2003 Maine Fuels Report

Prepared for: The Joint Standing Committee on Natural Resources

Prepared by: The Maine Department of Environmental Protection
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
(207) 287-2437

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Table of Contents

Section I: Executive Summary

Executive Summary

The Department of Environmental Protection (DEP) submits this report in accordance with Maine Revised Statutes Title 38, Section 585-H, enacted by the Maine Legislature in 2000. At that time, the Legislature established the goal to eliminate methyl-tertiary butyl ether (MTBE) in gasoline sold in the state by January 1, 2003. DEP is required to monitor and report on levels of MTBE in shipments of gasoline to storage terminals in Maine. The Department is also required to work collaboratively at a regional level to develop alternatives of the use of MTBE as a gasoline additive.

Although shipments of gasoline to Maine still contain MTBE as an octane-enhancer, the concentrations of MTBE are much lower than when Maine received reformulated gasoline. Maine continues to work toward passage of national legislation that would achieve the goal of eliminating MTBE from our fuels.

Maine began participating in the federal Reformulated Gasoline (RFG) program in January 1995 as part of the state's plan to comply with the federal Clean Air Act Amendments of 1990. The RFG delivered in Maine contained higher levels of MTBE than gasoline sold here prior to implementing the program. Subsequently, MTBE began appearing in public and private water supplies more frequently and at higher concentrations than had been reported in prior years.

This prompted Maine to petition the United States Environmental Protection Agency (EPA) to allow the state to opt-out of the RFG program based on the risk to ground water posed by MTBE. EPA approved the petition provided several conditions were met, including implementing a replacement fuel program that achieved reductions of certain air emissions (volatile organic compounds) that were equivalent to RFG. Therefore, the Maine Board of Environmental Protection adopted Chapter 119 *Motor Vehicle Fuel Volatility Limit*, which required 7.8 Reid Vapor Pressure gasoline in the seven southern counties from May first to September 15th of each year. Having met the conditions, the effective date for withdrawal from the RFG program was March 10, 1999. In May of 2001, the Department submitted a fuels waiver request for 7.8 RVP fuel under the authority of 211 (c) of the Clean Air Act. The waiver received final approval on March 6, 2002 and became effective on April 5, 2002.

The DEP anticipated that MTBE levels would drop to levels for gasoline sold in Maine prior to initial implementation of the RFG program (1995). Under the RFG program, the MTBE levels were 11% by volume; pre-RFG levels of MTBE were typically 2 to 3 percent by volume in regular grade gasoline.

For the third year in a row MTBE levels in Maine have dropped: from 2.51 in 2001, 2.44 in 2002, and 2.38 percent by volume in 2003.

In addition, the DEP tracks not only the levels of MTBE but also other gasoline components including sulfur, benzene, and aromatics. Sulfur in 2003 went down significantly from the weighted average of 201 parts per million (ppm) in 2002 to 157 ppm in 2003. The overall average level of benzene in the fuel in 2003 was slightly higher than the 2002 level. Benzene levels went up from 0.81 percent by volume to 0.96 percent. See Table 1 for a summary of all 2003 gasoline component concentrations.

TABLE 1 DATA SUMMARY

Weighted Average for:	RVP (psi)	Oxygen (wt %)	MTBE (% vol)	Other Oxy. (% vol) TAME	Other Oxy. (% vol) ETBE	Other Oxy. (% vol) ETOH	Other Oxy. (% vol) MEOH	Other Oxy. (% vol) T-butanol	Other Oxy. (% vol) Sec-butanol	Other Oxy. (% vol) DIPE	Other Oxy. (% vol) Iso-butanol	Benz. (% vol)	Aro. (% vol)	Sulf. (ppm)
1st Quarter	11.82	0.10	0.49	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	27.98	138
2nd Quarter	8.14	0.55	2.91	1.16	0.39	0.01	0.11	0.32	0.00	0.00	0.00	1.08	31.06	208
3rd Quarter	8.33	0.78	3.90	0.91	0.59	0.00	0.21	0.51	0.47	0.00	0.22	1.10	28.73	160
4th Quarter	11.77	0.44	2.07	1.08	1.26	0.00	0.00	0.20	0.00	1.40	0.00	0.75	23.01	123
Ozone Season	8.03	0.80	4.08	0.99	0.42	0.01	0.18	0.23	0.26	0.00	0.22	0.87	30.57	205
Full Year	9.99	0.48	2.38	0.93	0.73	0.01	0.18	0.22	0.26	1.40	0.22	0.96	27.68	157

Section II: Introduction

A. Background

The federal reformulated gasoline (RFG) program was designed to reduce emissions of motor vehicle pollutants. To comply with the RFG program, gasoline must achieve a set of emission performance standards and meet a minimum oxygen content requirement. Refiners have opted to comply with the oxygen requirement by selling RFG containing methyl tertiary-butyl ether (MTBE) at 11 percent by volume. In comparison, conventional gasoline has MTBE in amounts of a few percent by volume or less, while some premium blends can contain as much as 9 percent MTBE.

Methyl tertiary-butyl ether (MTBE) is a gasoline additive that replaced lead as an octane enhancer since 1979. MTBE is a member of a group of chemicals commonly known as fuel oxygenates. Oxygenates are added to conventional fuel to increase its octane. MTBE is used in gasoline throughout the United States to reduce carbon monoxide and ozone levels caused by auto emissions. In the Northeast more than one billion gallons of MTBE is sold annually.

In 1991 Maine volunteered to phase into the RFG program and began selling RFG in January of 1995. States with voluntary RFG programs were required to decide by December 30, 1997, whether they wanted to remain in the program, otherwise procedures required them to stay in the program through 2003.

With the distribution of RFG in southern Maine there was concern over the potential threat to ground water quality. MTBE is more water soluble than other gasoline components and is persistent in ground water. MTBE is considered by the United States Environmental Protection Agency (EPA) as a possible carcinogen, Class C, and has a very low odor and taste detection threshold.

In 1997, the Maine Bureau of Health reported MTBE in 7% of Maine public water supplies. These incidents of groundwater contamination prompted Governor King to direct a ground water investigation to determine the extent of MTBE in public and private water supplies. Maine did not want to commit to continued participation in the RFG program through the year 2003 until the ground water testing was completed. In *The Presence of MTBE and Other Gasoline Compounds in Maine's Drinking Water* report (1998) MTBE was detected (1ppb detection limit) in approximately 16% of the public water supplies and 951 private wells sampled in Maine.

Therefore, in October 1998, Maine petitioned EPA under 40 CFR 80.72(a) to opt-out of the RFG program based on the unacceptable risk to ground water posed by MTBE. EPA approved the petition provided several conditions were met including implementing a replacement fuel with volatile organic compound

reductions equivalent to RFG. Having met the conditions, the effective date for withdrawal from the RFG program was March 10, 1999.

It was anticipated that if RFG levels for MTBE (eleven percent by volume) were not required, then the levels of MTBE would drop to the levels for conventional gas sold in Maine prior to participation in the RFG program. However, MTBE would not be totally eliminated as the industry continues to rely on MTBE as an octane enhancer.

At the request of the legislature, the Department now collects data on gasoline sold in Maine to determine the MTBE levels in gasoline and the progress made to achieve the goal of eliminating MTBE in gas sold in Maine by January 2003. The Department tracks not only the levels of MTBE but also other gasoline components including sulfur, benzene, and aromatics.

The State of Maine is required to promote and actively participate in regional efforts to develop alternatives of the use of MTBE as a gasoline additive. NESCAUM completed a study in July of 2001 of the potential affects to public health, the environment, and regulatory and economic impacts for ethanol as an oxygenate.

In 1999, a Northeast Regional Fuels Task Force was established at the behest of the New England Governors Association to look at regional solutions to address the MTBE issue. This Task Force's objectives are to maximize the air quality benefits and public health benefits of reformulated gasoline, reduce the amount of MTBE in the gasoline supply to protect water resources, promote a regionally consistent clean fuels program, and minimize impact of fuel quality changes on gasoline supply and price. The Task Force continues to work with EPA and other stakeholders to encourage congressional action to lift the oxygen mandate from RFG and provide an adequate solution over current levels of MTBE in gasoline.

The Department will continue to keep track all MTBE issues throughout the region.

B. Legislative Requirement

38 M.R.S.A. §585-H, enacted by the Legislature in 2000, requires MTBE monitoring and reductions. Specifically:

"The department shall monitor shipments of gasoline to storage terminals in this State and compile annual reports showing the levels of methyl tertiary butyl ether, referred to as "MTBE", in gasoline brought into this State.

The Department shall promote and actively participate in regional efforts by state regulatory agencies in the Northeast to develop alternatives to the use of MTBE as a gasoline additive. In these efforts, the department shall work toward the goal of the elimination of MTBE in gasoline sold in the State by January 1, 2003 in a manner that:

1. *Market constraints. Adequately accounts for market constraints related to supply and pricing; and*

2. *Lowest environmental impact. Based on thorough analysis and evaluation of alternatives to the use of MTBE, ensures the lowest possible total environmental impact.*

The department shall annually, no later than February 1st of each year, present a report to the joint standing committee of the Legislature having jurisdiction over natural resources matters on the levels of MTBE in gasoline brought into this State and the progress made in achieving the goal of eliminating MTBE in gasoline sold in the State by January 1, 2003. The committee may report out to any session of any Legislature legislation relating to MTBE use in gasoline."

C. 211 (c) Waiver

Following the 1990 Clean Air Act Amendments, Governor John McKernan, Jr., opted Maine's nonattainment counties[1] into the federal reformulated gasoline program (RFG) on June 26, 1991. The sale of reformulated gasoline began on January 1, 1995.

On October 13, 1998, Governor King sent a letter to EPA requesting permission to opt- out of the RFG program. EPA approved the request to opt-out, with March 10, 1999 as the effective date, contingent upon three conditions being met by the Department. Those conditions were as follows: (1) Maine identify a replacement fuel measure or other measure to provide VOC reductions equivalent to those yielded by RFG; (2) Maine provide a schedule for implementing the replacement measure; and (3) Maine provide an explanation of the impact to the State Implementation Plan[2].

To meet the first condition, on March 14, 1999, the Maine Board of Environmental Protection subsequently amended Chapter 119 *Motor Vehicle Fuel Volatility Limit*, a conventional low volatility fuel regulation. This amended regulation required all gasoline have a Reid Vapor Pressure no greater than 7.8 psi during the period between May 1, 1999 and September 15, 1999 and reduced to 7.2 psi during the period between May 1, 2000 and September 15, 2000 and continuing every year thereafter. This regulation applied to gasoline that is distributed or marketed by bulk gasoline terminals, or is directly imported to gasoline service stations or bulk gasoline plants in York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Knox and Lincoln Counties. However, there was concern of a limited number of refiners making 7.2 RVP fuel. This could result in a potential supply disruption. In the event of a major supply disruption, the most likely "replacement" fuel would be RFG with its required oxygen levels i.e. 11% MTBE by volume. Due to continued concerns of potential groundwater contamination from MTBE, an oxygenate used in RFG, the risk of increased levels of MTBE in gasoline shipped to Maine was not acceptable. Therefore, on April 20, 2000 the Maine Board of Environmental Protection amended Chapter 119 *Motor Vehicle Fuel Volatility Limit* to repeal the requirement that gasoline sold in the seven southern counties must have a Reid Vapor Pressure of 7.2 psi or less during the summer months. The current 7.8 RVP gasoline with no restrictions on oxygen levels has resulted in MTBE levels equal to or below typical conventional gasoline (2 to 3% by volume).

Maine is prohibited from adopting a non-identical state control under section 211(c)(4) of the Clean Air Act (CAA). EPA has promulgated nationally

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[1] Hancock and Waldo counties were subsequently opted-out of the RFG program on December 28. 1994.

[2] On January 22, 1999 EPA extended the effective date of Maine's withdrawal from the RFG program until March 10, 1999 "in order to provide time for EPA and the State to reach agreement on such replacement program."

applicable federal standards for the RVP levels of motor vehicle gasoline under sections 211(c) and 211(h) of the CAA. Section 211(c)(4)(A) of the CAA prohibits non-identical state regulation of fuel characteristics or components for which EPA has adopted a control or prohibition. In accordance with Section 211(c)(4)(C), EPA may approve a non-identical state fuel control as a State Implementation Plan (SIP) provision, provided the state demonstrates that the measure is necessary to achieve the national primary or secondary ambient air quality standards that the plan implements. EPA can approve a state fuel requirement as necessary only if no other measure exists that would bring about timely attainment, or if other measures exist but are unreasonable or impracticable.

Therefore, Maine submitted to EPA in accordance with Section 211 (c), a fuels waiver request for 7.8 RVP gasoline that was accepted on May 29, 2001. EPA subsequently published in the Federal Register on December 6, 2001 a proposal to approve the waiver and request comments. The comment period ended on January 9, 2002 with no comments received. Final approval of the waiver was received on March 6, 2002 and became effective on April 5, 2002.

Section III: Data

A. Data Collection

In addition to the requirements of 38 MRSA § 585-H, Chapter 119 *Motor Vehicle Fuel Volatility Limit* requires the following records to be kept at the bulk gasoline terminals:

> *"Any owner or operator of a bulk gasoline terminal shall maintain records on the Reid Vapor Pressure, oxygen content, oxygenate, benzene, aromatics, and sulfur of any gasoline that is delivered to or distributed from such terminal. Such records shall be maintained for at least three years and shall be available for inspection during normal business hours, and copies shall be provided to the Commissioner or his representative upon request."*

The Department requested the information listed above from each bulk gasoline terminal carrying automotive gasoline. A bulk gasoline terminal refers to a storage facility that has a daily average throughput of more than 20,000 gallons of gasoline.

In cooperation with the Maine Petroleum Association, the Department developed a quarterly reporting form for the terminals to fill out and submit to the Department (Appendix A). In addition, the Department requested the date of delivery, the number of barrels delivered, and any other significant information.

The following bulk gasoline terminals carry automotive gasoline and reported gasoline data to the Department:

Terminal	Location
Gulf	Portland
Irving	Bucksport
Mobil	Portland
Motiva	Portland
Webber	Searsport

No data was obtained from any trucking of fuel into the state.

B. Maine Data on MTBE and Other Oxygenates

During calendar year 2003, as in previous years, MTBE was present in almost all gasoline shipments containing oxygenates. MTBE was either the sole oxygenate or in formulations containing one or more of the following oxygenates: Tertiary Amyl Methyl Ether (TAME) and Ethyl Tertiary Butyl Ether (ETBE), Methanol (MEOH), T-butanol, Ethanol, Sec-butanol, isobutanol and diisopropyl ether (DIPE). Six shipments of gasoline contained no MTBE at all, only other oxygenates either alone or in combination. In some shipments, there were up to three different oxygenates plus MTBE in the gasoline delivered to the bulk terminals. This is according to the Maine Petroleum Association a common occurrence. In fact according to the petroleum industry, oxygenates can also occur as a natural byproduct of the refining process.

During the year 2002 gasoline contained 2.44 percent by volume MTBE and a 0.50 percent weighted average oxygen level (Table 2). The MTBE volume percent remained stable between 2002 to 2003 with levels being slightly lower in 2003.

Table 2 MTBE & Other Oxygenates

Weighted Ave for:	Oxygen Wt %	MTBE Vol %	TAME Vol %	ETBE Vol %	MEOH Vol %	Ethanol Vol %	T-butanol Vol %
2001 Data	0.51	2.51	0.86	0.22	0	0	0
2002 Data	0.50	2.44	0.80	0.89	1.43	0	0.98
2003 Data	0.48	2.38	0.93	0.73	0.18	0.01	0.22

Weighted Ave for:	isobutanol Vol %	Sec-butanol Vol %	DIPE Vol %
2001 Data	0	0	0
2002 Data	1.26	0	0
2003 Data	0.22	0.26	1.40

As a reference, Reformulated Gasoline (RFG) required a minimum oxygen level of 2 percent by weight in gasoline. For MTBE this equates to 11 percent by volume. Conventional gasoline prior to RFG commonly contained between 3 to 5 percent by volume MTBE in regular grades and as much as 9 percent by volume in premium blends.

The oxygenate data sorted by the date of delivery is listed by each quarter (Appendix B), and for ozone season (Appendix C).

Table 3 summarizes the MTBE content in Maine fuel reported during 2003.

Table 3 Shipment Summary

Number of shipments of gasoline	316
Number of shipments with missing or questionable data	2
Number of shipments with no oxygenate	48
Number of shipments with MTBE only	165
Number of shipments with MTBE plus other oxygenates	97
Number of shipments with an other oxygenate but no MTBE	6
Number of shipments with MTBE only with oxygen levels greater than 2% by weight	15
Number of shipments with oxygen levels greater than 2% by weight containing oxygenates other than MTBE alone	0

For all shipments of gasoline:

MTBE	2.38 % by volume
Weighted average oxygen level	0.48 % by weight

Figure 1 depicts the levels of MTBE in gasoline by quarter for 2001, 2002 and 2003. The level of MTBE in gasoline in 2003 rose during the second and third quarters and then dropped off during the fourth quarter. This may be due in part to a limited supply of 7.8 RVP fuel for both higher and lower octane blends. While the blends met the 7.8 RVP requirement, higher levels of MTBE were in the gasoline.

Figure 2 is a scatter-diagram of the percent volume of MTBE by delivery date for 2003 and Figure 3 depicts the volume percent of MTBE for 2001, 2002 and 2003 by shipment. Figure 4 is a scatter-diagram of the percent weight oxygen by delivery date and Figure 5 shows the percent weight oxygen levels for 2001, 2002 and 2003 by shipment.

Table 4 summarizes the other (non-MTBE) oxygenates in the Maine fuel reported during 2002.

Table 4 Other Oxygenates Reparted

Oxygenate	Number of Shipments	Percent Oxygenate (by volume)
TAME	59	0.93
ETBE	14	0.73
Ethanol	1	0.01
MEOH	3	0.18
T-butanol	34	0.22
isobutanol	4	0.22
Sec-butanol	10	0.26
DIPE	4	1.40

Overall, the levels of MTBE have dropped since the state withdrew from the federal RFG program and implemented a "low volatility" gasoline program starting in 1999.[3]

[3] RFG was required only in the seven southern Maine counties.

Figure 1
% Volume MTBE by Quarter
2003

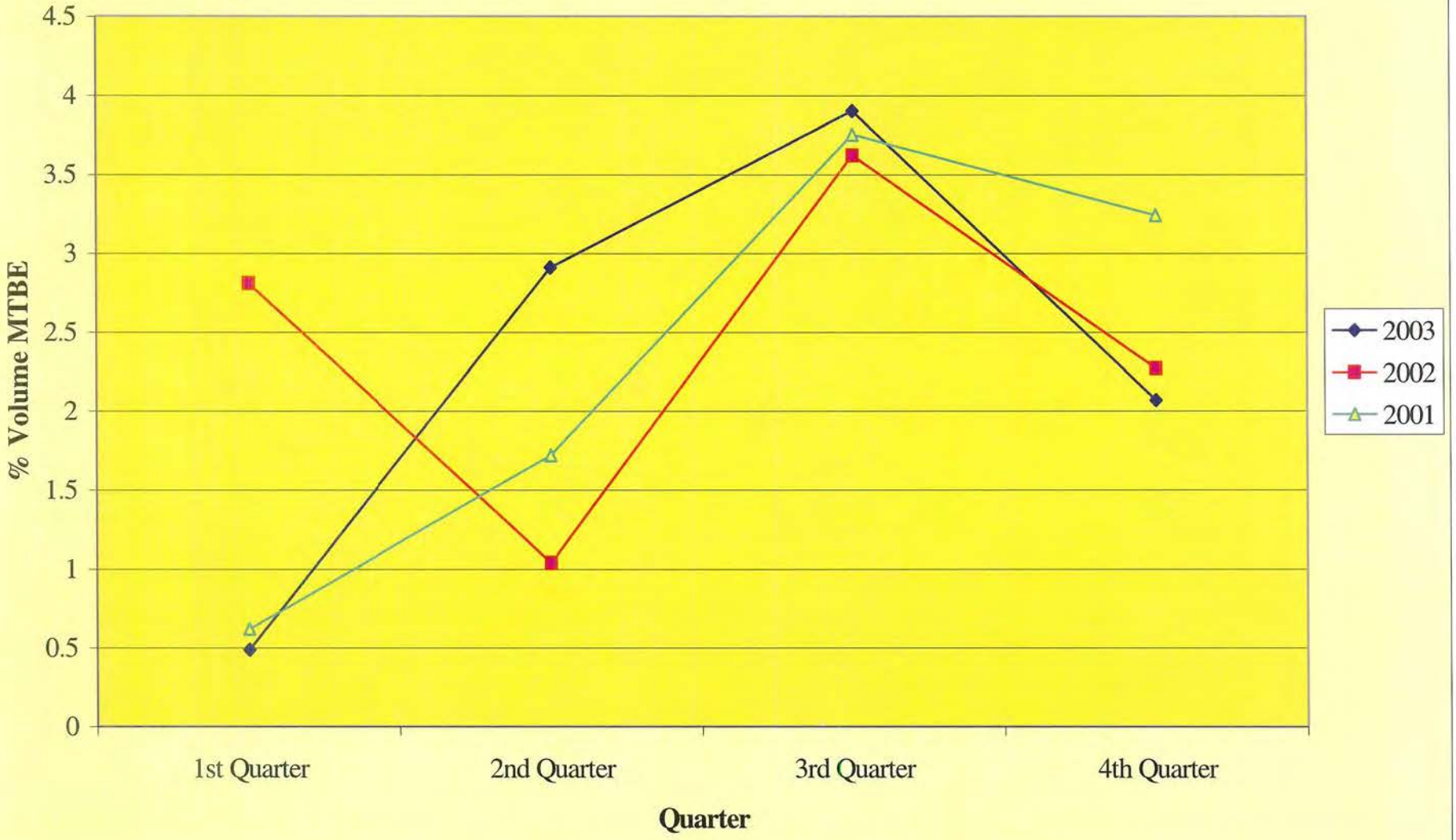


Figure 2
MTBE (vol %) by Delivery Date

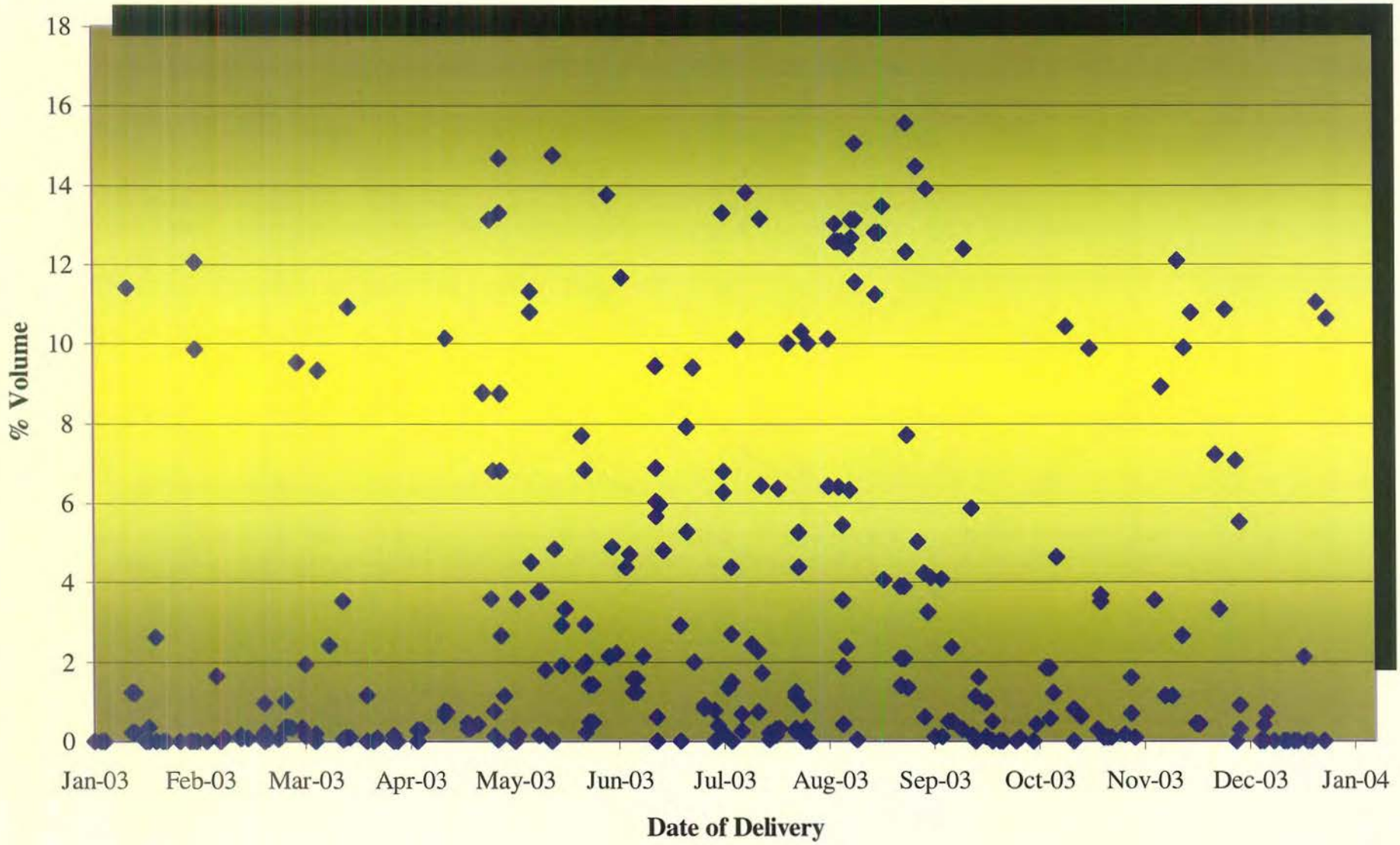


Figure 3
% Volume MTBE by Shipment

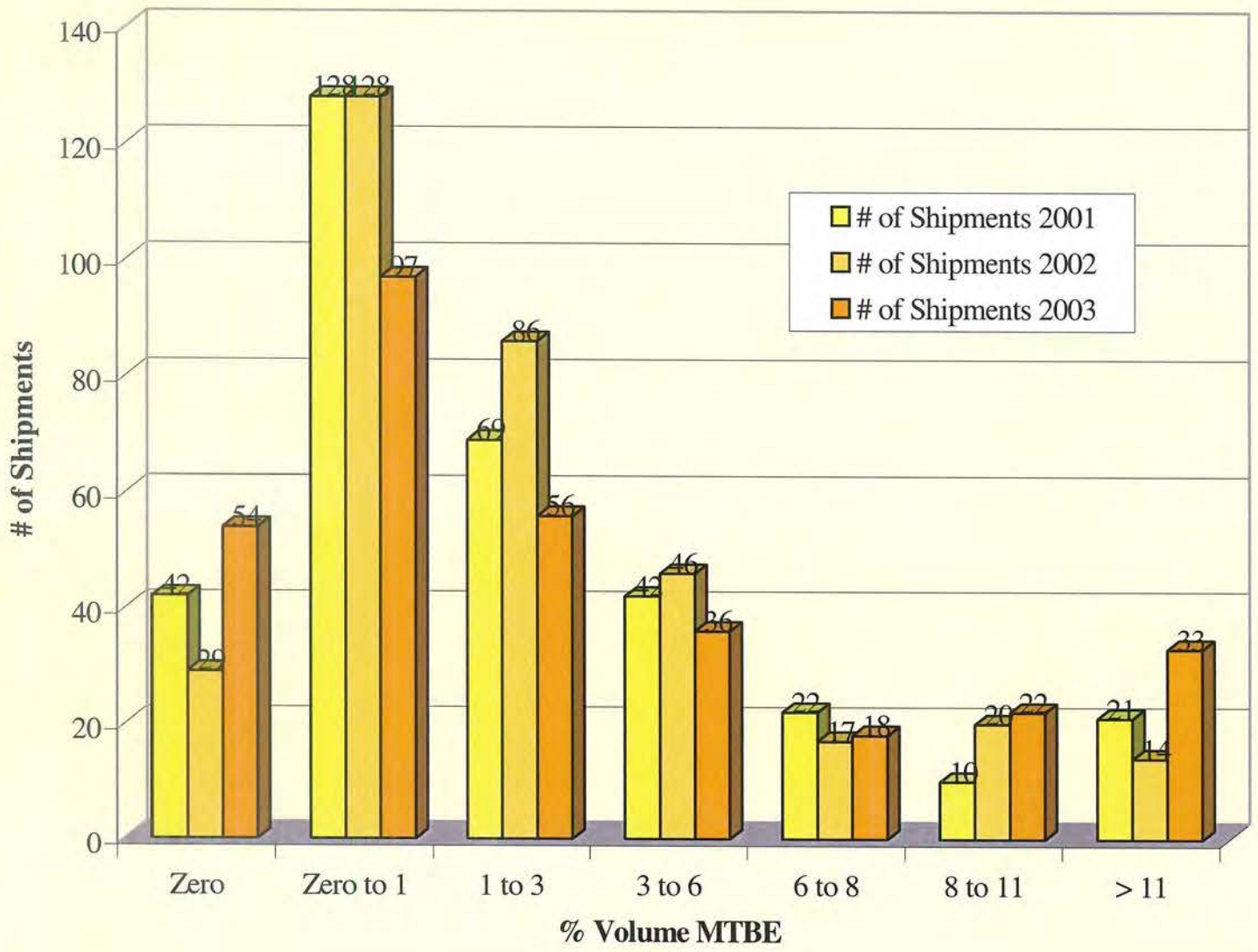


Figure 4
Oxygen (wt %) by Delivery Date

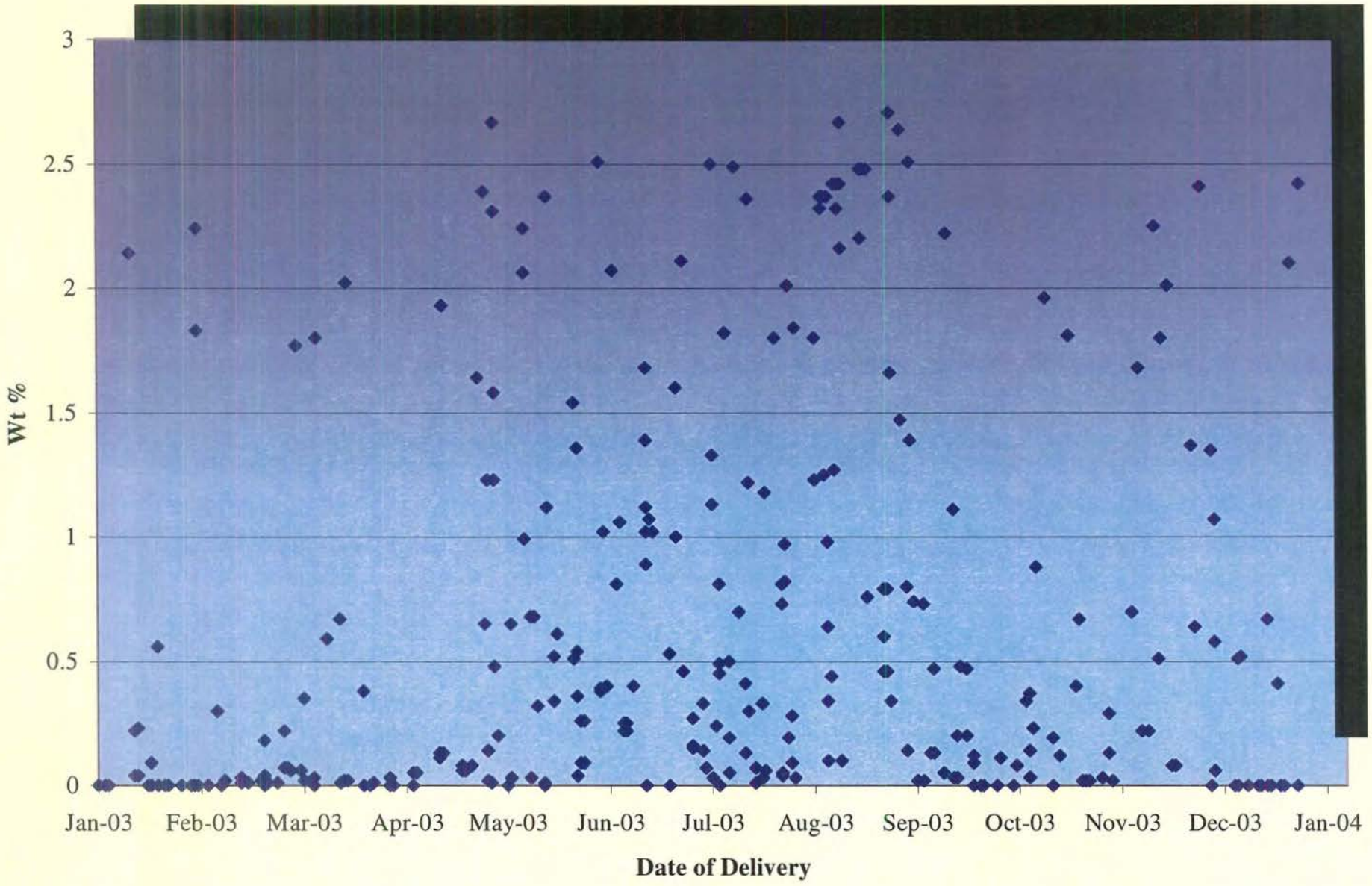
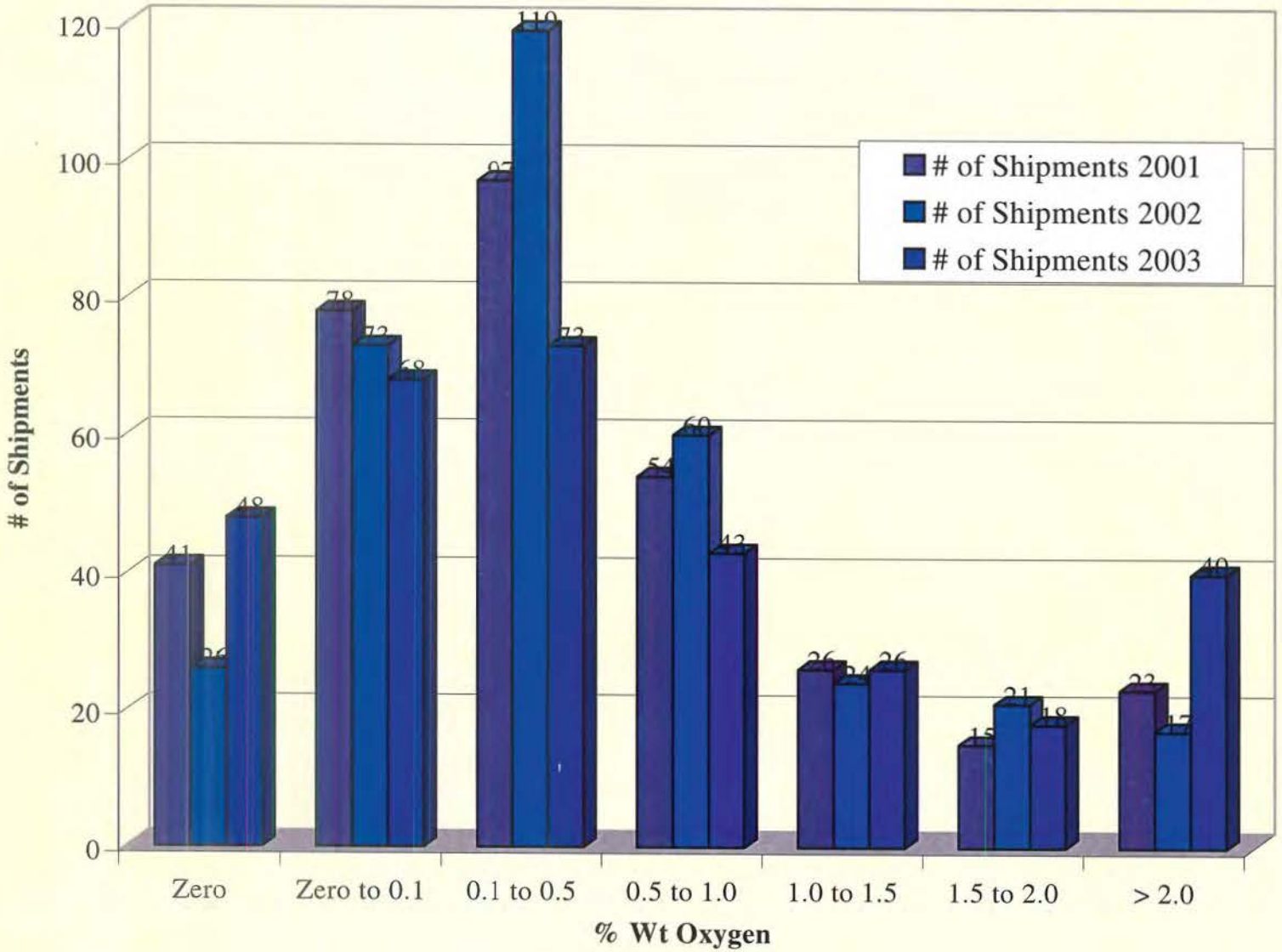


Figure 5
% Weight Oxygen by Shipment



C. Maine Data on Other Gasoline Components: Sulfur, Benzene, and Aromatics

Table 5 lists the statewide weighted averages of benzene, aromatics and sulfur in the 2003 fuel compared to 2002 and 2001 fuel, plus Phase 1 and Phase 2 Reformulated Gasoline (RFG).

Table 5 Other Gasoline Components

Weighted Averages for:	Sulfur	Benzene	Aromatics
2003 data	156.7 ppm	0.96 % Vol	27.68 % Vol
2002 data	201 ppm	0.81 % Vol	27.69 % Vol
2001 data	154 ppm	0.92 % Vol	28.10 % Vol
Ave. Phase I RFG	170 ppm	0.8% Vol	26.3 % Vol
Ave Phase II RFG	150 ppm	0.8 % Vol	24.0 % Vol

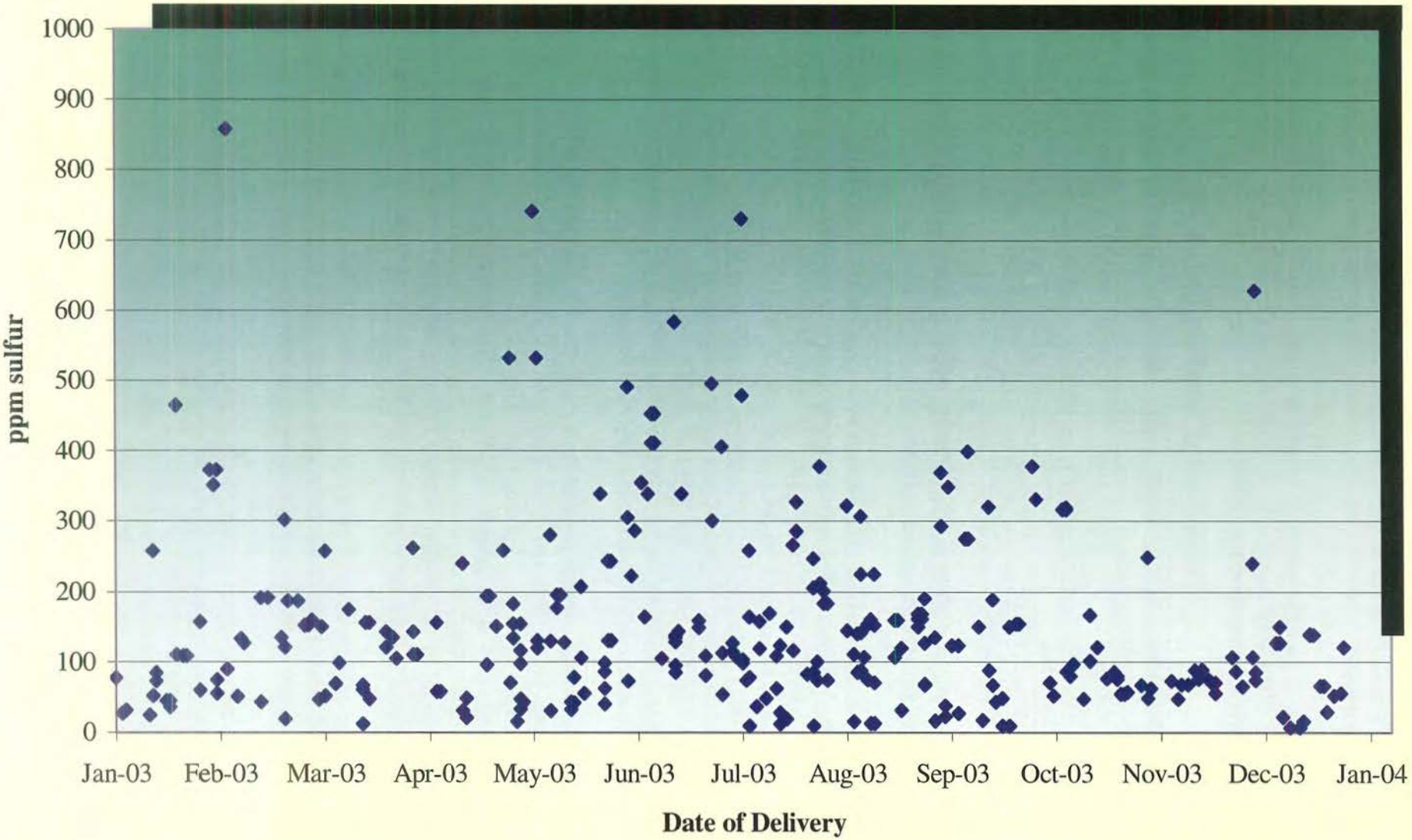
Note: Phase 1 RFG started in 1995. Phase 2 RFG started in 2000. Maine opted-out of the RFG program in 1999.

The sulfur levels in 2003 went down significantly from 2002. In 2003, 5 percent of the shipments reported, or approximately 5 percent of the volume of gasoline, had sulfur levels over 400 ppm. In comparison, 10.9 percent of the fuel shipments, or approximately 11 percent of the volume of gasoline were reported over 400 ppm in 2002. This may be due in part to the sale of gasoline meeting or nearly meeting RFG standards. Figure 6 is a scatter-diagram of the ppm sulfur by delivery date and Figure 7 shows the ppm of sulfur for 2001, 2002 and 2003 by shipment. Figure 7-A shows the barrels of sulfur by range of sulfur (i.e. so many barrels for those deliveries with less than 100 ppm sulfur).

The overall average level of benzene in gasoline in 2003 was higher than the 2002 level, higher than the 2001 level, and just slightly higher than the RFG average benzene content. Benzene was reported in 112 (or 35%) of 316 shipments, at levels of 1 % or greater by volume, with maximum levels as high as 3.29% by volume. RFG is required to have a 1 percent benzene cap. Figure 8 is a scatter-diagram of the percent volume benzene by delivery date and Figure 9 shows the percent volume benzene levels for 2001, 2002 and 2003 by shipment.

The concentration of aromatics in gasoline for 2003 remained higher than Phase I and Phase II RFG but decreased slightly from 2002 and 2001. When MTBE is not used or its use is reduced, refiners commonly increase the use of aromatics to increase octane in gasoline. As a result, conventional gas with lower MTBE levels will report higher levels of aromatics. An increase in aromatics results in increased emissions of air toxics; this occurs primarily from the combustion of gasoline as opposed to evaporation. Figure 10 is a scatter-diagram of the percent volume aromatics by delivery date and Figure 11 shows the percent volume aromatic levels for 2001, 2002 and 2003 by shipment.

Figure 6
PPM Sulfur by Date of Delivery



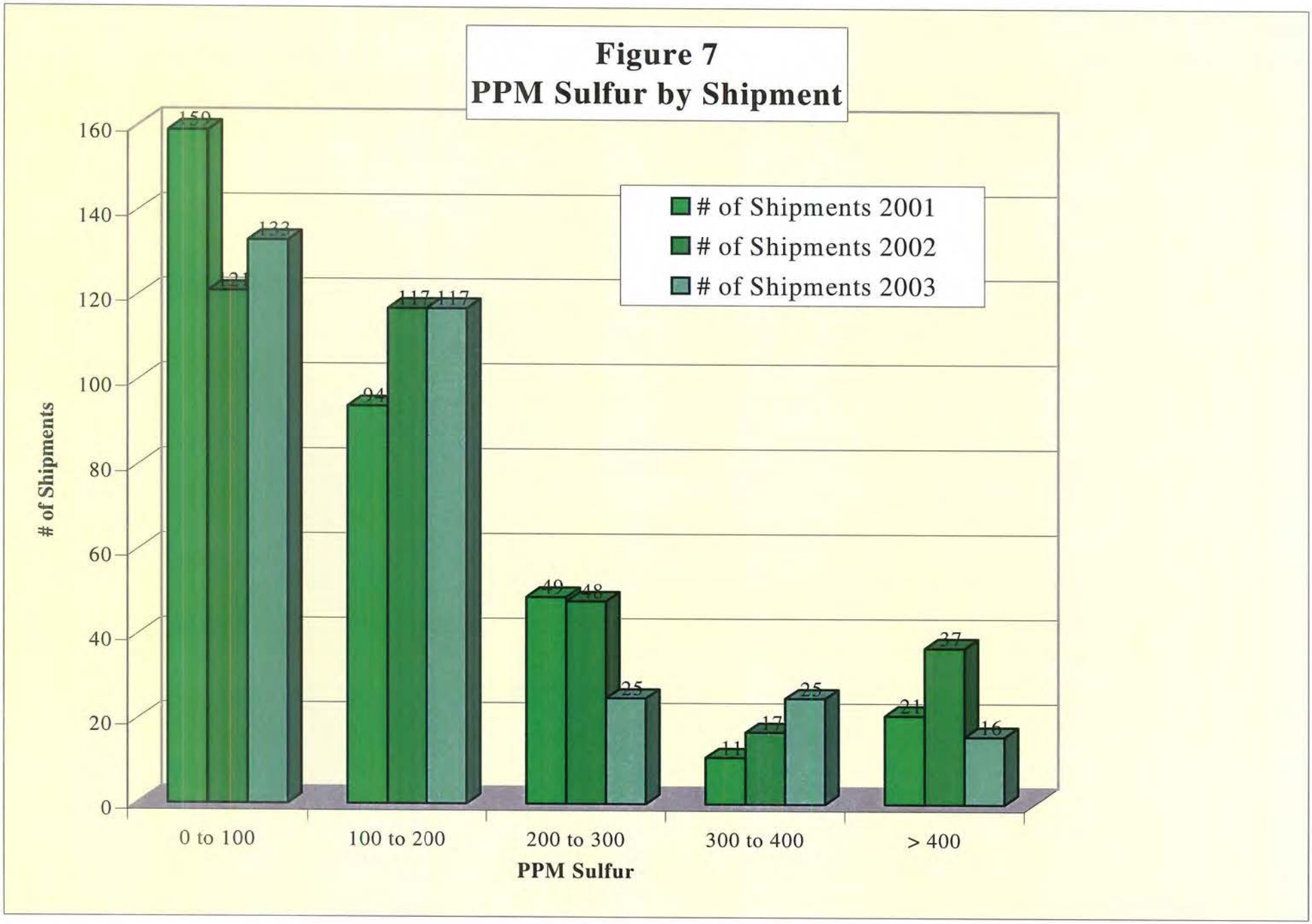


Figure 7
PPM Sulfur by Shipment
# of Shipments 2001
# of Shipments 2002
# of Shipments 2003
# of Shipments
160
140
120
100
80
60
40
20
0
159
94
117
117
49
48
25
11
17
25
21
37
16
0 to 100
100 to 200
200 to 300
300 to 400
> 400
PPM Sulfur

Figure 7-A
Sulfur by Barrel of Fuel

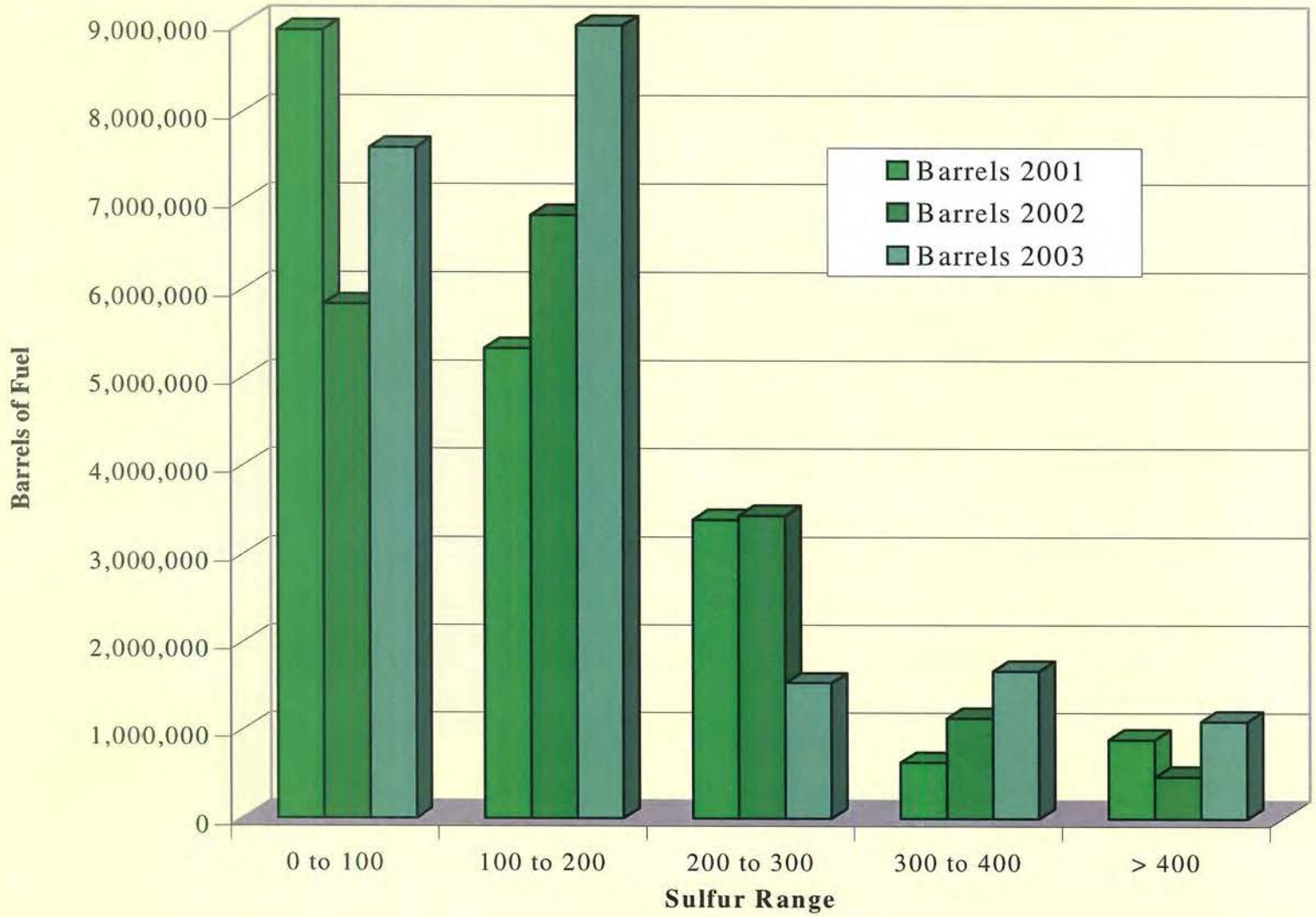


Figure 8
Percent Benzene by Delivery Date

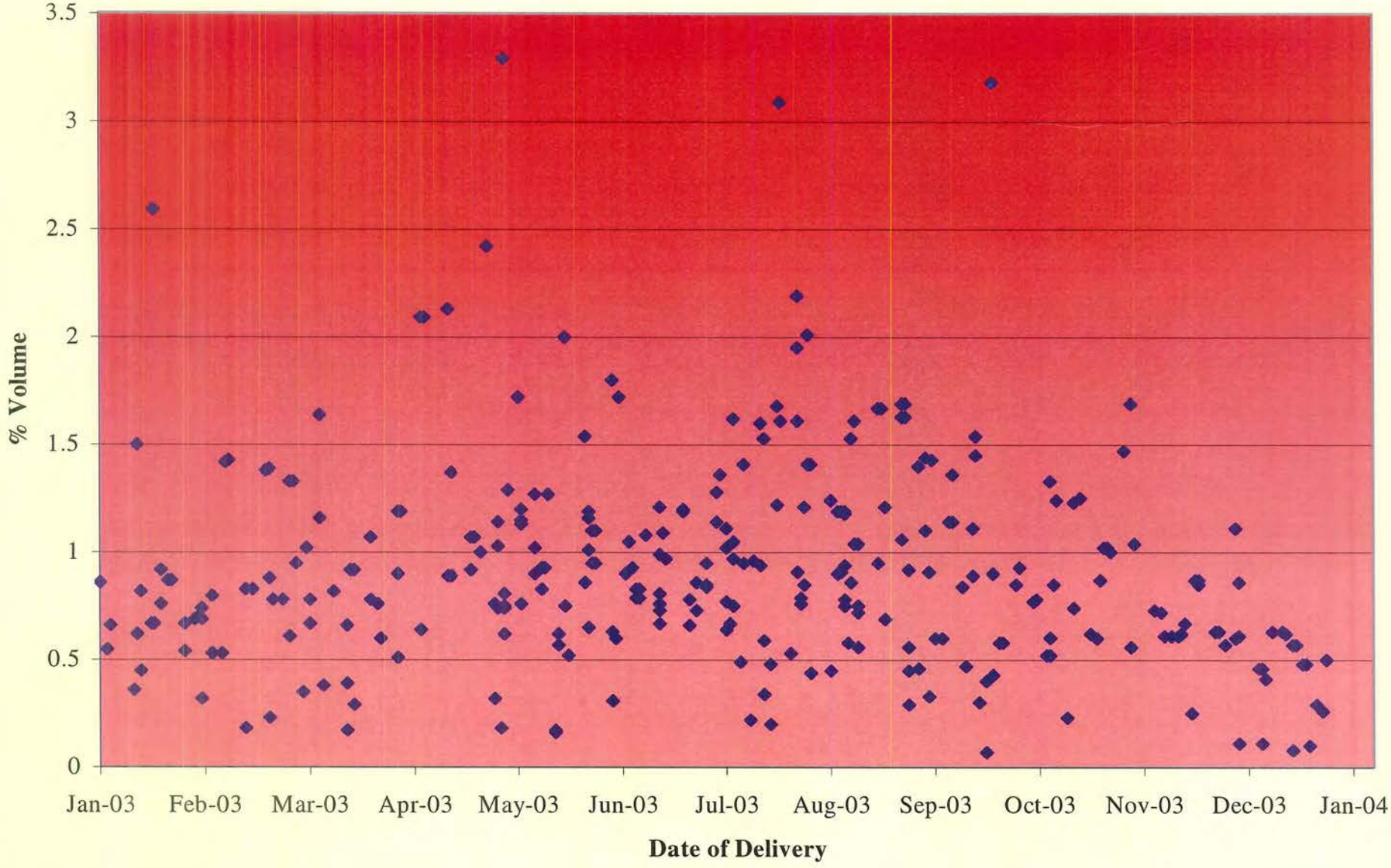


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Figure 9
% Volume Benzene by Shipment

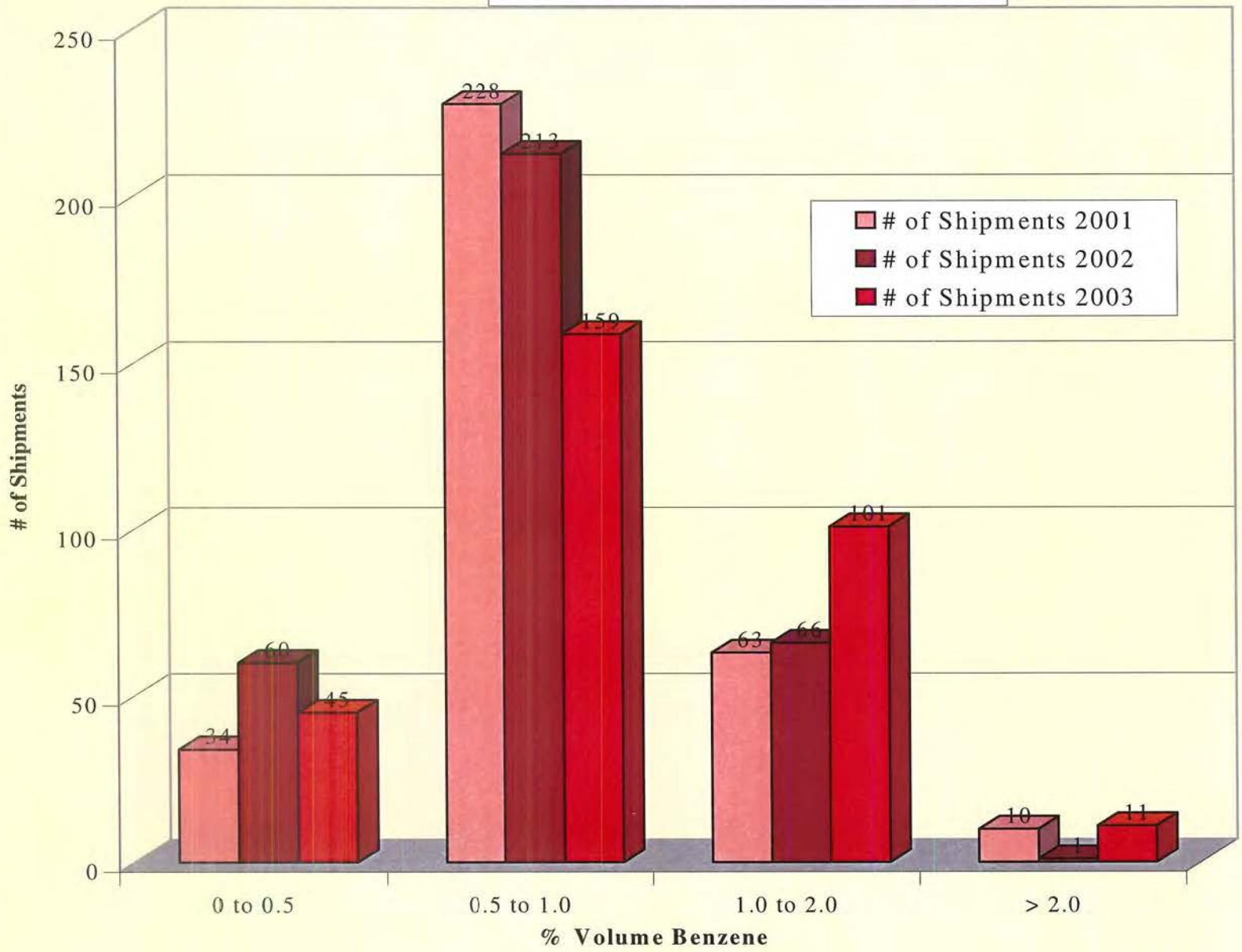


Figure 10
Percent Volume Aromatics by Delivery Date

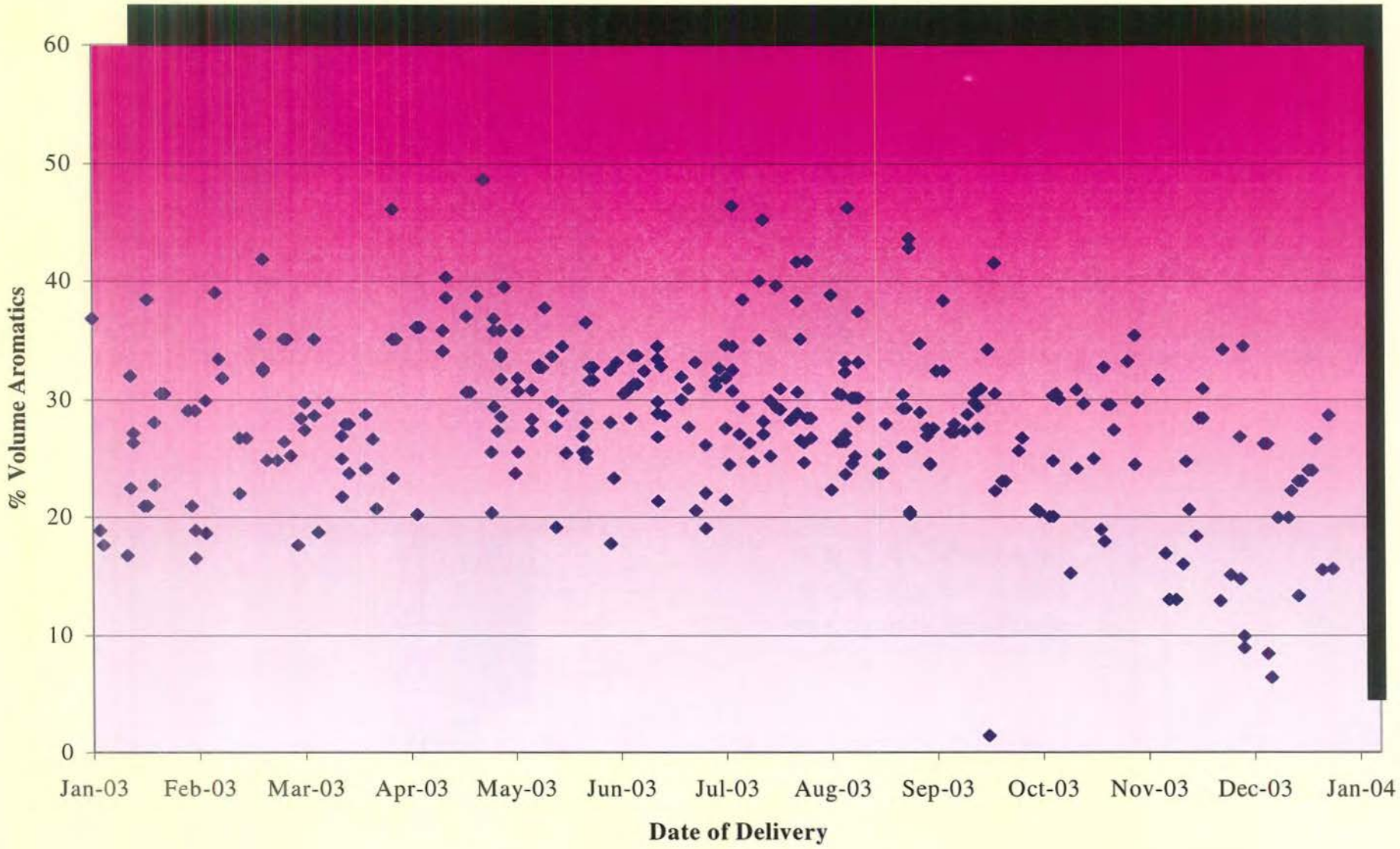
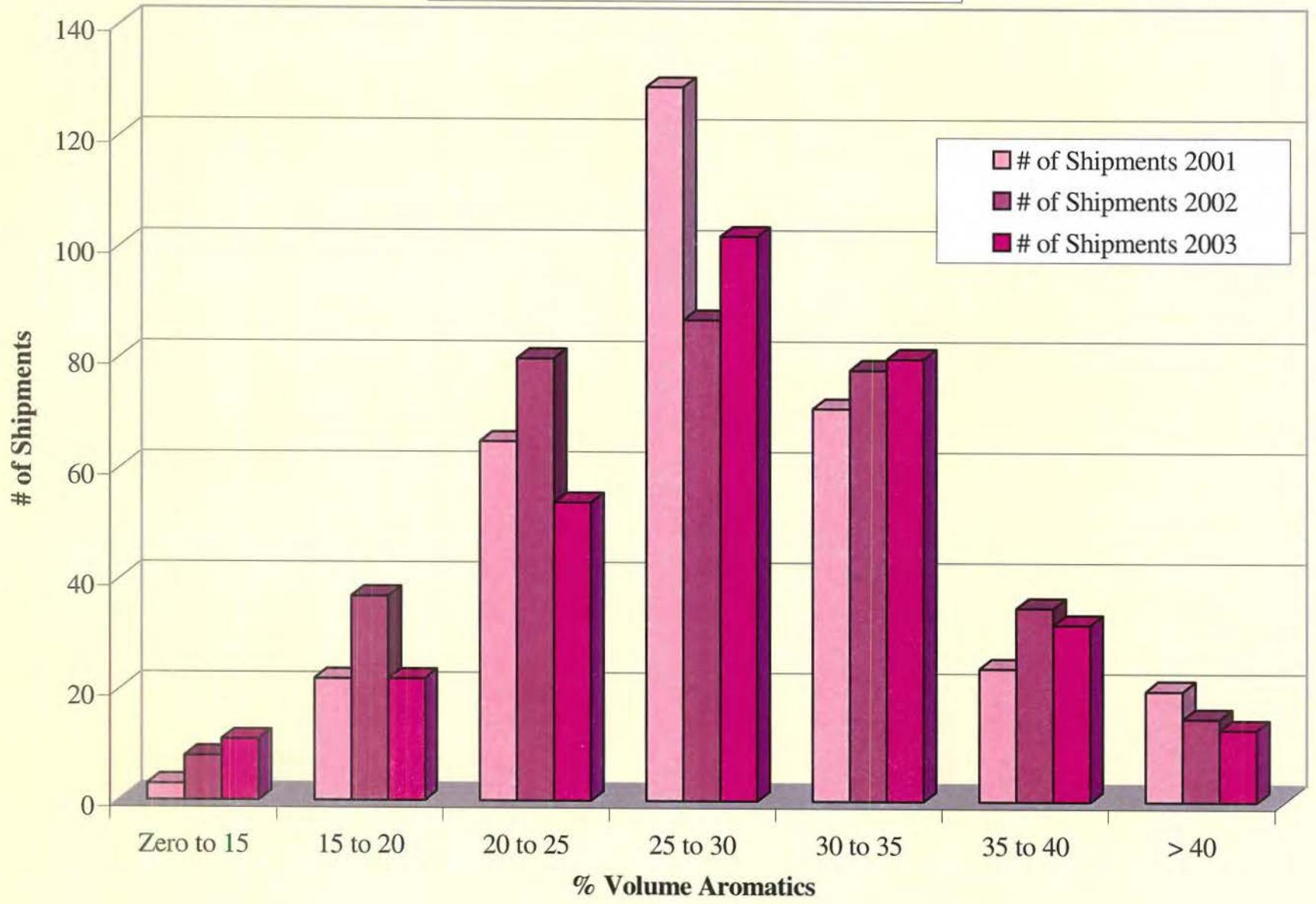


Figure 11
% Volume Aromatics by Shipment



D. Maine Data on Reid Vapor Pressure

Chapter 119 *Motor Vehicle Fuel Volatility Limit* requires that the Reid Vapor Pressure (RVP) of gasoline sold in Maine from May 1 to September 15 of each year shall not exceed 9.0 pounds per square inch (psi). Chapter 119 further limits the RVP of all gasoline sold in York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Knox and Lincoln counties to not exceed 7.8 psi from May 1 to September 15 of each year.

The ozone season is from May 1 to September 15th of each year, which correlates to the period when 7.8 RVP is required in Maine's seven southern counties. Low volatility gas is required during the ozone season to reduce emissions of volatile organic compounds, which are precursors to ozone formation.

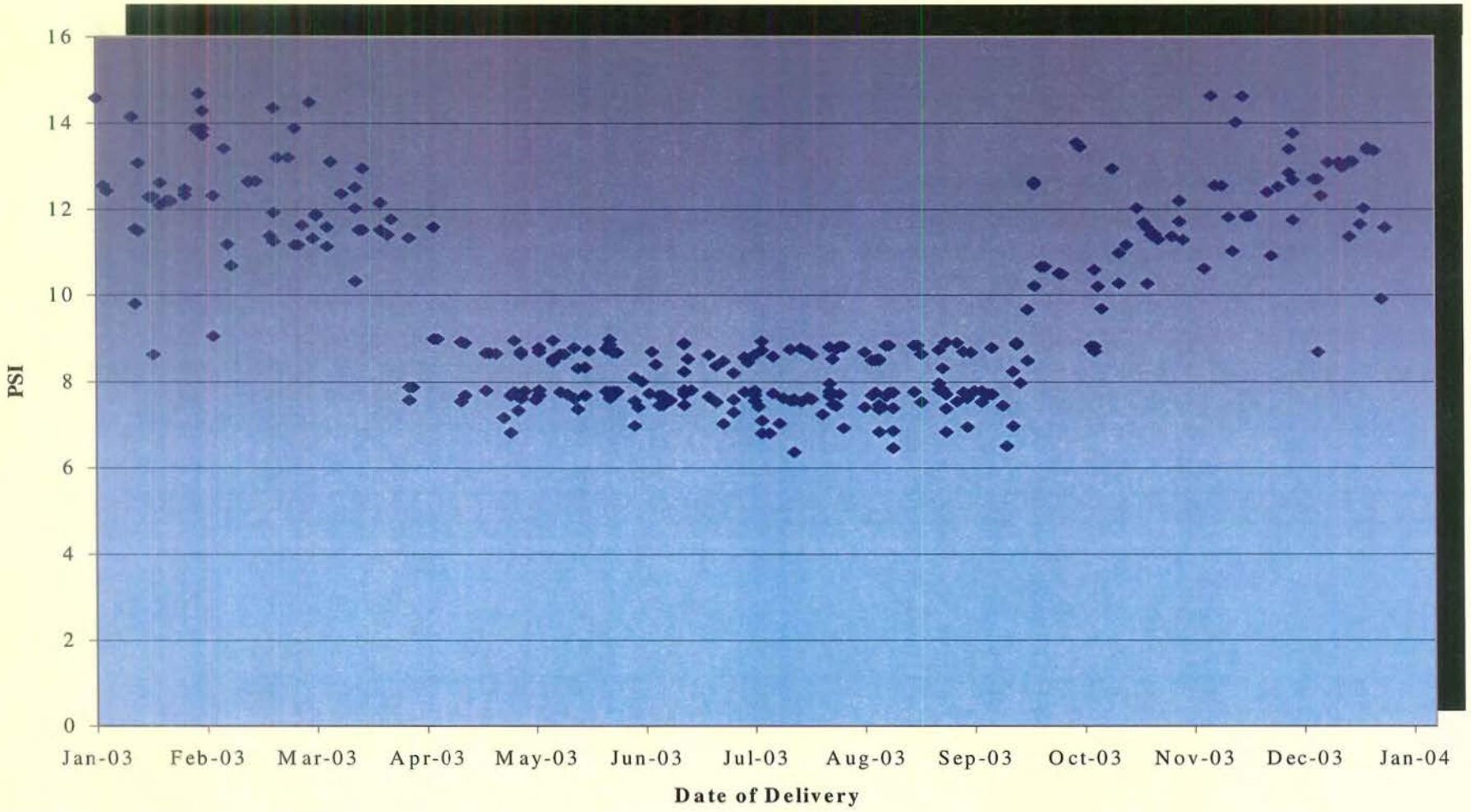
The average of all fuel sold during ozone season in Maine beginning in May through mid-September is shown below in Table 6. A summary of the RVP is sorted by the date of delivery by quarter (Appendix B) and by ozone season (Appendix C).

Table 6 RVP Averages

RVP Reported	RVP Average
Ozone Season, 7 counties	7.56 psi
Ozone Season, statewide	8.03 psi

Figure 12 is a scatter-diagram of the Reid Vapor Pressure by delivery date.

Figure 12
RVP by Delivery Date



Section IV: Progress Toward the Goal of Eliminating MTBE in Maine

Overview of Federal Action on RFG/MTBE

Maine's relatively small market share of the northeast or national gasoline market make it difficult to eliminate or create a gasoline product just for Maine. Supply issues and price disruptions and potential lack of competition are some the problems that face a state like Maine when analyzing Maine gasoline options. National or regional solutions help offset these issues and their impacts. Maine and other states in the Northeast sought a federal solution to eliminate MTBE from all gasoline.As a result, over the past several years a flurry of congressional and administrative actions have been initiated to address the problem of MTBE groundwater contamination while preserving the air quality and public health benefits of RFG. This discussion focuses on activities in three areas that will form the foundation for future federal action:

1) Congressional actions;
2) New Hampshire opt-out of RFG and 211 (c) fuels waiver request;
3) Connecticut and New York MTBE Bans.

Congressional Actions

Congressional action on MTBE was a very contentious issue in 2003 as it has been for the past few years. For the third year in a row Congress was unable to pass a comprehensive energy bill that conatained provisions to eliminate MTBE from gasoline. The major sticking point for the 2003 bill was the "safe harbor" provision included in the House version of the bill. This "safe harbor" provides freedom from defective product liability for the MTBE and Ethanol producers.. The bill was filibustered in the Senate with the proponents unable to summon the last two votes needed to call a cloture. The bill is due to be debated once again some time in early 2004, but our current expectation on its passage remain uncertain.

The Energy Bill History

The Northeast States have played a significant role in advancing federal legislative efforts. Frustrated by the lack of legislative activity in the months following the September 1999 conclusion of the U.S. EPA's Blue Ribbon Panel on Oxygenates and Gasoline, the eight Northeast States' air pollution control programs joined together to support a series of principles for congressional action.
NOTE: ***Northeast Regional Fuels Task Force.*** *In the fall of 1999 after EPA's Blue Ribbon Panel on MTBE was released , the New England Governor's asked NESCAUM to establish a Northeast Regional Fuels Task Force (specifically asking that NESCAUM involve other states and officials from other environmental media in addition to air), and tasked them to find an alternative gasoline fuel that would eliminate MTBE.*

On January 19, 2000, Northeast States for Coordinated Air Use Management (NESCAUM) released the following recommendations:

1) Repeal the 2 percent oxygen mandate for reformulated gasoline (RFG) in the Clean Air Act;
2) Phase down and cap MTBE content in all gasoline;
3) Clarify state and federal authority to eliminate MTBE or other oxygenates if necessary to protect public health or the environment;
4) Maintain the full air quality benefits achieved to date by the federal RFG program;
5) Promote consistency in fuel specifications through the timely implementation of effective federal requirements;
6) Provide adequate lead-time for the petroleum infrastructure to adjust in order to ensure adequate fuel supply and price stability.

These principles were endorsed by the American Lung Association (ALA), the Natural Resources Defense Council (NRDC), and the American Petroleum Institute (API). Thus began an unusual coalition effort among states, environmentalists, and oil companies and refineries to secure federal legislation. Notably absent from this alliance were ethanol producers, who were unwilling to accept the basic premise of repealing the oxygen mandate. However, it was generally accepted that the ethanol industry would have to join in a compromise before legislation would pass in either house of Congress.

In the 106th Congress, Senators Tom Daschle (D-SD) and Richard Lugar (R-IN) introduced legislation backed by much of the ethanol community that lifted the oxygen mandate and replaced it with a more flexible national sales requirement for renewable fuels. Instead of mandating the sale of ethanol only in states participating in the RFG program, the Daschle/Lugar approach allowed oil companies to decide where it was most viable economically to sell ethanol throughout the nation. Governors Shaheen (D-NH) and King (I-ME) wrote to Senator Daschle expressing cautious support for the concept if properly designed.

The Northeast States Regional Fuels Task Force and the environmental community worked with Senator Robert Smith (R-NH), then chair of the Environment and Public Works Committee, in an effort to harmonize the Daschle/Lugar approach with legislation introduced by Smith that effectively reflected the views of the Northeast States and their partners. Unfortunately, most oil companies rejected all legislative proposals that required the sale of ethanol, thus ending their Alliance involvement for the time being. Similarly, while Smith's approach was strongly supported by the majority of small ethanol producers and by Governors from a host of ethanol-producing states, large multi-international ethanol producers opposed lifting the oxygen mandate, even in exchange for a national program. Observers surmised that large ethanol producers took this position because allowing ethanol to be sold nationwide would increase competition from small producers. Whereas only the large companies possessed the infrastructure and capital to ship hundreds of millions of gallons of ethanol from the Midwest to the Northeast, California and Texas, areas that would have to use ethanol in lieu of MTBE if the oxygen mandate was retained.

Legislation establishing a national renewable fuels program would have required nearly unanimous support from ethanol interests and environmentalists, along with acceptance from some sectors of the oil industry. In an effort to create such a broad-based coalition, the eight Northeast States joined with the twenty-four state Governors' Ethanol Coalition (GEC) to advance a joint position. On July 19, 2000, in a letter signed by Governors representing thirty-two states urged Senator Smith to introduce legislation that phased out MTBE within four years; lifted the oxygen standard and replaced it with a national renewable fuels program; and maintained the full air quality benefits of the RFG program.

Sen. Smith re-introduced legislation on MTBE in the 107th Congress and his bill (S. 950) was reported out of the Environment and Public Works Committee on December 20, 2001. The bill would have banned MTBE within four years, allowed states to waive the oxygenate requirement, stimulated the use of ethanol and clean vehicles, increased funding to clean up contaminated ground water, and broadened EPA's authority to regulate fuel additives and emissions. It also provided funds to assist merchant MTBE producers in converting production facilities to produce cleaner additives.

S. 950 was almost entirely incorporated in S. 1766, omnibus energy legislation introduced by Senators Daschle and Jeff Bingaman (D-NM).[4] In addition, S. 1766 contained a national renewable fuels mandate, starting at two billion gallons in calendar year 2003 and increasing to five billion gallons in 2012. Refiners who produced more than the required amount of renewable fuel could earn tradable credits effective for one year. Some state officials on the east and west coasts remain concerned about whether their states could absorb the quantities of ethanol-blended fuel that were expected to be produced under this mandate without sacrificing air quality. However, a year-round nationwide renewable fuels requirement was generally viewed as more flexible than the current oxygen mandate under the RFG program, and thus as a positive starting point.

Prospects were more positive in 2002. The Senate Democratic leadership's energy bill (S. 1766) included several major provisions on MTBE and ethanol, and had been scheduled for early floor consideration. However, The Senate was unable to move S. 1766 forward and pass the Energy bill in 2002.

Section V: Other Regional State Activities

New Hampshire opt-out of RFG and 211 (c) fuels waiver request

Maine opted out of the RFG program, in 1999 and New Hampshire filed a similar request in 2001. In 2001, at the direction of both the Governor and the General Court, the New Hampshire Department of Environmental Services (DES) submitted the necessary

[4] The sole exception is that S. 1766 only repeals the current one-pound Reid Vapor Pressure waiver in section 211(h) of the Clean Air Act in states east of the Mississippi, whereas S. 950 repeals the waiver nationwide. This waiver facilitates the use of ethanol as a fuel additive by partially discounting its higher volatility relative to other oxygenates.

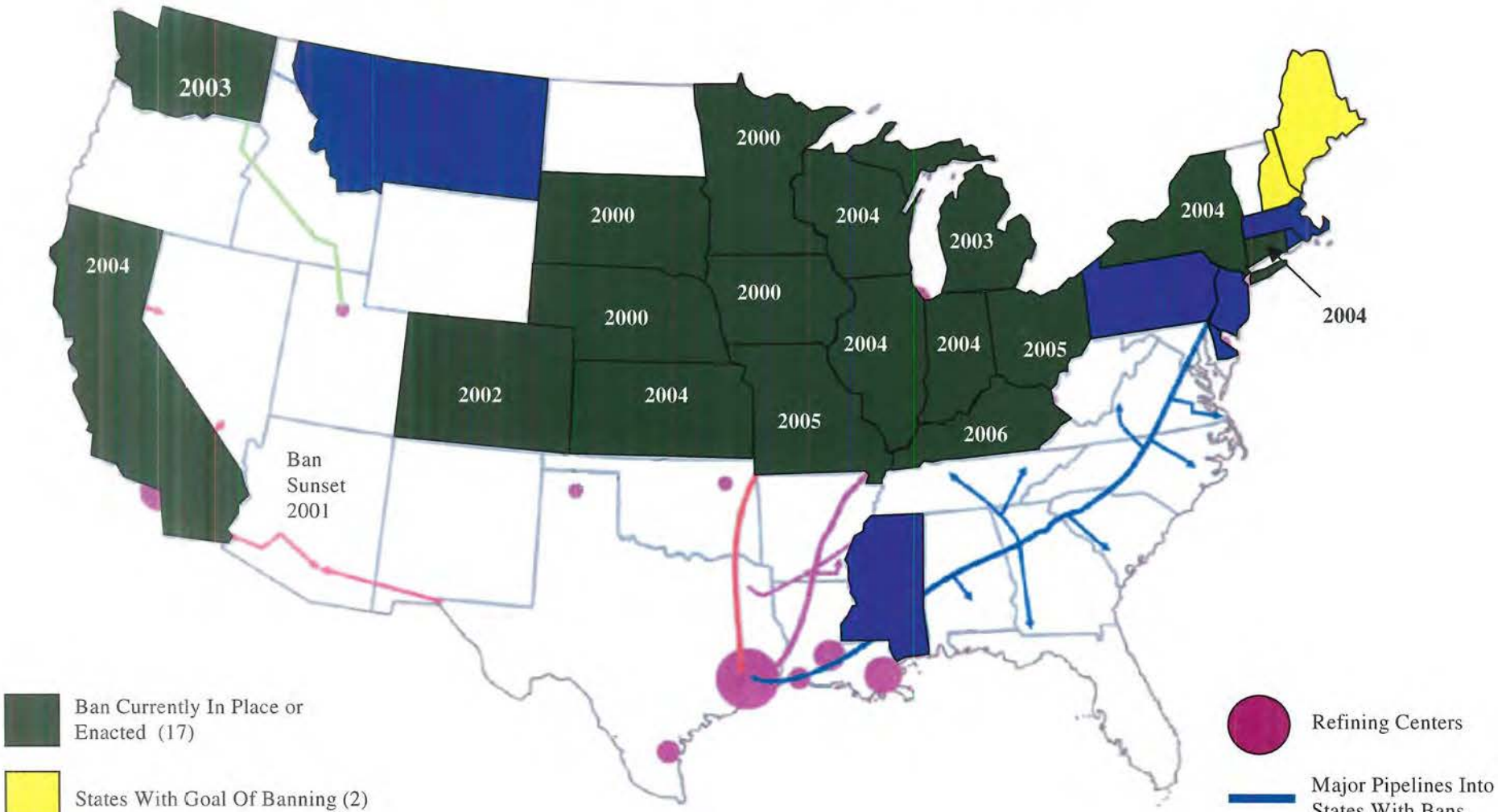
documentation to EPA to request that New Hampshire opt-out of the RFG program, replacing the emissions reductions with a state level fuel rule (NH Code of Administrative Rules Env-A 1611, "Oxygen Flexible Reformulated Gasoline, OFRFG") that achieves similar benefits. Simultaneously, DES requested that EPA revise their RFG rules at 40 CFR 80.72(b)(3)(V)[5] requiring the State to remain in the program until January 1, 2004 or provide other such relief as to allow New Hampshire to opt-out early. The EPA declined to address DES's request. After lengthy review and comment, EPA on January 22, 2004 proposed approval of New Hampshire's opt-out petition and OFRFG rule in the Federal Register. The proposed approval is subject to a 30 day comment period. If there are no significant adverse comments, particularly from the petroleum industry and MTBE suppliers, it is anticipated that EPA final approval could follow soon after the close of the comment period.

MTBE Bans in New York and Connecticut

On January 1, 2004 the MTBE bans in both New York and Connecticut went into effect. At this time consumers have seen little impact from the change over. Any price changes were minimal and the reasons for the price changes were difficult to discern. The next event that may affect the fuel prices is the changeover from winter to summer blend fuels. The RVP of the base for summertime fuel using ethanol must be significantly lower than the base fuel used when blending ethanol. The RBOB as it is called must be lower (somewhere around 6 psi) to accommodate the higher volatility of the ethanol. For the winter the volatility must be higher to allow vehicles to start in the cold weather therefore a lower volatility base fuel is unnecessary. The events unfolding in both New York and Connecticut bear careful watching over the next few months to see the long term effects of the ban on price and availability.

[5] See http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_40/40cfr80_00.html

STATE MTBE BANS



Updated: September 2003

Source for pipeline/refinery infrastructure: Turner, Mason & Company, Feb. 2000.

APPENDIX A
Quarterly Reporting Form

		RVP	Oxygen	MTBE	Other Oxygenate(s) in Fuel		BENZ	ARO	SULF		
Date of transfer	Octane	(psi)	(% wt O_2)	(% Vol)	(Other Oxy. Name)	(% Vol)	(% Vol)	(% Vol)	(ppm)	Barrels	Notes

APPENDIX B
All Data by Quarter

1st Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Gulf	01/01/03	87	14.59	0	0			0.86	36.8	78	137320
Exxon-Mobil	01/03/03	87	12.55	0	0			0.55	18.8	27	150117
Irving	01/04/03	87	12.43	0	0			0.66	17.6	32	93290
Irving	01/11/03	93	14.15	2.14	11.41			0.36	16.7	25	23182
Gulf	01/12/03	87.5	9.8	0.22	1.23			1.5	32	258	39918
Exxon-Mobil	01/12/03	87	11.54	0.04	0.22			0.62	22.4	52	155071
Exxon-Mobil	01/13/03	93	13.07	0.23	1.21			0.45	26.3	73	33920
Irving	01/13/03	87	11.49	0.04	0.22			0.82	27.1	85	117824
Motiva	01/16/03	87	12.28	0	0			0.67	20.9	45	135410.50
Gulf	01/17/03	87.3	12.28	0	0			0.67	20.9	45	110126
Webber	01/17/03	87	8.62	0.09	0.35	TAME	0.16	2.59	38.4	36	65,683.74
Exxon-Mobil	01/19/03	87	12.1	0	0			0.92	22.7	465	33907
Exxon-Mobil	01/19/03	93	12.61	0.56	2.63			0.76	28	110	51546
Exxon-Mobil	01/21/03	87	12.19	0	0			0.87	30.5	109	189473
Gulf	01/22/03	87.4	12.19	0	0			0.87	30.5	109	54218
Motiva	01/26/03	87	12.33	0	0			0.54		157	77399.60
Motiva	01/26/03	93	12.47	0	0			0.67		60	29687.50
Exxon-Mobil	01/29/03	87	13.87	0	0			0.69	29	373	169145
Motiva	01/30/03	87	14.7	0	0			0.7	20.9	352	55917.21
Gulf	01/31/03	87.9	13.87	0	0			0.69	29	373	40660
Irving	01/31/03	93	13.72	1.83	9.86			0.32	16.5	56	10843
Irving	01/31/03	87	14.29	2.24	12.05			0.74	18.8	75	17970
Motiva	02/03/03	87	9.05	0	0			0.53	18.6	858	57953.67
Motiva	02/03/03	93	12.32	0	0			0.8	29.9	90	16761.68
Exxon-Mobil	02/06/03	93	13.41	0.3	1.64			0.53	39	51	67037

1st Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other in Fuel (Other Oxy. Name)	Other in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	02/07/03	87	11.19	0	0			1.42	33.4	133	164753
Irving	02/08/03	87	10.68	0.02	0.1			1.43	31.8	127	73815
Motiva	02/13/03	87	12.65	0.01	0.08			0.83	26.7	192	105015.12
Motiva	02/13/03	93	12.63	0.03	0.15	TAME	0.02	0.18	21.96	43	29915.17
Exxon-Mobil	02/15/03	87	12.65	0.01	0.08			0.83	26.7	192	33658
Exxon-Mobil	02/19/03	87	11.37	0.02	0.09			1.38	35.5	135	189504
Exxon-Mobil	02/20/03	87	11.92	0.18	0.96			0.88	32.6	302	34290
Exxon-Mobil	02/20/03	93	14.35	0.04	0.22			0.23	41.8	19	33896
Irving	02/20/03	87	11.25	0	0			1.39	32.4	121	53669
Motiva	02/21/03	87	13.19	0.01	0.06			0.78	24.8	187	118511.90
Exxon-Mobil	02/24/03	87	13.2	0.01	0.06			0.78	24.8	187	29929
Gulf	02/26/03	87.5	13.88	0.22	1.02	TAME	0.16	0.61	26.4	152	40463
Exxon-Mobil	02/26/03	87	11.16	0.07	0.36			1.33	35.1	153	196327
Gulf	02/27/03	87.1	11.16	0.07	0.36			1.33	35.1	153	48401
Webber	02/28/03	87	11.62	0.06	0.33			0.95	25.2	160	50,250.50
Irving	03/02/03	93	14.49	1.77	9.52			0.35	17.6	47	8182
Exxon-Mobil	03/03/03	87	11.32	0.06	0.33			1.02	28.4	150	106652
Irving	03/04/03	87	11.89	0.02	0.13			0.67	27.4	52	49271
Motiva	03/04/03	87	11.84	0.35	1.93			0.78	29.7	258	84003.38
Exxon-Mobil	03/07/03	87	11.58	0.03	0.18			1.16	28.6	70	103217
Irving	03/07/03	87	11.13	0	0			1.64	35.1	69	136651
Motiva	03/08/03	87	13.11	1.8	9.33	TAME	0.21	0.38	18.7	99	30130.81
Gulf	03/11/03	87	12.36	0.59	2.42	TAME	0.86	0.82	29.7	175	72939
Exxon-Mobil	03/15/03	93	12.5	0.67	3.53	TAME	0.10	0.66	26.9	67	60400
Motiva	03/15/03	87	12.02	0.01	0.05			0.39	21.7	61	125561.95
Motiva	03/15/03	93	10.32	0.01	0.03			0.17	24.9	12	15082.24

1st Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other in Fuel (Other Oxy. Name)	Other in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	03/16/03	87	11.51	0.02	0.09			0.92	27.9	156	194922
Gulf	03/17/03	87.2	11.51	0.02	0.09			0.92	27.9	156	47896
Irving	03/17/03	93	12.95	2.02	10.93			0.29	23.7	48	16425
Webber	03/22/03	87.4	12.15	0.38	1.17	TAME	0.16	1.07	28.7	121	70,829.62
Exxon-Mobil	03/22/03	87	11.51	0	0			0.78	24.1	143	167794
Irving	03/24/03	87	11.41	0	0			0.76	26.6	135	70748
Motiva	03/25/03	87	11.77	0.01	0.08			0.6	20.7	105	201462.24
Gulf	03/30/03	87.2	11.33	0	0			0.9	23.3	143	46928
Exxon-Mobil	03/30/03	93	7.57	0.03	0.15			0.51	46.1	262	54425
Exxon-Mobil	03/30/03	87	11.33	0	0			0.9	23.3	143	193309
Motiva	03/30/03	87	7.86	0	0			1.19	35.1	110	80817.48
Gulf	03/31/03	87.2	7.86	0	0			1.19	35.1	110	100067
Weighted Ave.			**11.82**	**0.10**	**0.49**	**TAME**	**0.28**	**0.89**	**27.98**	**138.39**	
Cells colored grey have no data available.											

2nd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	04/06/03	87	8.98	0.05	0.28			2.09	36.1	58	140363
Exxon-Mobil	04/06/03	87	11.58	0	0			0.64	20.2	156	52824
Gulf	04/07/03	87	8.98	0.05	0.28			2.09	36.1	58	46903
Exxon-Mobil	04/14/03	87	7.53	0.11	0.64			0.89	34.1	240	93664
Exxon-Mobil	04/14/03	87	8.92	0.13	0.75			2.13	35.8	31	45008
Irving	04/15/03	87	8.88	0.13	0.74			1.37	40.3	49	103901
Motiva	04/15/03	93	7.68	1.93	10.14	TAME	0.75	0.89	38.6	21	30414
Exxon-Mobil	04/21/03	87	7.79	0.08	0.47			0.92	37	96	67772
Exxon-Mobil	04/21/03	87	8.65	0.06	0.31			1.07	30.6	194	102166
Gulf	04/22/03	87	8.65	0.06	0.31			1.07	30.6	194	26979
Irving	04/24/03	87	8.64	0.08	0.42			1	38.7	151	44890
Gulf	04/26/03	93	7.16	1.64	8.77	T-butanol	0.21	2.42	48.6	259	39824
Irving	04/28/03	93	6.81	2.39	13.13			0.32	20.3	71	25028
Motiva	04/28/03	87	7.68	0.65	3.59			0.76	25.5	533	88830
Gulf	04/29/03	87	7.75	0.14	0.76			1.03	29.4	183	35990
Exxon-Mobil	04/29/03	87	7.71	1.23	6.82			0.74	35.8	155	74675
Exxon-Mobil	04/29/03	87	8.95	0.02	0.13			1.14	36.8	134	138360
Motiva	04/30/03	93	7.33	0.01	0.03			0.18	27.3	16	49275
Gulf	05/01/03	87	7.71	1.23	6.82			0.74	35.8	155	27073
Exxon-Mobil	05/01/03	93	7.62	2.31	13.29			0.62	28.5	117	25275
Exxon-Mobil	05/01/03	93	8.68	1.58	8.75			0.75	33.6	34	30113
Webber	05/01/03	87	7.6	0.48	2.66			3.29	33.9	48	70445
Webber	05/01/03	93	8.63	2.67	14.67	TAME	0.21	0.81	31.7	98	29944
Gulf	05/02/03	89	7.78	0.2	1.14			1.29	39.5	43	44133
Motiva	05/05/03	87	7.58	0	0			1.72	23.7	741	109908

2nd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Gulf	05/06/03	87	7.8	0.03	0.17			1.2	35.8	131	27664
Irving	05/06/03	87	8.69	0.03	0.15			1.13	31.8	120	87256
Motiva	05/06/03	87	7.68	0.65	3.59			0.76	25.5	533	108516
Exxon-Mobil	05/06/03	87	7.8	0.03	0.17			1.2	35.8	131	72570
Exxon-Mobil	05/06/03	87	8.77	0.03	0.17			1.15	30.7	120	53701
Motiva	05/10/03	87	8.46	0.99	4.5	ETBE	0.5	1.02	28.3	31	42258
Motiva	05/10/03	93	8.52	2.24	10.8	ETBE TAME T-butanol	0.7 0.4 0.4	0.9	27.3	130	19940
Exxon-Mobil	05/10/03	87	8.95	2.06	11.31	T-butanol	0.11	1.27	30.8	281	7329
Exxon-Mobil	05/12/03	87	7.75	0.03	0.14			0.83	32.9	178	101716
Exxon-Mobil	05/12/03	87	8.63	0.68	3.77			0.93	32.7	196	67249
Gulf	05/13/03	88	8.63	0.68	3.77			0.93	32.7	196	72606
Gulf	05/14/03	90	7.7	0.32	1.8			1.27	37.7	128	40196
Motiva	05/16/03	93	7.6	0	0			0.16	33.6	43	19576
Motiva	05/16/03	93	8.77	0.01	0.03			0.17	29.8	33	20609
Exxon-Mobil	05/17/03	93	7.36	1.12	4.84			0.57	27.7	79	25205
Exxon-Mobil	05/17/03	93	8.3	2.37	14.76			0.62	19.1	42	24985
Exxon-Mobil	05/19/03	87	7.68	0.52	2.91			0.75	29	208	81293
Exxon-Mobil	05/19/03	87	8.32	0.34	1.91			2	34.5	106	86091
Irving	05/20/03	87	8.71	0.61	3.32			0.52	25.4	56	72522
Motiva	05/25/03	87	8.75	1.54	7.7	ETBE	0.3	0.86	25.5	339	56128
Motiva	05/25/03	93	7.76	0.51	1.9	TAME	0.4	1.54	26.9	339	19108
Gulf	05/26/03	87	7.75	0.04	0.23	Ethanol	0.01	1.01	36.5	41	35933
Exxon-Mobil	05/26/03	87	8.97	0.36	1.99			1.19	28	63	56451
Exxon-Mobil	05/26/03	93	7.61	1.36	6.84			0.65	24.9	99	18105
Exxon-Mobil	05/26/03	93	8.85	0.54	2.94			1.16	25.5	87	14970

2nd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	05/27/03	87	7.76	0.26	1.42			0.95	32.7	244	72097
Exxon-Mobil	05/27/03	87	8.66	0.09	0.48			1.1	31.6	131	100366
Gulf	05/28/03	87	7.76	0.26	1.42			0.95	32.7	244	25751
Gulf	05/28/03	87	8.66	0.09	0.48			1.1	31.6	131	39446
Irving	06/02/03	87	6.97	2.51	13.75			0.31	17.7	73	21699
Exxon-Mobil	06/02/03	87	7.55	0.38	2.12			0.63	28	491	101850
Exxon-Mobil	06/02/03	87	8.09	0.39	2.15			1.8	32.5	306	75192
Motiva	06/03/03	87	7.4	1.02	4.89	TAME	0.85	0.6	23.3	223	110433
Irving	06/04/03	87	7.99	0.4	2.21			1.72	33.1	287	61295
Gulf	06/06/03	93	7.72	2.07	11.66			0.9	30.5	355	39953
Webber	06/07/03	87	8.68	0.81	4.37	ETBE	0.14	1.05	30.7	164	65604
Motiva	06/08/03	87	8.39	1.06	4.7	T-butanol	0.4	0.93	28.4	339	55236
Exxon-Mobil	06/09/03	87	7.68	0.25	1.57			0.83	31.3	453	91919
Exxon-Mobil	06/09/03	87	7.45	0.22	1.24			0.79	33.7	412	92398
Gulf	06/10/03	87	7.68	0.25	1.57			0.83	31.3	453	27687
Gulf	06/10/03	87	7.45	0.22	1.24			0.79	33.7	412	27479
Gulf	06/12/03	87	7.57	0.4	2.15			1.08	32.4	105	39753
Exxon-Mobil	06/16/03	87	7.71	1.68	9.43			0.81	34.5	95	83462
Exxon-Mobil	06/16/03	87	8.88	1.02	5.66			0.99	33.4	135	74690
Exxon-Mobil	06/16/03	87	7.8	0	0			0.73	21.3	584	20538
Exxon-Mobil	06/16/03	87	8.86	0.89	0.61	TAME	4.48	1.21	29.8	129	40485
Exxon-Mobil	06/16/03	93	7.46	1.39	6.89			0.67	26.8	86	20646
Exxon-Mobil	06/16/03	93	8.22	1.12	6.03			0.76	28.8	138	20899
Irving	06/17/03	87	8.52	1.07	5.96			1.09	32.8	144	80982
Motiva	06/18/03	87	7.8	1.02	4.8	ETBE	0.5	0.97	28.6	339	109451
Gulf	06/23/03	88	8.61	0.53	2.92			1.19	31.9	149	55153

2nd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	06/23/03	87	7.64	0	0			1.2	30	159	92384
Exxon-Mobil	06/23/03	87	8.61	0.53	2.92			1.19	31.9	149	91824
Exxon-Mobil	06/25/03	93	7.52	1.6	7.92			0.78	30.9	109	20814
Exxon-Mobil	06/25/03	93	8.36	1	5.28			0.66	27.6	81	21037
Motiva	06/27/03	87	8.47	2.11	9.4	TAME	1.9	0.86	20.5	496	54564
Motiva	06/27/03	87	7.02	0.46	2	TAME	0.6	0.73	33.1	301	55050
Gulf	06/30/03	88	7.28	0.27	0.89	TAME Methanol	0.24 0.11	0.95	19	113	41310
Exxon-Mobil	06/30/03	87	7.58	0.16	0.9			0.85	26.1	406	45422
Exxon-Mobil	06/30/03	87	8.19	0.15	0.84			0.84	22	54	69199
Weighted Average			**8.14**	**0.55**	**2.91**	**TAME**	**1.16**	**1.08**	**31.06**	**208.37**	
						TBA	**0.32**				
						ETBE	**0.39**				
						Ethanol	**0.01**				
						Methanol	**0.11**				

3rd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	07/03/03	87	7.75	0.33	0	TAME	2.09	1.14	31.6	115	79664
Exxon-Mobil	07/03/03	87	8.55	0.14	0.77			1.28	31.1	127	75007
Irving	07/04/03	87	8.44	0.07	0.39			1.36	32.6	108	83,306
Gulf	07/06/03	87	7.79	1.13	6.28			1.02	21.4	731	39544
Exxon-Mobil	07/06/03	93	7.56	1.33	6.79	TAME	0.55	0.64	27.5	103	15833
Exxon-Mobil	07/06/03	93	8.62	2.5	13.3	Methanol	0.26	0.77	34.6	99	25008
Exxon-Mobil	07/06/03	87	7.69	0.03	0.16			1.11	31.8	479	29184
Motiva	07/07/03	87	7.42	0.24	1.35			0.67	24.4	74	108,426.90
Gulf	07/08/03	87	8.93	0.49	2.69			0.97	32.5	79	7480
Motiva	07/08/03	87	6.8	0.45	1.5	ETBE TAME	0.5 0.6	0.75	34.5	259	59,091.48
Motiva	07/08/03	93	7.1	0	0		0	1.62	46.4	10	35,082.14
Webber	7/8/2003	87	8.72	0.81	4.37	ETBE	0.14	1.05	30.7	164	73,820.53
Gulf	07/10/03	87	6.8	1.82	10.1			0.49	27	37	43966
Gulf	07/11/03	87	8.58	0.5	0.68	TAME	0.29	0.95	29.4	158	44414
Exxon-Mobil	07/11/03	87	7.72	0.05	0.26			1.41	38.4	119	87096
Exxon-Mobil	07/11/03	87	8.58	0.19	0.68	Isobutanol	0.29	0.95	29.4	158	102471
Irving	07/13/03	93	7.03	2.49	13.81	TAME	0.76	0.22	26.3	49	23,535
Gulf	07/14/03	87	7.61	0.7	2.43	TAME	1.51	0.96	24.7	170	54520
Exxon-Mobil	07/16/03	87	7.56	0.13	0.73			1.6	40	109	50138
Exxon-Mobil	07/16/03	87	8.74	0.41	2.27			0.94	35	63	48790
Gulf	07/17/03	93	6.36	2.36	13.15			0.34	27	12	24509
Exxon-Mobil	07/17/03	93	7.56	1.22	6.44	TAME	0.39	0.59	28.1	124	29448
Exxon-Mobil	07/17/03	93	7.59	0.3	1.72			1.53	45.2	28	24664
Motiva	07/19/03	87	7.53	0.01	0.04		0	0.48	25.15	150	198,365.07
Motiva	07/19/03	93	8.76	0.07	0.2	TAME	0.15	0.2	29.9	19	34,986.45

3rd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	07/21/03	87	7.62	0.03	0.15			1.22	39.6	117	97458
Exxon-Mobil	07/21/03	87	8.69	0.33	0.3	Isobutanol	0.21	1.68	29.3	267	94927
Gulf	07/22/03	88	7.59	1.18	6.37	TAME	0.23	3.09	29.1	328	39568
Irving	07/22/03	87	8.62	0.06	0.31			1.61	30.9	286	96,461
Gulf	07/25/03	87	7.24	1.8	10.01			0.53	28.2	83	29980
Motiva	07/27/03	87	7.67	0.73	1.12	TAME	2.94	1.61	28.8	86	34493
Motiva	07/27/03	87	8.8	0.81	1.24	TAME	3.58	0.91	30.6	10	67961
Exxon-Mobil	07/27/03	87	7.76	0.05	0.31			2.19	41.6	206	29563
Exxon-Mobil	07/27/03	87	7.95	0.04	0.24			1.95	38.3	247	54791
Exxon-Mobil	07/28/03	93	7.47	0.82	4.38	TAME	0.19	0.79	26.5	101	29274
Exxon-Mobil	07/28/03	93	8.52	0.97	5.26	TAME	0.2	0.76	35.1	74	19825
Exxon-Mobil	07/29/03	87	8.75	2.01	10.3	TAME Methanol	0.13 0.19	1.21	24.6	212	64523
Exxon-Mobil	07/29/03	87	7.44	0.19	0.92	TAME	0.11	0.85	26.3	378	39306
Exxon-Mobil	07/30/03	87	7.7	0.09	0.33	T-butanol	0.12	2.01	41.7	201	54888
Exxon-Mobil	07/30/03	87	8.81	0.28	0	TAME T-butanol Isobutanol	0.11 0.23 0.10	1.41	28.4	184	47247
Gulf	07/31/03	87	8.81	0.03	0	TAME T-butanol	0.11 0.23	1.41	28.4	184	44268
Exxon-Mobil	07/31/03	87	6.92	1.84	10	T-butanol	0.22	0.44	26.7	74	30020
Webber	8/6/2003	93	7.40	1.80	10.12			0.45	38.8	145	7728
Webber	8/6/2003	88	8.67	1.23	6.42	TAME	0.12	1.24	22.3	322	61030
Motiva	08/08/03	87	8.49	2.37	12.57	T-butanol Sec-butanol	0.19 0.18	1.19	26.4	111	14998

3rd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	08/08/03	87	7.68	2.32	13.01			0.9	30.5	16	89550
Exxon-Mobil	08/09/03	87	7.74	1.25	6.41	Tame T-butanol Sec-butanol	0.13 0.15 0.23	0.91	30.4	140.8	68804
Exxon-Mobil	08/09/03	87	8.49	2.37	12.57	T-butanol Sec- butanol	0.19 0.18	1.19	26.4	86	85623
Gulf	08/10/03	87	8.49	2.37	12.57	T-butanol	0.19	1.19	26.4	86	55180
Motiva	08/10/03	87	6.83	0.1	0.43		0	0.75	33.1	225	39577
Exxon-Mobil	08/10/03	93	7.46	0.64	3.55			1.18	27	142	15030
Exxon-Mobil	08/10/03	93	8.51	0.98	5.45			0.78	32.3	88	19742
Exxon-Mobil	08/10/03	87	7.36	0.34	1.88			0.94	23.6	307	19957
Motiva	08/11/03	93	7.4	0.44	2.37		0	0.58	46.2	107	27962
Exxon-Mobil	08/12/03	87	7.66	1.27	6.34	T-butanol Sec- butanol	0.19 0.37	0.86	30.1	75	44098
Exxon-Mobil	08/12/03	87	8.83	2.42	12.4	T-butanol Sec-butanol	0.28 0.36	1.53	24.5	154	98355
Irving	08/13/03	87	8.83	2.32	12.66	T-butanol	0.31	1.61	25.1	161	97808
Exxon-Mobil	08/13/03	87	7.74	2.42	13.13	Sec-butanol	0.31	1.04	30.1	13	9951
Gulf	08/14/03	87	7.38	2.16	11.56	TAME	0.54	0.72	28.4	71	39447
Gulf	08/14/03	88	6.85	0.1	0.043	TAME	0.11	0.75	33.1	225	49938

3rd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Gulf	08/14/03	93	6.46	2.67	15.05	TAME	0.23	0.56	37.4	153	13035
Motiva	08/14/03	87	7.74	2.42	13.13	Sec-butanol	0.31	1.04	30.1	13	155485
Exxon-Mobil	08/20/03	87	7.75	2.2	11.25	T butanol Isobutanol Sec-butanol	0.24 0.21 0.18	0.95	25.3	107	70189
Exxon-Mobil	08/20/03	87	8.83	2.48	12.79	T-butanol Sec- butanol	0.28 0.34	1.67	23.7	160	107752
Gulf	08/21/03	87	8.83	2.48	12.79	T-butanol	0.28	1.67	23.7	160	46994
Exxon-Mobil	08/22/03	93	7.52	0.76	4.06	TAME	0.17	1.21	27.9	120	29352
Exxon-Mobil	08/22/03	93	8.63	2.45	13.45			0.69	25.1	32	19738
Motiva	08/27/03	87	7.95	0.6	1.4	TAME ETBE T-butanol	1.0 0.7 0.3	1.06	30.4	150	75899
Exxon-Mobil	08/27/03	87	7.81	0.79	3.89	T butanol	0.33	1.63	25.9	169	83645
Exxon-Mobil	08/27/03	87	8.73	0.46	2.09	T butanol	0.33	1.69	29.2	162	93082
Gulf	08/28/03	87	7.8	0.79	3.89	T-butanol	0.33	1.63	25.9	169	27445
Gulf	08/28/03	87	8.3	0.46	2.09	T-butanol	0.33	1.69	29.2	162	26347
Gulf	08/29/03	93	6.83	2.71	15.57	TAME	0.08	0.29	43.6	69	18373
Gulf	08/29/03	88	7.37	0.34	1.35			0.45	42.8	67	19824
Exxon-Mobil	08/29/03	87	7.7	1.66	7.72	TAME	1.49	0.56	20.2	191	34626
Exxon-Mobil	08/29/03	87	8.9	2.37	12.31	TAME	0.66	0.92	20.4	127	39356
Exxon-Mobil	09/01/03	93	7.53	1.47	5.02	T-butanol	0.73	1.4	28.9	135	15026
Exxon-Mobil	09/01/03	93	8.89	2.64	14.48	T-butanol	0.11	0.46	34.7	17	25114

3rd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	09/03/03	87	7.74	0.14	0.61	T butanol	0.15	1.1	27.5	293	74039
Exxon-Mobil	09/03/03	87	8.69	0.8	4.23	T butanol	0.18	1.44	26.9	369	92822
Gulf	09/04/03	87	7.61	1.39	3.25	TAME	4.88	0.91	24.5	23	39724
Irving	09/04/03	93	6.94	2.51	13.91	T-butanol	0.21	0.33	24.4	38	22032
Irving	09/05/03	87	8.66	0.74	4.11	T-butanol Sec-butanol	0.2 0.18	1.43	27.5	349	72037
Motiva	09/06/03	87	7.77	0.02	0.12			0.6	32.4	124	75553
Motiva	09/08/03	87	7.77	0.02	0.12			0.6	32.4	124	41688
Motiva	09/08/03	93	7.52	0.73	4.08	TAME	0.07	0.6	38.3	27	13905
Exxon-Mobil	09/10/03	87	7.7	0.13	0.5	T butanol	0.18	1.14	27.2	276	97278
Gulf	09/11/03	87	7.7	0.13	0.5			1.14	27.2	276	29655
Gulf	09/11/03	87	8.77	0.47	2.36			1.36	27.9	399	51133
Exxon-Mobil	09/11/03	87	8.77	0.47	2.36	T butanol	0.22	1.36	27.9	399	59946
Motiva	09/14/03	87	7.43	0.05	0.3			0.84	27.3	150	49075
Gulf	09/15/03	93	6.5	2.22	12.39			0.47	28.7	18	24481
Exxon-Mobil	09/17/03	87	6.96	0.03	0.15			0.89	29.7	321	58013
Exxon-Mobil	09/17/03	93	8.22	1.11	5.88	TAME	0.32	1.11	30.5	88	15920
Irving	09/18/03	87	8.85	0.2	1.12			1.45	27.5	189	95139
Exxon-Mobil	09/18/03	87	8.89	0.03	0	T butanol	0.12	1.54	29.4	67	195020
Motiva	09/19/03	93	7.96	0.48	1.6	TAME	0.7	0.3	30.9	43	42354
Gulf	09/21/03	93	8.48	0.2	0.98	TAME	0.12	0.4	34.2	49	24779
Exxon-Mobil	09/21/03	93	9.66	0.47	0.12	TAME	2.3	0.07	1.4	10	50094
Motiva	09/23/03	87	10.21	0.12	0	ETBE T-butanol	0.3 0.3	0.9	22.2	150	97698

3rd Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Webber	9/23/2003	94	12.63	0.00	0.00			0.43	41.5	10	14405
Webber	9/23/2003	88	12.58	0.09	0.49			3.18	30.5	10	40461
Exxon-Mobil	09/25/03	87	10.66	0	0			0.58	23	155	222694
Exxon-Mobil	09/03/03	87	8.69	0.8	4.23	T butanol	0.18	1.44	26.9	369	92822
Gulf	09/04/03	87	7.61	1.39	3.25	TAME	4.88	0.91	24.5	23	39724
Irving	09/04/03	93	6.94	2.51	13.91	T-butanol	0.21	0.33	24.4	38	22032
Irving	09/05/03	87	8.66	0.74	4.11	T-butanol Sec-butanol	0.2 0.18	1.43	27.5	349	72037
Motiva	09/06/03	87	7.77	0.02	0.12			0.6	32.4	124	75553
Motiva	09/08/03	87	7.77	0.02	0.12			0.6	32.4	124	41688
Motiva	09/08/03	93	7.52	0.73	4.08	TAME	0.07	0.6	38.3	27	13905
Gulf	09/26/03	87	10.66	0	0			0.58	23	155	103040
Exxon-Mobil	09/30/03	87	10.51	0	0			0.85	25.6	378	93205
Weighted Avereage			**8.33**	**0.78**	**3.9**	**TAME**	**0.91**	**1.1**	**28.73**	**159.82**	
						ETBE	**0.59**				
						Methanol	**0.21**				
						Sec-butanol	**0.47**				
						Isobutanol	**0.22**				
						T-butanol	**0.51**				

4th Quarter Data by Date of Delivery

			RVP	Oxygen	MTBE	Other Oxygenate(s) in Fuel		BENZ	ARO	SULF	
Terminal	Date of transfer	Octane	(psi)	(% wt O_2)	(% Vol)	(Other Oxy. Name)	(% Vol)	(% Vol)	(% Vol)	(ppm)	Barrels
Motiva	10/01/03	87	10.48	0.11	0.08	ETBE T-butanol	0.40 0.20	0.93	26.70	331	98622.94
Exxon-Mobil	10/05/03	87	13.54	0	0			0.77	20.6	71	90035.00
Irving	10/06/03	87	13.45	0.08	0.43			0.78	20.4	52	22117.00
Exxon-Mobil	10/09/03	87	8.81	0.34	1.84			0.52	20	317	60088.43
Gulf	10/10/03	88	8.81	0.034	1.84			0.52	20	317	99930.00
Exxon-Mobil	10/10/03	87	10.58	0.14	0.57			1.33	30.3	87	168382.50
Motiva	10/10/03	87	8.70	0.37	1.84			0.60	24.75	320	120307.11
Webber	10/11/03	88	10.20	0.2	1.22			0.85	30.5	80	59301.47
Exxon-Mobil	10/12/03	93	9.68	0.88	4.63	TAME	0.25	1.24	30	97	59897.00
Irving	10/15/03	93	12.94	1.96	10.43	TAME	0.19	0.23	15.2	48	21915.00
Gulf	10/17/03	87	10.98	0.19	0.81	TAME	0.17	1.23	30.8	102	109035.00
Exxon-Mobil	10/17/03	87	10.98	0.19	0.81			1.23	30.8	102	131972.00
Motiva	10/17/03	87	10.28	0.00	0.00		0.00	0.74	24.10	167	70889.33
Exxon-Mobil	10/19/03	87	11.16	0.12	0.63			1.25	29.6	121	108567.81
Irving	10/22/03	87	12.03	1.81	9.87			0.62	24.9	77	29982.00
Motiva	10/24/03	87	11.68	0.40	0.29	TAME	2.24	0.60	18.90	86	180378.97
Gulf	10/25/03	93	10.26	0.67	3.67			0.87	32.7	76	39574.00
Exxon-Mobil	10/25/03	87	11.57	0.67	3.5			0.87	17.9	80	59489.31
Exxon-Mobil	10/25/03	93	10.26	0.67	3.67			0.87	32.7	76	76183.00

4th Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	10/26/03	87	11.4	0.02	0.09			1.02	29.5	55	150362.50
Gulf	10/27/03	87	11.4	0.02	0.09			1.02	29.5	55	91928.00
Irving	10/28/03	87	11.3	0.02	0.1			1	27.4	57	56022.00
Exxon-Mobil	11/01/03	87	11.36	0.03	0.16			1.47	33.2	67	168486.14
Webber	11/03/03	93	11.71	0.3	1.60			0.56	35.4	49	9970.05
Webber	11/03/03	88	12.19	0.1	0.70			1.69	24.4	249	52942.67
Irving	11/04/03	87	11.28	0.02	0.09			1.04	29.7	63	72378.00
Exxon-Mobil	11/10/03	93	10.62	0.7	3.55	TAME	0.37	0.73	31.6	73	31954.00
Exxon-Mobil	11/12/03	87	14.63	1.68	8.91			0.72	16.9	48	29899.86
Exxon-Mobil	11/13/03	87	12.55	0.22	1.14			0.61	13	68	214373.17
Gulf	11/15/03	87	12.55	0.22	1.14			0.61	13	68	26937.00
Motiva	11/17/03	87	11.81	2.25	12.10			0.61	16.00	88	119702.59
Motiva	11/18/03	93	11.02	0.51	2.65	TAME	0.17	0.62	24.70	76	29768.85
Irving	11/19/03	87	14.01	1.8	9.89			0.67	20.6	89	30219.00
Irving	11/21/03	93	14.62	2.01	10.78			0.25	18.3	75	20696.00
Exxon-Mobil	11/22/03	87	11.83	0.08	0.45			0.87	28.4	71	125105.17
Gulf	11/23/03	87	11.83	0.08	0.45			0.87	28.4	71	67958.00
Irving	11/23/03	87	11.85	0.08	0.42			0.85	30.9	56	84955.00
Gulf	11/28/03	87	12.39	1.37	7.22			0.63	12.9	107	47889.00
Exxon-Mobil	11/28/03	87	12.39	1.37	7.22			0.63	12.9	107	192083.71
Exxon-Mobil	11/29/03	93	10.91	0.64	3.33	TAME	0.24	0.63	34.2	87	50104.00
Motiva	12/01/03	87	12.52	2.41	10.86	TAME	2.29	0.57	15.10	65	75333.90
Gulf	12/04/03	87	13.39	0	0			1.11	26.8	240	71514.00

4th Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	12/04/03	87	12.84	1.35	7.07			0.6	14.7	107	123722.00
Irving	12/05/03	87	12.68	1.07	5.52			0.61	9.9	86	81511.00
Motiva	12/05/03	87	11.75	0.58	0.90	ETBE DIPE	1.10 1.60	0.11	8.90	628	174735.78
Webber	12/05/03	88	13.76	0.1	0.30			0.86	34.5	74	59118.71
Exxon-Mobil	12/11/03	87	12.7	0	0			0.46	26.2	127	250421.45
Gulf	12/12/03	87	12.7	0	0			0.46	26.2	127	48621.00
Motiva	12/12/03	87	8.67	0.51	0.40	ETBE DIPE	1.40 1.40	0.11	8.40	150	28001.44
Motiva	12/13/03	93	12.31	0.52	0.70	DIPE ETBE	1.50 1.00	0.41	6.40	22	25315.71
Exxon-Mobil	12/15/03	87	13.08	0	0			0.63	19.9	7	192994.05
Gulf	12/18/03	87	13.08	0	0			0.63	19.9	7	52650.00
Irving	12/19/03	87	12.97	0	0			0.62	22.2	16	83697.00
Exxon-Mobil	12/21/03	87	13.11	0	0			0.57	23	139	173108.00
Motiva	12/21/03	87	11.36	0.67	0.00	ETBE DIPE	3.70 0.60	0.08	13.30	140	47813.14
Gulf	12/22/03	87	13.11	0	0			0.57	23	139	66911.00
Exxon-Mobil	12/24/03	93	11.65	0.41	2.13	TAME	0.13	0.48	23.9	66	56189.00
Gulf	12/25/03	93	12.02	0	0			0.48	23.9	66	15038.00
Gulf	12/26/03	93	13.42	0	0			0.1	26.6	29	29605.00
Motiva	12/26/03	93	13.38	0.00	0.00			0.10	26.60	29	34576.40

4th Quarter Data by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Webber	12/28/03	93	13.36	2.1	11.04			0.29	15.5	52	27858.57
Webber	12/30/03	88	9.91	0.0	0.00			0.26	28.6	56	59690.74
Motiva	12/31/03	87	11.57	2.42	10.64	TAME	2.65	0.50	15.60	121	48335.91
Weighted Ave.	**Weighted Ave.**		**11.77**	**0.44**	**2.07**	**TAME**	**1.08**	**0.75**	**23.01**	**122.93**	
						ETBE	**1.26**				
						DIPE	**1.40**				
						T-butanol	**0.20**				
Weighted Ave.for the Entire Year			**9.99**	**0.48**	**2.38**	**TAME**	**0.93**	**0.96**	**27.68**	**156.7**	
						ETBE	**0.73**				
						Ethanol	**0.01**				
						Methanol	**0.18**				
						Sec-butanol	**0.26**				
						Isobutanol	**0.22**				
						T-butanol	**0.22**				
						DIPE	**1.40**				

APPENDIX C
Ozone Season Data

Ozone Season by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Gulf	05/01/03	87	7.71	1.23	6.82			0.74	35.8	155	27073
Exxon-Mobil	05/01/03	93	7.62	2.31	13.29			0.62	28.5	117	25275
Exxon-Mobil	05/01/03	93	8.68	1.58	8.75			0.75	33.6	34	30113
Webber	05/01/03	87	7.6	0.48	2.66			3.29	33.9	48	70445
Webber	05/01/03	93	8.63	2.67	14.67	TAME	0.21	0.81	31.7	98	29944
Gulf	05/02/03	89	7.78	0.2	1.14			1.29	39.5	43	44133
Motiva	05/05/03	87	7.58	0	0			1.72	23.7	741	109908
Gulf	05/06/03	87	7.8	0.03	0.17			1.2	35.8	131	27664
Irving	05/06/03	87	8.69	0.03	0.15			1.13	31.8	120	87256
Motiva	05/06/03	87	7.68	0.65	3.59			0.76	25.5	533	108516
Exxon-Mobil	05/06/03	87	7.8	0.03	0.17			1.2	35.8	131	72570
Exxon-Mobil	05/06/03	87	8.77	0.03	0.17			1.15	30.7	120	53701
Motiva	05/10/03	87	8.46	0.99	4.5	ETBE	0.5	1.02	28.3	31	42258
Motiva	05/10/03	93	8.52	2.24	10.8	ETBE TAME T-butanol	0.7 0.4 0.4	0.9	27.3	130	19940
Exxon-Mobil	05/10/03	87	8.95	2.06	11.31	T-butanol	0.11	1.27	30.8	281	7329
Exxon-Mobil	05/12/03	87	7.75	0.03	0.14			0.83	32.9	178	101716
Exxon-Mobil	05/12/03	87	8.63	0.68	3.77			0.93	32.7	196	67249
Gulf	05/13/03	88	8.63	0.68	3.77			0.93	32.7	196	72606
Gulf	05/14/03	90	7.7	0.32	1.8			1.27	37.7	128	40196
Motiva	05/16/03	93	7.6	0	0			0.16	33.6	43	19576
Motiva	05/16/03	93	8.77	0.01	0.03			0.17	29.8	33	20609
Exxon-Mobil	05/17/03	93	7.36	1.12	4.84			0.57	27.7	79	25205

Ozone Season by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Exxon-Mobil	05/17/03	93	8.3	2.37	14.76			0.62	19.1	42	24985
Exxon-Mobil	05/19/03	87	7.68	0.52	2.91			0.75	29	208	81293
Exxon-Mobil	05/19/03	87	8.32	0.34	1.91			2	34.5	106	86091
Irving	05/20/03	87	8.71	0.61	3.32			0.52	25.4	56	72522
Motiva	05/25/03	87	8.75	1.54	7.7	ETBE	0.3	0.86	25.5	339	56128
Motiva	05/25/03	93	7.76	0.51	1.9	TAME	0.4	1.54	26.9	339	19108
Gulf	05/26/03	87	7.75	0.04	0.23	Ethanol	0.01	1.01	36.5	41	35933
Exxon-Mobil	05/26/03	87	8.97	0.36	1.99			1.19	28	63	56451
Exxon-Mobil	05/26/03	93	7.61	1.36	6.84			0.65	24.9	99	18105
Exxon-Mobil	05/26/03	93	8.85	0.54	2.94			1.16	25.5	87	14970
Exxon-Mobil	05/27/03	87	7.76	0.26	1.42			0.95	32.7	244	72097
Exxon-Mobil	05/27/03	87	8.66	0.09	0.48			1.1	31.6	131	100366
Gulf	05/28/03	87	7.76	0.26	1.42			0.95	32.7	244	25751
Gulf	05/28/03	87	8.66	0.09	0.48			1.1	31.6	131	39446
Irving	06/02/03	87	6.97	2.51	13.75			0.31	17.7	73	21699
Exxon-Mobil	06/02/03	87	7.55	0.38	2.12			0.63	28	491	101850
Exxon-Mobil	06/02/03	87	8.09	0.39	2.15			1.8	32.5	306	75192
Motiva	06/03/03	87	7.4	1.02	4.89	TAME	0.85	0.6	23.3	223	110433
Irving	06/04/03	87	7.99	0.4	2.21			1.72	33.1	287	61295
Gulf	06/06/03	93	7.72	2.07	11.66			0.9	30.5	355	39953
Webber	06/07/03	87	8.68	0.81	4.37	ETBE	0.14	1.05	30.7	164	65604
Motiva	06/08/03	87	8.39	1.06	4.7	T-butanol	0.4	0.93	28.4	339	55236
Exxon-Mobil	06/09/03	87	7.68	0.25	1.57			0.83	31.3	453	91919
Exxon-Mobil	06/09/03	87	7.45	0.22	1.24			0.79	33.7	412	92398
Gulf	06/10/03	87	7.68	0.25	1.57			0.83	31.3	453	27687

Ozone Season by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Gulf	06/10/03	87	7.45	0.22	1.24			0.79	33.7	412	27479
Gulf	06/12/03	87	7.57	0.4	2.15			1.08	32.4	105	39753
Exxon-Mobil	06/16/03	87	7.71	1.68	9.43			0.81	34.5	95	83462
Exxon-Mobil	06/16/03	87	8.88	1.02	5.66			0.99	33.4	135	74690
Exxon-Mobil	06/16/03	87	7.8	0	0			0.73	21.3	584	20538
Exxon-Mobil	06/16/03	87	8.86	0.89	0.61	TAME	4.48	1.21	29.8	129	40485
Exxon-Mobil	06/16/03	93	7.46	1.39	6.89			0.67	26.8	86	20646
Exxon-Mobil	06/16/03	93	8.22	1.12	6.03			0.76	28.8	138	20899
Irving	06/17/03	87	8.52	1.07	5.96			1.09	32.8	144	80982
Motiva	06/18/03	87	7.8	1.02	4.8	ETBE	0.5	0.97	28.6	339	109451
Gulf	06/23/03	88	8.61	0.53	2.92			1.19	31.9	149	55153
Exxon-Mobil	06/23/03	87	7.64	0	0			1.2	30	159	92384
Exxon-Mobil	06/23/03	87	8.61	0.53	2.92			1.19	31.9	149	91824
Exxon-Mobil	06/25/03	93	7.52	1.6	7.92			0.78	30.9	109	20814
Exxon-Mobil	06/25/03	93	8.36	1	5.28			0.66	27.6	81	21037
Motiva	06/27/03	87	8.47	2.11	9.4	TAME	1.9	0.86	20.5	496	54564
Motiva	06/27/03	87	7.02	0.46	2	TAME	0.6	0.73	33.1	301	55050
Gulf	06/30/03	88	7.28	0.27	0.89	TAME Methanol	0.24 0.11	0.95	19	113	41310
Exxon-Mobil	06/30/03	87	7.58	0.16	0.9			0.85	26.1	406	45422
Exxon-Mobil	06/30/03	87	8.19	0.15	0.84			0.84	22	54	69199
Exxon-Mobil	07/03/03	87	7.75	0.33	0	TAME	2.09	1.14	31.6	115	79664
Exxon-Mobil	07/03/03	87	8.55	0.14	0.77			1.28	31.1	127	75007
Irving	07/04/03	87	8.44	0.07	0.39			1.36	32.6	108	83,306

Ozone Season by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	Other Oxygenate(s) in Fuel (% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Gulf	07/06/03	87	7.79	1.13	6.28			1.02	21.4	731	39544
Exxon-Mobil	07/06/03	93	7.56	1.33	6.79	TAME	0.55	0.64	27.5	103	15833
Exxon-Mobil	07/06/03	93	8.62	2.5	13.3	Methanol	0.26	0.77	34.6	99	25008
Exxon-Mobil	07/06/03	87	7.69	0.03	0.16			1.11	31.8	479	29184
Motiva	07/07/03	87	7.42	0.24	1.35			0.67	24.4	74	108,426.90
Gulf	07/08/03	87	8.93	0.49	2.69			0.97	32.5	79	7480
Motiva	07/08/03	87	6.8	0.45	1.5	ETBE TAME	0.5 0.6	0.75	34.5	259	59,091.48
Motiva	07/08/03	93	7.1	0	0			1.62	46.4	10	35,082.14
Webber	7/8/2003	87	8.72	0.81	4.37	ETBE	0.14	1.05	30.7	164	73,820.53
Gulf	07/10/03	87	6.8	1.82	10.1			0.49	27	37	43966
Gulf	07/11/03	87	8.58	0.5	0.68	TAME	0.29	0.95	29.4	158	44414
Exxon-Mobil	07/11/03	87	7.72	0.05	0.26			1.41	38.4	119	87096
Exxon-Mobil	07/11/03	87	8.58	0.19	0.68	Isobutanol	0.29	0.95	29.4	158	102471
Irving	07/13/03	93	7.03	2.49	13.81	TAME	0.76	0.22	26.3	49	23,535
Gulf	07/14/03	87	7.61	0.7	2.43	TAME	1.51	0.96	24.7	170	54520
Exxon-Mobil	07/16/03	87	7.56	0.13	0.73			1.6	40	109	50138
Exxon-Mobil	07/16/03	87	8.74	0.41	2.27			0.94	35	63	48790
Gulf	07/17/03	93	6.36	2.36	13.15			0.34	27	12	24509
Exxon-Mobil	07/17/03	93	7.56	1.22	6.44	TAME	0.39	0.59	28.1	124	29448
Exxon-Mobil	07/17/03	93	7.59	0.3	1.72			1.53	45.2	28	24664
Motiva	07/19/03	87	7.53	0.01	0.04			0.48	25.15	150	198,365.07

Ozone Season by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Motiva	07/19/03	93	8.76	0.07	0.2	TAME	0.15	0.2	29.9	19	34,986.45
Exxon-Mobil	07/21/03	87	7.62	0.03	0.15			1.22	39.6	117	97458
Exxon-Mobil	07/21/03	87	8.69	0.33	0.3	Isobutanol	0.21	1.68	29.3	267	94927
Gulf	07/22/03	88	7.59	1.18	6.37	TAME	0.23	3.09	29.1	328	39568
Irving	07/22/03	87	8.62	0.06	0.31			1.61	30.9	286	96,461
Gulf	07/25/03	87	7.24	1.8	10.01			0.53	28.2	83	29980
Motiva	07/27/03	87	7.67	0.73	1.12	TAME	2.94	1.61	28.8	86	34493
Motiva	07/27/03	87	8.8	0.81	1.24	TAME	3.58	0.91	30.6	10	67961
Exxon-Mobil	07/27/03	87	7.76	0.05	0.31			2.19	41.6	206	29563
Exxon-Mobil	07/27/03	87	7.95	0.04	0.24			1.95	38.3	247	54791
Exxon-Mobil	07/28/03	93	7.47	0.82	4.38	TAME	0.19	0.79	26.5	101	29274
Exxon-Mobil	07/28/03	93	8.52	0.97	5.26	TAME	0.2	0.76	35.1	74	19825
Exxon-Mobil	07/29/03	87	8.75	2.01	10.3	TAME Methanol	0.13 0.19	1.21	24.6	212	64523
Exxon-Mobil	07/29/03	87	7.44	0.19	0.92	TAME	0.11	0.85	26.3	378	39306
Exxon-Mobil	07/30/03	87	7.7	0.09	0.33	T-butanol	0.12	2.01	41.7	201	54888
Exxon-Mobil	07/30/03	87	8.81	0.28	0	TAME T-butanol Isobutanol	0.11 0.23 0.10	1.41	28.4	184	47247
Gulf	07/31/03	87	8.81	0.03	0	TAME T-butanol	0.11 0.23	1.41	28.4	184	44268
Exxon-Mobil	07/31/03	87	6.92	1.84	10	T-butanol	0.22	0.44	26.7	74	30020
Webber	8/6/2003	93	7.40	1.80	10.12			0.45	38.8	145	7728
Webber	8/6/2003	88	8.67	1.23	6.42	TAME	0.12	1.24	22.3	322	61030

Ozone Season by Date of Delivery

Terminal	Date of transfer	Octane	RVP (psi)	Oxygen (% wt O_2)	MTBE (% Vol)	Other Oxygenate(s) in Fuel (Other Oxy. Name)	(% Vol)	BENZ (% Vol)	ARO (% Vol)	SULF (ppm)	Barrels
Motiva	08/08/03	87	8.49	2.37	12.57	T-butanol Sec-Butanol	0.19 0.18	1.19	26.4	111	14998
Exxon-Mobil	08/08/03	87	7.68	2.32	13.01			0.9	30.5	16	89550
Exxon-Mobil	08/09/03	87	7.74	1.25	6.41	TAME T-butanol Sec-butanol	0.13 0.15 0.23	0.91	30.4	140.8	68804
Exxon-Mobil	08/09/03	87	8.49	2.37	12.57	T-butanol Sec-butanol	0.19 0.18	1.19	26.4	86	85623
Gulf	08/10/03	87	8.49	2.37	12.57	T-butanol	0.19	1.19	26.4	86	55180
Motiva	08/10/03	87	6.83	0.1	0.43			0.75	33.1	225	39577
Exxon-Mobil	08/10/03	93	7.46	0.64	3.55			1.18	27	142	15030
Exxon-Mobil	08/10/03	93	8.51	0.98	5.45			0.78	32.3	88	19742
Exxon-Mobil	08/10/03	87	7.36	0.34	1.88			0.94	23.6	307	19957
Motiva	08/11/03	93	7.4	0.44	2.37			0.58	46.2	107	27962
Exxon-Mobil	08/12/03	87	7.66	1.27	6.34	T-butanol Sec-butanol	0.19 0.37	0.86	30.1	75	44098
Exxon-Mobil	08/12/03	87	8.83	2.42	12.4	T-butanol Sec-butanol	0.28 0.36	1.53	24.5	154	98355
Irving	08/13/03	87	8.83	2.32	12.66	T-butanol	0.31	1.61	25.1	161	97808
Exxon-Mobil	08/13/03	87	7.74	2.42	13.13	Sec-butanol	0.31	1.04	30.1	13	9951
Gulf	08/14/03	87	7.38	2.16	11.56	TAME	0.54	0.72	28.4	71	39447
Gulf	08/14/03	88	6.85	0.1	0.043	TAME	0.11	0.75	33.1	225	49938
Gulf	08/14/03	93	6.46	2.67	15.05	TAME	0.23	0.56	37.4	153	13035
Motiva	08/14/03	87	7.74	2.42	13.13	Sec-Butanol	0.31	1.04	30.1	13	155485

Ozone Season by Date of Delivery

			RVP	Oxygen	MTBE	Other Oxygenate(s) in Fuel		BENZ	ARO	SULF	
Terminal	Date of transfer	Octane	(psi)	(% wt O_2)	(% Vol)	(Other Oxy. Name)	(% Vol)	(% Vol)	(% Vol)	(ppm)	Barrels
Exxon-Mobil	08/20/03	87	7.75	2.2	11.25	T Butanol Isobutanol Sec-butanol	0.24 0.21 0.18	0.95	25.3	107	70189
Exxon-Mobil	08/20/03	87	8.83	2.48	12.79	T-butanol Sec-butanol	0.28 0.34	1.67	23.7	160	107752
Gulf	08/21/03	87	8.83	2.48	12.79	T-butanol	0.28	1.67	23.7	160	46994
Exxon-Mobil	08/22/03	93	7.52	0.76	4.06	TAME	0.17	1.21	27.9	120	29352
Exxon-Mobil	08/22/03	93	8.63	2.45	13.45			0.69	25.1	32	19738
Motiva	08/27/03	87	7.95	0.6	1.4	TAME ETBE T-butanol	1.0 0.7 0.3	1.06	30.4	150	75899
Exxon-Mobil	08/27/03	87	7.81	0.79	3.89	T Butanol	0.33	1.63	25.9	169	83645
Exxon-Mobil	08/27/03	87	8.73	0.46	2.09	T Butanol	0.33	1.69	29.2	162	93082
Gulf	08/28/03	87	7.8	0.79	3.89	T-butanol	0.33	1.63	25.9	169	27445
Gulf	08/28/03	87	8.3	0.46	2.09	T-butanol	0.33	1.69	29.2	162	26347
Gulf	08/29/03	93	6.83	2.71	15.57	TAME	0.08	0.29	43.6	69	18373
Gulf	08/29/03	88	7.37	0.34	1.35			0.45	42.8	67	19824
Exxon-Mobil	08/29/03	87	7.7	1.66	7.72	TAME	1.49	0.56	20.2	191	34626
Exxon-Mobil	08/29/03	87	8.9	2.37	12.31	TAME	0.66	0.92	20.4	127	39356
Exxon-Mobil	09/01/03	93	7.53	1.47	5.02	T-butanol	0.73	1.4	28.9	135	15026
Exxon-Mobil	09/01/03	93	8.89	2.64	14.48	T-butanol	0.11	0.46	34.7	17	25114
Exxon-Mobil	09/03/03	87	7.74	0.14	0.61	T Butanol	0.15	1.1	27.5	293	74039
Exxon-Mobil	09/03/03	87	8.69	0.8	4.23	T Butanol	0.18	1.44	26.9	369	92822
Gulf	09/04/03	87	7.61	1.39	3.25	TAME	4.88	0.91	24.5	23	39724
Irving	09/04/03	93	6.94	2.51	13.91	T-butanol	0.21	0.33	24.4	38	22032

Ozone Season by Date of Delivery

			RVP	Oxygen	MTBE	Other Oxygenate(s) in Fuel		BENZ	ARO	SULF	
Terminal	**Date of transfer**	**Octane**	**(psi)**	**(% wt O_2)**	**(% Vol)**	**(Other Oxy. Name)**	**(% Vol)**	**(% Vol)**	**(% Vol)**	**(ppm)**	**Barrels**
Irving	09/05/03	87	8.66	0.74	4.11	T-butanol Sec-Butanol	0.2 0.18	1.43	27.5	349	72037
Motiva	09/06/03	87	7.77	0.02	0.12			0.6	32.4	124	75553
Motiva	09/08/03	87	7.77	0.02	0.12			0.6	32.4	124	41688
Motiva	09/08/03	93	7.52	0.73	4.08	TAME	0.07	0.6	38.3	27	13905
Exxon-Mobil	09/10/03	87	7.7	0.13	0.5	T Butanol	0.18	1.14	27.2	276	97278
Gulf	09/11/03	87	7.7	0.13	0.5			1.14	27.2	276	29655
Gulf	09/11/03	87	8.77	0.47	2.36			1.36	27.9	399	51133
Exxon-Mobil	09/11/03	87	8.77	0.47	2.36	T Butanol	0.22	1.36	27.9	399	59946
Motiva	09/14/03	87	7.43	0.05	0.3			0.84	27.3	150	49075
Gulf	09/15/03	93	6.5	2.22	12.39			0.47	28.7	18	24481
Weighted Ave.			**8.03**	**0.8**	**4.08**	**TAME**	**0.99**	**1.09**	**29.74**	**190.35**	
						ETBE	**0.42**				
						Ethanol	**0.01**				
						Methanol	**0.18**				
						Sec-butanol	**0.26**				
						Isobutanol	**0.22**				
						T-butanol	**0.23**				