6           "         10.0         ND         10.0           "         10.0         ND         8.45           "         20.0         22.6           "         20.0         22.6           "         20.0         10.9           "         10.0         ND         8.45           "         20.0         20.9         19.9           "         20.0         19.7           "         20.0         19.7           "         20.0         19.9           "         20.0         19.9           "         10.0         ND           "	Analyzed         Level         Result         Result         Units           0790310-BS1         20.0         22.6         ug/l           "         20.0         21.2         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         19.7         "           "         20.0         ND         19.7         "           "         10.0         ND         9.28         ug/l           "         10.0         ND         8.77         "           "         10.0         ND         10.0         "           "         20.0         22.6         "           "         20.0         22.6         "           "         20.0         19.7         "           "         20.0         19.7         "           "         10.0         ND         8.30	Analyzed         Level         Result         Result         Units         Recov. Limits           0790310-BS1         7/10/99         20.0         22.6         ug/l         80.0-120           "         20.0         21.2         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         19.9         "         80.0-120           "         20.0         ND         9.28         ug/l         80.0-120           "         10.0         ND         8.77         "         80.0-120           "         10.0         ND         10.6         "         80.0-120           "         10.0         ND         8.45         "         80.0-120           "         20.0         22.6         "         80.0-120           "         20.0         19.7         "         80.0-120           "         20.0         19.9         " <td< td=""><td>Analyzed         Level         Result         Result         Units         Recov. Limits         %           0790310-BS1        </td><td>Analyzed         Level         Result         Result         Units         Recov. Limits         %         Limit           0790310-BS1        </td><td>Analyzed         Level         Result         Units         Recov. Limits         %         Limit         %           0790310-BS1        </td></td<>	Analyzed         Level         Result         Result         Units         Recov. Limits         %           0790310-BS1	Analyzed         Level         Result         Result         Units         Recov. Limits         %         Limit           0790310-BS1	Analyzed         Level         Result         Units         Recov. Limits         %         Limit         %           0790310-BS1

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

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Dames and	d Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Marke	et Place Tower, 2025 1st Ave	Project Number:		Received:	7/9/99
Seattle, W	A 98121	Project Manager:	David Raubvogel	Reported:	7/13/99 14:27
		No	tes and Definitions		
#	Note				···
1	The spike recovery for this QC recovery for this analyte does n			view of associated batch QC indic ch.	ates the
DET	Analyte DETECTED				
ND	Analyte NOT DETECTED at o	r above the reporting lir	nit		
NR	Not Reported				
dry	Sample results reported on a dr	y weight basis			
Recov.	Recovery				
RPD	Relative Percent Difference				

North Creek Analytical - Bothell

Joy B Chang, Project Manager



18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132

(425) 420-9200FAX 420-9210(509) 924-9200FAX 924-9290(503) 906-9200FAX 906-9210

# CHAIN OF CUSTODY REPORT

Work Order # 8907190

REPORT TO:			INVOICE	то:	<del>_</del>							TIP	AROUND REQ	UEST in Bu	siness Dave •
ATTENTION: PAULO RAM	a		ATTENTIO	N:	Jam	3						. 0 14		Inorganic Ana	•
			ADDRESS	-	<u> </u>							0 7	5 4	٦Å٢	2 1 Same Day
2025 ISTANS 4500,		94.21									Siar	ilard	Fuels & I	Hydrocarbon /	Analyses
			P.O. NUME	1ED-			NCA	OUOTE #			_		5 3-4		1 Same al
PHONE: 206 728 - 0744					17	7	7	/	7		7		Standard L.		دیں؛ لئیا لے ڈ∕`
PROJECT NAME: PLFP- MAG			Analysis Request:	/.	<u>,</u>		· /			/ /	′  Г	OTHER	Spacify:		
PROJECT NUMBER: 48.368-0	67-000		1	<del>f</del>				/ · ,		/ /		Turnaroun		n standard may	incur Auth Charges.
SAMPLED BY: ATV-1~3 CLIENT SAMPLE	SAMPLING	NCA SAMPLE ID		<u> </u>			/ /					TRIX	# OF		
IDENTIFICATION		(Laboratory Use Only)		<u>¥</u>		{		-{	<u> </u>	<u> </u>		S, A. O)	CONTAINERS		COMMENTS
P-23 - 5W	815	B90790-01		<u> </u>	┥──┼-				1			r.			
2 P-23 - RW	845	02	. /				_				_				
P-14A-17W	5.15	03							_					<u> </u>	
1 P-24-5W	1030	сy												7 Ru	NSH GUN
5P-124~12W	1042	05		$\Delta$								_		Sm	ONDAY
·P-25-5W	115	06			<b>_</b>							<u> </u>		_\	
1. P-25-124	1130	07		$\square$								4	-	)	
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ADDITIONAL REMARKS:															
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 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509.924,9290
 Spokane

9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588 Portland

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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

# **ANALYTICAL REPORT FOR SAMPLES:**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
P-20A-17W	B907207-01	Water	7/9/99
P-26-5W	B907207-02	Water	7/9/99
P-26-12W	B907207-03	Water	7/9/99
P-27-3W	B907207-04	Water	7/9/99
P-27-9W	B907207-05	Water	7/9/99
P-28-5W	B907207-06	Water	7/9/99
P-28-12W	B907207-07	Water	7/9/99
Trip Blank	B907207-08	Water	7/9/99

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Joy B Chang, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	1	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005		Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel		Reported:	7/14/99 14:56

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

f	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-20A-17W</u>			<u>B9072</u>	07-01			<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99	<u>07 0x</u>	10.0	ND	ug/l	
Benzene	u	11 10/00	"		1.00	ND	"	
Bromobenzene	II	**	и		1.00	ND	*1	
Bromochloromethane	W	"			1.00	ND	"	
Bromodichloromethane	U U	u.			1.00	ND	н	
Bromoform	U II	14	"		1.00	ND	ш	
Bromomethane	*1	17	a		1.00	ND		
2-Butanone	ti	v	ti -		10.0	ND		
n-Butylbenzene	11		н		1.00	ND		
sec-Butylbenzene	н	н	11		1.00	ND	u	
tert-Butylbenzen'e	н		н		1.00	ND	U .	
Carbon disulfide	u.	11	н		1.00	ND	U	
Carbon tetrachloride	"				1.00	ND	u	
Chlorobenzene					1.00	ND		
Chloroethane	"	17	o		1.00	ND	и	
Chloroform	"	0			1.00	ND	11	
Chloromethane	*1		ti		5.00	ND	н	
2-Chlorotoluene					1.00	ND		
4-Chlorotoluene	и	11	*1		1.00	ND	17	
	и	11		÷	1.00	ND	0	
Dibromochloromethane			u		5.00	ND		
1,2-Dibromo-3-chloropropane	"	H			1.00	ND	78	
1,2-Dibromoethane					1.00	ND		
Dibromomethane	12				1.00	ND		
1,2-Dichlorobenzene		11	ท		1.00	ND ND		
1,3-Dichlorobenzene	**							
1,4-Dichlorobenzene			11		1.00 1.00	ND	n	
Dichlorodifluoromethane	н		11		1.00	ND ND	**	
1,1-Dichloroethane		u U	0			ND		
1,2-Dichloroethane					1.00 1.00		**	
1,1-Dichloroethene	0					ND	н	
cis-1,2-Dichloroethene		11	"		1.00	ND	n	
trans-1,2-Dichlorgethene	4) 91				1.00	ND		
1,2-Dichloropropane		"	" "		1.00	ND		
1,3-Dichloropropane	II .				1.00	ND		
2,2-Dichloropropane	11	0	19 1		1.00	ND	"	
1,1-Dichloropropene	11	*1	17		1.00	ND	"	
cis-1,3-Dichloropropene	**	**	U		1.00	ND		
trans-1,3-Djehloropropene	*1	17	11		1.00	ND	u	

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	S	ampled: 7/	/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	· Re	eceived: 7/	/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Re	eported: 7/	/14/99 14:56

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

I	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-20A-17W (continued)			B90720	07-01			<u>Water</u>	
Ethylbenzene	0790384	7/13/99	7/13/99		1.00	ND	ug/l	
Hexachlorobutadiene	"	"	H .		1.00	ND		
2-Hexanone	"	"	17		10.0	ND	D	
Isopropylbenzene	"	**	IF		1.00	ND	U	
p-Isopropyltoluene	11	н	n		1.00	ND		
Methylene chloride	11		"		5.00	ND	11	
4-Methyl-2-pentanone		u	H.		10.0	ND		
Naphthalene	IT	u	11		1.00	ND	**	
n-Propylbenzene		11	a a		1.00	ND	*1	
Styrene		11			1.00	ND	**	
1,1,1,2-Tetrachloroethane	11	11	*1		1.00	ND	**	
1,1,2,2-Tetrachloroethane	0	17	н		1.00	ND	11	
Tetrachloroethene		11	**		1.00	1.99	н	
Toluene	"	U	**		1.00	1.00	H.	
1,2,3-Trichlorobenzene	**	11	"		1.00	ND	18	
1,2,4-Trichlorobenzene		*1	"		1.00	ND		
1,1,1-Trichloroethane			и		1.00	ND	u ,	
1,1,2-Trichloroethane	"	"	н		1.00	ND	11	
Trichloroethene	н	n	н		1.00	ND		
Trichlorofluoromethane		11			1.00	ND	0	
1,2,3-Trichloropropane		н	u.		1.00	ND	19	
1,2,4-Trimethylbenzene		14			1.00	ND		
1,3,5-Trimethylbenzene	"	11	71		1.00	ND		
Vinyl chloride	н	U	"		0.200	ND	n	
m,p-Xylene	11	11	"		2.00	ND	"	
o-Xylene	H 1	"	u		1.00	ND	11	
Surrogate: 2-Bromopropene	"	"	- "	80.0-120		104	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		91.5	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		103	"	
Surrogate: 4-BFB	"	"	"	80.0-120		97.5	"	

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Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			D.0					
<u>P-26-5W</u>		-	<u>B9072</u>	<u>07-02</u>	10.0	2.022	<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99 "		10.0	ND	ug/l "	
Benzene	"				1.00	ND		
Bromobenzene			"		1.00	ND	11	
Bromochloromethane		u	u		1.00	ND	U	
Bromodichloromethane		"	II		1.00	ND	. "	
Bromoform	и	U	н		1.00	ND	U	
Bromomethane	II.		u		1.00	ND	U.	
2-Butanone	it.	0			10.0	ND	v	
n-Butylbenzene	11	f1	n		1.00	ND	0	
sec-Butylbenzene	n	*1	11		1.00	ND		
tert-Butylbenzene	14	61	u		1.00	ND	U.	
Carbon disulfide	U.	91	IT		1.00	ND	U	
Carbon tetrachloride	n	21	18		1.00	ND	"	
Chlorobenzene	U	11	IF.		1.00	ND	11	
Chloroethane	11	н	11		1.00	ND	"	
Chloroform	"				1.00	ND	••	
Chloromethane	н		14		5.00	ND	n	
2-Chlorotoluene	n	u	17		1.00	ND	**	
4-Chlorotoluene	и	IF	0		1.00	ND	п	
Dibromochloromethane	и		u		1.00	ND	u	
1,2-Dibromo-3-chloropropane	"	0	11		5.00	ND	91	
1,2-Dibromoethane	"	U .	11		1.00	ND	н	
Dibromomethane	U	11	"		1.00	ND	u.	
1,2-Dichlorobenzene	Ħ	"	н		1.00	ND		
1,3-Dichlorobenzene	"	t1	11		1.00	ND	D	
1,4-Dichlorobenzene	u		u		1.00	ND	0	
Dichlorodifluoromethane	11	11	н		1.00	ND	U	
1,1-Dichloroethane	н		11		1.00	ND	H	
1,2-Dichloroethane	0	и			1.00	ND	"	
1,1-Dichloroethene	n				1.00	ND	Π.	
cis-1,2-Dichloroethene		11	19		1.00	ND	"	
trans-1,2-Dichloroethene	11	0	U		1.00	ND		
1,2-Dichloropropane		u	U		1.00	ND	' n	
1,3-Dichloropropane	u	11	H		1.00	ND	н	
	и	н	U		1.00	ND	н	
2,2-Dichloropropane			11				11	
1,1-Dichloropropene					1.00	ND		
cis-1,3-Dichloropropene		"			1.00	ND	"	
trans-1,3-Dichloroppopene					1.00	ND		

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Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue. Beaverton, OR 97008-7132

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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting		-	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-26-5W (continued)			<u>B9072</u>	<u>07-02</u>			<u>Water</u>	
Ethylbenzene	0790384	7/13/99	7/13/99		1.00	ND	ug/l	
Hexachlorobutadiene	**	н	"		1.00	ND	U	
2-Hexanone	ti.	W	*1		10.0	ND	17	
Isopropylbenzene	11	11	91		1.00	ND	0	
p-Isopropyltoluene	11	н	11		1.00	ND	0	
Methylene chloride	11	17	н		5.00	ND	a	
4-Methyl-2-pentanone	11 .	U .	н		10.0	ND	*1	
Naphthalene	11	U.	11		1.00	ND	н	
n-Propylbenzene	u	н			1.00	ND	н .	
Styrene	11	**	и		1.00	ND	н	
1,1,1,2-Tetrachloroethane	u	11	17		1.00	ND	н	
1,1,2,2-Tetrachloroethane	н.	11	17		1.00	ND	н	
Tetrachloroethene	н	11	17		1.00	81.3	19	
Toluene	**	91	D		1.00	ND	17	
1,2,3-Trichlorobenzene	11	11			. 1.00	ND	11	
1,2,4-Trichlorobenzene	11	н	u		1.00	ND		
1,1,1-Trichloroethane	11	14	11		1.00	ND		
1,1,2-Trichloroethane	u	u.	11		1.00	ND	11	
Trichloroethene		U .	. 41		1.00	ND	U	
Trichlorofluoromethane		ti -	н		1.00	ND	н	
1,2,3-Trichloropropane	a	11	н		1.00	ND	U	
1,2,4-Trimethylbenzene	u	11	IF		1.00	ND	"	
1,3,5-Trimethylbenzene	"	11	17		1.00	ND	91	
Vinyl chloride	"	11	n .		0.200	ND	91	
m,p-Xylene	11	11	14		2.00	ND		
o-Xylene		и			1.00	ND		
Surrogate: 2-Bromopropene	"	"	"	80.0-120		105	%	·
Surrogate: 1,2-DCA-d4	"	"	n	80.0-120		94.0	"	
Surrogate: Toluene-d8	"	"	<i>n</i> .	80.0-120		106	"	
Surrogate: 4-BFB	"	"	"	80.0-120		97.5	"	
Durroguic, T-DID	•							

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Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20322 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	 Reported:	7/14/99 14:56

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
· · · · · · · · · · · · · · · · · · ·								
<u>P-26-12W</u>			<u>B9072</u>	<u>07-03</u>			<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99		10.0	ND	ug/l	
Benzene	u	41	17		1.00	ND	11	
Bromobenzene	11	0	H		1.00	ND	н	
Bromochloromethane	н	u –	IF.		, 1.00	ND	11	
Bromodichloromethane	"		17		. 1.00	ND	11	
Bromoform	н	n	н		1.00	ND	11 .	
Bromomethane	u	0	11		1.00	ND	11	
2-Butanone	14	a	11		- 10.0	ND	11	
n-Butylbenzene	u	0	11		1.00	ND	*1	
sec-Butylbenzene	н .	u	11		1.00	ND	11	
tert-Butylbenzene			IT		1.00	ND	n	
Carbon disulfide	II	0	u .		1.00	ND	Ħ	
Carbon tetrachloride	"	n	и		1.00	ND	"	
Chlorobenzene	н	11	ir (		1.00	ND	н	
Chloroethane	н	<b>11</b>	u .		1.00	ND	11	
Chloroform		41	II .		1.00	ND	".	
Chloromethane	u .	11	IF.		5.00	ND	*1	
2-Chlorotoluene	11	ti	н		1.00	ND	*1	
4-Chlorotoluene		11	IF.		1.00	ND	11	
Dibromochloromethane	u	н	IF.		1.00	ND	11	
1,2-Dibromo-3-chloropropane	U U	*1	IF.		5.00	ND	"	
1,2-Dibromoethane	11	"	IF.		1.00	ND	11	
Dibromomethane	"	н	W.		1.00	ND	11	
1,2-Dichlorobenzene	11	11	IF.		1.00	ND	11	
1,3-Dichlorobenzene	11	н	ur '		1.00	ND	11	
1,4-Dichlorobenzene	н	11	ti		1.00	ND	11	
Dichlorodifluoromethane	н	11	n		1.00	ND	u	
1,1-Dichloroethane	н	u.	I7 -		1.00	ND	н	
1,2-Dichloroethane	н	If	11		1.00	ND	н	
1,1-Dichloroethene	II .		0		1.00	ND	u	
cis-1,2-Dichloroethene	U.	H	0		1.00	ND	н	
trans-1,2-Dichloroethene	11		u –		1.00	ND	н	
1,2-Dichloropropane	"	11	0		1.00	ND	11	
1,3-Dichloropropane	u .	U.	11		1.00	ND	н	
2,2-Dichloropropane	u	U.	H		1.00	ND	11	
1,1-Dichloropropene		н	н		1.00	ND		
cis-1,3-Dichloropropene		n	ti		1.00	ND	н	1
trans-1,3-Dichloropropene	•1	n	11		1.00	ND		
					1.00	112		

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\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

- Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290
- Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 tax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners		Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	•	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel		Reported:	7/14/99 14:56

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

P26-12W (continued)         B907207-03         Water           Ethylbenzene         0790384         7/13/99         1.00         ND         ug/l           Hexachlorobutadiene         "         "         1.00         ND         "           2-Hexanone         "         "         1.00         ND         "           2-Hexanone         "         "         1.00         ND         "           Sopropylbenzene         "         "         1.00         ND         "           p-Isopropyloluene         "         "         1.00         ND         "           Methylene chloride         "         "         1.00         ND         "           Abethyl-D-pentanne         "         "         1.00         ND         "           Naphthalene         "         "         1.00         ND         "           Nypthenzene         "         "         1.00         ND         "           Styrene         "         "         1.00         ND         "           1,1,12-Tetrachloroethane         "         "         1.00         ND         "           1,1,2-Tetrachloroethane         "         "         1.00		Batch	Date	Date	Surrogate	Reporting			
Ethylbenzene       0790384       7/13/99       7/13/99       1.00       ND       ug/l         Hexachlorobutadiene       """""1.00       ND       """1.00       ND       ""1.00       ND       ""1.00       ND       ""1.00       ND       ""1.00       ND       ""1.	Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Ethylbenzene       0790384       7/13/99       7/13/99       1.00       ND       ug/l         Hexachlorobutadiene       """""1.00       ND       """1.00       ND       ""1.00       ND       ""1.00       ND       ""1.00       ND       ""1.00       ND       ""1.	P-26-12W (continued)			<b>B9072</b>	07-03			Water	
Hexachlorobutadiene       "       1.00       ND       "         2-Hexanone       "       1.00       ND       "         Isopropylbenzene       "       1.00       ND       "         -Sporopylboluene       "       1.00       ND       "         Methylene chloride       "       1.00       ND       "         4-Methyl-2-pentanone       "       1.00       ND       "         n-Propylbenzene       "       1.00       ND       "         systeme       "       1.00       ND       "         1,1,2-2-Tetrachloroethane       "       "       1.00       ND       "         1,1,2-Tetrachloroethane       "       "       1.00       ND       "         1,2,3-Trichlorobenzene       "       "       1.00       ND       "	· · · ·	0790384	7/13/99		<u></u>	1.00	ND		
2-Hexanone       "       "       10.0       ND       "         Isopropylbenzene       "       1.00       ND       "         p-Isopropylbenzene       "       1.00       ND       "         p-Isopropylbenzene       "       1.00       ND       "         wethylene chloride       "       1.00       ND       "         4-Methyl-2-pentanone       "       1.00       ND       "         Naphthalene       "       1.00       ND       "         n-Propylbenzene       "       1.00       ND       "         Syrene       "       1.00       ND       "         1,1,2,2-Tetrachloroethane       "       1.00       ND       "         1,1,2,2-Trichlorobenzene       "       1.00       ND       "         1,1,2-Trichloroethane       "       1.00       ND       "	-							-	
Isopropylbenzene       "       1.00       ND       "         p-Isopropylbenzene       "       1.00       ND       "         Methylene chloride       "       5.00       ND       "         Methylene chloride       "       1.00       ND       "         Methylene chloride       "       1.00       ND       "         Naphthalene       "       1.00       ND       "         n-Propylbenzene       "       1.00       ND       "         Styrene       "       1.00       ND       "         1,1,2,2-Tetrachloroethane       "       1.00       ND       "         1,1,2,2-Tetrachloroethane       "       1.00       ND       "         1,1,2,2-Tetrachloroethane       "       1.00       ND       "         1,2,3-Trichlorobenzene       "       1.00       ND       "         1,2,4-Trichloroethane       "       1.00       ND       "         1,1,2-Trichloroethane       "       1.00       ND       "         1,1,2-Trichloroethane       "       1.00       ND       "         1,1,2-Trichloroethane       "       1.00       ND       "         1		н	**	61	•			17	
p-Isopropyloluene       """"""""""""""""""""""""""""""""""""	•	11	17	*1				11	
Methylene chloride       """"""""""""""""""""""""""""""""""""		и						14	
4-Methyl-2-pentanone       """""       10.0       ND       """"""""""""""""""""""""""""""""""""	• • • •	н	0	"				11	
Naphthalene       """"""""""""""""""""""""""""""""""""		" ·		*1				18	
n-Propylbenzene       """"""""""""""""""""""""""""""""""""	,	11	U .	"		1.00	ND	17	
Styrene       """"""""""""""""""""""""""""""""""""	-	11	0	<b>4</b> 1		1.00	ND	17	
1,1,2-Tetrachloroethane       """"""100 ND ""         1,1,2,2-Tetrachloroethane       """""100 ND "         Tetrachloroethene       """"100 ND "         Toluene       """"100 ND "         1,2,3-Trichlorobenzene       """"100 ND "         1,2,4-Trichloroethane       """"100 ND "         1,1,2-Trichloroethane       """100 ND "         1,1,2-Trichloroethane       """100 ND "         1,1,1-Trichloroethane       """100 ND "         1,1,2-Trichloroethane       """100 ND "         1,2,3-Trichloropropane       """100 ND "         1,2,3-Trichloropropane       """100 ND "         1,3,5-Trimethylbenzene       """100 ND "         1,3,5-Trimethylbenzene       """100 ND "         1,3,5-Trimethylbenzene       """100 ND "         1,3,5-Trimethylbenzene       """100 ND "         Nurgate: 2-Bromopropene       """100 ND "         Surrogate: 2-Bromopropene       """100 ND "         Surrogate: 1,2-DCA-d4       """80.0-120 103 "			0	"			ND		
Tetrachloroethene       "       "       1.00       ND       "         Toluene       "       "       1.00       ND       "         1,2,3-Trichlorobenzene       "       "       1.00       ND       "         1,2,4-Trichlorobenzene       "       "       1.00       ND       "         1,1,1-Trichloroethane       "       "       1.00       ND       "         1,1,2-Trichloroethane       "       "       1.00       ND       "         1,2,3-Trichloropropane       "       "       1.00       ND       "         1,2,4-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       0.200       ND       "         ynycklene       "       "       0.200       ND       "         o-Xylene       "       "       80.0-120       ND       "         Surrogate:	1,1,1,2-Tetrachloroethane	и	11	"		1.00	ND		
Toluene       "       "       1.00       ND       "         1,2,3-Trichlorobenzene       "       "       1.00       ND       "         1,2,4-Trichlorobenzene       "       "       1.00       ND       "         1,1,1-Trichloroethane       "       "       1.00       ND       "         1,1,2-Trichloroethane       "       "       1.00       ND       "         1,1,2-Trichloroethane       "       "       1.00       ND       "         Trichloroethane       "       "       1.00       ND       "         Trichloroethane       "       "       1.00       ND       "         Trichlorofluoromethane       "       "       1.00       ND       "         1,2,3-Trichloropropane       "       "       1.00       ND       "         1,2,4-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       0.200       ND       "         o-Xylene       "       "       80.0-120       ND       "         Surrogate: 1	1,1,2,2-Tetrachloroethane	n	U	н		1.00	ND	17	
1,2,3-Trichlorobenzene       "       "       1.00       ND         1,2,4-Trichlorobenzene       "       "       1.00       ND       "         1,1,2-Trichlorobenzene       "       "       1.00       ND       "         1,1,1-Trichlorobenzene       "       "       1.00       ND       "         1,1,2-Trichlorobenzene       "       "       1.00       ND       "         1,1,2-Trichlorobenzene       "       "       1.00       ND       "         Trichlorobenzene       "       "       1.00       ND       "         Trichloroppane       "       "       1.00       ND       "         1,2,3-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       0.200       ND       "         m,p-Xylene       "       "       80.0-120       ND       "         Surrogate: 2-Bromopropene </td <td>Tetrachloroethene</td> <td>17</td> <td>n</td> <td>14</td> <td></td> <td>1.00</td> <td>ND</td> <td>17</td> <td></td>	Tetrachloroethene	17	n	14		1.00	ND	17	
1,2,4-Trichlorobenzene       """""""100 ND ""         1,1,1-Trichloroethane       """""100 ND "         1,1,2-Trichloroethane       """"100 ND "         1,1,2-Trichloroethane       """"100 ND "         Trichloroethane       """"100 ND "         Trichloroethane       """"100 ND "         Trichloroethane       """"100 ND "         Trichloroethane       """"100 ND "         1,2,3-Trichloropropane       """"100 ND "         1,2,4-Trimethylbenzene       """100 ND "         1,2,4-Trimethylbenzene       """100 ND "         1,3,5-Trimethylbenzene       """100 ND "         1,3,5-Trimethylbenzene       """100 ND "         Nup-Xylene       """100 ND "         o-Xylene       """100 ND "         Surrogate: 2-Bromopropene       """100 ND "         Surrogate: 1,2-DCA-d4       """100 ND "         Surrogate: Toluene-d8       """100 ND "	Toluene	11	u.	*1		1.00	ND	14	
1,1,1-Trichloroethane       """"""""""""""""""""""""""""""""""""	1,2,3-Trichlorobenzene		"	W		1.00	ND	u.	
1,1,2-Trichloroethane       """""""       1.00       ND       "         Trichloroethene       """""""       1.00       ND       "         Trichlorofluoromethane       """""""""       1.00       ND       "         1,2,3-Trichloropropane       """"""""""""""""""""""""""""""""""""	1,2,4-Trichlorobenzene	14	"	и		1.00	ND	14	
Trichloroethene       """"""""       1.00       ND       "         Trichlorofluoromethane       """""""       1.00       ND       "         1,2,3-Trichloropropane       """"""""""""""""""""""""""""""""""""	1,1,1-Trichloroethane		"	11		1.00	ND	U .	
Trichlorofluoromethane       "       "       "       1.00       ND       "         1,2,3-Trichloropropane       "       "       "       1.00       ND       "         1,2,4-Trimethylbenzene       "       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       "       0.200       ND       "         Vinyl chloride       "       "       "       0.200       ND       "         m,p-Xylene       "       "       "       2.00       ND       "         o-Xylene       "       "       "       2.00       ND       "         Surrogate: 2-Bromopropene       "       "       "       80.0-120       ND       "         Surrogate: 1,2-DCA-d4       "       "       "       80.0-120       96.0       "         Surrogate: Toluene-d8       "       "       "       80.0-120       103       "	1,1,2-Trichloroethane	17	"	11		1.00	ND		
1,2,3-Trichloropropane       "       "       "       1.00       ND       "         1,2,4-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       0.200       ND       "         Vinyl chloride       "       "       0.200       ND       "         m,p-Xylene       "       "       2.00       ND       "         o-Xylene       "       "       1.00       ND       "         Surrogate: 2-Bromopropene       "       "       80.0-120       104       %         Surrogate: 1,2-DCA-d4       "       "       80.0-120       96.0       "         Surrogate: Toluene-d8       "       "       80.0-120       103       "	Trichloroethene	0	н			1.00	ND	U	
1,2,4-Trimethylbenzene       "       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       1.00       ND       "         1,3,5-Trimethylbenzene       "       "       1.00       ND       "         Vinyl chloride       "       "       0.200       ND       "         m,p-Xylene       "       "       2.00       ND       "         o-Xylene       "       "       1.00       ND       "         Surrogate:       2-Bromopropene       "       "       80.0-120       104       %         Surrogate:       1,2-DCA-d4       "       "       "       80.0-120       96.0       "         Surrogate:       Toluene-d8       "       "       "       80.0-120       103       "	Trichlorofluoromethane		"			1.00	ND	11	
1,3,5-Trimethylbenzene       "       "       1.00       ND       "         Vinyl chloride       "       "       0.200       ND       "         m,p-Xylene       "       "       2.00       ND       "         o-Xylene       "       "       1.00       ND       "         Surrogate:       2-Bromopropene       "       "       80.0-120       104       %         Surrogate:       1,2-DCA-d4       "       "       "       80.0-120       96.0       "         Surrogate:       Toluene-d8       "       "       "       80.0-120       103       "	1,2,3-Trichloropropane	н	"			1.00	ND	v	
Vinyl chloride       "       "       "       0.200       ND       "         m,p-Xylene       "       "       2.00       ND       "         o-Xylene       "       "       1.00       ND       "         Surrogate:       2-Bromopropene       "       "       80.0-120       104       %         Surrogate:       1,2-DCA-d4       "       "       80.0-120       96.0       "         Surrogate:       Toluene-d8       "       "       80.0-120       103       "	1,2,4-Trimethylbenzene	n	н	14		1.00	ND		
m,p-Xylene     "     "     2.00     ND     "       o-Xylene     "     "     1.00     ND     "       Surrogate: 2-Bromopropene     "     "     80.0-120     104     %       Surrogate: 1,2-DCA-d4     "     "     80.0-120     96.0     "       Surrogate: Toluene-d8     "     "     80.0-120     103     "	1,3,5-Trimethylbenzene	"		U		1.00	ND	*1	
o-Xylene " " " 1.00 ND " Surrogate: 2-Bromopropene " " " 80.0-120 104 % Surrogate: 1,2-DCA-d4 " " " 80.0-120 96.0 " Surrogate: Toluene-d8 " " " 80.0-120 103 "	Vinyl chloride	"	IF .	n		0.200	ND	11	
o-Xylene     "     "     1.00     ND     "       Surrogate: 2-Bromopropene     "     "     80.0-120     104     %       Surrogate: 1,2-DCA-d4     "     "     80.0-120     96.0     "       Surrogate: Toluene-d8     "     "     80.0-120     103     "	m,p-Xylene	**	11			2.00	ND	*1	
Surrogate:         1,2-DCA-d4         "         "         80.0-120         96.0         "           Surrogate:         Toluene-d8         "         "         80.0-120         103         "	o-Xylene	<b>n</b> .	"	U		1.00			·
Surrogate: Toluene-d8 " " " 80.0-120 103 "	Surrogate: 2-Bromopropene	11	"		80.0-120			%	
•	Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		96.0	"	
Surrogate: 4-BFB " " " 80.0-120 100 "	Surrogate: Toluene-d8	n	"	"	80.0-120				-
	Surrogate: 4-BFB	"	"	"	80.0-120		100	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/14/99 14:56

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

· · · · · · · · · · · · · · · · · · ·	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-27-3W</u>			<u>B9072</u>	<u>07-04</u>			<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99		10.0	ND	ug/l	
Benzene	14	11	11		1.00	ND	*1	
Bromobenzene	11	*1	14		1.00	ND	n	
Bromochloromethane	11	<b>f</b> I	II		1.00	ND	11	
Bromodichloromethane	ti	11			1.00	ND	н	
Bromoform		11	If		1.00	ND	11	
Bromomethane	U	11	If		1.00	ND	11	
2-Butanone	м	11	0		10.0	ND	н	
n-Butylbenzene	n	17	н		1.00	ND	11	
sec-Butylbenzene	19	11	n		1.00	ND	11	
tert-Butylbenzene	17	14	n		1.00	ND	"	
Carbon disulfide	n	U .	н		1.00	ND	"	
Carbon tetrachloride	"	."	11		1.00	ND	и	
Chlorobenzene	u –	11	11		1.00	ND		
Chloroethane	u.	*1	н		1.00	ND	11	
Chloroform	0		IF.		1.00	ND	U .	
Chloromethane	U	н	и		5.00	ND	u.	
2-Chlorotoluene	"	н	5e		1.00	ND	*1	
4-Chlorotoluene	н				1.00	ND	11	
Dibromochloromethane		17			1.00	ND	н	_
1,2-Dibromo-3-chloropropane		u	U		5.00	ND	н	-
1,2-Dibromoethane		u	u		1.00	ND	н	
Dibromomethane	н		*1		1.00	ND	11	
1,2-Dichlorobenzene		п			1.00	ND	ii .	
1,3-Dichlorobenzene	*1	51			1.00	ND		
1,4-Dichlorobenzene			**		1.00	ND	и	
Dichlorodifluoromethane	14		н		1.00	ND	"	
1.1-Dichloroethane	14	17	It		1.00	ND	u	
1,2-Dichloroethane	"				1.00	ND	U	
1,1-Dichloroethene		0	11		1.00	ND	11	
cis-1,2-Dichloroethene		n	o .		1.00	ND	"	
trans-1,2-Dichloroethene	"				1.00	ND	11	
	14				. 1.00	ND		
1,2-Dichloropropane	11	н	11		1.00	ND	н	
1,3-Dichloropropane	17		"		1.00			
2,2-Dichloropropane	.,							
1,1-Dichloropropene		"			1.00	ND		
cis-1,3-Dichlørepropene	E1 F1	n U	17		1.00	ND		
trans-1,3-D chloropropene	"	a	1		1.00	ND	n	

North Cleek Apalytical - Bothell



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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
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 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-27-3W (continued)			B90720	17_A4			Water	
Ethylbenzene	0790384	7/13/99	7/13/99	<u>,,,,,,</u>	1.00	ND	ug/l	
Hexachlorobutadiene	11	"	"		1.00	ND	"	
2-Hexanone	н	н	u		10.0	ND		
Isopropylbenzene	u		11		1.00	ND	u	
p-Isopropyltoluene	и	"			1.00	ND	u	
Methylene chloride	н	н	IR		5.00	ND	u	
4-Methyl-2-pentanone	н	••	17		10.0	ND	11	
Naphthalene	u	*1			1.00	ND	11	
n-Propylbenzene	"	11			1.00	ND	11	
Styrene	11	**	11		1.00	ND	"	
1,1,1,2-Tetrachloroethane	*1	11	17		1.00	ND	"	
1,1,2,2-Tetrachloroethane	"	11	0		1.00	ND	*1	
Tetrachloroethene	11	14	U .		1.00	ND	11	
Toluene	"	17			1.00	ND	*1	
1,2,3-Trichlorobenzene	н	U	11		1.00	ND	н	
1,2,4-Trichlorobenzene	н	U	11		1.00	ND	н	
1,1,1-Trichloroethane	п	U.	11		1.00	ND	11	
I, I, 2-Trichloroethane		"	*		1.00	ND	н	
Trichloroethene	u	"	11		1.00	ND	н	
Trichlorofluoromethane	п		н		1.00	ND	11	
1,2,3-Trichloropropane	"	U	н		1.00	ND		
1,2,4-Trimethylbenzene	"	u	н		1.00	ND	17	
1,3,5-Trimethylbenzene	и `		н		1.00	ND	11	
Vinyl chloride	"	14	"		0.200	ND		
m,p-Xylene	"	11	н		2.00	ND	n	
o-Xylene	"	u	n		1.00	ND	N	
Surrogate: 2-Bromopropene	"	"		80.0-120		104	%	
Surrogate: 1,2-DCA-d4	"	"	n	80.0-120		95.0	<i>)1</i>	
Surrogate: Toluene-d8	"	"	"	80.0-120		104	"	
Surrogate: 4-BFB	"	"	"	80.0-120		98.0	"	

North Creek Analycical - Bothell

Joy B Chang, Project Manager



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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/14/99 14:56

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

1	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit_	Result	Units	Notes*
<u>P-27-9W</u>			<u>B9072</u>	<u>07-05</u>			<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99		10.0	ND	ug/l	
Benzene	ч	n	*1		1.00	ND		
Bromobenzene	"	11	41		1.00	ND	18	
Bromochloromethane	"		11		1.00	ND	11	
Bromodichloromethane	11	n	11		1.00	ND	11	
Bromoform	11		11	•	1.00	ND	11	
Bromomethane	11		u.		1.00	ND	8	
2-Butanone	U		17		10.0	ND	**	
n-Butylbenzene	U	17	11		1.00	ND	*1	
sec-Butylbenzene	U U	u.			1.00	ND	*1	
tert-Butylbenzene	"		U		1.00	ND	**	
Carbon disulfide	н		*1		. 1.00	ND	u	
Carbon tetrachloride	11	*1	п		1.00	ND		
Chlorobenzene	н		н		1.00	ND	II .	
Chloroethane	н				1.00	ND		
Chloroform	и				1.00	ND	H Í	
Chloromethane	u	11			5.00	ND	u.	
2-Chlorotoluene	n	10			1.00	ND	U II	
4-Chlorotoluene	n				1.00	ND		
Dibromochloromethane	u	17	U		1.00	ND		
1,2-Dibromo-3-chloropropane	u		0		5.00	ND	*1	
1,2-Dibromoethane	"				1.00	ND	41	
Dibromomethane	U		*1		1.00	ND		
-	U	w '			1.00	ND		
1,2-Dichlorobenzene	"	u	14		1.00	ND	17	
1,3-Dichlorobenzene	u .				1.00	ND	14	
1,4-Dichlorobenzene Dichlorodifluoromethane	u .	Ϋ́υ.	0		1.00	ND	0	
	u .	U	0		1.00	ND	n	
1,1-Dichloroethane			11		1.00	ND	"	
1,2-Dichloroethane			11		1.00	ND ND	*1	
1,1-Dichloroethene							*1	
cis-1,2-Dichloroethene		"			1.00	ND	11	
trans-1,2-Dichloroethene	"				1.00	ND		
1,2-Dichloropropane		"			1.00	ND		
1,3-Dichloropropane	11	n	14		1.00	ND	"	
2,2-Dichloropropane	11	U	0		1.00	ND		
1,1-Dichloropropene	"	11	"		1.00	ND	H	
cis-1,3-Dichloropropene		"	"		1.00	ND	11	
trans-1,3-Dichloropropene	47	"	11		1.00	ND		

North Creek Analytical - Bothell



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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-27-9W (continued)			<u>B90720</u>	<u>07-05</u>			<u>Water</u>	
Ethylbenzene	0790384	7/13/99	7/13/99		• 1.00	ND	ug/l	
Hexachlorobutadiene	н	U .	*1		1.00	ND	"	
2-Hexanone	н	11	n		10.0	ND		
Isopropylbenzene	н	"	U		1.00	ND	**	
p-Isopropyltoluene	It	0	н		1.00	ND	10	
Methylene chloride	н	17	**		5.00	ND	18	
4-Methyl-2-pentanone		0	11		10.0	ND	18	
Naphthalene	11	19	a		1.00	ND	18	
n-Propylbenzene	IT	17			1.00	ND	н	
Styrene		n	u		1.00	ND		
1,1,1,2-Tetrachloroethane	. u	14	0		1.00	ND	н	
1,1,2,2-Tetrachloroethane	IF	17	U .		1.00	ND	11	
Tetrachloroethene		17			1.00	ND	н	
Toluene	H.	a.	11		1.00	ND	н	
1,2,3-Trichlorobenzene		ti -	п		1.00	ND	"	
1,2,4-Trichlorobenzene		n	17		1.00	ND	"	
1,1,1-Trichloroethane	11	U U	U .		1.00	ND	"	
1,1,2-Trichloroethane		D.			1.00	ND	"	
Trichloroethene	17		U .		1.00	ND	**	
Trichlorofluoromethane		u –	11		1.00	ND	**	
1,2,3-Trichloropropane		ti -	U		1.00	· ND	**	
1,2,4-Trimethylbenzene	u	u	*1		1.00	ND	*1	
1,3,5-Trimethylbenzene	**	*1	n		1.00	ND	**	
Vinyl chloride	"	"	п		0.200	ND	**	
m,p-Xylene	н	11	11		2.00	ND	**	
o-Xylene	18	"			1.00	ND		
Surrogate: 2-Bromopropene	"	"	11	80.0-120		104	%	
Surrogate: 1,2-DCA-d4	. "	"	"	80.0-120		95.0	"	
Surrogate: Toluene-d8	"	n	11	80.0-120		106	"	
Surrogate: 4-BFB	"	"	"	80.0-120	•	99.5	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-571

nd 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/14/99 14:56

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-28-5W</u>			<u>B9072</u>	<u>07-06</u>			<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99		10.0	ND	ug/l	
Benzene	11	11	н		1.00	ND	"	
Bromobenzene	14	11	n		1.00	ND		
Bromochloromethane	11	14	**		. 1.00	ND	".	
Bromodichloromethane	11	17	11		1.00	ND	11	
Bromoform	n	17	11		1.00	ND	0	
Bromomethane	n	"	17		1.00	ND	*1	
2-Butanone	II.	**	0		10.0	ND	11	
n-Butylbenzene	11	н	U		1.00	ND	11	
sec-Butylbenzene	H	11	11		1.00	ND	u	
ert-Butylbenzene	"	II	"	·	1.00	ND	u	
Carbon disulfide	11		11		1.00	ND	17	
Carbon tetrachloride	"	11	14		1.00	ND	"	
Chlorobenzene			14		1.00	ND	U	
Chloroethane	11	*1	17		1.00	ND	11	
Chloroform		11	U U		1.00	ND	11	
Chloromethane	u	11	11		5.00	ND	*1	
2-Chlorotoluene	н		"		1.00	ND	u	
4-Chlorotoluene	11	17	<del>1</del> 1		1.00	ND	н	
Dibromochloromethane	н		и		1.00	ND	11	
1,2-Dibromo-3-chloropropane	17	11	19	_	5.00	ND	11	
1,2-Dibromoethane		11	17	•	1.00	ND	u	
Dibromomethane	"	11			1.00	ND	11	
1,2-Dichlorobenzene	11	н .			1.00	ND	11	•
1,3-Dichlorobenzene		н			1.00	ND	н	
1,4-Dichlorobenzene	U.				1.00	ND	IF	
Dichlorodifluoromethane	"	n	**		1.00	ND		
1.1-Dichloroethane	•1	11	11		1.00	ND		
1,2-Dichloroethane	11		н		1.00	ND	"	
1,1-Dichloroethene	14		**		1.00	ND	"	
cis-1,2-Dichloroethene		a	"		1.00	ND	11	
trans-1,2-Dichloroethene	"	Ħ	н		1.00	ND	18	
1,2-Dichloropropane			11		1.00	ND	14	
1,3-Dichloropropane		11	IF.		1.00	ND	11	
2,2-Dichloropropane	U	19	0		1.00	ND		
		0			1.00	ND ND	u	
1,1-Dichloropropene	*1	"	*1		1.00	ND	*1	
cis-1,3-Dichloropropene					1.00	ND ND	11	
trans-1,3-Dichlotopropene					1.00	ND		

North Creek Analytical - Bothell



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56	

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

1	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-28-5W (continued)			<u>B90720</u>	<u>07-06</u>			<u>Water</u>	
Ethylbenzene	0790384	7/13/99	7/13/99 ·		1.00	ND	ug/l	
Hexachlorobutadiene	11	18			1.00	ND	"	
2-Hexanone	17	It	18		10.0	ND	18	
Isopropylbenzene		11	18		1.00	ND	11	
p-Isopropyltoluene	0 <sup>1</sup>		14		1.00	ND		
Methylene chloride	u.	11			5.00	ND		
4-Methyl-2-pentanone	tt.	11	14		10.0	ND	"	
Naphthalene		19	C†		1.00	ND	17	
n-Propylbenzene	0				1.00	ND	11	
Styrene	U	11	17		1.00	ND		
1,1,1,2-Tetrachloroethane	**	0	"		1.00	ND		
1,1,2,2-Tetrachloroethane	U U	0			1.00	ND	14	
Tetrachloroethene	u	U .	".		1.00	ND	10	
Toluene	11	0			1.00	ND		
1,2,3-Trichlorobenzene	11	u.	17		1.00	ND		
1,2,4-Trichlorobenzene	"	U .	17		1.00	ND		
1,1,1-Trichloroethane	*1	0	.,		1.00	ND		
1,1,2-Trichloroethane	"		.,		1.00	ND	14	
Trichloroethene	18		и.		1.00	ND		
Trichlorofluoromethane		11	14		1.00	ND		
1,2,3-Trichloropropane		"			1.00	ND		
1,2,4-Trimethylbenzene	U .	"	**		1.00	ND	f1	
1,3,5-Trimethylbenzene	0	н	"		1.00	ND		
Vinyl chloride	*1	**	"		0.200	ND	н	
m,p-Xylene	*1	"	*1		2.00	ND	U .	
o-Xylene	"	11	*1		1.00	ND	н	
Surrogate: 2-Bromopropene	"		"	80.0-120		103	%	
Surrogate: 1,2-DCA-d4	"	н	"	80.0-120		95.0	"	
Surrogate: Toluene-d8	"	n	"	80.0-120		103	"	
Surrogate: 4-BFB	"	n	"	80.0-120		97.0	"	

North Creek Analytical - Bothell

Joy B Chang, Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210 
 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 Bend 2032 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/14/99 14:56

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-28-12W</u>			<u>B9072(</u>	)7-07			<u>Water</u>	
Acetone	0790384	7/13/99	7/13/99	<del>, , , ,</del>	10.0	ND	ug/l	
Benzene	11	1113737 II	"		1.00	ND	ug/i "	
Bromobenzene	17	0	"		1.00	ND	u	
Bromochloromethane	41	U .	"		1.00	ND	u .	
Bromodichloromethane	11	U .	11		1.00	ND	17	
Bromoform	17	11	н		1.00	ND	"	
Bromomethane	и	н	н		1.00	ND	17	
2-Butanone	и	н	н		10.0	ND		
n-Butyibenzene	17	н	**		1.00	ND	0	
sec-Butylbenzene	11	н	н		1.00	ND	U U	
tert-Butylbenzene		<b>†</b> 1	II .		1.00	ND	rr .	
Carbon disulfide	"	11	u		1.00	ND	11	
Carbon tetrachloride	U	11			1.00	ND	*1	
Chlorobenzene	n	11			1.00	ND	"	
Chloroethane	н	и	v		1.00	ND	11	
Chloroform	"		u		1.00	ND	н	
Chloromethane	**		n		5.00	ND	"	
2-Chlorotoluene	н	"	11		1.00	ND	11	
4-Chlorotoluene		U	*1		1.00	ND	н	
Dibromochloromethane	u	u	**		1.00	ND	IF.	
1,2-Dibromo-3-chloropropane	н	"	11		5.00	ND	14	
1,2-Dibromoethane	н	"	H		1.00	ND	16	
Dibromomethane	"	"	11		1.00	ND	U.	
1,2-Dichlorobenzene	"	11	14		1.00	ND		
1,3-Dichlorobenzene	"		"		1.00	ND	11	
1,4-Dichlorobenzene	u	11	11		1.00	ND	п	
Dichlorodifluoromethane	II.	11	14		1.00	ND	N	
1,1-Dichloroethane	"	11	II.		1.00	ND	и	
1,2-Dichloroethane	17	, U	n		1.00	ND	11	
1,1-Dichloroethene	a .		n		1.00	ND	u	
cis-1,2-Dichloroethene		u	11		1.00	ND	11	
trans-1,2-Dichloroethene		11	н		1.00	ND	17	
1,2-Dichloropropane	"	u	11		1.00	ND	17	
1,3-Dichloropropane	u	IR	н		1.00	ND	17	
2,2-Dichloropropane		u	11		1.00	ND	n	
1,1-Dichloropropene		17	и		1.00	ND	u	
cis-1,3-Dichloropropene	U .	11	и		1.00	ND	u	
trans-1,3-Dichloropropene	n	u	11		1.00	ND	н	

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Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Rood 00.92701-5711

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/9/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/14/99 14:56	_

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Reșult	Units	Notes*
P-28-12W (continued)			<u>B9072</u>	N <b>7_N7</b>			Water	
Ethylbenzene	0790384	7/13/99	7/13/99	<u></u>	1.00	ND	ug/l	
Hexachlorobutadiene	"	11 13/33	"		1.00	ND	"	
2-Hexanone			и		10.0	ND		
Isopropylbenzene	11		17		1.00	ND	17	
p-IsopropyItoluene	14	19	11		1.00	ND	17	
Methylene chloride			17		5.00	ND	17	
4-Methyl-2-pentanone		н	11		10.0	ND	17	
Naphthalene	11	н	n		1.00	ND	n	
n-Propylbenzene	H	11	u.		1.00	ND	U	
Styrene	"	11	n		1.00	ND	*1	
1,1,1,2-Tetrachloroethane		11	*1		1.00	ND	e7	
1,1,2,2-Tetrachloroethane	"	*1	"		1.00	ND	"	
Tetrachloroethene	"	*1	11		1.00	ND	"	
Toluene	"	н			1.00	ND	"	
1,2,3-Trichlorobenzene	u	11			1.00	ND -	11	
1,2,4-Trichlorobenzene	п	и	ш		1.00	ND	u	
1,1,1-Trichloroethane	и	18	17		1.00	ND	u	
1,1,2-Trichloroethane		14	u.		1.00	ND	u	
Trichloroethene		17			1.00	' ND		
Trichlorofluoromethane	**		17		1.00	ND		
1,2,3-Trichloropropane		0	17		1.00	ND		
1,2,4-Trimethylbenzene	"	u .	a.		1.00	ND		
1,3,5-Trimethylbenzene	п	Ħ			1.00	ND		
Vinyl chloride	11	n	"		0.200	ND		
m,p-Xylene		11	. "		2.00	ND	n	
o-Xylene	17	11	*1		1.00	ND		
Surrogate: 2-Bromopropene	"	"	"	80.0-120		104	%	
Surrogate: 1,2-DCA-d4	"	'n	"	80.0-120		94.0	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		104	"	
Surrogate: 4-BFB	"	"	"	80.0-120		95.5	"	

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North Creek Analytical - Bothell

Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Trip Blank			<u>B9072(</u>	7 09			Watar	
Acetone	0790384	7/13/99	<u>690720</u> 7/13/99	<u> </u>	10.0	ND	<u>Water</u> ug/l	•
Benzene	0790304	1113133	1/1 <i>3/33</i>		1.00	ND	ug/1	
Bromobenzene		11	IF		1.00	ND	11	
Bromochloromethane	U U	11	н		1.00	ND	н	
Bromodichloromethane	U	17			1.00	ND	н	
Bromoform	tt	If			1.00	ND	"	
Bromomethane	"	17			1.00	ND	*1	
2-Butanone		IF	"			ND ND	"	
	u	н	11		10.0			
n-Butylbenzene	u	11	11		1.00	ND		
sec-Butylbenzene		11			1.00	ND	" , 1	
tert-Butylbenzene		**			1.00	ND	14	
Carbon disulfide			17		1.00	ND	". "	
Carbon tetrachloride		*			1.00	ND		
Chlorobenzene	11				1.00	ND	и 11	
Chloroethane	"	"	14		1.00	ND		
Chloroform		11		•	1.00	ND		
Chloromethane	"		17 18		5.00	ND	"	
2-Chlorotoluene	"				1.00	ND	u	
4-Chlorotoluene	11	U	"		1.00	ND	н	
Dibromochloromethane	"	n	H		1.00	ND	11	
1,2-Dibromo-3-chloropropane	п	U	и		5.00	ND	n	
1,2-Dibromoethane	11	0	11		1.00	ND	4	
Dibromomethane	u .	11	11		1.00	ND	11	
1,2-Dichlorobenzene	н	0	н		1.00	ND	11 .	,
1,3-Dichlorobenzene	11	н	н		1.00	ND	*1	
1,4-Dichlorobenzene	n	н	11		1.00	ND	**	
Dichlorodifluoromethane	"		*1		1.00	ND	11	
1,1-Dichloroethane	11		п		1.00	ND	*1	
1,2-Dichloroethane	н		11		1.00	ND	11	
1,1-Dichloroethene	н	"	11		1.00	ND	11	
cis-1,2-Dichloroethene	н	11	11		1.00	ND	U	
trans-1,2-Dichloroethene	и	14	**		1.00	ND	11	
1,2-Dichloropropane	н		".		1.00	ND	U.	
1,3-Dichloropropane	u		H		1.00	ND	н	
2,2-Dichloropropane	u	u.	11		1.00	ND	17	
1,1-Dichloropropene	н	H.	TÎ		1.00	ND	16	
cis-1,3-Dichlorpprogene	11	u .	U		1.00	ND	н	
trans-1,3-Dichloropropene	11	14	"		1.00	ND	u	

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\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Trip Blank (continued)			<u>B9072</u>	07-08			<u>Water</u>	
Ethylbenzene	0790384	7/13/99 ·	7/13/99	<u></u>	1.00	ND	ug/l	
Hexachlorobutadiene		11	11		1.00	ND	"	
2-Hexanone	н	11	n		10.0	ND		
Isopropylbenzene		0			1.00	ND	"	
p-Isopropyltoluene	n		11		1.00	ND	**	
Methylene chloride	91	н	U		5.00	ND	**	
4-Methyl-2-pentanone	41	11	u		10.0	ND	"	
Naphthalene	. "	9	a		1.00	ND	*1	
n-Propylbenzene	*1	"	0		1.00	ND		
Styrene	u	n	11		1.00	ND		
1,1,1,2-Tetrachloroethane		"	".		1.00	ND	"	
1,1,2,2-Tetrachloroethane		п	н		1.00	ND	11	
Tetrachloroethene	H	н	11		1.00	ND	a	
Toluene	U U	н .	н		1.00	ND	11	
1,2,3-Trichlorobenzene	u .	It	н		1.00	ND	11	
1,2,4-Trichlorobenzene	u .	11	н	-	1.00	ND		
1,1,1-Trichloroethane	н ,		н		1.00	ND	17	
1,1,2-Trichloroethane	н	11	14		1.00	ND		
Trichloroethene	н	u .	18		1.00	ND	14	
Trichlorofluoromethane		U	(1		1.00	ND	11	
1,2,3-Trichloropropane	**	*1	17		1.00	ND	11	
1,2,4-Trimethylbenzene	**	0	H .		1.00	ND	0	
1,3,5-Trimethylbenzene	u	11	u .		1.00	ND	0	
Vinyl chloride	"	*1	n		0.200	ND	**	•
m,p-Xylene	"	11	*1		2.00	ND	11	
o-Xylene	17		<b>H</b>		1.00	ND	••	
Surrogate: 2-Bromopropene	"		"	80.0-120	· · · · · · · · · · · · · · · · · · ·	103	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		95.5	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		104	"	
Surrogate: 4-BFB	"	"	"	80.0-120		94.5	"	





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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.966.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 0790384	<u>Date Prepa</u>	<u>red: 7/</u> 13/9	<u>99</u>		<u>Extrac</u>	tion Method: EP.	<u>A_503</u> 0B	[P/T]		
<u>Blank</u>	0790384-BI									
Acetone	7/13/99			ND	ug/l	10.0				
Benzene	"			ND	"	1.00				
Bromobenzene	"			ND	U.	1.00				
Bromochloromethane	"			ND	U .	1.00				
Bromodichloromethane	0			ND	U	1.00				
Bromoform	17			ND	U	1.00				
Bromomethane	17			ND	п	1.00				
2-Butanone	H			ND	11	10.0				
n-Butylbenzene	u			ND	ti	1.00				
sec-Butylbenzene	"			ND	**	1.00				
tert-Butylbenzene	f1			ND	*1	1.00				
Carbon disulfide	*1			ND	11	1.00				
Carbon tetrachloride	*1			ND	*1	1.00				
Chlorobenzene	*1			ND	н	1.00				
Chloroethane	11			ND	11	1.00				
Chloroform	и			ND	н	1.00				
Chloromethane	18			ND	H	5.00				
2-Chlorotoluene				ND	и	1.00				
4-Chlorotoluene				ND	и	1.00				
Dibromochloromethane	u			ND		1.00				
1,2-Dibromo-3-chloropropane	11			ND	14	5.00			•	
1,2-Dibromoethane	11			ND	14	- 1.00				
Dibromomethane	u ·			ND		1.00				
1,2-Dichlorobenzene	и			ND	н	1.00				
1,3-Dichlorobenzene	н,			ND		1.00				
1,4-Dichlorobenzene	11			ND	U	1.00				
Dichlorodifluoromethane	. "			ND	11	1.00				
1,1-Dichloroethane	U			ND	0	1.00				
1,2-Dichloroethane	u .			ND	.a	1.00				
1,1-Dichloroethene				ND	*1	1.00				
cis-1,2-Dichloroethene	н			ND	*1	1.00				
trans-1,2-Dichloroethene	н			ND	"	1.00				
1,2-Dichloropropane	17			ND	"	1.00				
1,3-Dichloropropane				ND	**	1.00				
2,2-Dichloropropane	n			ND	"	1.00				
1,1-Dichloroppopene	II.			ND	н	1.00				
cis-1,3-Dichløropropene	U			ND	11	1.00				

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	<u>0790384-BI</u>	LK1					·			
trans-1,3-Dichloropropene	7/13/99			ND	ug/l	1.00				
Ethylbenzene	*1			ND	"	1.00				
Hexachlorobutadiene	"			ND	· 14	1.00				
2-Hexanone	"			ND	0	10.0				
Isopropylbenzene	"	•		ND	17	1.00				
p-Isopropyltoluene	"			ND		1.00				
Methylene chloride	11			ND	U	5.00				
4-Methyl-2-pentanone	11			ND	11	10.0				
Naphthalene	"			ND	11	1.00				
n-Propylbenzene	u .			ND	v	1.00				
Styrene				ND	0	1.00				
1,1,1,2-Tetrachloroethane				ND	11	1.00				
1,1,2,2-Tetrachloroethane	u			ND	0	1.00				
Tetrachloroethene	tr			ND	ti	1.00				
Toluene				ND	н	1.00	•			
1,2,3-Trichlorobenzene				ND	п	1.00				
1,2,4-Trichlorobenzene	.,			ND		1.00				
1,1,1-Trichloroethane	**			ND	11	1.00				
1,1,2-Trichloroethane	11			ND	11	1.00				
Trichloroethene	"	-		ND	*1	1.00				
Trichlorofluoromethane	*1			ND		1.00				
1,2,3-Trichloropropane	*1			ND	11	1.00				
1,2,4-Trimethylbenzene	*1			ND	*1	1.00				
1,3,5-Trimethylbenzene	*1			ND	11	1.00				
Vinyl chloride	11			ND	**	0.200				
m,p-Xylene	If			ND	11	2.00				
o-Xylene	и			ND	11	1.00				
Surrogate: 2-Bromopropene	"	20.0		21.9	"	80.0-120	109	•		
Surrogate: 1,2-DCA-d4	"	20.0		19.2	"	80.0-120	96.0			
Surrogate: Toluene-d8	"	20.0		20.7	"	80.0-120	104			
Surrogate: 4-BFB	"	20.0		19.9	"	80.0-120	99.5			
<u>Blank</u>	<u>0790384-BI</u>	L <b>K2</b>								
Acetone	7/14/99			ND ·	ug/l	10.0		×		
Benzene	*1			ND	U	1.00				
Bromobenzene	11			ND	"	1.00				
Bromochloromethane	11			ND	H	1.00				
Bromodichloromethane	н			ND	υ.	1.00				

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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
<u>Blank (continued)</u>	<u>0790384-BI</u>	L <b>K2</b>							
Bromoform	7/14/99			ND	ug/l	1.00			
Bromomethane	U			ND	"	1.00			
2-Butanone	n			ND	Ħ	10.0			
n-Butylbenzene	**			ND		1.00			
sec-Butylbenzene	10			ND	11	1.00			
tert-Butylbenzene	**			ND	U .	1.00			
Carbon disulfide	11			ND	"	1.00			
Carbon tetrachloride	*1			ND		1.00			
Chlorobenzene	11			ND	11	1.00			
Chloroethane	11			ND	11	1.00			
Chloroform	U			ND	11	1.00			
Chloromethane	*1			ND	11	5.00			
2-Chlorotoluene	11			ND	н	1.00			
4-Chlorotoluene	. "			ND	11	1.00			
Dibromochloromethane	u			ND	U.	1.00			
1,2-Dibromo-3-chloropropane	11			ND	11	5.00			
1,2-Dibromoethane	11			ND	u	1.00			
Dibromomethane	11			ND	n	1.00			
1,2-Dichlorobenzene	u .			ND	0	1.00			
1,3-Dichlorobenzene	11			ND	0	1.00			
1,4-Dichlorobenzene	н			ND	н	1.00			
Dichlorodifluoromethane				ND		1.00			
1,1-Dichloroethane	u			ND	"	1.00			
1,2-Dichloroethane	*1			ND		1.00			
1,1-Dichloroethene	11			ND	*1	. 1.00			
cis-1,2-Dichloroethene	11			ND	11	1.00			
trans-1,2-Dichloroethene				ND		1.00			
1,2-Dichloropropane	"			ND		1.00			
1,3-Dichloropropane	п			ND	н	1.00			
2,2-Dichloropropane				ND	"	1.00			
1,1-Dichloropropene	n			ND	11	1.00			
cis-1,3-Dichloropropene	91			ND	U	1.00	I.		
trans-1,3-Dichloropropene	17			ND	41	1.00	I.		
Ethylbenzene	U II			ND	н	1.00	I		
Hexachlorobutadiene	n			ND	"	1.00	I		
2-Hexanone	11			ND	u	10.0	)		
Isopropylbenzen	и			ND	11	1.00	)		
p-Isopropyltoluene	u.			ND	н	1.00	i		

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
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 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

500 Market Place Tower, 2025 1st AveProject Number: 42368-063-005Received: 7/9/99DescriptionReceived: 7/9/99	
	'
Seattle, WA 98121 Project Manager: David Raubvogel Reported: 7/14/99 14:56	

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	<u>0790384-BI</u>	LK2								
Methylene chloride	7/14/99	·		ND	ug/l	5.00				
4-Methyl-2-pentanone	"			ND	"	10.0				
Naphthalene	**			ND	11	1.00				
n-Propylbenzene	п			ND	11	1.00				
Styrene	н			ND		1.00				
1,1,1,2-Tetrachloroethane	tı			ND	*1	1.00				
1,1,2,2-Tetrachloroethane	"			ND	н	1.00				
Tetrachloroethene				ND		1.00				
Toluene	11			ND	U	1.00				
1,2,3-Trichlorobenzene	18			ND	11	1.00				
1,2,4-Trichlorobenzene	u			ND	14	1.00				
1,1,1-Trichloroethane	. u			ND	11	1.00				
1,1,2-Trichloroethane	u.			ND	11	1.00				
Trichloroethene	н			ND	11	1.00				
Trichlorofluoromethane	п.			ND	н	1.00		•		
1,2,3-Trichloropropane	11			ND	11	1.00				
1,2,4-Trimethylbenzene	"			ND	11	1.00				
1,3,5-Trimethylbenzene	11			ND	11	1.00				
Vinyl chloride	н ,			ND		1.00				
m,p-Xylene	"			ND	0	2.00				
o-Xylene	".			ND	α.	1.00				
Surrogate: 2-Bromopropene	"	20.0		21.8	"	80.0-120	109			
Surrogate: 1,2-DCA-d4	"	20.0		18.8	"	80.0-120	94.0			
Surrogate: Toluene-d8	"	20.0		20.8	"	80.0-120	104		,	
Surrogate: 4-BFB	".	20.0		19.5	"	80.0-120	97.5			
LCS	<u>0790384-BS</u>	51			•					
Benzene	7/13/99	10.0		10.6	ug/l	80.0-120	106			
Chlorobenzene	n	10.0		9.99	"	80.0-120	99.9			
1,1-Dichloroethene	U	10.0		8.65	*1	80.0-120	86.5			
Toluene	U	10.0		10.1	**	80.0-120	101			
Trichloroethene	11	10.0		9.92	11	80.0-120	99.2			
Surrogate: 2-Bromopropene	"	20.0		19.8	"	80.0-120	99.0			
Surrogate: 1,2-DCA-d4	"	20.0		17.5	"	80.0-120	87.5			
Surrogate: Toluene-d8	"	20.0		19.7	"	80.0-120	98.5			
Surrogate: 4-BFB	"	20.0		18.5	"	80.0-120	92.5			
						3010 120				

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Portland 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588 Bend

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56

Volatile Organic Compounds by EPA Method 8260B/Quality Control . . . зC, . s, i, c Č, 4 North Creek Analytical - Bothell ÷

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Matrix Spike	0790384-MS1	Ŀ	<u> 8907199-02</u>							
Benzene	7/13/99	10.0	ND	10.4	ug/l	80.0-120	104			
Chlorobenzene	u	10.0	ND	9.86	17	80.0-120	98.6			
1,1-Dichloroethene	"	10.0	ND	8.44	н	80.0-120	84.4			
Toluene	н	10.0	ND	10.0	19	80.0-120	100			
Trichloroethene	н	10.0	ND	9.61		80.0-120	96.1			
Surrogate: 2-Bromopropene	"	20.0		20.8	"	80.0-120	104			
Surrogate: 1,2-DCA-d4	"	20.0		19.8	"	80.0-120	99.0			
Surrogate: Toluene-d8	"	20.0		21.2	"	80.0-120	106			
Surrogate: 4-BFB	"	20.0		19.2	"	80.0-120	96.0			
Matrix Spike Dup	0790384-MSI	<u>)1 J</u>	<u> 8907199-02</u>							
Benzene	7/13/99	10.0	ND	9.67	ug/l	80.0-120	96.7	15.0	7.27	
Chlorobenzene	11	10.0	ND	9.43	*1	80.0-120	94.3	15.0	4.46	
1,1-Dichloroethene	11	10.0	ND	7.64	73	80.0-120	76.4	15.0	9.95	I
Toluene	U	10.0	ND	9.26	11	80.0-120	92.6	15.0	7.68	
Trichloroethene	U	10.0	. ND	8.88	<b>7</b> 8	80.0-120	88.8	15.0	7.90	
Surrogate: 2-Bromopropene	"	20.0		20.6	"	80.0-120	103		-	
Surrogate: 1,2-DCA-d4	"	20.0		20.9	"	80.0-120	104			
Surrogate: Toluene-d8	"	20.0		20.5	"	80.0-120	103			
Surrogate: 4-BFB	**	20.0		19.7	"	80.0-120	<i>98.5</i>			

North Cre k Analytical - Bothell Joy B Chang, Project Manager



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 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420,9200 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509,924,9200 fax 509,924,9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503,906,9200 fax 503,906,9210

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Dames an	d Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/9/99
500 Mark	et Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, W	/A 98121	Project Manager:	David Raubvogel	Reported:	7/14/99 14:56
		No	tes and Definitions		
#	Note				
1	The spike recovery for this QC recovery for this analyte does n		ablished control limits. Review of ontrol condition for the batch.	associated batch QC indic	ates the
DET	Analyte DETECTED				
ND	Analyte NOT DETECTED at o	r above the reporting lir	nit	· · ·	
NR	Not Reported				
dry	Sample results reported on a dr	y weight basis			
Recov.	Recovery				
RPD	Relative Percent Difference				
					•

North Cree nalytical - Bothell Joy B Chang, Project Manager

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508 East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (425) 420-9200 FAX 420-9210 (509) 924-9200 FAX 924-9290 (503) 906-9200

FAX 906-9210 

Environmental Laboratory Service													ſ	$\overline{\mathcal{L}}$		$\overline{}$	
	CHAIN	NOF CUSTO	DY R	EPO	RT		·			Wo	rk (	)rde	r #[	N)	10		20-+
REPORT TO:			INVOICET	0:			-						TURNA	ROUND	REQU	EST in Bus	siness Days *
ATTENTION: P. RAWS 1093-	•		ATTENTION	;	5.			_						Organ	uic & Ino	rganie Analy	yses
ADDRESS: Doma Jo Moons		•	ADDRESS:		An	10						10	7	5	4		2 1 Sa
2025 155 AUS#500	SEAme	98121										Slandard	l	Fue	ls & Hy	drocarbon A	
PHONE: 206 722 0744	FAX: 727		P.O. NUMBE	<u>R:</u>	<del>,,</del>	, <u>,</u>	N	CA QUOTE	#:	, <u> </u>				5	3-4	2	l Same Day
PROJECT NAME: LSP- MAGLE	e Cisroner	15	Analysis		6/6/					' /		,		500020	•		
PROJECT NUMBER: 42 362-063	-005		Request:	18	<i>v</i> / .		/ /	' /		/ /		ОТ	HER	Specify:			
SAMPLED BY: AJULAS	- <del></del>	<b>_</b>		/``/	' ./					' /			r			undard may i	incur Rush Charge
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	/·	$\gamma_{o}$				' /				MATRI (W. S. A.		# OF		<b>)</b> '	COMMENTS
1.P-20A-17W	7/5/51			1								W		Z	K	590	7207
2P-26-5w	1425											)		١			1 ~ _
P.26-12W	1500		/	7										. [			
P-27-3W	1540		/	,													-
5 P-27-19-96	1615							-									-
P-28-SW	1705		1														-
2.P-25-RW	1715														-		~
· Trup Beause /				イ	·									T			
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NORTH CREEK



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 Dots.324.3200
 Ita 503.324.3230

 Portland
 9405
 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle 500 Market Place Tower, 2025 1st Ave Seattle, WA 98121		Project: Lake Fo Project Number: 42368-( Project Manager: David F	Sampled: Received: Reported:		
		ANALYTICAL REP	ORT FOR SAMPLES:		·
Sample Description	· · ·	Laboratory Sample Num	ber Sample )	Matrix	Date Sampled
P - 32 - 6	·	B907418-01	Water		7/19/99
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North Creek Analytical - Bothell

Joy B Chang, Project Manager

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

> North Creek Analytical, Inc. Environmental Laboratory Network

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Dames and Moore- Seattle	Project:	Lake Forest Park Cleaners	Sampled: 7/1	9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/2	0/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/2	7/99 16:43

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

<b>[</b>	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		•						
<u>P - 32 - 6</u>			<u>B9074</u>	<u>18-01</u>			<u>Water</u>	
Acetone	0790715	7/21/99	7/21/99		10.0	ND	ug/l	
Benzene	11	n	10		1.00	ND	17	
Bromobenzene	11	41	17		1.00	ND	*1	
Bromochloromethane	n.	н.	17		1.00	ND	11	
Bromodichloromethane	U		u .		1.00	ND	н	
Bromoform	11	11	U U		1.00	ND	11	
Bromomethane	11	U	ti		1.00	ND	17	
2-Butanone	11	0	*1		10.0	ND	"	
n-Butylbenzene	н	11	11		1.00	ND	0	
sec-Butylbenzene	н	я .	н		1.00	ND	н	
tert-Butylbenzene	".	н	и		1.00	ND	*1	
Carbon disulfide	ч	18	U .		1.00	ND	и	
Carbon tetrachloride		11	*1		1.00	ND	H	
Chlorobenzene	н	n	*1		1.00	ND	11	
Chloroethane		*1			1.00	ND		
Chloroform	U.	11	и		1.00	ND	u .	
Chloromethane	11	н	u		5.00	ND	u	
2-Chlorotoluene	**	IF .			1.00	ND	"	
4-Chlorotoluene	11	u			1.00	ND	11	
Dibromochloromethane		11	*1		1.00	ND	18	
1,2-Dibromo-3-chloropropane	t1	11	ц		5.00	ND	0	
1,2-Dibromoethane	n		**		1.00	ND	n	
Dibromomethane	"	u .	Ð		1.00	ND	**	
1.2-Dichlorobenzene		0	U .		1.00	ND	"	
1,3-Dichlorobenzene			n		1.00	ND	11	
1,4-Dichlorobenzene	*1		*1		1.00	ND	14	
Dichlorodifluoromethane	· n	It	н		1.00	ND	11	
1,1-Dichloroethane	11	v			1.00	ND	"	
1,2-Dichloroethane	tt.	"	н		1.00	ND	11	
1,1-Dichloroethene	u	*1	11		1.00	ND	"	
cis-1,2-Dichloroethene	11	н	u		1.00	ND	и	
trans-1,2-Dichloroethene	н	II	n		1.00	ND	14	
1,2-Dichloropropane	14	0	11		1.00	ND	n	
1,3-Dichloropropane		11	17		1.00	ND	11	
2,2-Dichloropropane	a	11	u		1.00	ND	*1	
1,1-Dichloropropene	14	11	*1		1.00	ND	11	
	14	17	"		1.00	ND	11	
cis-1,3-Dichloropropene	u	u	14	•	1.00	ND	17	
trans-1,3-Dichloropropene					1.00			

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 Spokane
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 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503,906,9200 fax 503,906,9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541,383,9310 fax 541,382,7588

Dames and Moore- Seattle	Project:	Lake Forest Park Cleaners	Sampled:	7/19/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/20/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/27/99 16:43

# Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			20074				Watan	
<u>P - 32 - 6 (continued)</u>			<u>B9074</u>	<u>18-01</u>		200	<u>Water</u>	
Ethylbenzene	0790715	7/21/99	7/21/99		1.00	ND	ug/l "	
Hexachlorobutadiene	61	Ħ			1.00	ND		
2-Hexanone	11	и	11		10.0	ND	*1	
Isopropylbenzene	17	17	н		1.00	ND		
p-Isopropyltoluene	n	**	"		1.00	ND	11	
Methylene chloride	н	11	*1	1	5.00	ND	U	
4-Methyl-2-pentanone	"		11		10.0	ND	18	
Naphthalene	n	μ.	IF.		1.00	ND	н	
n-Propylbenzene	"	"	**		1.00	ND	17	
Styrene		14	**		1.00	ND	a	
1,1,1,2-Tetrachloroethane	U U	11			1.00	ND	11	
1,1,2,2-Tetrachloroethane	u .	,u	11		1.00	ND	14	
Tetrachloroethene		u	"		1.00	2.41	"	
Toluene	**	14	u		1.00	ND	н	
1,2,3-Trichlorobenzene	"	91	н		1.00	ND	"	
1,2,4-Trichlorobenzene		11	*1		1.00	ND	n	
1,1,1-Trichloroethane	н	U U			1.00	ND	11	
1,1,2-Trichloroethane	**	11	14		1.00	ND		
Trichloroethene		IF.	*1		1.00	ND	11	
Trichlorofluoromethane		**	н		1.00	ND	*1	
	11	<b>†</b> 1	н		1.00	ND	IF.	
1,2,3-Trichloropropane	11	17	"		1.00	ND		
1,2,4-Trimethylbenzene	**	н	17		1.00	ND	11	
1,3,5-Trimethylbenzene	11		7/22/99		0.200	ND	11	
Vinyl chloride	"	11	7/21/99		2.00	· ND	17	
m,p-Xylene		"	//////////////////////////////////////		1.00	ND	*1	
o-Xylene				80.0-120			%	
Surrogate: 2-Bromopropene		"	"	80.0-120 80.0-120		94.0	"	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120 80.0-120		95.5	"	
Surrogate: Toluene-d8	"	"	"			101	"	
Surrogate: 4-BFB	"	26	••	80.0-120		101		

Joy B Chang Project Manager


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Seattle	18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
	425.420.9200 fax 425.420.9210
Spokane	East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
•	509.924.9200 fax 509.924.9290
Portland	9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
	503.906.9200 fax 503.906.9210

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Dames and Moore- Seattle	Project:	Lake Forest Park Cleaners	Sampled:	7/19/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/20/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/27/99 16:43

## Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		Reporting Limit Rec		RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	% Limit	% Notes*
Batch: 0790715	Date Prepa	red: <u>7/21/</u>	<u>99</u>		Extraction Method: EPA 5030B [P/T]			
Blank	0790715-BI							
Acetone	7/21/99			ND	ug/l	10.0		
Benzene	n			ND		1.00		
Bromobenzene	"			ND	61	1.00		
Bromochloromethane	н		•	ND	97	1.00		
Bromodichloromethane	11			ND	17	1.00		`
Bromoform	н			ND	n	1.00		
Bromomethane	"			ND	"	1.00		
2-Butanone	u			ND	"	10.0		
n-Butylbenzene	14			ND	10	1.00		
sec-Butylbenzene	**			ND	11	1.00		
tert-Butylbenzene	"	•		ND	11	1.00		
Carbon disulfide				ND	Ħ	1.00		
Carbon tetrachloride	u ^			ND	н	1.00		
Chlorobenzene	"		•	ND	n	1.00		
Chloroethane	"			ND	н	1.00		
Chloroform	**			ND	м	1.00		
Chloromethane	11			ND	u.	5.00		
2-Chlorotoluene	n			ND	11	1.00		
4-Chlorotoluene	и.			ND	ti	1.00		
Dibromochloromethane	11			ND	"	1.00		
1,2-Dibromo-3-chloropropane	**			ND	14	5.00		
1,2-Dibromoethane	10			ND		1.00		
Dibromomethane	n			ND	11	1.00		
1,2-Dichlorobenzene	"		•	ND	17	1.00		
1,3-Dichlorobenzene	10			ND	17	1.00		
1,4-Dichlorobenzene	11			ND	н	1.00		
Dichlorodifluoromethane	н			ND	. *	1.00	-	
1,1-Dichloroethane	11			ND	"	1.00		
1,2-Dichloroethane	H			ND	11	1.00		
1,1-Dichloroethene	11		• •	ND	11	1.00		
cis-1,2-Dichloroethene	II.			ND	**	1.00		
trans-1,2-Dichloroethene	U			ND	11	1.00		
1,2-Dichloropropane	н			ND	H	1.00		
1,3-Dichloropropane	· • • •			ND		1.00		
2,2-Dichloropropane				ND	11	1.00		
1,1-Dichloropropene	*1			ND	".	1.00		
cis-1,3-Dichloropropene	"			ND	n	1.00		

North Creek Analytical - Bothell

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 East 11115 Montgomery, Suite B, Spekane, WA 99206-4776 509.924.9200 fax 509.924.9290

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 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541,383,9310 fax 541,382.7588

Dames and Moore- Seattle	Project:	Lake Forest Park Cleaners	Sampled:	7/19/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/20/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/27/99 16:43

#### Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	<u>0790715-B</u>	L <u>K1</u>								
trans-1,3-Dichloropropene	7/21/99			ND	ug/l	1.00				
Ethylbenzene	n			ND	11	1.00				
Hexachlorobutadiene				ND	W	1.00				
2-Hexanone	"			ND	н	10.0				
Isopropylbenzene	H			ND	н	1.00				
p-Isopropyltoluene	11			ND	11	1.00				
Methylene chloride	**			ND		5.00				
4-Methyl-2-pentanone				ND		10.0				
Naphthalene	11			ND	*1	1.00		,		
n-Propylbenzene				ND	11	1.00				
Styrene	w			. ND	11	1.00				
1,1,1,2-Tetrachloroethane	и			ND	11 ·	1.00				
1,1,2,2-Tetrachloroethane	*			ND	n	1.00				
Tetrachloroethene	11			ND	**	1.00				
Toluene	**			ND	17	1.00				
1,2,3-Trichlorobenzene	11		•	ND	υ,	1.00				
1,2,4-Trichlorobenzene	H			ND		1.00				
1,1,1-Trichloroethane	11	÷		ND	11	1.00				
1,1,2-Trichloroethane	11			ND	н	1.00				
Trichloroethene	n	•		ND	н	1.00				
Trichlorofluoromethane				ND		1.00			•	
1,2,3-Trichloropropane	u			ND	IF	1.00				
1,2,4-Trimethylbenzene	n			ND	н	1.00				
1,3,5-Trimethylbenzene	н .			ND	11	1.00				
Vinyl chloride	7/22/99			ND	. 11	0.200				
m,p-Xylene	7/21/99			ND	11	2.00				
o-Xylene	W			ND	н	1.00				
Surrogate: 2-Bromopropene	<u> </u>	20.0		21.2	"	80.0-120	106	_		
Surrogate: 1,2-DCA-d4	"	20.0		19.4	"	80.0-120	97.0			
Surrogate: Toluene-d8	"	20.0		19.2	"	80.0-120	96.0			
Surrogate: 4-BFB	"	20.0	•	20.5	"	80.0-120	103	•		
1.00	<u>0790715-B</u>	<b>C</b> 1						· .		
LCS				8.65	ug/l	80.0-120	86.5			
Benzene	7/21/99 "	10.0		8.65 9.18	ug/1	80.0-120				
Chlorobenzene	17	10.0			11	80.0-120				
1,1-Dichloroethene		10.0		8.34						
Toluene	. 11	10.0		8.76	"	80.0-120				
Trichloroethene	ν "	10.0		8.60	71	80.0-120	86.0			

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager

North Creek Analytical, Inc. Environmental Laboratory Network

Page 5 of 7

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Dames and Moore- Seattle	Project:	Lake Forest Park Cleaners	Sampled:	7/19/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/20/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/27/99 16:43

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell ć, ÷. · · 23

	Date	Spike	Sample	QC	-	<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS (continued)	<u>0790715-BS1</u>									
Surrogate: 2-Bromopropene	7/21/99	20.0		21.2	ug/l	80.0-120	106			
Surrogate: 1,2-DCA-d4	"	20.0		19.1	"	80.0-120	95.5			
Surrogate: Toluene-d8	"	20.0		19.0	"	80.0-120	95.0			
Surrogate: 4-BFB	"	20.0		20.4	"	80.0-120	102			
Matrix Spike	<u>0790715-MS</u>	<u>1 B</u>	907355-21							
Benzene	7/21/99	10.0	ND	8.62	ug/l	80.0-120	86.2			
Chlorobenzene	u	10.0	ND	9.14	11	80.0-120	91.4			
1,1-Dichloroethene	н	10.0	ND	8.43	14	80.0-120	84.3			
Toluene	u	10.0	ND	8.74	U.	80.0-120	87.4			
Trichloroethene		10.0	ND	8.62	n	80.0-120	86.2			
Surrogate: 2-Bromopropene	"	20.0		21.2	"	80.0-120	106			
Surrogate: 1,2-DCA-d4	"	20.0		19.6	"	80.0-120	98.0			
Surrogate: Toluene-d8	"	20.0		19.0	"	80.0-120	95.0			
Surrogate: 4-BFB	"	20.0		20.8	"	80.0-120	104			
<u>Matrix Spike Dup</u>	<u>0790715-MS</u>	<u>D1 B</u>	<u>907355-21</u>							
Benzene	7/21/99	10.0	ND	8.02	ug/l	80.0-120	80.2	15.0	7.21	
Chlorobenzene	11	10.0	ND	8.58	11	80.0-120	85.8	15.0	6.32	
1,1-Dichloroethene	11	10.0	ND	7.53	N	80.0-120	75.3	15.0	11.3	1
Toluene	u II	10.0	ND	8.09	11	80.0-120	80.9	15.0	7.72	
Trichloroethene	10	10.0	ND	7.88	11	80.0-120	78.8	15.0	8.97	1
Surrogate: 2-Bromopropene	"	20.0		21.1	"	80.0-120	106			
Surrogate: 1,2-DCA-d4	"	20.0		19.5	"	80.0-120	97.5			
Surrogate: Toluene-d8	<i>II</i> .	20.0		18.8	"	80.0-120	94.0			
Surrogate: 4-BFB	"	20.0		20.6	"	80.0-120	103			



Dames and Moore- Seattle	Project:	Lake Forest Park Cleaners	Sampled:	7/19/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/20/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/27/99 16:43

#### **Notes and Definitions**

#	Noté
1	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

North Creek Analytical - Bothell



North Creek Analytic Environmental Labor www.ncelabs.com	•			East 1115 Montgom 9405 S.W. Nimb 20332 Empire Av	E. Contra 101, B. et H. Wa ery, Sume B, Spokane, Wa bus Avenue, Beaverton, Ol venue, Suite F-1, Bend, Ol	A 90200-4776 (009 R 97008-7132 (503 R 97701-5711 (541	470.0000)       FAX 909-9210
www.iicaiaus.com	СНА	IN OF CUS	STODY RE	PORT	Work Ord	er #: 190	1418
CLIENT: DAMES MOUNT	٢		INVOICE TO:				D REQUEST in Business Days*
REPORT TO: D. KONTVOLE							nic & Inorganic Analyses
ADDRESS: ZOZS IST	AVE.						
500 MARKETP	PUE COCE TOWER SEPTTC 744 FAX: Z					STD. Petrole	eum Hydrocarbon Analyses
PHONE: 206-778-0 PROJECT NAME: LOKE FOR	794 FAX: C		REOUESTE	D ANALYSES		STD.	Please Specify
PROJECT NUMBER: 4/2361	-					OTH	
SAMPLED BY: KMV	• • • • • • •					*Turnaround Request	s less than standard may incur Rush Charges.
CLIENT SAMPLE	SAMPLING					MATRIX # OF	NCA W
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COC REV 3/99		· · · · · · · · · · · · · · · · · · ·					PAGE OF



Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

## ANALYTICAL REPORT FOR SAMPLES:

Laboratory Sample Number	Sample Matrix	Date Sampled
B907258-01	Water	7/12/99
B907258-02	Water	7/12/99
B907258-03	Water	7/12/99
B907258-04	Water	7/12/99
B907258-05	Water	7/12/99
B907258-06	Water	7/12/99
	B907258-01 B907258-02 B907258-03 B907258-04 B907258-05	B907258-01       Water         B907258-02       Water         B907258-03       Water         B907258-04       Water         B907258-05       Water

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North Creek A	nalytical - Bothell	
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Joy B Chang,	Project Manager	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received: 7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

[	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
							-	
<u>P-29-5W</u>			<u>B9072</u> :	<u>58-01</u>			<u>Water</u>	
Acetone	0790426	7/14/99	7/14/99		10.0	ND	ug/l	
Benzene	"	"	н		1.00	ND	11	
Bromobenzene	N ,	11	91		1.00	ND	11	
Bromochloromethane	"	11	<b>11</b>		1.00	ND	"	
Bromodichloromethane	11	и .	17		1.00	ND	11	
Bromoform	11	U .	11		1.00	ND	11	
Bromomethane	II .	0	14		1.00	ND	н	
2-Butanone	11	11	l†		10.0	ND	u .	
n-Butylbenzene	14	ч	U.		1.00	ND	IF.	
sec-Butylbenzene	n	*1	U	•	1.00	ND	n.	
tert-Butylbenzene	U	н	11		1.00	ND	U U	
Carbon disulfide	"	11	н		1.00	ND	0	
Carbon tetrachloride	91	16	н		1.00	ND	11	
Chlorobenzene	11		17		1.00	ND	"	
Chloroethane	"	n	11		1.00	ND		
Chloroform	11				1.00	ND	IR	
Chloromethane	H	"	11		5.00	ND	H .	
2-Chlorotoluene	U	н	U		1.00	ND	и ,	
4-Chlorotoluene	н	н	н		1.00	ND	0	
Dibromochloromethane	11		*1		1.00	ND	U	
1,2-Dibromo-3-chloropropane	11	н	"		5.00	ND	**	
1,2-Dibromoethane	0	U			1.00	ND	"	
Dibromomethane	11	*1			1.00	ND	н,	
1,2-Dichlorobenzene	41	н	19		1.00	ND		
1,3-Dichlorobenzene	11	11	0		1.00	ND	æ	
1,4-Dichlorobenzene	II.	IF.	n		1.00	ND	19	
Dichlorodifluoromethane	н	ø	н		1.00	ND	u	
1,1-Dichloroethane	u	8	"		1.00	ND		
1,2-Dichloroethane	"	*1	н		1.00	ND	•1	
1,1-Dichloroethene	"	11			1.00	ND	u	
cis-1,2-Dichloroethene	11	IT			1.00	ND		
trans-1,2-Dichloroethene		11	17		1.00	ND		
1,2-Dichloropropane	n	н			1.00	ND		
1,3-Dichloropropane		u	н		1.00	ND	u	
2,2-Dichloropropane	"	н	"		1.00	ND	"	
1,1-Dichloropropene	и	11	II		1.00	ND		
cis-1,3-Dichloropropene		It	II .		1.00	ND	4,	
trans-1,3-Dichloropropene			11		1.00	ND	*1	
nans-1,5-Dickloropropene					1.00			

North Creek Analytigal - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received: 7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes
P-29-5W (continued)			<u>B9072</u> :	<u>58-01</u>			<u>Water</u>	
Ethylbenzene	0790426	7/14/99	7/14/99		1.00	ŇD	ug/l	
Hexachlorobutadiene		11	U.		1.00	ND	* <sup>-</sup>	
2-Hexanone		17	п		10.0	ND	u	
Isopropylbenzene		n	*1		1.00	ND	11	
p-Isopropyltoluene		11	ti		1.00	ND	II .	
Methylene chloride	u	.0	*1		5.00	ND	IF.	
4-Methyl-2-pentanone	9	**	н		10.0	ND	14	
Naphthalene	u	*1	11		1.00	ND	U	
n-Propylbenzene	и	н	17		1.00	ND	U	
Styrene	11	11			1.00	ND	*1	
1,1,1,2-Tetrachloroethane	н	17	0		1.00	ND	11	
1,1,2,2-Tetrachloroethane	"	11	U		1.00	ND	*1	
Tetrachloroethene		0	U		1.00	ND	11	
Toluene	u .	н	11		1.00	ND	н	
1,2,3-Trichlorobenzene	*1		11		1.00	ND		
1,2,4-Trichlorobenzene		u			1.00	ND		
1,1,1-Trichloroethane	**	11			1.00	ND	U U	
1,1,2-Trichloroethane	и		16		1.00	ND		
Trichloroethene			11		1.00	ND		
Trichlorofluoromethane			U U		1.00	ND	"	
1,2,3-Trichloropropane	n	8	61		1.00	ND	**	
1,2,4-Trimethylbenzene	*1	*1	*1		1.00	ND	"	
1,3,5-Trimethylbenzene	"		**		1.00	ND		
Vinyl chloride	11		7/15/99		0.200	ND	W	
m,p-Xylene	0	11	7/14/99		2.00	ND .		
o-Xylene	n	U	H		1.00	ND	U	
Surrogate: 2-Bromopropene	"	"		80.0-120		126	%	1
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		101	"	
Surrogate: Toluene-d8	n	"	"	80.0-120		101	"	
Surrogate: 4-BFB	"	"	".	80.0-120		101	"	

North Creek Analytical - Bothell



Seattle	18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
	425.420:9200 fax 425.420.9210
Spokane	East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
	E00 034 0300 for E00 034 0300

- Sol. 302, 324, 9200
   fax 509, 924, 9290

   Portland
   9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

   503.906, 9200
   fax 503, 906, 9210

   Bend
   20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

   541.383.9310
   fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	-	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005		Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel		Reported:	7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	<b>n</b> -	<b>**</b>	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes'
<u>P-29-12W</u>			<u>B9072:</u>	58_07			Water	
Acetone	0790426	7/14/99	<u>7/14/99</u>	<u>00-04</u>	10.0	ND	ug/l	
Benzene	0790420	//14/22 N	1/14/33		1.00	ND	ug/1	
Bromobenzene	11	н ,			1.00	ND	н	
Bromochloromethane	"	н	17		1.00	ND	n	
Bromochloromethane	11	1	ur .		1.00	ND		
Bromoticniorometnane	11		<b>n</b> .		1.00	ND	"	
		*1			1.00	ND	11	
Bromomethane	H				10.0	ND	11	
2-Butanone							11	
n-Butylbenzene	11			•	1.00	ND		
sec-Butylbenzene	**		1		1.00	ND		
tert-Butylbenzene	"				1.00	ND	"	
Carbon disulfide			**		1.00	ND	n	
Carbon tetrachloride	"	n	"		1.00	ND		
Chlorobenzene		n			1.00	ND	*1	
Chloroethane	14	11	11		1.00	ND		
Chloroform		"	17		1.00	ND	11	
Chloromethane	. u	11	H		5.00	ND	. "	
2-Chlorotoluene	••		'n		1.00	ND	W	
4-Chlorotoluene		11	11		1.00	ND	н	
Dibromochloromethane	11	61	11		1.00	ND	n	
1,2-Dibromo-3-chloropropane	n	91			5.00	ND	11	
1,2-Dibromoethane	n	It	18		1.00	ND	•1	
Dibromomethane	n		н		1.00	ND	u.	
1,2-Dichlorobenzene	**		11	•	1.00	ND	11	
1,3-Dichlorobenzene	17	8	ú		1.00	ND	11	
1,4-Dichlorobenzene	11	11	. 11		1.00	ND	н	
Dichlorodifluoromethane	n		w		1.00	ND	н	
1,1-Dichloroethane	н	u .	u		1.00	ND	"	
1,2-Dichloroethane	*1	17	14		1.00	ND	11	
1,1-Dichloroethene	17	tt.	H		1.00	ND	11	
cis-1,2-Dichloroethene	11	n	11		1.00	ND	14	
trans-1,2-Dichloroethene	11	u	n		1.00	ND	11	
1,2-Dichloropropane	n	11	н		1.00	ND		
1,3-Dichloropropane	н .	11	17		1.00	ND	"	
2,2-Dichloropropane	"		11		1.00	ND	*1	
	17		U		1.00	ND ND	v	
1,1-Dichloropropene			U		1.00	ND	11	
cis-1,3-Dichloropropene	n				1.00	ND ND		
trans-1,3-Dichloropropene			-		1.00	IND		

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North Creek Analytical - Bothell

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\*Refer to end of report for text of notes and definitions.

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North Creek Analytical, Inc. Environmental Laboratory Network

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Joy B Chang, Project Manager

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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	· Limit	Result	Units	Notes*
P-29-12W (continued)			<u>B9072</u> :	<u>58-02</u>			<u>Water</u>	
Ethylbenzene	0790426	7/14/99	7/14/99		1.00	ND	ug/l	
Hexachlorobutadiene	**		n		1.00	ND	"	
2-Hexanone	<del>1</del> 1	"	u ·		10.0	ND	11	
sopropylbenzene	, n	*1	u		1.00	ND	8	
o-Isopropyltoluene	"	•1			1.00	ND	0	
Methylene chloride	"	"	u.		5.00	ND	11	
I-Methyl-2-pentanone	u.	U U	u		10.0	ND	IF.	
Naphthalene	u.	0	u		1.00	ND	IF.	
n-Propylbenzene	u .		11		1.00	ND	n	
Styrene	11		*1		1.00	ND	11	
,1,1,2-Tetrachloroethane		n	*1		1.00	ND	11	
,1,2,2-Tetrachloroethane	"	17	11		1.00	ND	11	
etrachloroethene	u.	17	11		1.00	ND	n	
Foluene	11	**	17		1.00	ND	ti.	
,2,3-Trichlorobenzene	"	"	11		1.00	ND	u.	
,2,4-Trichlorobenzene	**	11	и .		1.00	ND	n	
,1,1-Trichloroethane	11				1.00	ND	11	
,1,2-Trichloroethane	"	"	11		1.00	ND	н .	
Trichloroethene	U		н		1.00	ND		
Trichlorofluoromethane	0		н		1.00	ND	17	
,2,3-Trichloropropane	u	0	н		1.00	ND	**	•
,2,4-Trimethylbenzene	Ħ		**		1.00	ND	11	
,3,5-Trimethylbenzene	. 0		*1		1.00	ND	11	
Vinyl chloride		U	7/15/99		0.200	ND	11	
n,p-Xylene	"	11	7/14/99		2.00	ND	*1	
o-Xylene	Ð	"	u		1.00	ND	n	
Surrogate: 2-Bromopropene	11	"	"	80.0-120		126	%	1
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		100	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		101	"	
Surrogate: 4-BFB	"	"	"	80.0-120		104	"	

North Creek Analytical - Bothell Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

.



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420.9200
 fax 425,420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

 541.383.9310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/12/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received: 7/13/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/16/99 13:12	

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-30-5W</u>			<u>B9072</u>	58-03			<u>Water</u>	
Acetone	0790426	7/14/99	7/14/99	<u>50 00</u>	10.0	ND	ug/l	
Benzene	"		0		1.00	ND	"	
Bromobenzene		n			1.00	ND	"	
Bromochloromethane		н	**		1.00	ND	н	
Bromodichloromethane	н		11		1.00	ND	n	
Bromoform	11	11	*1		1.00	ND	н	
Bromomethane	11	10	11		1.00	ND		
2-Butanone	17	17	п		10.0	ND	Cf	
n-Butylbenzene	0	υ			1.00	ND	0	
sec-Butylbenzene	U U	11	U		1.00	ND	tı .	
tert-Butylbenzene	**	"	n		1.00	ND	••	
Carbon disulfide			0		1.00	ND		
Carbon tetrachloride	**	u			1.00	ND	II	
Chlorobenzene			"		1.00	ND	н	
Chloroethane	и .	14	11		1.00	ND	u	
Chloroform	0		11		1.00	ND		
Chloromethane		н	17		5.00	ND	17	
2-Chlorotoluene		*1	0		1.00	ND	11	
4-Chlorotoluene	"	*1	u		1.00	ND	71	
Dibromochloromethane		и	*1		1.00	ND	<b>†1</b>	
		11			5.00	ND	н	
1,2-Dibromo-3-chloropropane	0	U	11		1.00	ND		
1,2-Dibromoethane	"	n ,	18		1.00	ND	u	
Dibromomethane		<b>†1</b>	u		1.00	ND ND	n	
1,2-Dichlorobenzene		91	"		1.00	ND	n	
1,3-Dichlorobenzene			U		1.00	ND ND	11	
1,4-Dichlorobenzene					1.00	ND ND	11	
Dichlorodifluoromethane	u	11	"		1.00	ND	11	
1,1-Dichloroethane	"	H			1.00	ND		
1,2-Dichloroethane	11	0	11		1.00	ND ND		
1,1-Dichloroethene			U.		1.00	ND ND	14	•
cis-1,2-Dichloroethene		11	0		1.00		n	
trans-1,2-Dichloroethene			0			ND ND		
1,2-Dichloropropane	"	"			1.00		11	
1,3-Dichloropropane	*1		"		1.00	ND	"	
2,2-Dichloropropane		"			1.00	ND	11	
1,1-Dichloropropene	"	"	11		1.00	ND		•
cis-1,3-Dichloropropene	"				1.00	ND	"	
trans-1,3-Dichloropropene	U	W	17		1.00	ND	n	

North Creek Analytical - Bothell

Joy B Chang, Project Manager



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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/12/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received: 7/13/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/16/99 13:12	

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting		· · · · ·	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-30-5W (continued)			<u>B9072</u>	58-03			<u>Water</u>	
Ethylbenzene	0790426	7/14/99	7/14/99		1.00	ND	ug/l	
Hexachlorobutadiene	18	11	"		1.00	ND	'n	
2-Hexanone	17	H.	"		10.0	ND		
Isopropylbenzene	17	11	"		1.00	ND		
p-Isopropyltoluene	II	11	"		1.00	ND	v	
Methylene chloride	**	11	"		5.00	ND	17	
4-Methyl-2-pentanone	**	11	"		10.0	ND	IT	
Naphthalene	**	"	н '		1.00	ND	"	
n-Propylbenzene	**	"	14		1.00	ND	**	
Styrene		11	H .		1.00	ND	U	
1,1,1,2-Tetrachloroethane	11	n			1.00	ND	.,	
,1,2,2-Tetrachloroethane	0	11	14		1.00	ND	0	
[etrachloroethene	n	u	11		1.00	ND	14	
Foluene	u –	"	**		1.00	ND	11	
1,2,3-Trichlorobenzene	11	н	11		1.00	ND	**	
1,2,4-Trichlorobenzene	11	n	"		1.00	ND	"	
1,1,1-Trichloroethane		и			1.00	ND	u	
1,1,2-Trichloroethane		н	"		1.00	ND	u	
Frichloroethene		II.			1.00	ND	"	
Frichlorofluoromethane		II.	11		1.00	ND	"	
1,2,3-Trichloropropane		18	U		1.00	ND		
1,2,4-Trimethylbenzene	H	11	u –		1.00	ND	. "	
1,3,5-Trimethylbenzene	U.	11			1.00	ND		
Vinyl chloride	u.	н	7/15/99		0.200	ND		
n,p-Xylene		17	7/14/99		2.00	ND	a.	
o-Xylene	11	Ħ			1.00	ND	17	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		126	%	1
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		99.0	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		101	"	
Surrogate: 4-BFB	"	"	"	80.0-120		103	"	

North Creek Analytical - Bothell Joy B Charg, Project Manager



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Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	_		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
D 20 10W	_		<b>D</b> 00	.0 04			Watar	
<u>P-30-12W</u>	0700407	7/14/00	<u>B90725</u>	<u>58-04</u>	10.0	<b>۱</b> ۲۰	<u>Water</u>	-
Acetone	0790426	7/14/99 "	7/14/99 "			ND	ug/l "	
Benzene	ta 11	14	"		1.00	ND	11	
Bromobenzene	*1	"	**		1.00	ND	"	
Bromochloromethane	11	11	11		1.00	ND	"	
Bromodichloromethane					1.00	ND	11	
Bromoform		**	"		1.00	ND		
Bromomethane	n	ei 			1.00	ND		
2-Butanone	11	"	H		10.0	ND	"	
n-Butylbenzene	H		11		1.00	ND	0 	
sec-Butylbenzene	"	11			1.00	ND	11	
tert-Butylbenzene	U	18	U		1.00	ND	"	
Carbon disulfide	*1		**		1.00	ND	"	
Carbon tetrachloride	11	U	"		1.00	ND	11	
Chlorobenzene		n	*1		1.00	ND	н	
Chloroethane	"		"		1.00	ND	11	
Chloroform	"	11	н		1.00	ND	II	
Chloromethane	U	н	u		5.00	ND	11	
2-Chlorotoluene	U	и.	u		1.00	ND	н	
4-Chlorotoluene	n	II	11		1.00	ND	14	
Dibromochloromethane	11	"	U		1.00	ND	, If	
1,2-Dibromo-3-chloropropane	17	"	U		5.00	ND	U.	
I,2-Dibromoethane	"	11	*1		1.00	ND	17	
Dibromomethane	"	t1	"		1.00	ND		
1,2-Dichlorobenzene	n	"			1.00	ND	"	
1,3-Dichlorobenzene	41	n	11		1.00	ND	*1	
1,4-Dichlorobenzene	"	н	11		1.00	ND	11	
Dichlorodifluoromethane	78	n	u		1.00	ND	11	
1,1-Dichloroethane	17	11			1.00	ND	н	
1,2-Dichloroethane	11	"			1.00	ND	н	
1,1-Dichloroethene	R. <sup>1</sup>	1*	n		1.00	ND	11	
cis-1,2-Dichloroethene	н	tt	a		1.00	ND	и	
trans-1,2-Dichloroethene	п	n	"		1.00	ND	U	
1,2-Dichloropropane	"	н			1.00	ND	11	
1,3-Dichloropropane	н	н	u		1.00	ND	u	
2,2-Dichloropropane	17	u	u		1.00	ND	11	
2,2-Dichloropropane		n	19		1.00	ND ND	11	
		**	"		1.00	ND ND	11	
cis-1,3-Dichloropropene trans-1,3-Dichloropropene	0	11			1.00	ND ND	n	
uans-1,5-Dichloropropene	•				1.00	ND		

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Charg, Project Manager



Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-30-12W (continued)</u>			B9072	58-04			<u>Water</u>	
Ethylbenzene	0790426	7/14/99	7/14/99	<u> </u>	1.00	ND	ug/l	
Hexachlorobutadiene					1.00	ND	"	
2-Hexanone	0	It			10.0	ND	11	
Isopropylbenzene		"	п		1.00	ND	"	
p-Isopropyltoluene		"	11		1.00	ND		
Methylene chloride	н	u –	11		5.00	ND	U.	
4-Methyl-2-pentanone	"	U			10.0	ND	11	
Naphthalene	"	н <sup>т</sup>	11		1.00	ND	Ir	
n-Propylbenzene	11	n	н		1.00	ND	11	
Styrene	и	11	**		1.00	ND	*1	
1,1,1,2-Tetrachloroethane	IT	11	0		1.00	ND	17	
1,1,2,2-Tetrachloroethane	н	"	u -		1.00	ND	u	
Tetrachloroethene		IF	11	,	1.00	ND	н	
Toluene	11	14	17		1.00	ND	*1	
1,2,3-Trichlorobenzene	*1	II .	н		1.00	ND	n	
1,2,4-Trichlorobenzene	U	11	*1		1.00	ND	н	
1,1,1-Trichloroethane	17	11	11		1.00	ND	и	
1,1,2-Trichloroethane	u	11	11		1.00	ND	` и	,
Trichloroethene	11	0	14		1.00	ND	11	
Trichlorofluoromethane	11	n	11		1.00	ND	*1	
1,2,3-Trichloropropane	n	11	*1		1.00	ND	11	
1,2,4-Trimethylbenzene	*1	и	*1		1.00	ND	te	
1,3,5-Trimethylbenzene	*1	"	**		1.00	ND	11	
Vinyl chloride	u	ti	7/15/99		0.200	ND		
m,p-Xylene	u –	U	7/14/99		2.00	ND	"	
o-Xylene	11	0	11		1.00	ND	ti	
Surrogate: 2-Bromopropene		"	"	80.0-120		-126	%	1
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		98.5	f#	
Surrogate: Toluene-d8	"	"	"	80.0-120		101	"	
Surrogate: 4-BFB	"	"	"	80.0-120		101	"	

North Creek Analytical - Bothell

Joy B Charg, Project Manager



Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12	

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	-		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
· · · · · · · · · · · · · · · · · · ·								
<u>P-31-5W</u>			<u>B9072</u> :	<u>58-05</u>			<u>Water</u>	
Acetone	0790426	7/14/99	7/14/99		10.0	ND	ug/l	
Benzene	U	18	17		1.00	ND	11	
Bromobenzene	n	11	ti		1.00	ND	u	
Bromochloromethane	"		11		1.00	ND	n	
Bromodichloromethane	11	11	*1		1.00	ND		
Bromoform	11 <sup>1</sup>	u	*1		1.00	ND	**	
Bromomethane	11	*1	11		1.00	ND	0	
2-Butanone	t <del>1</del>	**	н		10.0	ND	**	
n-Butylbenzene	**	••	17		1.00	ND	"	
sec-Butylbenzene	"	W	U .		1.00	ND	n	
tert-Butylbenzene	"	11	н		1.00	ND	н	
Carbon disulfide	**	0	н .		1.00	ND	11	
Carbon tetrachloride			н		1.00	ND	u	
Chlorobenzene	11	"	**		1.00	ND	14	
Chloroethane	п	"	17		1.00	ND	U U	
Chloroform	11	11			1.00	ND	*1	
Chloromethane	"	14	17		5.00	ND	11	
2-Chlorotoluene		11	"		1.00	ND	"	
4-Chlorotoluene	U	н	n		1.00	ND	II	
Dibromochloromethane		*1			1.00	ND	ir	
1,2-Dibromo-3-chloropropane		**	11		5.00	ND	II.	
1,2-Dibromoethane	11	11	11		1.00	ND	n	
Dibromomethane	**	11			1.00	. ND	n	
1,2-Dichlorobenzene		**	11		1.00	ND	ti	
1,3-Dichlorobenzene	U	a			1.00	ND	11	
1,4-Dichlorobenzene	"	11	"		1.00	ND	11	
Dichlorodifluoromethane	*1	*1	*1		1.00	ND	u	
1,1-Dichloroethane	11	11	"		1.00	ND	0	
1,2-Dichloroethane	۳.	14	"		1.00	ND	n	
1,1-Dichloroethene	14				1.00	ND	11	
cis-1,2-Dichloroethene	U	0	n		1.00	ND	11	
trans-1,2-Dichloroethene	11	"	u		1.00	ND	и.	
1,2-Dichloropropane	. "	*1	4		1.00	ND	u	
1,3-Dichloropropane	11	н	"		1.00	ND	IF	
2,2-Dichloropropane					1.00	ND	11	
1,1-Dichloropropene	п	U .			1.00	ND	u	
cis-1,3-Dichloropropene	*1	n	11		1.00	ND	"	
trans-1,3-Dichloropropene	"	"	U		1.00	ND	"	

North Greek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509,924,9290
 Spokane Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
1								
P-31-5W (continued)			<u>B9072</u> :	<u>58-05</u>			<u>Water</u>	
Ethylbenzene	0790426	7/14/99	7/14/99		1.00	ND	ug/l	
Hexachlorobutadiene	W	*1	U		1.00	ND	"	
2-Hexanone	"	¥1	u		10.0	ND	*1	
Isopropylbenzene	U	91	"		1.00	ND	n.	
p-Isopropyltoluene	n	**	*1		1.00	ND	н	
Methylene chloride	n		11		5.00	ND	н	
4-Methyl-2-pentanone	n		11		· 10.0	ND	H.	
Naphthalene	11	11	If		1.00	ND	H.	
n-Propylbenzene	41	n	14		1.00	ND	14	
Styrene	17	<b>1</b>			1.00	ND	"	
1,1,1,2-Tetrachloroethane		"	14		1.00	ND	н	
1,1,2,2-Tetrachloroethane	U	11	n		1.00	ND	н	
Tetrachloroethene		If	"		1.00	ND	н	
Toluene	"	14	11		1.00	ND	it.	
1,2,3-Trichlorobenzene	".	0	и		1.00	ND		
1,2,4-Trichlorobenzene	11		W		1.00	ND	11	
1,1,1-Trichloroethane	11	n	17		1.00	ND	u	
1,1,2-Trichloroethane	0	11	U.		1.00	ND	U	
Trichloroethene	n	н	U		1.00	ND	11	
Trichlorofluoromethane	"	57	n		1.00	ND	41	
1,2,3-Trichloropropane	a '	17	*1		1.00	ND	и	
1,2,4-Trimethylbenzene		U .	11		1.00	ND	11	
1,3,5-Trimethylbenzene		u	н		1.00	ND	11	
Vinyl chloride	u	` H	7/15/99		0.200	ND	17	
m,p-Xylene		11	7/14/99		2.00	ND		
o-Xylene	*1	tt.	0		1.00	ND	11	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		128	%	Ι
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		98.5	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		102	"	
Surrogate: 4-BFB	"	"	"	80.0-120		104		

North Creek Analytical - Bothell

Joy B Chang, Project Manager



bus.324.3200 tax 503.324.3290 irtland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

ſ	Batch	Date	Date	Surrogate	Reporting		·	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
· · · · · · · · · · · · · · · · · · ·								
<u>P-31-12W</u>			<u>B9072</u>	<u>58-06</u>			Water	
Acetone	0790426	7/14/99	7/14/99		10.0	ND	ug/l	
Benzene	11	u	н		1.00	ND	11	
Bromobenzene	11	n	N		1.00	ND	н	
Bromochloromethane	tt	78	11		1.00	ND	ti	
Bromodichloromethane	14	**	11		1.00	ND	11	
Bromoform	"	17	91		1.00	ND	u	
Bromomethane	11		11		1.00	ND	17	
2-Butanone	и	<b>†1</b>	H .		10.0	ND	11	
n-Butylbenzene	n	11	n		1.00	ND	*1	
sec-Butylbenzene	11	11	t1		1.00	ND	"	
tert-Butylbenzene	11	U .	11		1.00	ND	и	
Carbon disulfide	11	н	14		1.00	ND	10	
Carbon tetrachloride	"	11			1.00	ND	Ð	
Chlorobenzene	"	11	a		1.00	ND	61	
Chloroethane	*1	18			1.00	ND	*1	
Chloroform	н	*1	14		1.00	ND.	u	
Chloromethane		*1	10		5.00	ND	"	
2-Chlorotoluene	U	11			1.00	ND	n	
4-Chlorotoluene				·	1.00	ND	et .	
Dibromochloromethane	н	e.	**		1.00	ND	*1	
1,2-Dibromo-3-chloropropane		*1	н		5.00	ND	н	
1,2-Dibromoethane	u	11	te .		1.00	ND	IF	
Dibromomethane	9	u.	0		1.00	ND	U	
1,2-Dichlorobenzene	u	U.	n		1.00	ND	u .	
1,3-Dichlorobenzene		н	u		1.00	ND	"	
1,4-Dichlorobenzene	11	11			1.00	ND	11	
Dichlorodifluoromethane	u	11	14	•	1.00	ND	It	
1,1-Dichloroethane	*1	17	u –		1.00	ND	н	
1,2-Dichloroethane		17	11		1.00	ND	11	
1,1-Dichloroethene		"	11		1.00	ND	11	
cis-1,2-Dichloroethene	tı	11	ur -		1.00	ND	11	
trans-1,2-Dichloroethene	11	17	II.		1.00	ND	17	
1,2-Dichloropropane	17	U	a		1.00	ND	0	
	19		11 ·		1.00	ND	u	
1,3-Dichloropropane	11	11	и		1.00	ND	n	
2,2-Dichloropropane	11	u	17		1.00	ND	н	
1,1-Dichloropropene	K.				1.00	ND ND		
cis-1,3-Dichloropropene	"		11		1.00			
trans-1,3-Djchloropropene	17				1.00	ND		

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received: 7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/16/99 13:12

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

·	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-31-12W (continued)</u>			<u>B9072</u>	58-06			<u>Water</u>	
Ethylbenzene	0790426	7/14/99	7/14/99	30-00	1.00	ND	ug/l	
Hexachlorobutadiene	0790420	1/1-4/99	11 1 - 17 5 5 5		1.00	ND	"	
2-Hexanone	"	н			10.0	ND	"	
	*1	u	H		1.00	ND		
Isopropylbenzene	11	"	u		1.00	ND		
p-Isopropyltoluene	u.	11	11		5.00	ND	11	
Methylene chloride			"		10.0	ND	11	
4-Methyl-2-pentanone			11		1.00	ND	1+	
Naphthalene		N	н			ND	17	
n-Propylbenzene			14		1.00		ri	
Styrene					1.00	ND		
1,1,1,2-Tetrachloroethane					1.00	ND	*	
1,1,2,2-Tetrachloroethane		"	**		1.00	ND		
Tetrachloroethene		n 11			1.00	ND		
Toluene	*1				1.00	ND		
1,2,3-Trichlorobenzene	91	11	11		1.00	ND		
1,2,4-Trichlorobenzene	"	14 .	17		1.00	ND		
1,1,1-Trichloroethane	"	11	t)		1.00	ND	H	
1,1,2-Trichloroethane	'n	n	11		1.00	ND	*1	
Trichloroethene	*1	**	*1		1.00	ND	"	
Trichlorofluoromethane	11	11	II.		1.00	ND	н	
1,2,3-Trichloropropane	17	19	11		1.00	ND	11	
1,2,4-Trimethylbenzene	U	0			1.00	ND	11	
1,3,5-Trimethylbenzene	U		U		1.00	ND	0	
Vinyl chloride	11	n	7/15/99		0.200	ND	*1	
m,p-Xylene	11	u	7/14/99		2.00	ND .	**	
o-Xylene			16		1.00	ND	II	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		129	%	1
Surrogate: 1,2-DCA-d4	"	".	"	80.0-120		<i>99.5</i>	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		105	"	
Surrogate: 4-BFB	11	"	"	80.0-120		99.5	"	

North Creek Analytical - Bothell Joy B Chang, Project Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network



Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

<u> </u>	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
	*		_					-	
<u>Batch: 0790426</u>	<u>Date Prepa</u>	red: 7/14/	<u>99</u>		<u>Extrac</u>	tion Method: EP	<u>A 5030B</u>	<u>[P/T]</u>	
Blank	<u>0790426-B</u>								
Acetone	7/14/99	•		ND	ug/l	10.0			
Benzene	"			ND	U	1.00			
Bromobenzene	н			ND	ti	1.00			
Bromochloromethane	**			ND	11	1.00			
Bromodichloromethane	**			ND	17	1.00			
Bromoform	"			ND		1.00			
Bromomethane	11			ND	u	1.00			
2-Butanone	11			ND	11	10.0			
n-Butylbenzene	"			ND	11	1.00			
sec-Butylbenzene	11			ND	17	1.00			
tert-Butylbenzene	н			ND	H	1.00			
Carbon disulfide				ND	11	1.00			
Carbon tetrachloride	tr			ND	"	1.00			
Chlorobenzene	н			ND	11	1.00			
Chloroethane	н			ND		1.00			
Chloroform	11			ND	U	1.00		•	
Chloromethane	U			ND	11	5.00			
2-Chlorotoluene	11			ND	н	1.00			
4-Chlorotoluene	11			ND	11	1.00			
Dibromochloromethane	"			ND	0	1.00			
1,2-Dibromo-3-chloropropane	tr			ND	U	5.00			
1,2-Dibromoethane	11			ND	*1	1.00			
Dibromomethane	н			ND	n	1.00			
1,2-Dichlorobenzene	"			ND		1.00			
1,3-Dichlorobenzene				ND	н	1.00			
1,4-Dichlorobenzene	"			ND		1.00			
Dichlorodifluoromethane	"			ND	**	1.00			
1,1-Dichloroethane				ND	н	1.00			
1,2-Dichloroethane	17			ND	17	1.00			
1,1-Dichloroethene	11			ND	11	1.00			
cis-1,2-Dichloroethene	11			ND	ti	1.00			
trans-1,2-Dichloroethene	11			ND	11	1.00			
1,2-Dichloropropane	U.			ND	14	1.00			
1,3-Dichloropropane	"			ND	U	1.00	I.		
2,2-Dichloropropane	10			ND	*1	1.00	· ·		
1,1-Dichloropropene	19			ND	u	1.00	I		
cis-1,3-Dichloropropene	ti			ND		1.00	I		

North Creek Analytical - Bothell



Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled:	7/12/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received:	7/13/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/16/99 13:12

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>				·
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	<u> %</u>	5 Limit	۲ %	Notes*
Blank (continued)	<u>0790426-BI</u>	9 <b>T I</b> Z 1				_				
trans-1,3-Dichloropropene	<u>0790420-B1</u> 7/14/99			ND	ug/l	1.00				
Ethylbenzene	//14/ <i>73</i>			ND	ug/1	1.00				
Hexachlorobutadiene				ND		1.00				
2-Hexanone	*1			ND ND	U	1.00				
Isopropylbenzene	11		,	ND ND	11	10.0				
p-Isopropyitoluene				ND ND		1.00				
Methylene chloride	u .			ND	*1	5.00				
4-Methyl-2-pentanone	H			ND ND		5.00 10.0				
Naphthalene	*1			ND ND						
n-Propylbenzene	U			ND ND		1.00				
Styrene	u .			ND ND		1.00				
1,1,1,2-Tetrachloroethane					"	1.00				
1,1,2,2-Tetrachloroethane				ND ND		1.00				
Tetrachloroethene	"		•	, ND	"	1.00				
Toluene	U U			ND ND	"	1.00				
1,2,3-Trichlorobenzene	11			ND		1.00				
1,2,3-Trichlorobenzene	4			ND ND	11 11	1.00				
1,2,4-1richlorobenzene 1,1,1-Trichloroethane	1			ND ND		1.00				
1,1,1-Trichloroethane 1,1,2-Trichloroethane	0			ND ND	" U	1.00				
1,1,2-Trichloroethane Trichloroethene	t: 17			ND	u u	1.00				
	17			ND		1.00				
Trichlorofluoromethane	u 11			ND	и , н	1.00				
1,2,3-Trichloropropane				ND	"	1.00				
1,2,4-Trimethylbenzene	"			ND		1.00				
1,3,5-Trimethylbenzene	"			ND	"	1.00				
Vinyl chloride	7/15/99			ND	н	0.200				
m,p-Xylene	7/14/99			ND	"	2.00				
o-Xylene	"			ND	"	1.00				
Surrogate: 2-Bromopropene	"	20.0		25.5	<i>n</i>	80:0-120				1
Surrogate: 1,2-DCA-d4	"	20.0		20.1	"	80.0-120				
Surrogate: Toluene-d8	"	20.0		20.4	"	80.0-120	102			
Surrogate: 4-BFB	"	20.0		20.3	"	80.0-120	101			
LCS	<u>0790426-BS</u>	<b>Q1</b>								
Benzene	<u>07/0420-BS</u> 7/14/99	10.0		9.34	ug/l	80.0-120	93.4			
Chlorobenzene	1/14/ <i>33</i> II	10.0		9.34 9.56	ug/i	80.0-120 80.0-120				
1,1-Dichloroethene	u	10.0		9.56		80.0-120 80.0-120				
Toluene	и	10.0		10.2 9.50		80.0-120 80.0-120				
Trichloroethene	11	10.0		9.50 8.96						
Themorouncie		10.0		0.70		80.0-120	89.6			

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.



Dames and Moore- SeattleProject:LFP- Magic CleanersSampled:7/12/99500 Market Place Tower, 2025 1st AveProject Number:42365-063-005Received:7/13/99Seattle, WA 98121Project Manager:David RaubvogelReported:7/16/99 13:12

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS (continued)	0790426-BS1									
Surrogate: 2-Bromopropene	7/14/99			26.6	ug/l	80.0-120	133			
Surrogate: 1,2-DCA-d4	"	20.0		19.8 ·	"	80.0-120	99.0			-
Surrogate: Toluene-d8	"	20.0		20.1	"	80.0-120	101			
Surrogate: 4-BFB	"	20.0		20.1	n	80.0-120	101			
<u>Matrix Spike</u>	<u>0790426-MS</u>	1 <u>B</u>	<u>907220-02</u>							
Benzene	7/14/99	10.0	ND	9.10	ug/l	80.0-120	91.0			
Chlorobenzene	4	10.0	ND	9.36	"	80.0-120	93.6			
1,1-Dichloroethene	n	10.0	ND	9.78	н	80.0-120	97.8			
Toluene	u.	10.0	ND	9.37	17	80.0-120	93.7			
Trichloroethene	u.	10.0	1.39	10.0	11	80.0-120	86.1			
Surrogate: 2-Bromopropene	"	20.0	<u> </u>	25.3	"	80.0-120	126			1
Surrogate: 1,2-DCA-d4	"	20.0		19.6	"	80.0-120	98.0			
Surrogate: Toluene-d8	"	20.0		20.5	н	80.0-120	103			
Surrogate: 4-BFB	"	20.0		20.6	"	80.0-120	103			
<u>Matrix Spike Dup</u>	<u>0790426-MS</u>	<u>D1 B</u>	<u>907220-02</u>	·						
Benzene	7/14/99	10.0	ND	8.51	ug/l	80.0-120	85.1	15.0	6.70	
Chlorobenzene	n	10.0	ND	8.78	11	80.0-120	87.8	15.0	6.39	
1,1-Dichloroethene	II	10.0	ND	8.97	"	80.0-120	89.7	15.0	8.64	
Toluene	10	10.0	ND	8.69	н	80.0-120	86.9	15.0	7.53	
Trichloroethene	н ·	10.0	1.39	9.34	н	80.0-120	79.5	15.0	7.97	2
Surrogate: 2-Bromopropene	"	20.0		25.2	"	80.0-120	126			1
Surrogate: 1,2-DCA-d4	"	20.0		19.6	"	80.0-120	98.0			
Surrogate: Toluene-d8	"	20.0		20.3	"	80.0-120	101			
Surrogate: 4-BFB	"	20.0		20.7	"	80.0-120	104			

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network

Joy B Charg, Project Manager



Dames and	Moore- Seattle	Project:	LFP- Magic Cleaners	Sampled: 7/12/99								
500 Marke	t Place Tower, 2025 1st Ave	Project Number:	42365-063-005	Received: 7/13/99								
Seattle, WA	A 98121	Project Manager:	David Raubvogel	Reported: 7/16/99 13:12								
	Notes and Definitions											
#	Note		·									
1	The surrogate recovery for this for this surrogate does not repre			f associated QC indicates the recovery								
2	The spike recovery for this QC recovery for this analyte does n	sample is outside of est ot represent an out-of-c	ablished control limits. Review of ontrol condition for the batch.	of associated batch QC indicates the								
DET	Analyte DETECTED											
ND	Analyte NOT DETECTED at o	r above the reporting lin	mit									
NR	Not Reported			·								
dry	Sample results reported on a dr	y weight basis										
Recov.	Recovery											
RPD	Relative Percent Difference											

North Creek Analytical - Bothell Joy B Chang, Project Manager



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18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4779
 9405 S.W. Ninibus Avenue, Beaverton, OR 97008-7132

 (425) 420-9200
 FAX 420-9210

 (509) 924-9200
 FAX 924-9290

 (503) 906-9200
 FAX 906-9210

\_

# **CHAIN OF CUSTODY REPORT**

Work Order # 3907258

REPORT TO:	<u> </u>		INVOI	CE TO:										TURN	AROUND REQ	UEST in Business	Days *
ATTENTION: D. RSUBUDGEL			ATTENTION: Dams-								Organic & I	norganic Analyses					
ADDRESS: Doms > - Monros-			ADDRESS:							10 7 5 4 2 1 Sume Day			l Same Day				
2025 15 AUS #500	Sessis	92121									Standard	Fuels & H	lydrocarbon Analys	:s			
PHONE: 206 728 - 0744 FAX: 77:7 3200			P.O. NU	MBER:		_			NCA C	UOTE #:					5 3-4	2 1	Same Duy
PROJECT NAME: LEP- MOGL	c. Cina	5123	Analysis		/	/ /	' /	/ /	/		' '	' /	Λ		Standard		
PROJECT NUMBER: 92 365 - 06-			Request:			א∕			/	/				OTHER	Specify:		
SAMPLED BY: ATKING					$\cdot$	/	' /	/ /	/ /	' /	/ /	' /		• Turnarouni	Requests less than	standard may incur R	ush Charges.
CLIENT SAMPLE	SAMPLING	NCA SAMPLE ID (Laboratory Use Only)		1 st	9/							. /		MATRIX (W. S. A. O)	# OF CONTAINERS	COMN	IENTS
		1258-01		$\overline{\mathbf{n}}$	(	(	(	$\int$	Í –	ſ	<u> </u>	(			Contrainers		
1P-29-5W	1555			$\sim$						· ·					<u> </u>	<u>-</u>	
2P-25-12W	162.5	-02															
3P-30 -565	1650	- 03	,				ļ				<u> </u>						
P.30-12W	17.05	- 04		$\geq$				L								- <u>-</u>	
5. P-30-5W	1740	- 05		$\geq$													
· P.30-12W	1800	-06		$\geq$						 							
7.									<u> </u>							·	
8.									ļ								
9.		·									<u> </u>						
10.																	
RELINQUISHED BY IS gradure Ua				DATE:	7·lr	3/95	RECEI	VED BY	Signature W	3	. L	Vid	een	$\sim$ _		D	ATE: 7/13
		FIRM: Down		TIME	100	X	PRINT	'NAME:	•	Ŕ	. ]			n	FIRM: 1/	MA T	име: 110
PRINT NAME: UANCS ATKINS	,			( I MILA		<u> </u>					¥_	_910	<u>~</u> ~/	<u> </u>	<u></u> 703		
				DATE:			RECEI	VED BY	Signaturek			-				D	ATE:
PRINT NAME:		FIRM:		TIME:			PRINT	NAME:							FIRM:	<b>T</b>	'IME:
ADDITIONAL REMARKS:															lly -	20.0 PA	GE OF
COC Res A. 100																- 0	



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

## **ANALYTICAL REPORT FOR SAMPLES:**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
P-33-6	B907687-01	Water	7/29/99
P-34-2.5	B907687-02	Water	7/29/99
P-34-6	B907687-03	Water	7/29/99

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

> North Creek Analytical, Inc. Environmental Laboratory Network

Joy B Chang, Project Manager



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

Analyte	Batch	Date Dramana d	Date	Surrogate	Reporting			
	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-33-6</u>			<u>B90768</u>	<u> 87-01</u>			<u>Water</u>	
Acetone	0791037	7/30/99	7/30/99		10.0	ND	ug/l	
Benzene	"	17			1.00	ND	"	
Bromobenzene	11	11	11		1.00	ND	н	
Bromochloromethane	U	н	11		1.00	ND	"	
Bromodichloromethane	"		u.		1.00	· ND	н	
Bromoform	н	11	Ir		1.00	ND		
Bromomethane	**	**	н		1.00	ND	"	
2-Butanone	11	н	11		10.0	ND	a .	
n-Butylbenzene	н		"		1.00	ND	и	
sec-Butylbenzene	•	**	"		1.00	ND		
tert-Butylbenzene	"		"		1.00	ND	" /	
Carbon disulfide	17	11	11		1.00	ND	0	
Carbon tetrachloride	11	17			1.00	ND	в	
Chlorobenzene	н	14	u		1.00	ND	н	
Chloroethane	· 11	*1	".		1.00	ND	11	
Chloroform	**	**			1.00	ND	o	
Chloromethane	11	17	0		5.00	ND		
2-Chlorotoluene		u	"		1.00	ND		
4-Chlorotoluene	11	н	"		1.00	ND	11	
Dibromochloromethane	**	<b>11</b>	**		1.00	ND	"	
1,2-Dibromo-3-chloropropane	H	n.	17		5.00	ND	н	
1,2-Dibromoethane	н	н			1.00	ND	н	
Dibromomethane	н	н	**		1.00	ND	<b>†</b> 1	
1,2-Dichlorobenzene	11	11			1.00	ND	u	
1,3-Dichlorobenzene	11		0		1.00	ND	и	
1,4-Dichlorobenzene	"	u.			1.00	ND	н	
Dichlorodifluoromethane	"	н	91		1.00	ND	*1	
1,1-Dichloroethane	"	11			1.00	ND	+1	
1,2-Dichloroethane	"	11	19		1.00	ND	u	
1,1-Dichloroethene	u	0	н		1.00	ND	17	
cis-1,2-Dichloroethene	и		н		1.00	ND	11	
rans-1,2-Dichloroethene	н	n	11		1.00	ND	••	
1,2-Dichloropropane	н	и		,	1.00	ND		
1,3-Dichloropropane	" '	*1	19		1.00	ND		
2,2-Dichloropropane	17	u •	n		1.00	ND	"	
1,1-Dichloropropene	17	17	11		1.00	ND		
cis-1,3-Dichloropropene	11	н	U		1.00	ND ND	u	
rans-1,3-Dichloropropene	**	и	17		1.00	· ND		

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			<u>B90768</u>	07.01			<u>Water</u>	
<u>P-33-6 (continued)</u>	0701077	7/20/00	7/30/99	<u>57-01</u>	1.00	ND	ug/l	
Ethylbenzene	0791037	7/30/99 "	1/30/99		` 1.00	ND	ug/i	
Hexachlorobutadiene	**				10.0	ND	"	
2-Hexanone								
Isopropylbenzene	n 11		и И		1.00	ND	11	
p-Isopropyltoluene		"	0		1.00	ND		
Methylene chloride	14				5.00	ND		
4-Methyl-2-pentanone	17	17	u		10.0	ND		
Naphthalene	н	U	"		1.00	ND	11	
n-Propylbenzene	"	<b>1</b> 1	11		1.00	ND	et.	
Styrene	н	<b>†1</b>	"		1.00	ND	<b>81</b>	
1,1,1,2-Tetrachloroethane	14	14	17		1.00	ND	81	
1,1,2,2-Tetrachloroethane	"	17	0		1.00	ND	U	
Tetrachloroethene		U	11		1.00	ND		
Toluene	11	**	н		1.00	ND	u	
1,2,3-Trichlorobenzene	н	*1	· II		1.00	ND	17	
1,2,4-Trichlorobenzene	17		17		1.00	ND	0	
1,1,1-Trichloroethane	U	"	17		1.00	ND	0	
1,1,2-Trichloroethane	11		0		1.00	ND	*1	
Trichloroethene	11	u	"		1.00	ND		
Trichlorofluoromethane	н	11	н		1.00	ND	н	
1,2,3-Trichloropropane	v	10			1.00	ND		
1,2,4-Trimethylbenzene	**		n	•	1.00	ND		
1,3,5-Trimethylbenzene	н				1.00	ND		
Vinyl chloride	н		8/3/99		0.200	ND		
-	14	н	7/30/99		2.00	ND	н	
m,p-Xylene	"	и	H 30/99		1.00	ND		
o-Xylene Surrogate: 2-Bromopropene				80.0-120	1.00	109	%	
	"	"	"	80.0-120 80.0-120		90.5	"	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120 80.0-120		97.5	"	
Surrogate: Toluene-d8	"		"	80.0-120 80.0-120		97.J 94.0	"	
Surrogate: 4-BFB		~		00.0-120		94.0		

North Creek Analytical - Bothell

Joy B Chang, roject Manager



 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425,420,9200
 fax 425,420,9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776

 509,924,9200
 fax 509.924,9290
 Spokane Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 . Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
,								
<u>P-34-2.5</u>			<u>B90768</u>	<u>87-02</u>			<u>Water</u>	
Acetone	0791037	7/30/99	7/30/99		10.0	ND	ug/l "	
Benzene		"			1.00	ND		
Bromobenzene	*1	"	U		1.00	ND	0	
Bromochloromethane	11	11	*1		1.00	ND		
Bromodichloromethane	11	17	и		1.00	ND	"	
Bromoform	17	0	н		1.00	ND	"	
Bromomethane	0	*1	14		1.00	ND	n	
2-Butanone	11	н	U.		10.0	ND	и	
n-Butylbenzene		11	U		1.00	ND		
sec-Butylbenzene	н	11	11		1.00	ND	U.	
tert-Butylbenzene	u	11	11		1.00	ND	u	
Carbon disulfide	9	61	н		1.00	ND	11	
Carbon tetrachloride	и <u>.</u>	*1	н		1.00	ND	м	•
Chlorobenzene	. <sup>10</sup>	н	u.		1.00	ND	и	
Chloroethane	II .				1.00	ND	II .	
Chloroform	"	17	**		1.00	ND	и	
Chloromethane					5.00	ND	0	
2-Chlorotoluene	"	"	17		1.00	ND	11	
4-Chlorotoluene	н	"			1.00	ND	11	
Dibromochloromethane	tr.	u.	0		1.00	ND		
1,2-Dibromo-3-chloropropane	0	u .	н		5.00	ND		
1.2-Dibromoethane	н	*1	н		1.00	ND	0	
Dibromomethane	н	11	)r		1.00	ND	U	
1,2-Dichlorobenzene		11	v		1.00	ND	*1	
1,3-Dichlorobenzene	n	U	•••••		1.00	ND		
1.4-Dichlorobenzene		*1	н		1.00	ND	**	
Dichlorodifluoromethane	n	11			1.00	ND	"	
1,1-Dichloroethane					1.00	ND		
1,2-Dichloroethane	U	"	v		1.00	ND	"	
1,1-Dichloroethene	••	0	"		1.00	ND		
cis-1,2-Dichloroethene	11	11	*1		1.00	ND		
trans-1,2-Dichloroethene	17		"		1.00	ND		
	<b>,</b>		0		1.00	ND	e1	
1,2-Dichloropropane		"	"		1.00	ND	"	
1,3-Dichloropropane		н	u		1.00	ND ND	н	
2,2-Dichloropropane		14			1.00	ND	и	
1,1-Dichloropropene	Ч	17					n	
cis-1,3-Dichloropropene	"	17 11			1.00	ND	0	
trans-1,3-Dichloropropene	"				1.00	ND		

North Creek Analytical - Bothell

Joy B Chang, Project Manager



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-34-2.5 (continued)			<u>B90768</u>	<u> 37-02</u>			<u>Water</u>	
Ethylbenzene	0791037	7/30/99	7/30/99		1.00	ND	ug/l	
Hexachlorobutadiene		<b>11</b> .	17		1.00	ND	U .	·
2-Hexanone	"	18	U .		10.0	ND	"	
Isopropylbenzene	11	"	*1		1.00	ND	н	
p-Isopropyltoluene	n		**		1.00	ND	11	
Methylene chloride	"	U II	н		5.00	ND	н	
4-Methyl-2-pentanone	11	u	14		10.0	ND	19	
Naphthalene		*1	U		1.00	ND	11	
n-Propylbenzene	U U	*1	0		1.00	ND	D.	
Styrene	*1	17	*1		1.00	ND	0	•
1,1,1,2-Tetrachloroethane	**	ti	н		1.00	ND	н	
1,1,2,2-Tetrachloroethane	и	0	н		1.00	ND	"	
Tetrachloroethene	11	U	н ,		1.00	ND	11	
Toluene	н	"	17		1.00	ND	"	
1,2,3-Trichlorobenzene	*1		11		1.00	ND	a.	
1,2,4-Trichlorobenzene	н		u		1.00	ND	11	
1,1,1-Trichloroethane	n		"		1.00	ND	11	
1,1,2-Trichloroethane	"		н		1.00	ND		
Trichloroethene	**	н			1.00	ND		
Trichlorofluoromethane	н .		0		1.00	ND	17	
1,2,3-Trichloropropane	н	17	9		1.00	ND	U	
1,2,4-Trimethylbenzene	0		н		1.00	ND	11	
1,3,5-Trimethylbenzene	0	**			1.00	ND	<b>11</b>	
Vinyl chloride	*1	"	8/3/99		0.200	ND	IF.	
m,p-Xylene		11	7/30/99		2.00	ND		
o-Xylene		11	1100199		1.00	ND	a.	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		109	%	
Surrogate: 1,2-DCA-d4	**	"	"	80.0-120		91.0		
Surrogate: Toluene-d8	"		"	80.0-120		96.5	"	
Surrogate: 4-BFB	"	"	"	80.0-120		93.5	"	
Surroguie. 4-DID				QUIU 18V				

North Creek Analytical - Bothell

Project Manager

Joy B Chang



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

#### Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
· · · · · · · · · · · · · · · · · · ·								
<u>P-34-6</u>			<u>B9076</u>	<u> 37-03</u>			<u>Water</u>	
Acetone	0791037	7/30/99	7/31/99		10.0	ND	ug/l	
Benzene	11		17		1.00	ND	"	
Bromobenzene	10	u	*1		1.00	ND	17	
Bromochloromethane	11	*1	н		. 1.00	ND	11	
Bromodichloromethane	11	11			1.00	ND	*1	
Bromoform	*1	н			1.00	ND	**	
Bromomethane	н	ıí	0		1.00	ND	11	
2-Butanone		"	71		10.0	ND	и	
n-Butylbenzene	0	*1	11		1.00	ND	U	
sec-Butylbenzene	u -	н			1.00	ND		
tert-Butylbenzene	*1	н	0		1.00	ND	**	
Carbon disulfide	н	tr.	**		1.00	ND		
Carbon tetrachloride	U	"	н		1.00	ND	81	
Chlorobenzene	11	ч	н		1.00	ND	0	
Chloroethane	11		11		1.00	ND	**	
Chloroform	н	19			1.00	ND		
Chloromethane	0	0	u .		5.00	ND	н	
2-Chlorotoluene	u	•1	н		1.00	ND	11	
4-Chlorotoluene	"	н	u		1.00	ND		
Dibromochloromethane	"	17	v		1.00	ND	11	
1,2-Dibromo-3-chloropropane	u				5.00	ND	ч	
1,2-Dibromoethane	"	n			1.00	ND	14	
Dibromomethane	11		u		1.00	ND	n	
1,2-Dichlorobenzene		11			1.00	ND	*1	
1,3-Dichlorobenzene	a	н.			1.00	ND	u	
1,4-Dichlorobenzene	*1	"	н		1.00	ND	u.	
Dichlorodifluoromethane	н	u	11		1.00	ND	"	
1,1-Dichloroethane		17			1.00	ND	*1	
1,2-Dichloroethane		0			1.00	ND	"	
1,1-Dichloroethene	"		**		1.00	ND		
cis-1,2-Dichloroethene	11	и	11		1.00	ND		
trans-1,2-Dichloroethene	u		11		1.00	ND	"	
1,2-Dichloropropane	*1	и	ti.		1.00	ND	н	
1,3-Dichloropropane	н	u	н		1.00	ND	14	
2,2-Dichloropropane	U.	0	н		1.00	ND		
I,1-Dichloropropene	11	"	11		1.00	ND	"	
	11		U		1.00	ND	n	
cis-1,3-Dichloropropene		н			1.00	ND	17	
trans-1,3-Dichloropropene					1.00	ND.		

North Creek Analytical - Bothell

Joy B Chang, Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588 Bend

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	 Reported:	8/4/99 13:30

## Volatile Organic Compounds by EPA Method 8260B North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	_		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			<u>B9076</u>	7 03			<u>Water</u>	,
<u>P-34-6 (continued)</u> Ethylbenzene	0791037	7/30/99	7/31/99	<u>17-05</u>	1.00	ND	ug/l	
Hexachlorobutadiene	0791037	1130/77	"		1.00	ND	ug/1	
	*1	11	••		10.0	ND		
2-Hexanone		**	91		1.00	ND		
Isopropylbenzene	u .		и		1.00	ND	**	
p-Isopropyltoluene		14			5.00	ND		
Methylene chloride		U	U		10.0	ND	н	
4-Methyl-2-pentanone			0		1.00	ND	н	
Naphthalene					1.00	ND	н	
n-Propylbenzene	"							
Styrene			n		1.00	ND	11	
1,1,1,2-Tetrachloroethane		17			1.00	ND	11	
1,1,2,2-Tetrachloroethane	0	0			1.00	ND		
Tetrachloroethene	*1	11	U .		1.00	ND		
Toluene	н	11	"		1.00	ND	u	
1,2,3-Trichlorobenzene	н	91	<del>1</del> 1		1.00	ND	11	
1,2,4-Trichlorobenzene	If		м .		1.00	ND	0	
1,1,1-Trichloroethane	"	U	н		1.00	. ND	11	
1,1,2-Trichloroethane	н	n	17		1.00	ND	*1	
Trichloroethene	н	*1	0		1.00	ND	u	•
Trichlorofluoromethane	11		*1		1.00	ND	"	
1,2,3-Trichloropropane		17	н		1.00	ND	0	
1,2,4-Trimethylbenzene					1.00	ND	11	
1,3,5-Trimethylbenzene	"	*1	0		1.00	ND	н	•
Vinyl chloride	"	14	8/3/99		0.200	ND	п	
m,p-Xylene	v	17	7/31/99		2.00	ND	n	
o-Xylene		11	"		1.00	ND	<b>n</b> .	
Surrogate: 2-Bromopropene	"	"	"	80.0-120		104	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120	•	91.0	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		. 97.5	"	
Surrogate: 4-BFB	n	н	"	80.0-120		96.5	"	

North Creek Analytical - Bothell

Joy B Chang, Protect Manager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network



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Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

[	Date	Spike	Sample	QC		Reporting Limit Re		RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
Batch: 0791037	Date Prepar	red: 7/30/9	19		<u>Extract</u>	tion Method: EPA 5	<u>030B</u>	[P/T]	
Blank	0791037-BL								
Acetone	7/30/99			ND	ug/l	10.0		•	
Benzene	11			ND	"	1.00			
Bromobenzene	W			ND	0	1.00			
Bromochloromethane			•	ND	11	1.00			
Bromodichloromethane	U			ND	11	1.00			
Bromoform	u		,	ND	11	1.00			
Bromomethane	ti			ND	11	1.00			
2-Butanone	11			ND	н	10.0			
n-Butylbenzene	u .			ND	н	1.00			
sec-Butylbenzene	11			ND		1.00			
tert-Butylbenzene	"			ND	11	1.00			
Carbon disulfide	**			ND	41	1.00			
Carbon tetrachloride	и			ND	п,	1.00			
Chlorobenzene	н			ND		1.00			
Chloroethane				ND	u	1.00			
Chloroform	17			ND	10	1.00			
Chloromethane	"			ND	0	5.00			
2-Chlorotoluene	"			ND	*1	1.00			
4-Chlorotoluene	н			ND	11	1.00			
Dibromochloromethane				· ND	н	1.00			
1,2-Dibromo-3-chloropropane				ND		5.00			
1,2-Dibromoethane	"			ND	17	1.00			
Dibromomethane				ND	U	1.00			
1,2-Dichlorobenzene	U .			ND	**	1.00			
1,3-Dichlorobenzene	0			ND	n	1.00			
1,3-Dichlorobenzene	"			ND	и	· 1.00			
Dichlorodifluoromethane	н			ND		1.00			
1,1-Dichloroethane	u.			ND	U	1.00			
1,2-Dichloroethane				ND	*1	1.00			
1,1-Dichloroethene	**			ND	н	1.00		•	
cis-1,2-Dichloroethene	*1			ND	н	1.00			
trans-1,2-Dichloroethene	14			ND	"	1.00			
1,2-Dichloropropane				ND	0	1.00			
1,3-Dichloropropane	*1			ND	*1	1.00			
2,2-Dichloropropane	**			ND	u	1.00			
1,1-Dichloropropene	u			ND	н	1.00			
cis-1,3-Dichloropropene	u			ND	11	1.00			
eis-1,5-trionopropene						1.00			

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North Creek Analytical - Bothell

Joy B Chang oject Manager



Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 8/4/99 13:30

#### Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell ÷ ر با التي آني. حصف من الالتي الي

Analyte         Analyzed         Level         Result         Units         Recov. Limits         9           Blank (continued)         0791037-BLK1           1.00          1.00           Ethylbenzene         "         ND         "         1.00          1.00           Plasachicrobutadiene         "         ND         "         1.00          1.00           2-Hexanone         "         ND         "         1.00          1.00           Plaspropylbaluene         "         ND         "         1.00          1.00           Plaspropylbaluene         "         ND         "         1.00          Maphthalene         "         ND         "         1.00           Plaspropylbaluzene         "         ND         "         1.00          ND         "         1.00           Styrene         "         ND         "         1.00         "         1.00          1.00          1.00          1.00          1.00          1.00          1.00         '         1.00         '         1.00          1.0		Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Biask (continued)         0791037-BLK1           Etnas-L_3-Dichloropropene         7/30/99         ND         ug/1         1.00           Ethylbenzene         "         ND         "         1.00           Ethylbenzene         "         ND         "         1.00           Ethylbenzene         "         ND         "         1.00           Jepropylbenzene         "         ND         "         1.00           Jepropylbenzene         "         ND         "         1.00           Methylene choride         "         ND         "         1.00          Propylbenzene         "         ND         "         1.00          Propylbenzene         "         ND         "         1.00           1,1,2-Tetrachloroethane         "         ND         "         1.00           1,1,2-Tetrachloroethane         "         ND         "         1.00           1,2,2-Tetrachloroethane         "         ND         "         1.00           1,2,2-Tetrachloroethane         "         ND         "         1.00           1,2,2-Tetrachloroethane         "         ND         "         1.00           1,2,2-Tetrachloroethane <t< th=""><th>Analyte</th><th></th><th>-</th><th>-</th><th>-</th><th>Units</th><th></th><th>%</th><th>Limit</th><th>%</th><th>Notes*</th></t<>	Analyte		-	-	-	Units		%	Limit	%	Notes*
trans-1,3-Dichloropropene       7/30/99       ND       ug/l       1.00         Ettylbenzene       "       ND       "       1.00         Ettylbenzene       "       ND       "       1.00         Sepropylbenzene       "       ND       "       1.00         Isopropylbenzene       "       ND       "       1.00         P-lsopropylbenzene       "       ND       "       1.00         Methylene chloride       "       ND       "       1.00         4-Methyl-2-pentanone       "       ND       "       1.00         Arkethyl-2-pentanone       "       ND       "       1.00         Naphthalene       "       ND       "       1.00         -Propylbonzene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2,2-Tetrachloroethane       "       ND       "       1.00         1,2,3-Trichloroethane       "       ND       "       1.00         1,2,4-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroeth	· · · · ·	· · · ·									
Ethylbenzne       ND       *       1.00         Hexachlorobutadiene       ND       *       1.00         2-Hexanone       ND       *       1.00         Sopropylbenzene       *       ND       *       1.00         p-Isopropylbenzene       *       ND       *       1.00         p-Isopropylbenzene       *       ND       *       1.00         Methylene chloride       *       ND       *       1.00         Maphthalene       ND       *       1.00       *       1.00         Naphthalene       *       ND       *       1.00       *       1.00         Naphthalene       *       ND       *       1.00       *       1.00         1,1,2-Tetrachloroethane       *       ND       *       1.00       *       1.00         1,1,2-Tetrachloroethane       *       ND       *       1.00       *       1.00         1,1,2-Tetrachloroethane       *       ND       *       1.00       *       1.00         1,1,2-Titchloroethane       *       ND       *       1.00       *       1.00       *       1.00       *       1.00       *       1.00       *<	<u>Blank (continued)</u>	<u>0791037-B</u>	<u>LK1</u>								
Duryneizene       "       ND       "       1.00         Hexanhorobutadiene       "       ND       "       1.00         2-Hexanonc       "       ND       "       1.00         Isopropylbenzene       "       ND       "       1.00         p-Isopropylbouene       "       ND       "       1.00         Mehylene chloride       "       ND       "       1.00         A-Methyl-2-pentanone       "       ND       "       1.00         Naphthalene       "       ND       "       1.00         -Propylbenzene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,1,2-Trichlorobenzene       "       ND       "       1.00         1,1,2-Trichlorobenzene       "       ND       "       1.00         1,1,2-Tricholorobenzene	trans-1,3-Dichloropropene	7/30/99			ND	ug/l	1.00				
Alexanono       "       1.00         Jerexanono       "       ND       "       1.00         Isopropylbenzene       "       ND       "       1.00         p-Isopropylbouree       "       ND       "       1.00         Methylene chloride       "       ND       "       1.00         Methylene chloride       "       ND       "       1.00         Naphthalene       "       ND       "       1.00         n-Propylbonzene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,1,2-Trichoroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND	Ethylbenzene	н			ND	U	1.00				
2-TEXANDRE       ND       1.0.0         p-Isopropylbenzene       ND       ND       1.00         p-Isopropylbenzene       ND       ND       1.00         Methylene chloride       ND       ND       1.00         Maphthalene       ND       ND       1.00         n-Propylbenzene       ND       ND       1.00         Styrene       ND       1.00       1.00         1,1,2-Tetrachloroethane       ND       1.00       1.00         1,1,2-Tetrachloroethane       ND       1.00       1.00         1,1,2-Tetrachloroethane       ND       1.00       1.00         1,2,3-Trichlorobenzene       ND       1.00       1.00         1,2,3-Trichlorobenzene       ND       1.00       1.00         1,1,2-Trichlorobenzene       ND       1.00       1.00         1,1,1-Trichlorobenzene       ND       1.00       1.00         1,1,2-Trichlorobenzene       ND       1.00       1.00         Trichloroptopane       ND       1.00       1.00         1,2,4-Trinethylbenzene       ND       1.00       1.00         1,2,4-Trinethylbenzene       ND       1.00       1.00         1,2,4-Trinethylbenzene	Hexachlorobutadiene	11			ND		1.00				
Isoprogrueizate       ND       1.00         p-Isoprogrupicitizate       ND       100         Methylene chloride       ND       ND         Maphthalene       ND       100         Naphthalene       ND       100         n-Propyllenzane       ND       100         styrene       ND       100         1,1,2-Tetrachloroethane       ND       100         1,1,2-Tetrachloroethane       ND       100         1,1,2-Tetrachloroethane       ND       100         1,1,2-Tetrachloroethane       ND       100         Tetrachloroethane       ND       100         1,1,2-Trichlorobenzene       ND       100         1,1,1-Trichlorobenzene       ND       100         1,1,2-Trichlorobenzene       ND       100         1,1,1-Trichloroethane       ND       100         1,1,2-Trichloroethane       ND       100         1,1,2-Trichloroethane       ND       100         1,2,3-Trichloropropane       ND       100         1,2,3-Trichloropropane       ND       100         1,2,3-Trinethylbenzene       ND       100         1,3,5-Trimethylbenzene       ND       100         Surroga	2-Hexanone	н			ND	11	10.0				
p-IsopropyItoluene       "       ND       "       1.00         Methylene chloride       "       ND       "       5.00         4-Methyl-2-pentanone       "       ND       "       10.0         Naphthalene       "       ND       "       1.00         n-PropyIbenzene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,2,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,2,4-Trichloroethane       "       ND       "       1.00         1,2	Isopropylbenzene	н			ND	11	· 1.00				
Methylene chloride       "       ND       "       5.00         4-Methyl-2-pentanone       "       ND       "       10.0         Naphthalene       "       ND       "       10.0         Naphthalene       "       ND       "       1.00         Naphthalene       "       ND       "       1.00         Styrene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         Toluene       "       ND       "       1.00         1,2,3-Trichloroethane       "       ND       "       1.00         1,2,4-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,2,3-Trichloropopane       "       ND       "       1.00         1,2,3-Trichloropopane       "       ND       "       1.00         1,2,4-Trichloroptine       "		u –			ND	11	1.00				
4-Methyl-2-pentanone       "       ND       "       10.0         Naphthalene       "       ND       "       1.00         n-Propylbenzene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,1,2,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichlorofluare       "       ND       "       1.00         Trichloroptopane       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       0.00         Sur		tr			ND	11	5.00				
Naphthalene       ND       ND       1.00         n-Propylbenzene       ND       ND       1.00         Styrene       ND       ND       1.00         1,1,2-Tetrachloroethane       ND       1.00       1.00         1,1,2-Tetrachloroethane       ND       1.00       1.00         1,1,2-Tetrachloroethane       ND       1.00       1.00         Tetrachloroethene       ND       ND       1.00         Toluene       ND       ND       1.00         1,2,3-Trichlorobenzene       ND       1.00       1.2,3-Trichloroethane         1,1,1-Trichloroethane       ND       1.00       1.00         1,1,2-Trichloroethane       ND       1.00       1.00         1,1,2-Trichloroethane       ND       1.00       1.00         1,1,2-Trichloroethane       ND       1.00       1.00         1,2,3-Trichloropropane       ND       1.00       1.00         1,2,3-Trichloropropane       ND       1.00       1.00         1,3,5-Trimethylbenzene       ND       1.00       1.00         1,3,5-Trimethylbenzene       ND       0.200       0         m,p-Xylene       7/30/99       ND       0.200       0	-		•		ND	**	10.0				
n-Propylbenzene       "       ND       "       1.00         Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         Toluene       "       ND       "       1.00         1,2,3-Trichloroethane       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,2,3-Trichloropapae       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       0.00         1,3,5-Trimethylbenzene       "       ND       "       0.00         <		U U		•	ND	н	1.00				
Styrene       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         Toluene       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,2,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       0.00         1,3,5-Trimethylbenzene       "       ND       "       0.00         0-Xylene       7/30/99       ND       "       0.00         S	-	*1			ND	ч	1.00				
1,1,2-Tetrachloroethane       "       1.00         1,1,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethane       "       ND       "       1.00         Toluene       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichloroethane       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,2,3-Trichloroptopane       "       ND       "       1.00         1,2,3-Trinethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       0.00 <i>Surrogate: 2-Bromopropene</i> "       20.0       17.1<"		*1			ND		1.00				
1,1,2,2-Tetrachloroethane       "       ND       "       1.00         Tetrachloroethene       "       ND       "       1.00         Toluene       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichloroethene       "       ND       "       1.00         Trichloroptuoromethane       "       ND       "       1.00         1,2,3-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         Vinyl chloride       8/3/99       ND       0.200       "         m.p-Xylene       7/30/99       ND       1.00       2.00       10         Surrogate: 1,2-DCA-d4       "       20.0       17.1<"		и			ND		1.00				
Tetrachloroethene       "       ND       "       1.00         Toluene       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichlorofluoromethane       "       ND       "       1.00         Trichlorofluoromethane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       0.200         Surrogate:       2-Bromopropene       "       20.0       17.1       #       80.0-120       95.         Surrogate:       1,2-DCA-d4       "       20.0       17.1       #       80.0-120       97. <t< td=""><td></td><td>H</td><td></td><td></td><td>ND</td><td></td><td>1.00</td><td></td><td></td><td></td><td></td></t<>		H			ND		1.00				
Toluene       "       ND       "       1.00         1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichlorofluoromethane       "       ND       "       1.00         Trichlorofluoromethane       "       ND       "       1.00         1,2,3-Trichloropopane       "       ND       "       1.00         1,2,3-Trichloropropane       "       ND       "       1.00         1,2,3-Trichloropropane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         Vinyl chloride       8/3/99       ND       "       0.200         m_p-Xylene       7/30/99       ND       "       0.00         Surrogate: 1,2-DCA-d4       "       20.0       17.1       "					ND	U	1.00				
1,2,3-Trichlorobenzene       "       ND       "       1.00         1,2,4-Trichlorobenzene       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloropthane       "       ND       "       1.00         Trichloropthane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       0.00         m,p-Xylene       7/30/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       1.00         Surrogate:       1,2-DCA-d4       "       20.0       17.1<"						**					
1,2,4-Trichlorobenzene       "       ND       "       1.00         1,1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroptopane       "       ND       "       1.00         1,2,3-Trichloroptopane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         vinyl chloride       8/3/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       2.00         o-Xylene       "       20.0       21.6       "       80.0-120       10         Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       97.         Surrogate:       1,					ND						
1,1-Trichloroethane       "       ND       "       1.00         1,1,2-Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroethane       "       ND       "       1.00         Trichloroptopane       "       ND       "       1.00         1,2,3-Trichloropropane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         Vinyl chloride       8/3/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       2.00         Surrogate: 1,2-DCA-d4       "       20.0       17.1<"						"					
1,1,2-Trichloroethane       "       ND       "       1.00         Trichloroethene       "       ND       "       1.00         Trichlorofluoromethane       "       ND       "       1.00         1,2,3-Trichloropropane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         Vinyl chloride       8/3/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       0.200         o-Xylene       "       20.0       21.6       "       80.0-120       10         Surrogate: 1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate: Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate: 4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       OT91037-ES1       E       E       10.0       9.68       80.0-120       96.         1,1-Dichloroet		"									
Trichloroethene       "       ND       "       1.00         Trichloroethene       "       ND       "       1.00         1,2,3-Trichloropropane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         yinyl chloride       8/3/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       2.00         o-Xylene       "       20.0       21.6       "       80.0-120       10         Surrogate: 1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate: Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate: 4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1       "       20.0       19.6       "       80.0-120       79.         Chlorobenzene       "       10.0       9.68       "       80.0-120       96.		н				u					
Trichlorofluoromethane       "       ND       "       1.00         1,2,3-Trichloropropane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         Vinyl chloride       8/3/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       2.00         o-Xylene       "       20.0       21.6       "       80.0-120       10.0         Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate:       4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1       E       E       10.0       9.68       "       80.0-120       96.         1,1-Dichloroethene       "       10.0       9.14       80.0-120       91.         Toluene       "       10.0 <td></td> <td>IF</td> <td></td> <td></td> <td></td> <td>н</td> <td></td> <td></td> <td></td> <td></td> <td></td>		IF				н					
1,2,3-Trichloropropane       "       ND       "       1.00         1,2,4-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         1,3,5-Trimethylbenzene       "       ND       "       1.00         Vinyl chloride       8/3/99       ND       "       0.200         m,p-Xylene       7/30/99       ND       "       2.00         o-Xylene       "       20.0       21.6       "       80.0-120       85.         Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       85.         Surrogate:       4.BFB       "       20.0       19.4       "       80.0-120       97.         Surrogate:       4.BFB       "       20.0       19.6       "       80.0-120       98.         LCS       O791037-BS1       Toluene       "       10.0       9.14       "       80.0-120       99.         1,1-Dichloroethene       "       10.0       9.14       "       80.0-120       91.											
No.No.No.No.No.1,2,4-Trimethylbenzene"ND."1.001,3,5-Trimethylbenzene"ND."1.00Vinyl chloride $8/3/99$ ND."0.200m,p-Xylene $7/30/99$ ND."2.00o-Xylene"ND."1.00Surrogate:2-Bromopropene"20.021.6"Surrogate:1,2-DCA-d4"20.017.1"80.0-120Surrogate:Toluene-d8"20.019.4"80.0-120Surrogate:4-BFB"20.019.6"80.0-120LCS0791037-BS1EE10.019.6"80.0-120Chlorobenzene"10.09.68"80.0-12096.1,1-Dichloroethene"10.09.14"80.0-12091.Toluene"10.011.0"80.0-12011.		t <del>1</del>				11					
No.NDND1.00 $1,3,5$ -Trimethylbenzene8/3/99NDND0.200m,p-Xylene7/30/99ND"2.00o-Xylene"ND"1.00Surrogate:2-Bromopropene"20.021.6"Surrogate:1,2-DCA-d4"20.017.1"Surrogate:Toluene-d8"20.019.4"Surrogate:4-BFB"20.019.6"LCS0791037-BS1SenzeneBenzene7/30/9910.07.97ug/l80.0-120Chlorobenzene"10.09.6880.0-1201,1-Dichloroethene"10.09.14"80.0-120Toluene"10.011.0"80.0-120	•••	U				"					
Nine       8/3/99       ND       0.200         m,p-Xylene       7/30/99       ND       "       2.00         o-Xylene       "       ND       "       1.00         Surrogate:       2-Bromopropene       "       20.0       21.6       "       80.0-120       10.0         Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate:       4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       O791037-BS1       Under the second						0					
m.p-Xylene       7/30/99       ND       "       2.00         o-Xylene       "       ND       "       1.00         Surrogate:       2-DCA-d4       "       20.0       21.6       "       80.0-120       10.0         Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate:       4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       O791037-BS1       "       20.0       9.68       "       80.0-120       99.         Chlorobenzene       "       10.0       9.68       "       80.0-120       96.         1,1-Dichloroethene       "       10.0       9.14       "       80.0-120       91.         Toluene       "       10.0       11.0       "       80.0-120       11.		8/3/99				н					
o-Xylene         "         1.00           Surrogate:         2-Bromopropene         "         20.0         21.6         "         80.0-120         10.0           Surrogate:         1,2-DCA-d4         "         20.0         17.1         "         80.0-120         85.           Surrogate:         Toluene-d8         "         20.0         19.4         "         80.0-120         97.           Surrogate:         Toluene-d8         "         20.0         19.4         "         80.0-120         97.           Surrogate:         4-BFB         "         20.0         19.6         "         80.0-120         98.           LCS         O791037-BS1         E	-					*1					
Surrogate:       2-Bromopropene       "       20.0       21.6       "       80.0-120       10.         Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate:       4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1       "       10.0       9.68       "       80.0-120       79.         Chlorobenzene       "       10.0       9.68       "       80.0-120       96.         1,1-Dichloroethene       "       10.0       9.14       "       80.0-120       91.         Toluene       "       10.0       11.0       "       80.0-120       11						"					
Surrogate:       1,2-DCA-d4       "       20.0       17.1       "       80.0-120       85.         Surrogate:       Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate:       4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1		"	20.0		-	<i>"</i>		108			<b>_</b>
Surrogate: Toluene-d8       "       20.0       19.4       "       80.0-120       97.         Surrogate: 4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1	• • •	"				"		85.5			
Surrogate: 4-BFB       "       20.0       19.6       "       80.0-120       98.         LCS       0791037-BS1		"				"		97.0			
LCS         0791037-BS1           Benzene         7/30/99         10.0         7.97         ug/l         80.0-120         79.           Chlorobenzene         "         10.0         9.68         "         80.0-120         96.           1,1-Dichloroethene         "         10.0         9.14         "         80.0-120         91.           Toluene         "         10.0         11.0         "         80.0-120         11.		"				"		98.0			
Benzene7/30/9910.07.97ug/l80.0-12079.Chlorobenzene"10.09.68"80.0-12096.1,1-Dichloroethene"10.09.14"80.0-12091.Toluene"10.011.0"80.0-12011.	Surroguie. +-DrD		20.0				•••••				
Benzene7/30/9910.07.97ug/l80.0-12079.Chlorobenzene"10.09.68"80.0-12096.1,1-Dichloroethene"10.09.14"80.0-12091.Toluene"10.011.0"80.0-12011.	1.05	0791037-B	S1								
Chlorobenzene"10.09.68"80.0-12096.1,1-Dichloroethene"10.09.14"80.0-12091.Toluene"10.011.0"80.0-12011.					7.97	ug/l	80.0-120	79.7			1
1,1-Dichloroethene"10.09.14"80.0-12091.Toluene"10.011.0"80.0-12011.								96.8			_
Toluene " 10.0 11.0 " 80.0-120 11		n				"		91.4			
	•					U II		110			
		н						82.0			
	Themoloculenc		10.0		0.20		00.0-120	54.0			

North Creek Analytical - Bothell

Joy B Chang Project Manager



 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508

 425.420.9200
 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B. Spokane, WA 99206-4776

 509.924.9200
 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

 503.906.9200
 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

 541.383.0310
 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 7/29/99	٦
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/30/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 8/4/99 13:30	

## Volatile Organic Compounds by EPA Method 8260B/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS (continued)	<u>0791037-BS1</u>									
Surrogate: 2-Bromopropene	7/30/99	20.0		22.3	ug/l	80.0-120				
Surrogate: 1,2-DCA-d4	"	20.0		19.0	"	80.0-120	95.0		•	
Surrogate: Toluene-d8	"	20.0		24.8	"	80.0-120	124			2
Surrogate: 4-BFB	"	20.0		19.7	"	80.0-120	98.5			
Matrix Spike	<u>0791037-MS1</u>	L.	<u>B907687-01</u>							
Benzene	7/30/99	10.0	ND	9.64	ug/l	80.0-120	96.4			
Chlorobenzene		10.0	ND	9.69	**	80.0-120	96.9			
1,1-Dichloroethene	"	10.0	ND	9.79	11	80.0-120	97.9			
Toluene	**	10.0	· ND	9.47	11	80.0-120	94.7			
Trichloroethene	"	10.0	ND	10.4	"	80.0-120	104			
Surrogate: 2-Bromopropene	"	20.0		20.9	"	80.0-120	104			
Surrogate: 1,2-DCA-d4	"	20.0		17.7	"	80.0-120	88.5			
Surrogate: Toluene-d8	"	20.0		20.1	"	80.0-120	101			
Surrogate: 4-BFB	"	20.0		18.8	"	80.0-120	94.0			
<u>Matrix Spike Dup</u>	<u>0791037-MS</u>	<u>D1</u>	<u>B907687-01</u>							
Benzene	7/30/99	10.0	ND	9.70	ug/l	80.0-120	97.0	15.0	0.620	
Chlorobenzene	11	10.0	ND	9.62	u	80.0-120	96.2	15.0	0.725	
1,1-Dichloroethene	"	10.0	ND.	8.91	t1	80.0-120	89.1	15.0	9.41	
Toluene	14	10.0	ND	9.73	н	80.0-120	97.3	15.0	2.71	
Trichloroethene	u	10.0	ND	10.0	н	80.0-120	100	15.0	3.92	
Surrogate: 2-Bromopropene	11	20.0		21.1	"	80.0-120	106			
Surrogate: 1,2-DCA-d4	"	20.0		18.2	"	80.0-120	91.0			
Surrogate: Toluene-d8	".	20.0		20.3	"	80.0-120	101			
Surrogate: 4-BFB	"	20.0		18.7	"	80.0-120	93.5			

North Creek Analytical - Bothell

Joy B Chang, Malgager

\*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc. Environmental Laboratory Network


 
 Seattle
 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fax 425.420.9210

 Spokane
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290

 Portland
 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

 Bend
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

#### **Notes and Definitions**

#	Note
1	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
2	The surrogate recovery for this sample is outside of established control limits. Review of associated QC indicates the recovery for this surrogate does not represent an out-of-control condition.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

North Creek Analytical - Bothell

Joy B Chang, Project Manager

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
 East 11115 Montgomery, Suite B, Spokane, WA 98206-4776
 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

(425) 420-9200FAX 420-9210(509) 924-9200FAX 924-9290(503) 906-9200FAX 906-9210(541) 383-9310FAX 382-7588

### CHAIN OF CUSTODY REPORT

### Work Order #: **B907687**

CLIENT SAMPLE       SAMPLING       W       SAMPLING       COMMENTS         IDENTIFICATION       DATE/TIME $\widehat{W}$ $\widehat{W}$ $\widehat{S}$ $\widehat{W}$ $\widehat{S}$ $\widehat{W}$ $\widehat{S}$ $\widehat{U}$	/S*
ADDRESS:SODMARKETPLARETSWERZOZS $VII$ $VIII$ $VIIII$ $VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII$	· ·
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<1
PROJECT NUMBER: $4/2563 \cdot 2653 + 2003$ SAMPLED BY:KastbarkutsANCLIENT SAMPLESAMPLINGNIDENTIFICATIONDATE/TIMEN1. $P=33-6$ $F/294$ $ZZ:15$ 2. $P=34-2.5$ $F/29$ $ZZ:455$ 3. $P=54-6$ $F/29$ $ZZ:10$	
PROJECT NUMBER: $4/2568 \cdot 065 = 0003$ SAMPLED BY:KastbarkutskOSAMPLED BY:KastbarkutskOCLIENT SAMPLESAMPLINGMATRIXIDENTIFICATIONDATE/TIMEN1. $P=33-6$ $F/29st$ ZZ:152. $P=34-2.5$ $7/29$ ZZ:453. $P=54-6$ $7/29$ Z3:10XImage: Colspan="4">Image: Colspan="4"IDENTIFICATIONDATE/TIMEImage: Colspan="4"2. $P=34-25$ $7/29$ $Z:45$ Image: Colspan="4"3. $P=54-6$ $7/29$ $Z:40$ Image: Colspan="4" </td <td></td>	
PROJECT NUMBER: $4/2568 \cdot 065 = 0003$ SAMPLED BY:KastbarkutskOSAMPLED BY:KastbarkutskOCLIENT SAMPLESAMPLINGMATRIXIDENTIFICATIONDATE/TIMEN1. $P=33-6$ $F/29st$ ZZ:152. $P=34-2.5$ $7/29$ ZZ:453. $P=54-6$ $7/29$ Z3:10XImage: Colspan="4">Image: Colspan="4"IDENTIFICATIONDATE/TIMEImage: Colspan="4"2. $P=34-25$ $7/29$ $Z:45$ Image: Colspan="4"3. $P=54-6$ $7/29$ $Z:40$ Image: Colspan="4" </td <td></td>	
SAMPLED BY: $kars Ust Rus A$ CLIENT SAMPLESAMPLINGIDENTIFICATIONDATE/TIME1. $P=33-6$ $\overline{P/29}$ ZZ:1/52. $P-34-Z.5$ $\overline{P/29}$ ZZ:4/53. $P-54-6$ $\overline{P/29}$ Z3:1/0XX	
CLIENT SAMPLE IDENTIFICATIONSAMPLING DATE/TIMEMATRIX N# OF (W, S, O)1. $P=33-6$ $\overline{7/29}$ $7$	3es.
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	NCA WO
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ID
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
3. P-5Y-6 $7/29$ $Z3:10$ X W $7 - 03$	
4. TRIP BLANK W 1 _ OLP	
6.	
7.	
8.	
9.	
	•
14. 15. 6.5 NO	
15. DATE: 7/50 RECEIVED BY TOWY	7/30/9.
RELINQUISHED BY: MILL DE AL FIRM: ALCA	12:20
PRINT NAME:     Kas brack     FIRM:     Diff     Hime:     Diff     Print NAME:     Print N	
PRINT NAME:     FIRM:     TIME:     PRINT NAME:     FIRM:     TIME:	
ADDITIONAL REMARKS:	05



#### Table 1

Summary of Groundwater Analytical Results Former Magic Cleaners

Analyte	Sample ID	P-1-W	P-1-W (DUP)	P-2-W	P-3-W	₽-4-₩	P-5-W	P-6-W	P-7-W	P-8-W	P-9-W	P-10-W	P-11-W	P-13-5W	P-13- 12W	MTCA Method A or B
Analyte	Sample Date	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/2 <b>2/98</b>	09/22/98	06/07/99	06/07/99	Groundwater Cleanup Level
Volatile Organic	: Compounds <sup>(1)</sup> (µg/L)				,					-						
Tetrachloroethen	e	2.6	2.9	ND	9.8	5.2	1.6	ND	8.1	3.1	5.8	ND	2.0	ND	ND	5.0 (A)
Trichloroethene		ND	ND	0.87	0.91	ND	ND	ND	ND	4.0	2.0	ND	0.76	ND ·	ND	5.0 (A)
1,1-Dichloroethe	ne	ND	ND	ND	ND	0.48	1.2	ND	ND	ND	ND	ND	ND	ND	ND	0.073 (B)
cis-1,2-Dichloroe	thene	ND	ND	ND	0.50	ND	4.2	ND	ND	<sup>·</sup> 3.6	1.6	ND	0.49	ND	ND	80 (B)
trans-1,2-Dichlor	oethene	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND	ND	ND	ND	ND	160 (B)
Vinyl chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 (A)
Ehtylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND	30 (A)
Toluene		1.7	0.84	0.69	1.0	0.59	1.1	2.2	ND	3.4	0.81	ND	0.35	ND	ND	40 (A)
Xylenes		0.43	0.67	7.3	1.0	2.1	2.0	2.2	2.2	2.8	3.3	ND	0.94	ND	ND	20 (A)

Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

#### Former Magic Cleaners Summary of Groundwater Analytical Results I əldsT

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MTCA Method A or B Groundwater	W21-91-9	MS-61-4	P-18-12W		M02-71-9		MS-91-d	M21-21-4		-14-11M		W2-41-9	CI əlqms2	- 91YlenA
Cleanup Level	66/L0/90	66/60/L0	66/L0/90	66/L0/90	Sample Date									
													(.1.94) <sup>(1)</sup> ebnuoqmoJ	Volatile Organic
(A) 0.č	ΔN	2.71	ND	ЛD	ИD	ИD	ND	ЛD	9.11	<i>L</i> .91	8.22	ЛŊ		etrachloroethene
(A) 0.č	ЛD	ΩN	ND	ND	MD	MD	ND	AD	ЛD	۵N	5'46	ND		Trichloroethene
(A) £70.0	AD	ΔN	AD	ЛD	ΩN.	ИD	ИD	AD	ЛD	MD	۵N	ΔN		I, I-Dichloroetheño
(B) 08	ИЛ	ND	ЛD	ND	ЯD	ND	ND	MD	۵N	ИD	88.1	ΩN	əuər	theorothoid-2,1-sic
160 (B)	ЛЛ	ЛD	ΔN	ЛD	۵N	ИD	ND	٨D	ИD	ИD	ЛD	ND	ethene	oroldoid-2,1-znsr
(¥) 2.0	ЛD	ЛD	ND	ΔN	ЛD	ЛD	٩D	٨D	۵N	ΩN	ИD	TL.0		sbinolda lyniV
(A) 0£	ND	MD	ИD	ЛD	ЛD	αN	۵N	' AN	۵N	ЛD	ND	ND		Ehtylbenzene
(¥) 0 <del>1</del> ⁄	ИD	ND	ИD	ЛD	ЛD	٩D	٩D	ND	ND	ЛD	٨D	ЛD		Toluene
(¥) 02	UN .	ЛD	אם	۵N	αn	an	ИD	AD	<u>и</u> л -	ЛD	٩D	ΔN		Xylenes

Page 2 of 4

bəlqms  $S = N \circ S$ ND = Not Detected

66/7/8

bgs = below ground surface MTCA - Model Toxics Control Act (A) - MTCA Method A groundwater cleanup level (B) - MTCA Method B groundwater cleanup level <u>SetoN</u>

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 $D_{\text{AMES}}\,\&\,M_{\text{OORE}}$ 

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#### Summary of Groundwater Analytical Results Sormer Magic Cleaners

Analyte	Sample ID Sample Date	P-20-5W 06/07/99	<b>P-20-12W</b> 06/07/99	P-20-17W 06/07/99	<b>P-21-5W</b> 06/07/99	<b>P-21-12W</b> 06/07/99	P-22-5W 06/07/99	<b>P-22-12W</b> 06/07/99	P-23-5W 07/09/99	P-23-12W 07/09/99	P-24-5W 07/09/99	<b>P-24-12W</b> 07/09/99	P-25-5W 07/09/99	P-25-12W 07/09/99	P-26-5W 07/09/99	MTCA Method A or B Groundwater Cleanup Level
<u>′olatile Organi</u>	с Compounds <sup>(1)</sup> (µg/L)															
'etrachloroethen	e	47.3	27.4	1.99	ND	ND	ND	ND	, ND	35.8	ND	ND	5.01	10.0	81.3	5.0 (A)
richloroethene		ND	ND	ND	ND	ND	ND	ND	ND	24.7	ND	ND	ND	ND	ND	5.0 (A)
,1-Dichloroethe	ne	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.073 (B)
is-1,2-Dichloroe	ethene	ND	ND	ND	ND	ND	1.46	ND	ND	18.7	ND	ND	ND	ND	ND	80 (B)
ans-1,2-Dichlor	roethene	ND	ND	ND	ND	ND	ND	ND.	ND	ND	ND	ND	ND	ND	ND	160 (B)
'inyl chloride		ND	ND	ND	· ND	ND	ND	ND	3.01	0.301	ND	ND	ND	ND	ND	0.2 (A)
htylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30 (A)
<i>`oluene</i>		ND	ND	1.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40 (A)
(ylenes		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20 (A)

lotes:

ITCA - Model Toxics Control Act

A) - MTCA Method A groundwater cleanup level

B) - MTCA Method B groundwater cleanup level

gs = below ground surface

ID = Not Detected

IS = Not Sampled

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#### Table 1

#### Summary of Groundwater Analytical Results

Former Magic Cleaners

	Sample ID	P-26-12W	P-27-3W	P-27-9W	P-28-5W	P-28-12W	P-29-5W	P-29-12W	P-30-5W	P-30-12W	P-31-5W	P-31-12W	P-32-6	P-33-6	P-34-2.5	P-34-6	MTCA Method A or B
Analyte	Sample Date	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	07/12/99	07/12/99	07/12/99	07/12/99	07/12/99	07/12/99	07/12/99	07/29/99	07/29/99	07/29/99	Groundwater Cleanup Level
Volatile Organic	c Compounds <sup>(1)</sup>	<u>(με/L)</u>		-													
Tetrachloroethen	e	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.41	ND	ND	ND	5.0 (A)
Trichloroethene		· ND	ND	ND	ND	ND	ND	ND	ND	ND	· ND	ND	ND	ND	ND	ND	5.0 (A)
1,1-Dichloroether	ne	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.073 (B)
cis-1,2-Dichloroe	thene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	80 (B)
trans-1,2-Dichlor	oethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160 (B)
Vinyl chloride		ND	ND	ND	ND ·	ND	0.2 (A)										
Ehtylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30 (A)
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	• ND	ND	ND	40 (A)
Xylenes		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND.	ND	20 (A)

Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

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## Table 1Summary of Groundwater Analytical ResultsFormer Magic Cleaners

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Analyte	Sample ID	P-1-W	P-1-W (DUP)	P-2-W	P-3-W	P-4-W	P-5-W	P-6-W	P-7-W	P-8-W	P-9-W	P-10-W	P-11-W	P-13-5W	P-13- 12W	MTCA Method A or B
	Sample Date	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	06/07/99	06/07/99	Groundwater Cleanup Level
Volatile Organie	: Compounds <sup>(1)</sup> (µg/L)															
Tetrachloroethen	e .	2.6	2.9	ND	- 9.8	5.2	1.6	ND	8.1	3.1	5.8	ND	2.0	ND	ND	5.0 (A)
Trichloroethene		ND	ND	0.87	0.91	ND	ND	ND	ND	4.0	2.0	ND .	0.76	ND	ND	5.0 (A)
1,1-Dichloroethe	ne	ND	ND	ND	ND	0.48	1.2	ND	' ND	ND	ND	ND	ND	ND	ND	0.073 (B)
cis-1,2-Dichloroe	thene	ND	ND	ND	0.50	ND	4.2	ND	ND	~ 3.6	1.6	ND	0.49	ND	ND	80 (B)
trans-1,2-Dichlor	oethene	ND	ND	ND	ND	ND	ND	ND	, ND	0.28	ND	ND	ND	ND	ND	160 (B)
Vinyl chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	. ND	ND	0.2 (A)
Ehtylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND	30 (A)
Toluene		1.7	0.84	0.69	1.0	0.59	1.1	2.2	ND	3.4	0.81	ND	0.35	ND	ND	40 (A)
Xylenes		0.43	0.67	7.3	1.0	2.1	2.0	2.2	2.2	2.8	3.3	ND	0.94	ND	ND	20 (A)

#### Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

(DUP) = Duplicate field sample

ND = Not Detected

Numbers in **bold** font indicate that the reporting limit exceeds the MTCA cleanup level.

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Dames & Moore

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# Table 1Summary ofGroundwater Analytical ResultsFormer Magic Cleaners

Analyte	Sample ID	P-14-5W	P-14-12W	P-14-17W	P-15-5W	P-15-12W	P-16-5W	P-16-9W	P-17-20W	P-18-5W	P-18-12W	P-19-5W	P-19-12W	MTCA Method A or B
	Sample Date	06/07/99	06/07/99	07/09/99	06/07/99	06/07/99	06/0 <b>7</b> /99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	06/07/99	Groundwater Cleanup Level
Volatile Organic	: <u>Compounds<sup>(1)</sup> (µg/L)</u>													
Tetrachloroethene	•	ND	22.8	16.7	11.6	ND	ND	ND	ND .	ND	ND	17.2	ND	5.0 (A)
Trichloroethene		ND	2.46	ND	ND	ND ·	ND	ND	ND	ND	ND	ND	ND	5.0 (A)
1,1-Dichloroether	ne	ND	ND	ND .	ND	ND	ND	ND	ND	ND	ŃD	ND	ND	0.073 (B)
cis-1,2-Dichloroe	thene	ND	1.88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	80 (B)
trans-1,2-Dichlor	oethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	160 (B)
Vinyl chloride		0.72	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2 (A)
Ehtylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30 (A)
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40 (A)
Xylenes		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20 (A)

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#### Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

bgs = below ground surface

ND = Not Detected

NS = Not Sampled

# Table 1Summary ofGroundwater Analytical ResultsFormer Magic Cleaners

A mellute	Sample ID	P-20-5W	P-20-12W	P-20-17W	P-21-5W	P-21-12W	P-22-5W	P-22-12W	P-23-5W	P-23-12W	P-24-5W	P-24-12W	P-25-5W	P-25-12W
Analyte	Sample Date	06/07/99	06/07/99	06/07/99	06/07/99	06/0 <b>7</b> /99	06/07/99	06/07/99	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99
Volatile Organic	: Compounds <sup>(1)</sup> (µg/L)													
Tetrachloroethen	e	47.3	27.4	1.99	ND	ND	ND	ND	ND	35.8	ND	ND	5.01	10.0
Trichloroethene		ND	ND	ND	NĎ	ND	ND	ND	ND	24.7	ND	ND	ND	ND
1,1-Dichloroethe	ne	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroe	ethene	ND	ND	ND	ND	ND	1.46	ND	ND	18.7	ND	ND	ND	ND
trans-1,2-Dichlor	oethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride		ND	ND	ND	ND	ND	ND	ND						
Ehtylbenzene		ND	ND	ND	ND ·	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene		ND	ND	1.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

#### Notes:

MTCA - Model Toxics Control Act

(A) - MTCA Method A groundwater cleanup level

(B) - MTCA Method B groundwater cleanup level

bgs = below ground surface

ND = Not Detected

NS = Not Sampled

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P-26-5W	P-26-12W	P-27-3W	P-27-9W	P-28-5W	P-28-12W	MTCA Method A or B
07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	07/09/99	Groundwater Cleanup Level
81.3	ND	ND	ND	ND	ND	5.0 (A)
ND	ND	ND	ND	ND	ND	5.0 (A)
ND	ND	ND	ND	ND	ND	0.073 (B)
ND	ND	ND	ND	ND	ND	80 (B)
ND	ND	ND	ND	ND	ND .	160 (B)
			1			0.2 (A)
ND	ND	ND	ND	ND	ND	30 (A)
				· ·		40 (A)
						20 (A)

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Dames and Moore- Seattle	Project:	Magic Cleaners	 Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	 Reported:	8/4/99 13:30

#### ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
P-33-6	B907687-01	Water	7/29/99
P-34-2.5	B907687-02	Water	7/29/99
P-34-6	B907687-03	Water	7/29/99

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 8/4/99 13:30

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<b>D</b> 22 (			<u>B9076</u>	P7 01			Water	
<u>P-33-6</u>	0791037	7/30/99	<u>1/30/99</u>	<u>1-01</u>	10.0	ND	ug/l	
Acetone	0791037	1/30/99	1/30/99		1.00	ND	ug/i	
Benzene		n			1.00	ND	н	
Bromobenzene	*1	n			1.00	ND		
Bromochloromethane	11	"	**		1.00	ND	*1	
Bromodichloromethane	"	"					*1	
Bromoform	"	"	**		1.00	ND	91	
Bromomethane		"	"		1.00	ND		
2-Butanone	n				10.0	ND		
n-Butylbenzene	*1	n	# #		1.00	ND		
sec-Butylbenzene	н	"			1.00	ND		
tert-Butylbenzene	N	11	н		1.00	ND	11	
Carbon disulfide	*1	н	n .		1.00	ND	a	
Carbon tetrachloride	n	n	t:		1.00	ND		
Chlorobenzene	u	**	f1		1.00	ND	*	
Chloroethane	n	n	17		1.00	ND	*1	
Chloroform	**	n	C7	•	1.00	ND	u	
Chloromethane	"	Ħ	•		5.00	ND	"	
2-Chlorotoluene	и	н	**		1.00	ND	н	
4-Chlorotoluene	**	11	*1		1.00	ND	11	
Dibromochloromethane	. "	н	n		1.00	ND	11	
1,2-Dibromo-3-chloropropane	н '	rt.	11		5.00	ND	17	
1,2-Dibromoethane	"	"	11		1.00	ND	<b>t1</b>	
Dibromomethane	f7	11	n		1.00	ND	11	
1,2-Dichlorobenzene	91	**	н		1.00	ND	14	
1,3-Dichlorobenzene	11	**	rr -		1.00	ND	63	
1,4-Dichlorobenzene	м	*1	"		1.00	ND	<b>81</b>	
Dichlorodifluoromethane	*1	n	14		1.00	ND	<b>1</b> 1	
1,1-Dichloroethane	н	**	11		1.00	ND	н	
1,2-Dichloroethane	N	**			1.00	ND	n	
1,1-Dichloroethene	**	n *	**		1.00	ND	n	
cis-1,2-Dichloroethene	Ħ	11	67		1.00	ND	14	
trans-1,2-Dichloroethene	н	**	"		1.00	ND		
1,2-Dichloropropane	u	"	**		1.00	ND	11	
1,3-Dichloropropane	н	**	11		1.00	ND	п	
	11	11	11		1.00	ND		
2,2-Dichloropropane	· "		**		1.00	ND	"	
1,1-Dichloropropene	"				1.00	ND	п	
cis-1,3-Dichloropropene	и	rt	67		1.00	ND		
trans-1,3-Dichloropropene					1.00	пD		

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 8/4/99 13:30

<u> </u>	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-33-6 (continued)</u>			<b>B9076</b>	87-01			Water	
Ethylbenzene	0791037	7/30/99	7/30/99		1.00	ND	ug/l	
Hexachlorobutadiene	н	n	11		1.00	ND	"	
2-Hexanone	H	н	11		10.0	ND	н	
Isopropylbenzene	н	n	IF.		1.00	ND	n	
p-Isopropyltoluene	11	11			1.00	ND	н	
Methylene chloride	**	11	н		5.00	ND	н	
4-Methyl-2-pentanone	87 ·	n	<b>н</b> .		10.0	ND	н	
Naphthalene	н	М	11		1.00	ND	11	
n-Propylbenzene	ŧ	*1	17		1.00	ND	"	
Styrene	n	"			1.00	ND	н	
1,1,1,2-Tetrachloroethane	н	н	<b>H</b>		1.00	ND	n	
1,1,2,2-Tetrachloroethane	**		π		1.00	ND	н	
Tetrachloroethene	11	**	11		1.00	ND	11	
Toluene	u	н .			1.00	ND	n	
1,2,3-Trichlorobenzene	n	н	N 19		1.00	ND	н	
1,2,4-Trichlorobenzene	**	и	н		1.00	ND	н	
1,1,1-Trichloroethane	*1	**	tt		1.00	ND	n	
1,1,2-Trichloroethane	. н	*1			1.00	ND	*1	
Trichloroethene	ri	n	*1		1.00	ND	11	
Trichlorofluoromethane	n	Ħ	н		1.00	ND	H	
1,2,3-Trichloropropane	*1	н	4		1.00	ND	e1	
1,2,4-Trimethylbenzene	н	n	P1		1.00	'ND	n	
1,3,5-Trimethylbenzene	N	Ħ	*1		1.00	ND	If.	
Vinyl chloride	**	14	8/3/99		0.200	ND	n	
m,p-Xylene		u	7/30/99		2.00	ND	н	
o-Xylene	н	n	"		1.00	ND		
Surrogate: 2-Bromopropene			"	80.0-120		109	%	· · ·
Surrogate: 1,2-DCA-d4	**	<i>"</i> '	"	80.0-120		90.5	"	
Surrogate: Toluene-d8	"	H	"	80.0-120		97.5	**	
Surrogate: 4-BFB	"	"	"	80.0-120		94.0	"	

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	 Reported:	8/4/99 13:30

	Batch	Date	Date	Surrogate	Reporting		<b></b>	<b>N</b> . +
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-34-2.5</u>			<u>B9076</u>	87-02			<u>Water</u>	
Acetone	0791037	7/30/99	7/30/99		10.0	ND	ug/l	
Benzene	11	**	11		1.00	ND	"	
Bromobenzene	н	11	n		1.00	ND	μ	
Bromochloromethane	n	41 ·			1.00	ND	н	
Bromodichloromethane	11	н	*1		1.00	ND	н	
Bromoform	N	14	11		1.00	ND	н	
Bromomethane	"	**	11		1.00	ND	n	
2-Butanone	н	11	<b>11</b>	-	10.0	ND	11	
n-Butylbenzene	π				1.00	ND	11	
sec-Butylbenzene	н	n	n		1.00	ND	11	
tert-Butylbenzene	n	H	II		1.00	ND	"	
Carbon disulfide	**	n	Ħ		1.00	ND	*1	
Carbon tetrachloride	11	+1	н		1.00	ND	п	
Chlorobenzene	"	11	и		1.00	ND	e#	
Chloroethane	н	••	lf.		1.00	ND	**	
Chloroform	u	11	и		1.00	ND	н .	
Chloromethane	"	"	н	,	5.00	ND	н	
2-Chlorotoluene	**	n	*1		1.00	ND	16	
4-Chlorotoluene	11	*1	и		1.00	ND	"	
Dibromochloromethane	u	Ħ	*1		1.00	ND	*1	
1,2-Dibromo-3-chloropropane	11	n			5.00	ND	11	
1,2-Dibromoethane	n	и	н	5	1.00	ND	n	
Dibromomethane	11	н	11		1.00	ND	n	
1,2-Dichlorobenzene	п	н	11		1.00	ND	**	
1,3-Dichlorobenzene	н	67	"		1.00	ND	н	
1.4-Dichlorobenzene	"	4	*1		1.00	ND	"	
Dichlorodifluoromethane	н	н	H		1.00	ND	n	
1,1-Dichloroethane			n		1.00	ND	"	
1.2-Dichloroethane	н	**	11		1.00	ND	*	
1,1-Dichloroethene	**		n		1.00	ND	н	
cis-1,2-Dichloroethene	11	91	<u>,</u> п		1.00	ND	n	
trans-1,2-Dichloroethene	11	и	11		1.00	ND	"	
1,2-Dichloropropane	n	11	"		1.00 .	ND	Ħ	
1,3-Dichloropropane	н	н	"		1.00	ND	π	
2,2-Dichloropropane	n	17	н		1.00	ND	**	
1,1-Dichloropropene		17	n		1.00	ND	**	
cis-1,3-Dichloropropene	n	n	11		1.00	ND	n	
trans-1,3-Dichloropropene	"		п		1.00	ND	11	

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-34-2.5 (continued)</u>			<b>B9076</b>	87-02			Water	
Ethylbenzene	0791037	7/30/99	7/30/99	<u> </u>	1.00	ND	ug/l	
Hexachlorobutadiene	n	1	n		1.00	ND	'n	
2-Hexanone	"	*1	н		10.0	ND	11	
Isopropylbenzene	. "	11	н		1.00	ND		
p-Isopropyltoluene	11	н	n		1.00	ND	*1	
Methylene chloride	н	n	*1		5.00	ND	11	
4-Methyl-2-pentanone	17	**	n		10.0	ND	11	
Naphthalene		11			1.00	ND	19	•
n-Propylbenzene	n	14	**		1.00	ND	n	
Styrene	**	н	n		1.00	ND	่ ท	
1,1,1,2-Tetrachloroethane	n	u	н		1.00	ND	н	
1,1,2,2-Tetrachloroethane	11	. "	tr		1.00	ND	н	
Tetrachloroethene	u	н	*1		1.00	ND	"	
Toluene	n	н	н.		1.00	ND	11	
1,2,3-Trichlorobenzene	"	14	11		1.00	ND	'n	
1,2,4-Trichlorobenzene		n	н		1.00	ND	n	
1,1,1-Trichloroethane	11	11	н		1.00	ND	11	
1,1,2-Trichloroethane	**	14	н		1.00	ND	n	
Trichloroethene	н	17	**		1.00	ND	*1	
Trichlorofluoromethane	n	11	н		1.00	ND	18	
1,2,3-Trichloropropane	*1		н		1.00	ND	н	
1,2,4-Trimethylbenzene	н				1.00	ND	*1	
1,3,5-Trimethylbenzene	N	11	n		1.00	ND	**	
Vinyl chloride	91		8/3/99		0.200	ND	'n	
m,p-Xylene	"		7/30/99		2.00	ND	41	
o-Xylene	11		"		1.00	ND	**	
Surrogate: 2-Bromopropene		"	"	80.0-120		109	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		91.0	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		96.5	"	
Surrogate: 4-BFB	"	"	#	80.0-120		93.5	"	

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 8/4/99 13:30

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			Doord	07 02			Watar	
<u>P-34-6</u>	0791037	7/30/99	<u>B90768</u> 7/31/99	87-03	10.0	ND	<u>Water</u>	
Acetone	0/91037	"	//31/99 "	•		ND	ug/l "	
Benzene	11	"	н		1.00		п	
Bromobenzene	u u				1.00	ND	11	
Bromochloromethane			n		1.00	ND	"	
Bromodichloromethane		"	11		1.00	NĎ	". N	
Bromoform		"	"		1.00	ND	"	
Bromomethane					1.00	ND		
2-Butanone	11	H	"		10.0	ND	н	
n-Butylbenzene	11	и.	н		1.00	ND	11	
sec-Butylbenzene	11	11	11		1.00	ND	"	
tert-Butylbenzene	*1	"	<b>"</b>		1.00	ND	**	
Carbon disulfide	"	11	u		1.00	ND	47	
Carbon tetrachloride	n	**	"		1.00	ND	n	
Chlorobenzene	. "	11	11		1.00	ND	п	
Chloroethane	n	89	11		1.00	ND	n	
Chloroform	rt	н	н		1.00	ND	н	
Chloromethane	11	н	н		5.00	ND	**	
2-Chlorotoluene	"	*1	н		1.00	ND		
4-Chlorotoluene	и.	•	n		1.00	ND	**	
Dibromochloromethane	11	11	*		1.00	ND	**	
1,2-Dibromo-3-chloropropane	n	"			5.00	ND	Ħ	
1,2-Dibromoethane	и	*1	ti		1.00	ND		
Dibromomethane	**	11	n		1:00	ND	n	
1,2-Dichlorobenzene	*		n		1.00	ND	11	
1,3-Dichlorobenzene		н	e1		1.00	ND	**	· .
1,4-Dichlorobenzene	•1	н	11		1.00	ND		
Dichlorodifluoromethane	11		**		1.00	ND	**	
1,1-Dichloroethane	11	π.	н		1.00	ND	<b>11</b>	
1,2-Dichloroethane	**	*1	IT .		1.00	ND	11	
1,1-Dichloroethene		Ħ			1.00	ND	n	
cis-1,2-Dichloroethene	"	n	•		1.00	ND	u	
trans-1,2-Dichloroethene	"	17	н		1.00	ND	**	
1,2-Dichloropropane	11	u	**		1.00	ND	"	
1,3-Dichloropropane	11	tt	•1		1.00	ND	11 ·	
2,2-Dichloropropane	*1	*1	н		1.00	ND	11	
		17	н		1.00	ND		
1,1-Dichloropropene		n	II .					
cis-1,3-Dichloropropene	"	u	"		1.00	ND		
trans-1,3-Dichloropropene					1.00	ND	•	

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-34-6 (continued)			<b>B9076</b>	<u>37-03</u>	-		Water	
Ethylbenzene	0791037	7/30/99	7/31/99		1.00	ND	ug/l	
Hexachlorobutadiene	11		H		1.00	ND	"	
2-Hexanone	n	**	н		10.0	ND	"	
sopropylbenzene	"	n	Ħ		1.00	ND	n	
p-Isopropyltoluene	11	н	п		1.00	ND	н	
Methylene chloride	н	**	н		5.00	ND		
4-Methyl-2-pentanone	n	*1	Ħ		10.0	ND	"	
Naphthalene	"	н	Ħ		1.00	ND	n	
n-Propylbenzene	*1	н	n		1.00	ND	н	
Styrene	н	"	н		1.00	ND	17	
1,1,1,2-Tetrachloroethane	, <b>н</b>	н	**		1.00	ND	17	
1,1,2,2-Tetrachloroethane			*1		1.00	ND	*1	
Tetrachloroethene		"	н		1.00	ND	11	
Foluene	н	**	u		1.00	ND	H.	
1,2,3-Trichlorobenzene	**	**	u		1.00	ND .	n	
1,2,4-Trichlorobenzene	**	u	и		1.00	ND	*1	
1,1,1-Trichloroethane	*1	17	11		1.00	ND	н	
1,1,2-Trichloroethane	11		11		1.00	ND	n	
Trichloroethene	**	n	**		1.00	ND	"	
Trichlorofluoromethane	*1	n	**		1.00	ND	H	
1,2,3-Trichloropropane	Ħ	Ħ			1.00	ND	11	
1,2,4-Trimethylbenzene	11	11	н		1.00	ND	**	
1,3,5-Trimethylbenzene	n	п	н		1.00	ND	u	•
Vinyl chloride	u	"	8/3/99		0.200	ND	11	
m,p-Xylene	*1	u	7/31/99		2.00	ND	"	
o-Xylene	n	н	11		1.00	ND	11	
Surrogate: 2-Bromopropene	"	н	<del>,,</del>	80.0-120		104	%	
Surrogate: 2-Bromopropene Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		91.0	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		97.5	"	
Surrogate: 1-BFB	"	"	"	80.0-120		96.5	"	

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

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	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 0791037	Date Prepa	red: 7/30/9	<u>99</u>		Extract	tion Method: EP	A 5030B	<u>[P/T]</u>		
Blank	0791037-BI									
Acetone	7/30/99			ND	ug/l	10.0				
Benzene	11			ND	"	1.00				
Bromobenzene	"			ND	н	1.00				
Bromochloromethane	н			ND	Ħ	1.00				
Bromodichloromethane	n			ND	n	1.00				
Bromoform	**			ND	M	1.00				
Bromomethane	**			ND	11	1.00				
2-Butanone	и			ND	41	10.0				
n-Butylbenzene	17			ND	11	1.00				
sec-Butylbenzene	"			ND	IL	1.00				
tert-Butylbenzene	**			ND	n.	1.00				
Carbon disulfide	u			ND	n	• 1.00				
Carbon tetrachloride	11			ND	11	1.00				
Chlorobenzene	U U			ND	11	1.00				
Chloroethane	11			ND	U .	1.00				
Chloroform	"			ND	"	1.00				
Chloromethane	۳.			ND	11	5.00				
2-Chlorotoluene	"			ND	11	1.00				
4-Chlorotoluene	н			ND	n	1.00				
Dibromochloromethane	n			ND	*1	1.00				
1,2-Dibromo-3-chloropropane	"			ND	12	5.00				
1,2-Dibromoethane	и			ND	17	1.00				
Dibromomethane				ND	U	1.00				
1.2-Dichlorobenzene	**			ND	н	1.00				
1,3-Dichlorobenzene	*1			ND		1.00				
1.4-Dichlorobenzene	н			ND	н	1.00			•	
Dichlorodifluoromethane	**			ND	*1	1.00				
1,1-Dichloroethane	**			ND	н	1.00				
1,2-Dichloroethane	11			ND		1.00				
1,1-Dichloroethene	н			ND	11	1.00				
cis-1,2-Dichloroethene				ND	н	1.00				
trans-1,2-Dichloroethene				ND	11	1.00				
1,2-Dichloropropane				ND	11	1.00				
1,3-Dichloropropane				ND		1.00				
2,2-Dichloropropane	**			ND	Ħ	1.00				
1,1-Dichloropropene	н			ND	11	1.00				
cis-1,3-Dichloropropene	u			ND	0	1.00				

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	<u>0791037-BI</u>	<u>.K1</u>								
trans-1,3-Dichloropropene	7/30/99			ND	ug/l	1.00				
Ethylbenzene				ND	11	1.00				
Hexachlorobutadiene	"			ND	<b>†1</b>	1.00				
2-Hexanone	н			ND	91	10.0				
Isopropylbenzene	н			ND	н	1.00				
p-Isopropyltoluene	**			ND	**	1.00				
Methylene chloride	"			ND	u	5.00				
4-Methyl-2-pentanone	n .			ND	"	10.0				
Naphthalene	n			ND		1.00				
n-Propylbenzene	н		-	ND	н	1.00				
Styrene	11			ND	"	1.00			·	
1,1,1,2-Tetrachloroethane	**			ND	11	1.00				
1,1,2,2-Tetrachloroethane	н			ND	**	1.00				
Tetrachloroethene	11			ND		1.00				
Toluene	**			ND	u	1.00				
1,2,3-Trichlorobenzene	11			ND		1.00				
1,2,4-Trichlorobenzene	11			ND	U I	1.00				
1,1,1-Trichloroethane	H			ND	*1	1.00				
1,1,2-Trichloroethane	н			ND		1.00				
Trichloroethene	"			ND	н	1.00				
Trichlorofluoromethane	и			ND	н	1.00				
1,2,3-Trichloropropane				ND	11	1.00				
1,2,4-Trimethylbenzene				ND	н	1.00				
1,3,5-Trimethylbenzene	*			ND	н	1.00				
Vinyl chloride	8/3/99			ND	t.	0.200				
m,p-Xylene	7/30/99			ND	11	2.00				
o-Xylene	11			ND	91	1.00				
Surrogate: 2-Bromopropene	17	20.0 .		21.6	#	80.0-120	108			
Surrogate: 1,2-DCA-d4	"	20.0		17.1	"	80.0-120	85.5			
Surrogate: Toluene-d8	17	20.0		19.4	"	80.0-120	97.0			
Surrogate: 4-BFB	"	20.0		19.6	"	80.0-120	98.0			
LCS	<u>0791037-B</u>	<u>S1</u>								
Benzene	7/30/99	10.0		7.97	ug/l	80.0-120	79.7			
Chlorobenzene	**	10.0		9.68	"	80.0-120	96.8			
1,1-Dichloroethene	и	10.0		9.14	17	80.0-120	91.4			
Toluene	п	10.0		11.0		80.0-120				
Trichloroethene	n	10.0		8.20	11	80.0-120				

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled: 7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 8/4/99 13:30

	Date	Spike	Sample	QC		<b>Reporting Limit</b>	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS (continued)	0791037-BS1				•					
Surrogate: 2-Bromopropene	7/30/99	20.0		22.3	ug/l	80.0-120	111			
Surrogate: 1,2-DCA-d4	"	20.0		19.0	"	80.0-120	95.0			
Surrogate: Toluene-d8	"	20.0		24.8	"	80.0-120	124			2
Surrogate: 4-BFB	"	20.0		19.7	"	80.0-120	98.5			
<u>Matrix Spike</u>	<u>0791037-MS</u>	<u> B</u>	<u>907687-01</u>							
Benzene	7/30/99	10.0	ND	9.64	ug/l	80.0-120	96.4			
Chlorobenzene	11	10.0	ND	9.69	11	80.0-120	96.9			
1,1-Dichloroethene	"	10.0	ND	9.79	"	80.0-120	97.9			
Toluene	"	10.0	ND	9.47	"	80.0-120	94.7			
Trichloroethene	н	10.0	ND	10.4	Ħ	80.0-120	104			
Surrogate: 2-Bromopropene	"	20.0		20.9	'n	80.0-120	104			
Surrogate: 1,2-DCA-d4	"	20.0		17.7	"	80.0-120	88.5			
Surrogate: Toluene-d8	"	20.0		20.1	"	80.0-120	101			
Surrogate: 4-BFB	"	20.0		18.8	"	80.0-120	94.0			
Matrix Spike Dup	0791037-MS	<u>D1 B</u>	<u>907687-01</u>							
Benzene	7/30/99	10.0	ND	9.70	ug/l	80.0-120	97.0	15.0	0.620	
Chlorobenzene	11	10.0	ND	9.62	н	80.0-120	96.2	15.0	0.725	
1,1-Dichloroethene	u	10.0	ND	8.91	41	80.0-120	89.1	15.0	9.41	
Toluene	41	10.0	ND	9.73	11	80.0-120	97.3	15.0	2.71	
Trichloroethene	41	10.0	ND	10.0	n	80.0-120		15.0	3.92	
Surrogate: 2-Bromopropene	"	20.0		21.1	#	80.0-120	106			
Surrogate: 1,2-DCA-d4	"	20.0		18.2	"	80.0-120	91.0			
Surrogate: Toluene-d8	"	20.0		20.3	"	80.0-120	101			
Surrogate: 4-BFB	"	20.0		18.7	"	80.0-120	93.5			

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	Magic Cleaners	Sampled:	7/29/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/30/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	8/4/99 13:30

#### **Notes and Definitions**

#	Note
1	The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
2	The surrogate recovery for this sample is outside of established control limits. Review of associated QC indicates the recovery for this surrogate does not represent an out-of-control condition.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled: 7/9/99	
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99	
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/26/99 15:37	

### ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
P-23-5W	B907190-01	Water	7/9/99
P-23-12W	B907190-02	Water	7/9/99
P-14A-17W	B907190-03	Water	7/9/99
<b>P-24-5</b> W	B907190-04	Water	7/9/99
P-24-12W	B907190-05	Water	7/9/99
P-25-5W	B907190-06	Water	7/9/99
P-25-12W	B907190-07	Water	7/9/99

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/26/99 15:37

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
n 22 513/			<b>B9071</b>	90_01			<u>Water</u>	
<u>P-23-5W</u>	0790310	7/9/99	7/10/99	<u>70-01</u>	10.0	ND	ug/l	
Acetone Benzene	0790510	11 21 2 2	11 10/00		1.00	ND	н н	
Bromobenzene	*	n	41		1.00	ND	11	
Bromobenzene Bromochloromethane	*1		н		1.00	ND	н	
Bromochloromethane	u	"			1.00	ND	H	
	**	*1	н		1.00	ND	n	
Bromoform	n		п		1.00	ND	n	
Bromomethane	н	f1	11		10.0	ND	"	
2-Butanone	IF	"	н		1.00	ND	11	
n-Butylbenzene	0	11	-		1.00	ND	**	
sec-Butylbenzene	11		n		1.00	ND	n	
tert-Butylbenzene			. u		1.00	ND	"	
Carbon disulfide		n	"		1.00	ND	*1	
Carbon tetrachloride	**	н			1.00	ND	н	
Chlorobenzene		"	"				н	
Chloroethane		"	"		1.00	ND		
Chloroform			"		1.00	ND	11	
Chloromethane	*1	н			5.00	ND		
2-Chlorotoluene		11	n		1.00	ND	"	
4-Chlorotoluene	"	м	91		1.00	ND	11	
Dibromochloromethane	"	н	11		1.00	ND	n	
1,2-Dibromo-3-chloropropane	н	84	14		5.00	ND		
1,2-Dibromoethane		ŧ7	н.		1.00	ND		
Dibromomethane	**	н	ti		1.00	ND	*1	
1,2-Dichlorobenzene	n	6	11		1.00	ND	п	
1,3-Dichlorobenzene	11	**	*1		1.00	ND	81	
1,4-Dichlorobenzene	n	11	11		1.00	ND	**	
Dichlorodifluoromethane	11	11	71		1.00	ND	11	
1,1-Dichloroethane	11	er	**		1.00	ND	**	
1,2-Dichloroethane	11	**	*1		1.00	ND	**	
1,1-Dichloroethene	*1	н	n		1.00	ND	н	
cis-1,2-Dichloroethene	н	н	11		1.00	ND	н	
trans-1,2-Dichloroethene	"	*	н		1.00	ND	17	
1,2-Dichloropropane	m	**	н		1.00	ND	87	
1,3-Dichloropropane	"		.,		1.00	ND	10 ·	
2,2-Dichloropropane	н	**	ú		1.00	ND	11	
1,1-Dichloropropene	н	**	u		1.00	ND	*	
cis-1,3-Dichloropropene		n	n		1.00	· ND	н	
trans-1,3-Dichloropropene		**	11		1.00	ND	u	
uans-1,5-Diemotopiopene								

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/26/99 15:37

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-23-5W (continued)			B9071	90-01			Water	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	11	ti .	"		1.00	ND	41 <sup>-</sup>	
2-Hexanone	"		*1		10.0	ND	н	
Isopropylbenzene	n	н	17		1.00	ND	**	
p-Isopropyltoluene	<b>†1</b>	н	17		1.00	ND	н	
Methylene chloride	11				5.00	ND	п	
4-Methyl-2-pentanone	н.	-	*1		10.0	ND	. H	•
Naphthalene	71	п '	Ħ		1.00	ND	**	
n-Propylbenzene	11	11	U.		1.00	ND	н	
Styrene	н	"	f1	•	1.00	ND	н	
1,1,1,2-Tetrachloroethane	n	11	и		1.00	ND	**	
1,1,2,2-Tetrachloroethane					1.00	ND	н	
Tetrachloroethene		**	н		1.00	ND	n	
Toluene	"	н.	91		1.00	ND	n	
1,2,3-Trichlorobenzene	"	н	н		1.00	ND	11	
1,2,4-Trichlorobenzene	11		и		1.00	ND	n	
1,1,1-Trichloroethane		*1	u		1.00	ND	"	
1,1,2-Trichloroethane	и	u	μ		1.00	ND	**	
Trichloroethene	"	**	**		1.00	ND	u	
Trichlorofluoromethane	*1	11	n		1.00	ND	n	
1,2,3-Trichloropropane	11	n	и		1.00	ND	11 .	
1,2,4-Trimethylbenzene	11	87	**		1.00	ND	n	
1,3,5-Trimethylbenzene	n	, 11	н		1.00	ND	**	
Vinyl chloride	n	"	7/13/99		0.200	3.01	91	
m,p-Xylene	11	н	7/10/99		2.00	ND	u	
o-Xylene	"	Ħ	"		1.00	ND		
Surrogate: 2-Bromopropene		"	"	80.0-120		111	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		106	"	
Surrogate: Toluene-d8	"	"	"	80.0-120		98.0	"	
Surrogate: 4-BFB	"	. #		80.0-120	•	99.5	"	

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\*Refer to end of report for text of notes and definitions.

Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled: 7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received: 7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported: 7/26/99 15:37

	Batch	Date	Date	Surrogate	Reporting	_		_
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>P-23-12W</u>			<u>B9071</u>	90-02			Water	
Acetone	0790310	7/9/99	7/10/99		10.0	ND	ug/l	
Benzene	"	11	11		1.00	ND	м .	
Bromobenzene	н ,	11	н		1.00	ND	**	
Bromochloromethane	11	н	н		1.00	ND	11	
Bromodichloromethane	11		н		1.00	ND	11	
Bromoform	**	61	"		1.00	ND	n	
Bromomethane		11	u		1.00	ND		
2-Butanone	"	41	• 11		10.0	ND	**	
n-Butylbenzene	14	14	17		1.00	ND	Ħ	
sec-Butylbenzene		**	**		1.00	ND		
tert-Butylbenzene	y <b>11</b>	n	11		1.00	ND	н	
Carbon disulfide	/ H	tł.	**		1.00	ND	н	
Carbon tetrachloride					1.00	ND	11	
Chlorobenzene	17	н	и		1.00	ND	17	
Chloroethane	*1	11			1.00	ND	**	
Chloroform	и	HT .	ч		1.00	ND		
Chloromethane	17	17	11		5.00	ND	н	
2-Chlorotoluene	11	11	н		1.00	ND	u	
4-Chlorotoluene	41		17		1.00	ND	"	
	н		п		1.00	ND		
Dibromochloromethane		"	**		5.00	ND	11	
1,2-Dibromo-3-chloropropane	"	11			1.00	ND	**	
1,2-Dibromoethane	11	a	**		1.00			
Dibromomethane	. "		11		1.00	ND	"	
1,2-Dichlorobenzene					1.00	ND	н	
1,3-Dichlorobenzene			Ħ		1.00	ND		
1,4-Dichlorobenzene		11	11		1.00	ND	<b>H</b> -	
Dichlorodifluoromethane					1.00	ND	**	
1,1-Dichloroethane	"	*1	н		1.00	ND	н	
1,2-Dichloroethane		11	n	`	1.00	ND	"	
1,1-Dichloroethene					1.00	18.7	11	
cis-1,2-Dichloroethene			11		1.00	· ND	**	
trans-1,2-Dichloroethene	"	"					**	
1,2-Dichloropropane	· •	"	14		1.00	ND	"	
1,3-Dichloropropane			•		1.00	ND	"	
2,2-Dichloropropane	11 ·	**	"		1.00	ND	"	
1,1-Dichloropropene	**	H			1.00	ND		
cis-1,3-Dichloropropene	11	u			1.00	ND	11	
trans-1,3-Dichloropropene	11	11	<b>H</b>		1.00	ND	n	

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\*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager

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Dames and Moore- Seattle	Project:	PLFP-Magic Cleaners	Sampled:	7/9/99
500 Market Place Tower, 2025 1st Ave	Project Number:	42368-063-005	Received:	7/9/99
Seattle, WA 98121	Project Manager:	David Raubvogel	Reported:	7/26/99 15:37

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
P-23-12W (continued)			<u>B9071</u>	<u>90-02</u>			<u>Water</u>	
Ethylbenzene	0790310	7/9/99	7/10/99		1.00	ND	ug/l	
Hexachlorobutadiene	u	14	Ħ		1.00	ND	0	
2-Hexanone		"	19		10.0	ND	14	
Isopropylbenzene	11	**	n		1.00	ND	14	
p-Isopropyltoluene	**	'n	n		1.00	ND	н	
Methylene chloride		14	11		5.00	ND	*1	
4-Methyl-2-pentanone	*1	61	н		10.0	ND	57	
Naphthalene	"		**		1.00	ND	11	
n-Propylbenzene	**	51	11		1.00	ND	п	
Styrene	н	u	n		1.00	ND	H .	
1,1,1,2-Tetrachloroethane	*	u	н		1.00	ND	41	
1,1,2,2-Tetrachloroethane	17	*1	**		1.00	ND	14	
Tetrachloroethene	17	**	н		1.00	35.8	6	
Toluene	11		*1		1.00	ND		
1,2,3-Trichlorobenzene	н	"	**		1.00	ND	12	
1,2,4-Trichlorobenzene	**	<b>†</b> 1	н		1.00	ND	84	•
1,1,1-Trichloroethane		н	11		1.00	ND	H	
1,1,2-Trichloroethane	н	17	н		. 1.00	ND	*1	
Trichloroethene	11	11			1.00	24.7	91	
Trichlorofluoromethane	*1	н			1.00	ND	<b>1</b> .	
1,2,3-Trichloropropane	11	н			1.00	ND	**	
1,2,4-Trimethylbenzene	н		*1		1.00	ND	. **	
1,3,5-Trimethylbenzene	IF.	n	н		1.00	ND	11	
Vinyl chloride	8	u	7/13/99		0.200	0.301	11	
m,p-Xylene	11	8	7/10/99		2.00	ND	**	
o-Xylene	н				1.00	ND	11	
Surrogate: 2-Bromopropene	"	"	11	80.0-120		109	%	
Surrogate: 1,2-DCA-d4	"	"	"	80.0-120		106	"	
Surrogate: Toluene-d8	"	n	"	80.0-120		<i>99.5</i>	"	
Surrogate: 4-BFB	"	"	"	80.0-120		101	"	

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\*Refer to end of report for text of notes and definitions.

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APPENDIX C AQUIFER DATA LOG

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									AQUI	FER 1	EST DAT	4			Page	_l_	of
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