II. STANDARDS[1]

1. **Question:** What are the standards for RFG?

Answer: The standards applicable to RFG under each model may be found in § 80.41 of the regulations.(7/1/94)

2. **Question:** What is the maximum oxygen content a refiner, importer or blender may certify, including blending allowances? Does this maximum oxygen content vary according to oxygenate type?

Answer: In general, refiners, importers, and oxygenate blenders may not certify fuel at an oxygen level above the maximum cap of 2.7% by weight for VOC controlled RFG, or 3.5% by weight for non-VOC controlled RFG. The maximum oxygen content for RFG does not vary according to oxygenate type, nor will blending allowances be permitted. This may be modified by state petition under § 80.41(g). Also, oxygen content must otherwise be federally permissible. More specifically, under the substantially similar interpretive rule (56 FR 5352, February 11, 1991), oxygen content is limited to 2.7% by weight unless waived under section 211(f) of the Clean Air Act.(7/1/94)

3. **Question**: Can a refiner ship gasoline with an oxygen content higher than 2.9 weight % using ethers? The purpose is to quickly increase the oxygen content in the distribution system.

Answer: In general, the maximum oxygen content for RFG that is not designated as VOC-controlled is 3.5 weight% oxygen. However, under the terms of the § 211(f) "Sun" waiver, MTBE blends are restricted to 15 volume% (or approximately 2.7 weight% oxygen). Refiners may ship RFG designated as VOC-controlled only if the RFG has an oxygen content of 1.5 to 2.7 weight%.

For those areas with state oxygenated gasoline programs under § 211(m) of the Act, EPA has granted a "blending tolerance" which allows upstream parties to introduce ethers of up to 2.9 weight% oxygen. The reason for this tolerance was to address the slight dilution of oxygen content in the distribution system and to ensure downstream compliance with the 2.7 weight % oxygen content for oxygenated gasoline program areas under § 211(m). This "blending tolerance" only applies in oxygenated gasoline program areas. For those oxygenated gasoline areas that are also RFG areas, the blending tolerance would only apply during the oxygenated gasoline control season (i.e. there is no "blending tolerance" in these areas during the VOC-controlled season or for VOC-controlled RFG).(7/1/94)

4. **Question:** What is the definition of oxygenated fuels program control area and oxygenated fuels program control period?

Answer: As per section 80.2 of the regulations, an oxygenated fuels program control area means a geographic area in which only oxygenated gasoline may be sold or dispensed during the control period. An oxygenated fuels program control period means the period during which oxygenated gasoline must be

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[1] This document draws a distinction between the standards that apply to refiners for gasoline produced and importers for gasoline imported, to the standards that apply only downstream of the refinery or import facility. These RFG "downstream" standards are the per-gallon maximums or minimums associated with the following average standards: under the simple model, oxygen and benzene, and RVP in the case of VOC-controlled RFG; under the complex model, oxygen, benzene, and NOx emissions performance, and VOC emissions performance in the case of VOC-controlled RFG.

sold or dispensed in any oxygenated gasoline control area, pursuant to section 211(m)(2) of the Act, and as specified in EPA guidance. Control seasons vary from 4-7 months in length depending on the state implemented program. A list of geographic areas required to implement oxygenated fuels programs and the length of their specific control periods is attached at the end of this document as Attachment I.(7/1/94)

5. **Question:** Will carbon monoxide non-attainment areas have to market 2.0% oxygen during one season and 2.7% oxygen during another season?

Answer: If an RFG area is also an oxygenated fuels program control area, then the RFG distributed to that area during the designated carbon monoxide control season will, pursuant to section 211(m) of the Act, require an average of 2.7% oxygen by weight with a minimum oxygen content of 2.0% by weight. If a state oxygenated fuels program does not provide for averaging, the minimum oxygen content is 2.7% by weight. During the remainder of the year, RFG distributed to that area must contain either 2.0% oxygen by weight or, if averaging, must contain 2.1% oxygen on average with a minimum allowable oxygen content of 1.5% by weight. (Note: California has applied for a waiver from the 2.7% oxygen standard for the oxygenated fuels program, and currently has a 1.8% to 2.2% oxygen program enforced in the oxygenated fuels program control areas. Therefore, the specific waiver allowances for California would apply during the oxygenated fuel control season).(7/1/94)

6. **Question:** Will areas that opted into RFG have to meet the 2.0% oxygen requirement all year?

Answer: Areas that have opted into the RFG program will have to meet the same oxygen content standards as other RFG areas (i.e., 2.0% per gallon or 2.1% oxygen if averaging). However, if an RFG area is also an oxygenated fuels program control area, RFG distributed to that area during the control season must meet the oxygen content standards of the state implemented oxygenated fuels program as discussed in the answer to question #4 above.(7/1/94)

7. **Question:** Given EPA's stated intent in the preamble to the direct final rule of July 20, 1994, it is our interpretation of the RFG regulations that refiners may certify and release a non-VOC controlled RBOB designated for blending with 10 vol% ethanol ("gasohol waiver"), provided the refinery's certification sample does not exceed 4.0 wt% oxygen. Is our interpretation correct?

Answer: In the direct final rule EPA changed the maximum oxygen range for both the simple and complex model from 3.5 wt% to 4.0 wt% in order to accommodate 10 vol% ethanol blends within a range of specific gravities. As noted in the preamble to the direct final rule, density variations in gasoline blendstocks may result in variation in the oxygen content of an oxygenated fuel on a weight percent basis despite the fact that the volume percent remains fixed. See 59 FR 36947. The preamble goes on to state that, as an example, the oxygen content of a 10 volume % ethanol blend may be as low as 3.4 wt% and as high as 4.0 wt%.

Although the range in the models was changed, § 80.41(g) provides that the maximum oxygen content for simple model RFG is 3.5 wt% in the case of VOC-controlled RFG and 2.7 wt% in the case of non-VOC-controlled RFG. The direct final rule did not change these provisions and they remain in effect. However, EPA believes that the maximum oxygen content provisions for RFG should accommodate blended oxygenates that meet the applicable Clean Air Act section 211(f) "substantially similar" and waiver provisions. In consequence, EPA believes the oxygen maximums specified in § 80.41(g) should be adjusted to reflect the expected maximum oxygen content when RBOB is blended with 10 vol% ethanol in the case of non-VOC-controlled RFG and 7.7 vol% ethanol in the case of VOC-controlled RFG. These adjusted oxygen maximums are 4.0 wt% in the case of non-VOC-controlled RFG and 3.2 wt% in the case of VOC-controlled RFG. EPA intends to change the oxygen maximums specified in § 80.41(g) to reflect these adjustments in a future rulemaking. In the meantime, EPA will allow parties to use these adjusted oxygen maximums. (4/18/95)

8. **Question:** Can total oxygen content, which may include small amounts of oxygenates such as DIPE that are not required to be reported, be used in demonstrating compliance with the oxygen standard? If so, in filling out the batch reports, the percent weight oxygen shown in Item 8.1 will not necessarily add up to the oxygen content that can be calculated from the sum of individual oxygenates shown in Items 8.7 thru 8.12.

Answer: Total oxygen content may be used for demonstrating compliance with the oxygen standard. If total oxygen content is used, the total oxygen weight percent in Item 8.1 of the batch report may not necessarily be identical to the oxygen weight percent that can be calculated from the sum of the individual oxygenates reported in Items 8.7 thru 8.12. (5/23/95)

9. **Question:** Section 80.41(h)(1) specifies that RFG may contain no heavy metals. What specifically does that mean, and is a refiner required to test for the presence of heavy metals?

Answer: The prohibition of heavy metals in RFG means that heavy metals may not be added, nor may it contain more than trace levels that may be picked up from the transportation/distribution system. In fact, no substantially similar unleaded gasoline may contain any elements purposely added outside of carbon, hydrogen, oxygen, nitrogen, and sulfur. Refiners are not required to test for heavy metals; however, quality control measures should be in place to ensure that heavy metals are not being added.(7/1/94)

10. **Question:** The emissions standard for simple model RFG is 100% of the baseline. Is this the refiner's baseline or the statutory baseline?

Answer: For reformulated gasoline under the Simple Model, refiners must not allow the level of sulfur, olefins, and/or T90 to rise above the levels of these parameters in their individual baseline fuels. The only exception is if a refiner meets the requirements for using the statutory baseline in lieu of an individual 1990 baseline.(7/1/94)

11. **Question:** For simple model RFG, will the RVP be 8.1 psi max. all year around or will the 13.5 psi be allowed during the winter months in VOC-Control Region 2?

Answer: The 8.1 psi maximum for per gallon RFG applies to any RFG designated as VOC controlled for use in VOC-Control Region 2. VOC controlled RFG is required only during the summer months (the period May 1 through September 15 for all facilities except retail stations, and June 1 through September 15 for retail stations). As well, VOC-Control Region 1 has a simple model per gallon maximum standard of 7.2 psi during the summer. There are no maximum RVP requirements for gasoline designated as non-VOC controlled during the winter months for either VOC-Control Regions 1 or 2.(7/1/94)

[Note: The RFG Simple Model oxygen maximum standards were changed to match the substantially similar limits, with certain exceptions. *See* 61 FR 12030, March 25, 1996.]

12. **Question:** Must the complex model be used to certify RFG with an oxygen level greater than 2.7%?

Answer: From the period January 1, 1995, through December 31, 1997, the simple model may be used for VOC-controlled RFG in a state which has elected to use the 3.5% by weight maximum oxygen content pursuant to 80.41(g). (Currently, no state has made such an election). In addition, the simple model may be used for RFG not designated as VOC-controlled which has a maximum oxygen content of 3.5% by weight.(7/1/94)

13. **Question:** Section 80.41(h)(2)(iii) and EPA's draft reporting forms imply that the sulfur, T-90 and

olefin restrictions associated with the simple model do not apply on a refinery basis for a refiner with more than one refinery, but instead apply to the refiner's aggregation of his refineries as chosen under the antidumping program. Is that correct?

Answer: If a refiner that operates more than one refinery elects to aggregate some or all of its refineries under section 80.101(h)(1), the aggregation of refineries must meet the standards for sulfur, T-90, and olefins for RFG that is produced at the aggregated refineries, on an annual average basis. If a refiner that operates more than one refinery chooses not to aggregate its refineries, each refinery must comply with the sulfur, T-90, and olefin standards for the RFG produced at each refinery on an individual refinery basis.(7/1/94)

14. **Question**: Does the refiner baseline, either an individual baseline or statutory baseline, have any relevance when calculating the toxic emissions reduction requirements for RFG, assuming the simple model technique is used? Does each refiner have a different starting point and therefore a different ending point when achieving the 15% reduction in toxic emissions?

Answer: Under the simple model, individual baselines are not used to determine compliance with the toxics standard for RFG. The toxics standard is set at a specified percentage reduction in emissions, determined using a model specified in the regulations. Neither the toxics standard nor the toxics emissions model are based on a refiner's or importer's individual baseline values. Each refiner has the same "endpoint" in that they have the same emissions performance standard, measured using the same emissions model. Each refiner has its own "starting point" in that the actual characteristics of that producer's fuel is used in the emissions model. However, the individual baseline is not used to determine compliance with the toxics standard. (10/3/94)

15. **Question**: In determining the standards under the early use Complex Model, does a refiner need to comply with a 15% reduction (or, in the case of an averaging scenario, a 16.5% reduction) from the emission standards determined under §80.41(j) for VOC and toxics?

Answer: No. The emission standards (when expressed in terms of percent reduction from the statutory baseline) determined under §80.41(j) for VOC, toxics, and NOx are the emission performance levels below which reformulated gasoline cannot be certified. The early use Complex Model emission standards calculated per §80.41(j) automatically include the VOC and toxics reductions required under the RFG program. No additional reductions beyond the standards established under §80.41(j) are required. (3/7/96)

16. **Question**: Under the early use Complex Model, emission standards for VOC, toxics, and NOx are determined according to §80.41(j). If per-gallon standards are being determined, the values from the table in §80.41(a) are used to calculate the emission standards with which a refiner must comply. If averaging standards are being determined, the values from the table in §80.41(b) are used instead. However, since the table in §80.41(b) includes per-gallon limitations under the averaging program, how should the per-gallon fuel property limits be translated into per-gallon emission limits under the early use Complex Model?

Answer: To determine per-gallon emission limits under the early use Complex Model for an averaging scenario, first determine the standards for VOC, toxics, and NOx according to §80.41(j). These standards should be represented as percent reduction from the statutory baseline despite the fact that the calculations should be performed using g/mi values (see question #3 below for details). Then subtract 4.00% from each of the averaging standards to obtain the per-gallon limits. Per-gallon emission limits should only be calculated for VOC and NOx. (3/7/96)

17. **Question**: When determining the emission standards under the early use Complex Model, what

oxygenate should be used?

Answer: For the purposes of setting the standards for RFG under §80.41(j), the oxygenate should be assumed to be MTBE to be consistent with the assumptions made during EPA's standards-setting process for the mandatory use of the Complex Model in 1998. (3/7/96)

18. **Question**: Are the per-gallon limits for fuel benzene and oxygen still applicable under the early-use Complex Model?

Answer: Yes. However, the Simple Model standards for RVP are not applicable under the early use Complex Model, unless compliance is being determined per the alternative Simple Model approach described in a 1/22/96 Q&A. (3/7/96)

19. **Question**: Please explain how to determine the proper aromatics value to use in calculating early complex model standards.

Answer: Section 80.41(j)(2) states that early complex model standards should be calculated using "the aromatics value which, together with the [applicable simple model] values for benzene, RVP, and oxygen meets the simple model toxics requirement." Thus, when calculating early complex model standards that are being met on a per-gallon basis, the simple model per-gallon standards under § 80.41(a) for oxygen (2.0 wt%) and benzene (1.00 vol%), and the applicable standard for RVP (7.2 psi for Region 1, 8.1 psi for Region 2, and 8.7 psi for winter) are used to determine the aromatics value that results in a 15 % toxics reduction calculated under the simple model. These aromatics values are the following:

Category of Gasoline	Aromatics Value
VOC Controlled for Region 1	37.1
VOC Controlled for Region 2	33.1
Not VOC Controlled	23.8

A refiner then can calculate the per-gallon standards for VOC, toxics and NOx that apply at a particular refinery. Consider, for example, a refiner who operates Refinery X. Assume that the relevant individual

baseline values for Refinery X are: sulfur, 310 ppm; E300, 81 %; and olefins, 12.9 vol%. Using the complex model, the following early complex model per-gallon standards are calculated:

Gasoline Category	Per Gallon Standards (% change)		
	VOC	Toxics	NOx
VOC Controlled for Region 1[2]	-33.31	-18.72	0.68
VOC Controlled for Region 2	-14.03	-18.23	1.00
Not VOC Controlled	n/a	-15.45	-0.77

The average standards for VOC, toxics and NOx, however, address gasoline in three categories (VOC controlled for Region 1, VOC controlled for Region 2, and not VOC controlled), so that calculating the proper annual aromatics value requires weighting the proportions of gasoline in these categories, such that the overall toxics reduction under the simple model is 16.5 %.

The regulations establish a precedent for the weighting of summer gasoline (Region 1 plus Region 2 gasoline) and winter gasoline of 39.6 %, and 60.4 %, respectively, representing a national average gasoline volume split between the two seasons. The annual average baseline fuel parameters and emissions given in § 80.91(c)(5) were calculated on the basis of this 39.6 to 60.4 summer to winter ratio. In addition, this same ratio was used in generating the complying simple model reformulated gasolines given in Section IV.H of the preamble to the Final Rule, subsequently evaluated under the complex model to determine the Phase I standards under §§ 80.41(c) and (d). As a result, these weightings also should be used when calculating the applicable standards under the early-use complex model. Thus, in every instance a refiner should use a summer weighting of 39.6 % and a winter weighting is 60.4 %, regardless of the actual portions of a refinery's gasoline that are classified as VOC controlled or non-VOC controlled.

The regulations do not contain any precedent for establishing the ratio of summer gasoline that is in the Region 1 versus Region 2 category, however. As a result, under the early complex model a refiner should use the actual volumes of gasoline produced in these summer categories to establish the weighting of summer gasoline in the Region 1 versus Region 2 category. Thus, for example, if the classification of the gasoline produced at Refinery X is 25 % VOC controlled for Region 1, and 75 % VOC controlled for Region 2, the refiner would calculate the weighting of gasoline in the two summer gasoline categories as 9.9 % Region 1 (0.25 X 39.6 = 9.9 %), and 29.7 % Region 2 (0.75 X 39.6 % = 29.7 %). The winter category is given a weighting of 60.4 % in every instance, regardless of the portion of a refinery's gasoline that is classified as winter.

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[2] For example, the following values are used with the complex model to calculate the per-gallon standards for VOC, Toxics and NOx emissions performance for gasoline classified as VOC Controlled for Region 1:

MTBE	2 wt% (§ 80.41(a) standard)
sulfur	310 ppm (refinery baseline value)
RVP	7.2 psi (§ 80.41(a) standard)
E200	41 % (seasonal value from § 80.45(b)(2))
E300	81 % (refinery baseline value)
aromatics	37.1 vol% (calculated as discussed above)
olefins	12.9 vol% (refinery baseline value)
benzene	1 vol% (§ 80.41(a) standard)

The simple model then is used to determine a single aromatics value that, when applied in all three gasoline categories, results in an overall toxics reduction of 16.5 %. In the case of the Refinery X example, this aromatics value is 26.6 vol%, determined as follows:

Category of Gasoline	Category Weighting (%)	Toxics Reduction @ 26.6 vol% aromatics	Category Weighting X Toxics Reduction
VOC, Region 1	9.9	- 25.1	- 2.5
VOC, Region 2	29.7	- 21.9	- 6.5
Not VOC Controlled	60.4	- 12.4	- 7.5
Total	100		- 16.5

In order to calculate the average standards for VOC, toxics and NOx emissions performance, the emissions are calculated using the complex model for each of the three gasoline categories on the basis

of an aromatics value of 26.6 vol%. The average VOC emissions performance standards for Refinery X are the percent changes shown by the complex model runs, as follows:

Category of Gasoline	Average VOC Standards (% change)
VOC Controlled for Region 1[3]	
Annual Average Standard[4]	-36.79
Per-Gallon Minimum[5]	-32.79
VOC Controlled for Region 2	
Annual Average Standard	-17.19
Per-Gallon Minimum	-13.19

In the case of the annual average standards for toxics and NOx, the emission results must be

[3] Under § 80.67(c)(1) the VOC emissions control standards, when met on average, must be met separately for the reformulated gasoline that is VOC controlled for Region 1 and the reformulated gasoline that is VOC controlled for Region 2. These two averaging categories may not be combined in a single compliance calculation.

[4] For example, the following values are used with the complex model to calculate the average standard for VOC, toxics and NOx emissions performance for the VOC controlled for Region 1 category:

MTBE 2.1 wt% (§ 80.41(b) standard)
sulfur 310 ppm (refinery baseline value)
RVP 7..1 psi (default wintertime RVP value)
E200 41 % (seasonal value from § 80.45(b)(2))
E300 81 % (refinery baseline value)
aromatics 26.6 vol% (calculated as discussed above)
olefins 12.9 vol% (refinery baseline value)
benzene 0.95 vol% (§ 80.41(b) standard)

[5] The per-gallon minimums associated with average emissions performance standards are calculated by adding 4.0 % to the average standard.

combined using the same seasonal weightings that were used to calculate the annual aromatics value. For Refinery X this calculation is shown as follows:

Standard	Category of Gasoline	Category Weighting (%)	Emissions Reduction (% change)	Category Weighting X Emissions Reduction (% change)
Toxics	VOC, Region 1	9.9	-27.76	-2.75
	VOC, Region 2	29.7	-24.22	-7.19
	Winter[6]	60.4	-13.92	-8.40
			Annual Average Toxics Standard	-18.35
NOx	VOC, Region 1	9.9	-0.44	-0.04
	VOC, Region 2	29.7	0.00	0.0
	Winter	60.4	-0.07	-0.04
			Annual Average NOx Standard[7]	-0.08
			Per-Gallon NOx Maximum	3.92

(5/2/96)

20. **Question**: What is the significance of winter VOC emissions, §80.45(c)(6)(ii)? Do not VOC emissions limits, by definition, apply only during VOC regulatory time periods?

Answer: The VOC performance standard applicable under § 80.41 is indeed a summer-only standard. Under the Complex Model, VOC emissions are calculated for winter blends to determine the emissions of Polycyclic Organic Material (POM). Emissions of POM are calculated as a fraction of VOC emissions. POM emissions are, in turn, used to determine compliance with the emissions performance standard for toxic pollutants for both RFG and conventional gasoline. The only significance of winter VOC emissions is based on their use in the determination of compliance with these toxic performance

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[6] For example, the following values are used with the complex model to calculate the average standard for VOC, toxics and NOx emissions performance for the winter category:

MTBE 2.1 wt% (§ 80.41(b) standard)
sulfur 310 ppm (refinery baseline value)
RVP 8.7 psi (default wintertime RVP value)
E200 50 % (seasonal value from § 80.45(b)(2))
E300 81 % (refinery baseline value)
aromatics 26.6 vol% (calculated as discussed above)
olefins 12.9 vol% (refinery baseline value)
benzene 0.95 vol% (§ 80.41(b) standard)

[7] Under § 80.67(e)(2) the annual average NOx standard must be separately met for reformulated gasoline that is VOC controlled and that is not VOC controlled.

standards. (11/10/97)

21. **Question**: Today, and with the Phase I complex model, there is effectively a 1 RVP difference between the Region 1 and 2 standards. In Phase II, this difference basically drops to 0 RVP. Was this intended, and why?

Answer: The Phase 2 Volatility Standards (55 FR 23658 (June 11, 1990)) provided the basis for the different RVP standards, depending on VOC Control Region, for reformulated gasoline under the Simple Model. The standards for VOC emissions performance for Phase I RFG under the Complex Model were based on the Simple Model standards, which were translated into equivalent VOC emission performance standards under the Complex Model. The Phase II RFG standards for VOC emissions performance, however, were derived using the Complex Model, which takes into account RVP and several other factors in determining VOC emissions performance. Since the Complex Model already evaluates the effect of RVP on VOC emissions performance, there was no need to make any additional RVP distinction between the two regions. (11/10/97)

22. **Question**: For downstream compliance, has EPA addressed the issue that two complying batches mixed downstream may not comply when tested downstream?

Answer: In the development of the Complex Model, EPA investigated the possibility that two complying batches, when mixed, may not comply with the RFG standards. This "fungibility" issue arises out of the model's nonlinear character. Based on a Monte Carlo simulation, EPA concluded that fungibility problems would not occur. The downstream standards adopted by EPA apply to each gallon of gasoline, including fungibly mixed gasoline.(11/10/97)

III. MODELS

1. **Question:** Does a refiner have to use the same model at all of its refineries?

Answer: If a refiner elects to aggregate its refineries under section 80.101(h), the same model (simple or complex) must be used at all refineries aggregated.(7/1/94)

2. **Question:** If a given refinery produces both reformulated and conventional gasoline, must that refinery use the same model for both?

Answer: Yes.(7/1/94)

3. **Question:** Will the EPA "Spreadsheet" be revised to be considered acceptable for fuel certifications?

Answer: No. The spreadsheet was designed to provide assistance in understanding and implementing the Complex Model equations as provided in the regulations. The EPA has no authority to endorse the spreadsheet as a legal instrument of certification. Only the Federal Register has legal authority.(7/1/94)

4. **Question:** When will EPA publish a corrected version of the Complex Model? The NOx equation corrections published in the DFRM were not correct, and the published evaporative VOC equations do not yield the published baseline emissions for baseline fuel.

Answer: Errors in the final rule for the reformulated gasoline program and the DFRM are being corrected in an upcoming technical amendment.

The spreadsheet version of the Complex Model does not contain the errors that appeared in the Federal Register description of the Complex Model. However, the equation coefficients in the spreadsheet have been rounded in comparison to the coefficient values given in the Federal Register. This difference results in a disparity of less than 0.005% between the published baseline emission values and the values calculated from the evaporative equations in the spreadsheet, a disparity which is unlikely to affect any results. Nevertheless, EPA will update the spreadsheet version of the Complex Model as soon as time permits.(10/31/94)

5. **Question:** Is there a "recommended" calculation tool for performing Complex Model calculations?

Related question: In view of inconsistencies between the current regulations and the Complex Model spreadsheet posted by EPA, which should industry follow? If the answer is the regulation, can EPA confirm that the regulation is consistent with the actual Complex Model developed by EPA? Will EPA use the spreadsheet to determine if fuels are in compliance?

Answer: The version of the Complex Model that is legally binding is that contained in the Federal Register[8]. The printed version of the Complex Model in the Federal Register does contain several minor errors which are under correction through a proposed rulemaking (62 FR 37337 (July 11, 1997). With these minor corrections, the Complex Model contained in the Federal Register will be consistent with the spreadsheet version.

The Lotus spreadsheet which EPA made available through the internet is being used by both the Office of Mobile Sources and the Office of Enforcement and Compliance Assurance in verifying refiners' compliance with the performance standards. The Agency has no plans to use a version of the Complex Model other than this Lotus spreadsheet. Although a refiner choosing to use the spreadsheet version of the Complex Model bears responsibility for any errors it may contain, to date no errors have been found in the spreadsheet. (11/10/97)

6. **Question:** Section 80.42 states that the summer Simple Model is to be used from May 1 through September 15. However, reformulated gasoline certified to be VOC-controlled can be made from January 1 through September 15. Should batches of VOC-controlled gasoline blended during January 1 through May 1 be certified by the summer or winter model?

Answer: The summer Simple Model should be used to evaluate all batches of VOC-controlled gasoline produced between January 1 and September 15. Non-VOC-controlled gasolines should be evaluated with the winter model.(7/1/94)

7. **Question:** If a California refiner chooses to certify a CARB Phase 2 gasoline formulation under the predictive model, does this alter his ability to select the Simple or the Complex Model for conventional gasoline?

Answer: The use of the Simple or Complex Models during the 1995 through 1997 time frame is generally governed by the provisions in § 80.41(i). A refiner cannot change from use of the Simple Model to the Complex Model when California Phase 2 RFG begins on March 1, 1996 because only one compliance model can be used within any calendar year. Other than this restriction, all refiners retain the option of complying under the Simple Model or the Complex Model during the 1995-1997 time frame for RFG sold in non-California states.(7/1/94)

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[8] *See* 59 Fed. Reg. 7716 (Feb. 16, 1994); 59 Fed. Reg 36944 (July 20, 1994; *see also* 40 CFR §80.45.

8. **Question**: What are the differences between the summer and winter models and what is their justification?

Answer: The equations, extrapolations, and normal-to-high emitter ratios remain the same when one switches from the summer version of the Complex Model to the winter version. However, four changes do take place. First, the baseline fuel is changed from the statutory summer values to the winter values. Second, the baseline emissions are changed from summer to winter values. The baseline emissions were derived from the MOBILE model with scenarios representing typical summer and winter conditions, and using the RVPs associated with the summer and winter baseline fuels. Third, the difference in non-exhaust emissions between the baseline fuel and the candidate fuel is given a value of zero under the winter complex model. As explained in Section IV.E of the Regulatory Impact Analysis for the RFG program, EPA determined that vapor generation rates under summer conditions are substantially higher than under winter conditions, and that the mechanisms involved in non-exhaust emission production are highly temperature dependent. Since the data on which the Complex Model was based was collected entirely under summer conditions, it was deemed unfit to represent non-exhaust winter emissions. Last, under the winter complex model the RVP for both the baseline fuel and target (candidate) fuels must be set to 8.7 psi when calculating emission performances with the Complex Model. *(See* § 80.45(c)(2), for example.) This last condition is designed to remove the effect of RVP on exhaust emissions, again since RVP effects are highly temperature dependent, and all the data on which the Complex Model was based was collected under summer conditions. *See* 59 FR 7716, 7731 (February 16, 1994) (11/10/97)

9. **Question**: What are specific calculation steps for conventional gasoline exhaust toxics and NOx emission performance? Is the annual statutory baseline used? If not, how are batches to be assigned to the summer/winter statutory baselines?

Answer: The regulations currently state that batches of gasoline are to be designated as summer or winter for purposes of compliance calculations under the Complex Model based on the RVP of the gasoline (§ 80.101(g)(1)(ii)). However, EPA issued guidance in the RFG/Anti-dumping Questions and Answers document (8/29/94), which clarifies that batches are to be designated as summer or winter for use with the Complex Model based on RVP and the intended season of use. This clarification has been proposed in the July 11, 1997 NPRM at § 80.101(g)(3)(ii).

The Complex Model calculates emissions in mg/mi for each batch. Proposed § 80.101(g)(2)(i) of the July 11, 1997 NPRM clarifies that the exhaust toxics and NOx emissions in mg/mi are volume-weighted by batch to arrive at annual average values which must be less than or equal to the refiner's compliance baseline. (11/10/97)

10. **Question:** The valid range limits for the Simple and Complex Models given in § 80.42(c)(1) and § 80.45(f)(1), respectively, give the ranges outside of which fuels cannot be evaluated with the compliance models. What are you supposed to use if the fuels to be evaluated are outside of the specified valid range limits?

Answer: If a target fuel contains one or more fuel parameters which are outside the valid range limits, the compliance models generally cannot be used to evaluate that fuel. To use the compliance models, a refiner may reformulate the fuel such that it falls within the valid range limits. A refiner may also augment the Complex Model through vehicle testing to widen the valid range limits. Finally, if the refiner's individual 1990 baseline fuel contains any parameters which fall outside the specified valid range limits, he may qualify for extension of the valid range per § 80.91(f)(2)(ii). This paragraph on valid range extension has been clarified in the Direct Final Rulemaking signed on June 27, 1994.(7/1/94)

11. **Question:** Limits of the RFG Simple Model for RVP at § 80.42(c) is 9.0 psi. However, this Simple

Model is used for compliance determinations of winter toxics. Will EPA revise the RVP range for non-VOC-controlled RFG to allow properly volatilized gasoline to be delivered in the winter season?

Answer: RVP does not show up in the calculation of toxics during the winter because non-exhaust emissions are assumed to be zero. Thus the valid range limits for RVP are superfluous under the winter Simple Model.(7/1/94)

12. **Question:** For anti-dumping, is there any provision to use the complex model outside of the limits shown in § 80.45(f)(1)(ii)?

Answer: Yes, the provision is given in § 80.91(f)(2)(ii), and allows for the extension of the valid range when a refiner's individual baseline fuel lies outside of the specified valid range. The provision given in this paragraph was clarified in the Direct Final Rulemaking signed on June 27, 1994.(7/1/94)

13. **Question:** Clarify that the valid range for RVP specified in the regulations has no effect on winter calculations with the Complex Model since the RVP is fixed at 8.7 psi in the winter regardless of the actual RVP of the fuel.

Answer: That is correct. Since the winter Complex Model requires the use of an RVP of 8.7 psi for both baseline and target fuels regardless of the actual RVPs, the valid range limits for RVP do not apply to the winter Complex Model calculation.(7/1/94)

14. **Question:** The Complex Model upper limit for RVP of conventional gasoline is 11.0 psi. Will winter gasoline meeting ASTM Class C and D specifications of 11.5 psi and 13.5 psi vapor pressures be allowed?

Answer: As described in §80.45(c)(2), (d)(2), and (e)(2)(i), use of the winter version of the Complex Model requires that the RVP be set to 8.7 psi for both the baseline and target fuels. Thus the valid range limits associated with RVP are irrelevant for winter gasoline. (11/10/97)

15. **Question:** Under the early-use Complex Model, conventional gasoline compliance is determined only on the basis of exhaust benzene per §80.101(b)(2). The valid range limits given in §80.45(f)(2)(ii) indicate that any conventional gasoline having an olefins content higher than 30 vol% cannot be evaluated with the Complex Model. However, the olefins content of any conventional gasoline evaluated under the early-use Complex Model will have no effect on exhaust benzene because there is no olefins term in the equations for exhaust benzene. Are refiners still required to comply with the valid range limits for olefins for conventional gasoline complying under the early-use Complex Model?

Answer: The olefin level of any conventional gasoline complying under the early-use Complex Model play no role in compliance. As a result, the valid range limits for olefins do not apply to conventional gasoline produced under the early-use Complex Model. Note that this answer does not apply to the alternative Simple Model because the alternative Simple Model approach does not apply to conventional gasoline. (5/2/96)

16. **Question**: Can refiners ship RFG with an RVP result of less than 6.4 psi, but use 6.4 psi in the emission parameter calculations?

Answer: The valid range limits associated with the Complex Model are given in §80.45(f). These standards apply to every batch of RFG. Since the lower end of the valid range limit for RVP is 6.4 psi, no valid batches of RFG may be produced with an RVP of less than 6.4 psi. The Agency proposed to clarify this in the July 11, 1997 NPRM.

If a given batch of RFG contains one or more fuel parameters falling outside of the valid range limits, the refiner must re-blend the batch before it leaves the refinery to comply with the valid range limit standards. (11/10/97)

17. **Question**: Will EPA consider widening the limits on distillation?

Answer: The range of data on which the Complex Model was based limits the range within which the model will exhibit appropriate accuracy. The E200 range in the database was 33 to 66 vol%; extrapolation widened this range to 30 to 70 vol% for the Complex Model. Likewise the E300 database range of 72 to 94 vol% was widened through extrapolation to 70 to 100 vol% in the Complex Model. The Agency believes that these extrapolations maximize the utility of the Complex Model without unduly compromising its accuracy. Further widening of the limits on distillation would dramatically increase the likelihood that Complex Model emission estimates would be fictitious. In addition, the regulations contain provisions for widening the valid range limits on any fuel parameter through vehicle testing. *See* §80.48. (11/10/97)

18. **Question**: It is technically possible for a particular batch of RFG to meet all current ASTM and EPA volatility specifications and yet have an E200 value less than the 30% minimum specified in 40 CFR 80.45(f)(1)(ii). Does EPA consider it unlawful to produce and sell a particular batch of RFG with an E200 less than 30% even though the volume-averaged parameters of the total RFG produced during the compliance period, including the E200 value, are well within the valid range of the Complex Model?

Answer: The valid range limits associated with the Complex Model are, in effect, per-gallon RFG standards. Thus it would be unlawful to produce RFG with an E200 value less than 30 vol%. The July 11, 1997 NPRM has proposed regulatory text to clarify this. (11/10/97)

19. **Question:** Clarify that "B" as defined in § 80.48(f)(3)(ii)(B) is equivalent to an edge target fuel as defined in § 80.45(c) and (d). The reference to paragraph § 80.48(f)(3)(i) is correct.

Answer: Yes, "B" defines the percent change in emissions for an edge target fuel wherein the fuel parameter being testing is fixed at the valid range limit for that parameter as specified in § 80.45(f)(1).(7/1/94)

20. **Question:** Clarify that interactive effects must be investigated when augmenting the Complex Model for a new fuel parameter despite the fact that the specified test fuel matrix does not include the full set of orthogonal matrices which is statistically necessary.

Answer: The test fuel matrix provided in the regulations delineates the minimum test program that would be acceptable to the Agency for Complex Model augmentation. A more comprehensive test program, which would provide the full set of orthogonal matrices which is statistically necessary, is allowed and is encouraged. The Agency expects that primary interactive effects can be adequately identified with the required minimum test fuel matrix.(7/1/94)

21. **Question:** Clarify that the proper version of the Complex Model that is to be used with an augmentation is the version that was in effect at the time the augmentation was approved. The preamble and regulations are inconsistent on this issue, and confusion arises in the term "the fuels," which is meant to apply to fuels that are produced before the augmentation is approved.

Answer: The proper version of the Complex Model that is to be used with an augmentation is the version that was in effect at the time the augmentation was approved.(7/1/94)

22. **Question:** Will the Complex Model for NOx emissions take additive effects into account?

Answer: No. However, the Complex Model can be augmented through the vehicle testing procedure outlined in the final rule to include the emission effects of an additive.(7/1/94)

23. **Question**: When performing simple and complex model calculations, what number of decimal places need to be entered for each of the gasoline properties?

Answer: Fuel parameters should be rounded to the following decimal places:

RVP	2 decimal places	Olefins	1 decimal place
Benzene	2 decimal places	E200	1 decimal place
Sulfur	0 decimal places	E300	1 decimal place
Aromatics	1 decimal place		

(7/1/94)

24. **Question**: Will you be looking at switching to MOBILE6, and if so, when?

Answer: Version 4.1 of the MOBILE model was used to generate the statutory baseline emission values for the Phase I Complex Model, and version 5 of the MOBILE model was used to generate the baseline values for the Phase II Complex Model. To use MOBILE6 to generate baseline values for either the Phase I or Phase II Complex Models would require substantial changes to the RFG regulations, resulting in a major disruption to the RFG program. Therefore, the Agency has no current plans to modify the regulations to incorporate MOBILE6 into the Complex Model. However, the Agency may evaluate using the MOBILE6 model in the RFG program in the future. (11/10/97)

IV. BASELINES

A. BASELINE AUDITORS

1. **Question:** Can you identify absolute minimum data requirements and margin for auditor judgements to minimize petitions for deficient data?

Answer: No. The amount of data that is sufficient to develop a baseline will depend on the individual case. The baseline auditor does have some flexibility in using their judgement to determine what is appropriate, but the rationale and detailed discussion of the situation must be provided in a petition to EPA.(7/1/94)

2. **Question:** It would seem that one objective of the auditor is to assure that the most representative 1990 baseline (with allowable adjustments) is submitted. What leeway, if any, do auditors have to achieve the most representative baseline?

Answer: Within the limits of the regulations, the auditor has a significant amount of leeway in determining the most representative baseline. The amount of flexibility is also dependent on the individual situation. However, the baseline auditor's role includes using technical judgement to determine the best approach, or the most appropriate of several options, when developing or auditing a baseline.(7/1/94)

3. **Question:** How does an auditor verify computer data if no hard copies exist?

Answer: The only option is to make do with the data available. If it seems clear to the auditor that data is in error or otherwise false but this cannot be verified, that data should be excluded from the calculations, with an explanation.(7/1/94)

4. **Question:** What are the requirements for baseline auditors?

Answer: The requirements for baseline auditors are clearly outlined in section 80.92 of the reformulated gasoline regulations.(7/1/94)

B. PETITIONS

1. **Question:** Will EPA provide written responses to petitions?

Answer: If the EPA responds to a petition prior to the deadline for baseline submissions, it will respond in writing. If the petition is not evaluated until review of the baseline submission (i.e after the deadline for baseline submissions), the petition will be addressed in the context of the baseline approval.(7/1/94)

2. **Question:** Why can't general petitions be submitted?

Answer: Section 80.91(b) requires a separate baseline submission for each refinery. Each baseline represents a distinct, individual situation and must be addressed as such. While similar situations may apply to several facilities, the impacts may vary significantly.(7/1/94)

3. **Question:** Why are petitions needed for relatively simple things?

Answer: Petitions are required for every situation where a refiner or other party wants or needs to deviate from the baseline determination requirements stipulated in the RFG regulations. Even apparently simple issues must be evaluated before the petition can be granted.(7/1/94)

4. **Question:** Rather than petitioning to use less than the minimum data for baseline determination, can refiners rely on the engineering judgement of the outside auditor, if it is at least half of these minimum requirements?

Answer: No. Baseline determination submissions must follow the criteria specified in the regulations regarding minimum data.(7/1/94)

5. **Question:** Rather than petitioning EPA for approval to exclude any data due to improper labeling, improper testing, etc., can refiners petition for excluding data which is not within the normal statistical data range of two standard deviations from the average? (The best statistical approach would exclude data outside of the normal statistical range and should not require any special permission.)

Answer: A petition must be approved for the exclusion of any baseline data, regardless of statistical deviation. Statistical variability, by itself, is not an acceptable basis for excluding data.(7/1/94)

6. **Question:** Will EPA eliminate the petition and approval requirement for using E200 and E300 equations to determine values from T50 and T90 data (i.e., just mandate the use of the conversion equations if temperature data is unavailable)?

Answer: No. This section of the regulation is subject to interpretation, and EPA needs to ensure that the equations are used only in situations that truly warrant their use. Often, interpolation of actual temperature data is more appropriate than using the equations.(7/1/94)

7. **Question:** When should a refiner file a petition to use calculated E200 and E300 values via the formula provided?

Answer: When they feel adequate temperature data is not available to create a distillation curve from actual data.(7/1/94)

8. **Question:** Will a petition be granted to use the E300 and E200 equations if data from the actual distillation is available in the form of temperature values?

Answer: No. The equations should be used only when the only available measurements are for T50 and T90. Given a table of temperature values, a distillation curve should be plotted from those numbers, and E (percent evaporated) values determined from the curve.(7/1/94)

9. **Question:** How do we determine our baseline if we don't know the outcome of a petition?

Answer: The refiner must decide how to proceed with its baseline determination. One method would be to assume that the petition will be allowed. Another method would be to calculate the baseline with and without approval of the petition.(7/1/94)

10. **Question:** What if we can't meet a WIP or extenuating circumstance criteria--can we petition anyway?

Answer: EPA cannot prevent any petition submissions. In this case, however, it is unlikely that the petition would be granted. Nevertheless, it may be a useful mechanism to gain EPA guidance on how the situation can best be addressed.(7/1/94)

11. **Question:** Can work-in-progress be applied to an aggregate baseline?

Answer: Work-in-progress applies only in the calculation of an individual refinery baseline.(7/1/94)

12. **Question:** What is the difference in the WIP caps for compliance under the simple and complex models?

Answer: Currently, the WIP caps for simple model and complex model compliance are defined differently, as stipulated in the regulations. However, this has been changed in the technical amendments.(7/1/94)

13. **Question:** If a refinery has more than one WIP which came on-line at different times (e.g., early 1991, late 1992) is it limited to one WIP adjustment, or are the adjustments cumulative?

Answer: If both projects meet the WIP requirements, the baseline should be adjusted for both. In other words, the baseline should reflect operation after both projects came on-line.(7/1/94)

14. **Question:** For WIP, would a good indicator of progress be to require that a certain amount of funds be expended toward the project in 1990? The language might read "In order to be considered as WIP, the refiner must have committed at least X percent of the total cost of the project externally in 1990." Use of the "committed" rather than the "expended" is suggested because equipment procurement normally includes a payment schedule rather than cash up front. For example, the first payment might be 30 percent, timed to coincide with the refiner's accounting periods so that it appears on the books in a certain fiscal year. "Externally" means committed to others rather than the re-deployment of the refiner's in-house staff which could be more subjective.(7/1/94)

Answer: EPA will not be changing the regulation language regarding this issue. EPA will be evaluate each WIP petition on a case-by-case basis.(7/1/94)

15. **Question:** Several refiners embarked on capital programs in 1990 aimed at meeting new environmental requirements. In some cases, permanent changes have been implemented stage-wise and in such a way as to provide improved refining returns as well as meeting the environmental regulations. Can a refiner claim as his baseline volume the impact of all these related permanent changes initiated by the need to produce low sulfur diesel?

Answer: If, and only if, the projects were begun or committed to in 1990, in response to environmental regulations, may they all be considered in making the WIP adjustment.(7/1/94)

16. **Question:** For a Work-in-Progress, are Method 1 and 2 type data limited to 1990 data only, with Method 3 being the only option for post-1990 data? OR are the Methods re-defined in a WIP situation?

Answer: The data types are not re-defined by the WIP. The WIP is a post-1990 adjustment made to the original baseline, regardless of the data type (method 1, 2 or 3) originally used.(7/1/94)

17. **Question:** For extenuating circumstances, does the shutdown include the shoulders of the shutdown?

Answer: No. The limit of 30 days or more downtime given in the regulation was not meant to include the shoulders of the shutdown. Extenuating circumstances, however, may be evaluated on a case by case basis.(7/1/94)

18. **Question:** For an extenuating circumstance adjustment, must the 30 days of downtime be consecutive?

Answer: Generally, the downtime is expected to be continuous. In some situations, such as a unit being shutdown for an extended period and then only in operation a few days before shutting down again, continuous downtime is not necessary. This is subject to EPA evaluation and approval.(7/1/94)

19. **Question:** Do all of the refineries of a refiner have to meet the JP-4 requirements to get an adjustment?

Answer: The criteria for a JP-4 baseline adjustment must be met for each refinery of a refiner: 1) the refinery will not produce reformulated gasoline; and 2) refiners must meet the specified 1990 JP-4 production to gasoline ratio (the ratio has changed from .5 to .2 via the DFRM, barring adverse comments). However, for those refiners with multiple refineries, it is no longer required that each of a refiner's refineries had to have produced JP-4 in 1990.(7/1/94)

20. **Question:** If a refiner meets the JP-4 provisions, but later switches to reform production, what baseline would be used?

Answer: A refiner may begin producing reformulated gasoline instead of, or in addition to, conventional gasoline any time during the calendar year. If this happens at any refinery within a refinery aggregate which has received an adjustment for JP-4 production, then the compliance baseline for that aggregate shall revert to its unadjusted baseline values for that entire averaging period. This is true even for those refiners that meet the JP-4 criteria, have petitioned to receive the adjustment, and were subsequently approved to adjust their baselines by the Agency.(7/1/94)

21. **Question:** Explain JP-4 provisions -- On a refinery basis or refiner basis?

Answer: The 1990 JP-4 to gasoline production ratio should be calculated on a refiner basis as opposed to a refinery basis. In other words, the total 1990 JP-4 production for each of a refiner's

refineries should be divided by the total 1990 gasoline production for each of a refiner's refineries to determine the ratio.(7/1/94)

22. **Question:** To avoid burdensome additional testing in 1994, can a refiner use data from any industry-accepted test method in determination of fuel parameter values?

Answer: In most cases, yes. However, in order to use such alternative test methods, the refiner must submit a petition and obtain EPA approval.(7/1/94)

23. **Question:** How do we handle a WIP that was built before 1990 but was not used in 1990?

Answer: To qualify for a WIP adjustment, the project must meet the requirements given in the regulation. It may be possible to consider a pre-1990 WIP if some unforeseen, extenuating circumstance prevented it from operating in 1990. This is highly unlikely, however, and is dependent on the specifics of the situation.(7/1/94)

24. **Question:** What is the effect of the WIP caps on volume? For instance, if exhaust benzene cannot exceed 6.77, does the refiner get the full effect of the volume increase?

Answer: Volume will also be adjusted based on the WIP. The new WIP-adjusted fuel parameters, whatever they may be, will apply to the entire WIP-adjusted volume. The WIP-adjusted volume would then be the baseline volume for the refinery.(7/1/94)

25. **Question:** Must refiners of dual train refineries include the entire1990 operation in their baselines or only the portion of the operation which they intend to operate?

Answer: The baseline submittal must represent 1990 refinery operation. It can only be adjusted based on allowable petitions, not subsequent changes in refinery operation.(7/1/94)

C. SUBMISSION/APPROVALS

1. **Question:** Clarify due dates for baseline submission and late submission if still collecting data.

Answer: Baselines were due to EPA June 1, 1994. If data collection continued beyond December 15, 1993, the resulting baseline is due September 1, 1994. It is not necessary to notify EPA that a baseline will be submitted September 1, 1994, if data collection continued into 1994.(7/1/94)

2. **Question:** Must a petition be submitted for an extension of the baseline submittal deadline? What is the likelihood of it being granted?

Answer: EPA does not have the authority to grant extensions to the deadlines for baseline submissions given in the final regulations.(7/1/94)

3. **Question:** Do California refiners need to submit baselines?

Answer: Yes. Every facility producing, importing or blending gasoline is required to have a 1990 baseline.(7/1/94)

4. **Question:** For a refinery still collecting data on one or two parameters but has baseline values for the other parameters, should only completed data be submitted, with a note about the missing parameters (and then submit those as available) or should refiners wait and submit all data when complete?

Answer: EPA would prefer to receive the completed baseline, once all data has been collected and all parameter values determined. If an incomplete baseline is submitted, EPA will wait until it is complete before beginning the review of that baseline. If an incomplete baseline is submitted after the deadline, the EPA will notify the submitter of the missing information and will wait for a resubmittal before begin review of the baseline.(7/1/94)

5. **Question:** In methods 1, 2, and 3, can seasonal data be submitted, rather than monthly data (seasonal data is sufficient and significant data are from scattered weekly samples, not monthly)?

Answer: The regulation requires monthly data - minimum data requirements are defined by month. However, EPA has modified the final rule (via the technical amendments) to allow use of method 1 per batch data to create the seasonal database. For minimum data requirements a month would then be defined as 4 weeks. This change would only apply to method 1.(7/1/94)

6. **Question:** Why is seasonal data needed in the baseline submission?

Answer: Because there are two compliance models, one for summer and a second for winter.(7/1/94)

7. **Question:** When will the baseline guidance document be finished? Are alternate formats okay? How thick is the expected submission?

Answer: A draft baseline guidance document is available. Given the time constraints of this regulation, it is unlikely that this document will be finalized. This document presents a suggested format; alternate formats are acceptable. The thickness of the submission will depend entirely upon the amount of data available for the facility.(7/1/94)

8. **Question:** Specifically, what operating data is required for each refinery unit?

Answer: The specific operating data required in the baseline submission is given in section 80.93(c)(10). This information should be provided for both the summer and winter operating periods.(7/1/94)

9. **Question:** Is the refinery information needed if using Method 1 or Method 2? Or is it just needed if using Method 3?

Answer: Per the final regulations, the refinery information must be provided with every baseline submission, regardless of the type of data used.(7/1/94)

10. **Question:** How will baselines be approved? Who should we call concerning the status of our baseline?

Answer: You will receive notification from EPA when the baseline has been approved. Please refrain from contacting EPA regarding the status of your individual baseline. EPA will be contacting each submitter throughout the review process.(7/1/94)

11. **Question:** When presenting the gasoline pool data (EPA Table 6), is it ok to present just summer, winter, and annual average data, rather than monthly data?

Answer: Yes, it is acceptable to present seasonal gasoline pool data. The format of this table will depend on the data available.(7/1/94)

12. **Question:** What are the consequences of a facility not having an approved baseline by 1/1/95? If a

refiner has submitted its baseline application, but EPA has not issued a final baseline determination, may a refiner produce RFG? If so, what baseline should the refiner use to be in compliance?

Answer: A facility whose baseline has not been approved by the time it begins producing RFG is responsible for meeting the baseline as ultimately approved by EPA. There is no bar on producing RFG before the baseline is approved, but if the RFG produced violates the parameters of the baseline as ultimately approved, the facility would be in violation and would be subject to civil penalties. EPA believes that any facility seeking to establish its baseline should have sufficient knowledge to determine its likely baseline, and to plan accordingly. EPA also believes that it will be able to issue approved baselines in all cases where complete and properly prepared baseline applications are submitted by facilities in a timely manner.(7/1/94)

13. **Question**: When will the approvals for an individual refiner's baseline be completed by EPA? It is anticipated that in early October 1994, RFG will be produced and shipped to initiate transition prior to the December 1, 1994 compliance date. Timing of EPA's response to this issue is critical as it is our understanding according to the Q&A document that any product produced not in compliance with the approved baseline will be in violation.

Answer: As stated in answer to question IV-C-12 of the July 1, 1994 Question and Answer Document, a party whose baseline has not been approved by EPA by the time it begins producing RFG is responsible for meeting the baseline as ultimately approved by EPA. EPA cannot state with certainty when approvals for individual refiners' baselines will be complete. In the interim, EPA believes that refiner's that have complied with the regulations by submitting their baselines in a timely manner should have a good grasp of what their actual baseline will be. Accordingly, these refiners may commence production assuming that the baseline submitted for approval will be their individual baseline. In the event that there is any discrepancy between the refiner's submitted baseline certification and the actual baseline approved by EPA, the refiner should have the opportunity to achieve compliance on average during the whole of the 1994 through 1995 averaging period.(8/29/94)

14. **Question:** What information in the baseline submittal will be considered Confidential Business Information?

Answer: Based on section 80.93(b)(6), the information listed in section 80.93(b)(5) cannot be considered CBI. Any other information in the baseline submission which the refiner wishes to be considered CBI must be clearly identified. Any such claims will be evaluated subject to 40 CFR part 2, subpart B. Upon baseline approval, EPA will publish the individual baseline standards for each refinery, blender and importer in the Federal Register, including annual average baseline emissions and 125% of the individual baseline values for sulfur, olefins and T90.(7/1/94)

D. BASELINE DEVELOPMENT - GENERAL

1. **Question:** Does a baseline change between the simple and complex models?

Answer: The set of baseline fuel parameters (after allowed adjustments) is basically fixed. The only time the baseline fuel parameters would change is when some circumstance specified in the regulations allowed it to change (such as the production of RFG after a JP-4 adjustment). There are different baseline emissions calculated using these parameters, depending on the model used (Simple or Complex) and the timeframe (Phase I vs. Phase II).(7/1/94)

2. **Question:** Do we get credit for the elimination of lead in the reduction of toxics?

Answer: No. The Clean Air Act did not allow the consideration of fuel lead reductions in

establishing a 1990 baseline nor in developing the anti-dumping regulations.(7/1/94)

3. **Question:** Is anti-dumping compliance the only restriction on conventional gasoline? Are there any future emissions reductions for conventional gasoline?

Answer: All gasoline requirements currently in place, except for those applicable to reformulated gasoline, apply to conventional gasoline (e.g., volatility requirements, lead requirements, state oxygenated fuel requirements, etc.). The anti-dumping requirements are in addition to these. It is possible that other fuel controls could be promulgated through separate actions in the future. (7/1/94)

4. **Question:** Is the blendstock-to-gasoline ratio to be reported as part of the baseline one number, i.e., the sum of the eight identified blendstocks divided by the gasoline produced? Are eight individual ratios required?

Answer: The numerator in the blendstock-to-gasoline ratio specified in § 80.102 of the final rule is, in general, the sum of the volumes of the applicable blendstocks. An individual ratio is not required to be determined for each blendstock.(7/1/94)

5. **Question:** With respect to benzene exhaust emissions for conventional gasoline under the simple model, there is reference to both benzene exhaust emissions calculated by the simple model and benzene exhaust emissions calculated by the formula presented in Section 80.90. Which formula should be used?

Answer: For conventional gasoline compliance, the equation specified in § 80.90 of the final regulations should be used to determine baseline exhaust benzene "emissions" under the simple model.(7/1/94)

6. **Question:** If a refinery will only be producing reformulated gasoline (no conventional gasoline) does it have to develop baseline values for other than sulfur, olefins and T90? If not, are audit requirements reduced?

Answer: Baseline values must be developed for each of the fuel parameters specified in § 80.91(a)(2), and all individual baselines must be verified by a baseline auditor. The full set of baseline fuel parameter values will become necessary if the refinery ever elects to produce conventional gasoline. Also, the full set of baseline values will be used to determine regional and national average baselines.(7/1/94)

7. **Question:** Using method 2 or 3 blendstock data, is there any way to exclude minimal blendstock quantities? (e.g. of the 1990 blendstocks, some contained only very small quantities for special cases, i.e. the volumes were negligible).

Answer: There are no lower end, minimum provisions in the regulation. All blendstocks should be included in the baseline, regardless of their volume.(7/1/94)

8. **Question:** When calculating the Winter Baseline Emissions for Anti-dumping in section 80.91, should a refinery use its winter baseline RVP or 8.7 psi?

Answer: 8.7 psi.(7/1/94)

9. **Question:** Why is the baseline winter RVP 8.7 psi?

Answer: When using the winter complex models, an RVP of 8.7 psi is used because the EPA was not able to adequately quantify the effects of RVP on wintertime emissions, and thus they are not represented in the Complex Model. Thus, independent of the actual RVP of such fuel (or the baseline

value) for both baseline and compliance determination, 8.7 psi should be used.(7/1/94)

10. **Question:** How are baselines apportioned for facilities that are joint ventures?

Answer: Each facility must have a complete baseline. The joint venture is considered the owner of the facility and is responsible for the baseline. Individual baselines cannot be apportioned or divided in any way. Further, the facilities owned by the joint venture are considered separate from the facilities that may be owned by the individual parties of the joint venture. Therefore, the jointly owned facility can not be aggregated with facilities owned by any of the individual parties.(7/1/94)

11. **Question:** Is in-line blending data acceptable for Method 2? For Method 1?

Answer: The regulations allow the use of alternative sampling and/or test methods if it can be shown that these methods are equivalent to the methods required in the regulation. Generally, it is better to use the available data rather than attempting to model qualities, as long as the procedures used are not significantly biased. Petition for the use of in-line blending data and EPA will consider its use.(7/1/94)

12. **Question**: The July 1, 1994 Q&A document indicates that purchased finished gasoline should not be included in a refiner's individual 1990 baseline in cases where the purchaser adds blendstocks or finished gasoline to the purchased gasoline, or does nothing to the purchased gasoline (see questions F.4 and J.3). However, in EPA's baseline review and approval process, some refiners have been told that purchased finished gasoline should be included if it has been changed in any way. Please clarify.

Answer: Section 80.91(c)(1)(iii) of the regulations indicates that purchased finished gasoline should not be accounted for in a refiner's baseline if it leaves the refinery "unchanged" from its arrival state. This provision is designed to ensure that a refiner's baseline reflects, to as great an extent as possible, its activities in producing gasoline in 1990. This provision also avoids double-counting (defined in more detail below), and is designed to ensure that a refiner's baseline does not reflect actions attributable to other refiners. A similar approach is taken in the compliance provisions (see 40 CFR 80.101(e)) where a refiner is required to exclude gasoline from its compliance calculations which was not produced at its own refinery.

The guidance issued by the Agency on July 1, 1994 for baseline development is consistent with the approach taken for compliance calculations. It notes that where a refiner purchased finished gasoline that has been included in the seller's baseline and then added components produced at its own refinery, only those added components are to be included in the refiner's baseline calculations; the purchased finished gasoline is not included. The one exception to this guidance is stated in Section 80.91(c)(1)(iii): if a refiner "changed" the purchased finished gasoline, it must be included in that refiner's baseline.

Purchased finished gasoline is considered unchanged (per §80.91(c)(1)(iii)) if it was simply blended with finished gasoline produced at the purchaser's refinery. When purchased finished gasoline is manipulated in this way, the resulting blend is no different than if fungible mixing had occurred downstream of the refinery. The finished gasoline produced at the purchaser's own refinery is a distinct product that can be clearly attributed to that refiner, and its properties are an accurate reflection of the product made by that refiner in producing gasoline in 1990. The addition of finished gasoline to the purchased finished gasoline can be treated as a separate event from the production of either of the precursory batches. Including the properties of the blend into the purchaser's baseline would result in the properties of the seller's finished gasoline being accounted for in both the seller's baseline and the purchaser's baseline (double-counting).

Likewise if the purchased finished gasoline was blended with blendstocks such as butane or alkylate, the purchased gasoline would be considered unchanged. The blendstocks are a distinct product,

clearly attributable to the refiner, and the properties of the blendstock are an accurate reflection of the product made by that refiner in producing gasoline in 1990. The addition or mixing of the blendstock and the purchased finished gasoline can be treated as a separate event from the production of either the blendstocks or the purchased gasoline, and including the properties of the final blend in the purchaser's baseline would tend to double-count the properties of the seller's finished gasoline.

In both forms of blending, the purchased finished gasoline is introduced into commerce in the same form as it arrived at the buyer's refinery, except with some additional, readily identifiable components; the fuel components involved all eventually end up being combusted in a vehicle engine. Since very few interactive effects between fuel parameters are recognized in the RFG compliance models, the final emission effects of a batch of gasoline are largely independent of whether the components are in a single batch or two different batches. Thus mixtures of gasolines or gasoline blendstocks are reasonably considered unchanged for the purposes of baseline determination.

If blending was regarded as an event that changes purchased finished gasoline, some refinery baselines could be severely and detrimentally affected. The volumes of purchased finished gasoline are very small for many refiners, but can be quite substantial for some. For such refiners, significant differences between the properties of the purchased gasoline and that produced at their own refinery can result in a baseline which profoundly misrepresents the impact of that refinery's production on vehicle emissions. In addition, many refiners have data on the finished gasoline they purchased in 1990, and so can accurately exclude such gasoline from their baseline.

Unlike blending, reprocessing of purchased finished gasoline would necessarily result in changes to the components that make up the gasoline batch. These changes would significantly alter the emission characteristics of the final finished gasoline. Although blending of purchased finished gasoline with components from the purchaser's own refinery also alters the emission characteristics of the final blend, there is a critical difference between blending and reprocessing in terms of the emission effects. For blending, the combustion emissions produced from the final blend will be nominally equal to the sum of the emissions from the purchased gasoline and those from the added components, had the blending not occurred. In other words, the same emissions (amount and type) can be expected regardless of whether blending occurs, because all the gasoline components in question (i.e. both the purchased finished gasoline and the added components) will end up being combusted in vehicles anyway; blending simply means that the components are combusted all at once instead of separately. As a result it may be said that the emission effects of purchased gasoline can be expected to manifest downstream of the buyer's refinery regardless of whether or not blending occurs.

However, when a batch of purchased finished gasoline is reprocessed in some way, all of the original gasoline components will not be combusted in a vehicle. Reprocessing would include any fuel manipulation that involves a blendstock producing unit, and which results in either a separation of fuel components or a chemical change to the molecules. Examples would include using the purchased finished gasoline as a supplemental feedstock to a unit, removing butane from the purchased gasoline, or redistilling it into separate components. Thus some components may be removed and sold in a non-fuels market, while other components may be chemically changed. As a result, the emissions attributable to the original purchased finished gasoline can never be expected to manifest downstream of the purchaser's refinery. Thus EPA makes a distinction between blending and reprocessing of purchased finished gasoline for the purposes of baseline determination.

Therefore, per §80.91(c)(1)(iii), any purchased finished gasoline which has been reprocessed in any way (not simply blended) must be included in the purchaser's baseline determination. All other purchased finished gasoline shall be excluded from a refiner's baseline determination if the purchased finished gasoline has been included in another refiner's baseline.

EPA is aware that in a limited number of cases it has not implemented Section 80.91 (c)(1)(iii) consistent with the above guidance. For example, certain baselines have been approved that included purchased finished gasoline that had been blended with either finished gasoline or blendstocks. In such cases a baseline will need to be resubmitted to the EPA, regardless of whether a baseline has been approved or is pending approval by EPA. However, EPA will consider a petition by a refiner to not make such a resubmission if one or more of the following conditions are met:

1) The refiner is unable to accurately determine or estimate the volumes and properties of any components added to gasoline purchased in 1990, and so cannot accurately exclude the purchased finished gasoline from the baseline calculations.

2) Any change in refinery baseline properties or volume resulting from the resubmission will be de minimis.

3) Any change in refinery baseline properties or volume resulting from the resubmission would constitute a more lenient baseline.

In addition, if a refiner's baseline has already been approved by EPA and is revised to be more stringent for any parameter or volume due to the exclusion of purchased finished gasoline, then the revised baseline will not apply to any gasoline produced prior to January 1, 1996. (9/19/95)

E. BASELINE DEVELOPMENT - OXYGEN/RVP

1. **Question:** When calculating the winter baseline emissions for anti-dumping purposes, should a refinery use its winter baseline RVP or 8.7 psi?

Answer: When using the winter Complex Model, an RVP of 8.7 psi should be used for both the baseline and target fuels. This applies to all winter Complex Model calculations, including an individual refiner's baseline emissions.(7/1/94)

2. **Question:** If for the winter model an RVP of 8.7 has to be used when calculating emissions, what is the purpose of the RVP limits being 6.4 to 11 psi for conventional gasoline?

Answer: Some valid range limits must apply to conventional gasoline because even in summer months the RVP varies widely. The Complex Model contains statistically derived regression equations whose accuracy decreases dramatically when they are used outside of the valid range limits.(7/1/94)

3. **Question:** How is the RVP and distillation non-linearity handled?

Answer: The RVP of hydrocarbons and oxygenates should actually blend very linearly, with the exception of the lighter alcohols, methanol and ethanol. Methanol is not expected to be used as an oxygenate due to its high RVP, and there are accepted rules of thumb for approximating the RVP boost from ethanol. Regarding distillation, EPA's complex model uses the percent evaporated at a given temperature as opposed to the temperature at which a given percentage of fuel evaporates. This was done in part to avoid this problem, since percent evaporated, like RVP, blends very linearly.(7/1/94)

4. **Question:** How are small amounts of alcohols and ethers in MTBE accounted for?

Answer: In baseline determination, such negligible quantities are insignificant. An attempt should be made to account for them, but there should not be much concern over these byproducts.(7/1/94)

5. **Question:** How should refiners use blending records for oxygenate parameters when distillation is nonlinear?

Answer: In this situation, it may be necessary to do further testing with the same oxygenates and similar hydrocarbon blendstocks to determine the blending effects.(7/1/94)

6. **Question:** For percent oxygen parameter determination, most refiners did not test for percent oxygen if they used an oxygenate. Should percent oxygen be estimated by dividing the volume of oxygenate blended by the volume of gasoline in 1990?

Answer: Yes, the percent oxygen can be estimated, using an appropriate formula.(7/1/94)

7. **Question:** What does EPA mean by "blending RVP of oxygenate" (equation in § 80.91(e)(4)(i)(B))?

Answer: This means the effect that an oxygenate has on RVP when it is assumed to have a constant RVP effect per volume added. This is analogous to the blending RVP for any other hydrocarbon, except that blending RVPs for hydrocarbons are generally independent of other factors while those for oxygenates may depend on the hydrocarbon composition and the amount of oxygenate added.(7/1/94)

F. BASELINE DEVELOPMENT - SPECIAL SITUATIONS

1. **Question:** What if a refinery shipped a lot of blendstock in 1990 instead of gasoline (thus its 1990 gasoline volume is low)--can it adjust for this?

Answer: The baseline can be adjusted only if this unusual operation were the result of a work-in-progress, extenuating circumstance, or other allowable adjustment specified in the regulations. EPA recognizes that there may be anomalies in 1990 operation, however the Clean Air Act Amendments require that baselines must reflect 1990 operations.(7/1/94)

2. **Question:** Can refiners aggregate if one of the refineries is partially owned? If so, how? (e.g. co-owned by oil company and some other, unrelated company)

Answer: No. Two refineries can only be aggregated if they are wholly owned by the same refiner. If a refinery is owned by more than one party, it may not be aggregated with any other refineries.(7/1/94)

3. **Question:** If a terminal was in operation for all of 1990, but did no blending of ethanol for gasoline and wishes to register it for potentially blending conventional gasoline from raffinate and ethanol, is it appropriate to use the statutory baseline? Would an outside audit be necessary?

Answer: If full method 1 fuel parameter data is available for the terminal's 1990 operation, an individual 1990 baseline is required, regardless of future operation plans. If this complete data is not available, the statutory baseline must be used. If the statutory baseline is used, verification by a baseline auditor is not needed.(7/1/94)

4. **Question:** If a refiner purchased finished gasoline in 1990, then blended in it's own components, is the baseline based on parameters for the final product (which would result in double counting of that gasoline), or only on the blending components it added? If parameters are required for the final product, the parameter information for the purchased gasoline is not available and will require a great deal of "guess work" to estimate.

Answer: If the purchased product is finished gasoline which would be reported in another party's

baseline calculation, only the produced blendstocks need to be included in the baseline. This is similar to the compliance provision in § 80.101(e)(1) which states that gasoline produced at another refinery must be excluded from compliance calculations.(7/1/94)

5. **Question:** A refiner owns a refinery where typical blend components are produced and blended to finished gasoline. One component is produced in excess, and shipped to a distant terminal also owned by that refiner. How should a baseline be developed?

a. Could the terminal be included as an extension of the refinery, and thus construct a single baseline for both (the terminal is a refinery by definition)? These facilities do not meet the geographical proximity and other requirements.

b. Should the refiner construct two baselines, one for each facility (one refiner, one blender)? The problem is that the blend component provided by the refinery is not purchased, as described in the regulations. Should the term "purchased" be interpreted as "purchased or otherwise acquired"? For the terminal, if Method 1 data is not complete, would it then default to the CAA baseline?

Answer: Under § 80.91(e)(1)(ii), if the terminal received at least 75 percent of its 1990 blendstock volume from a single refinery, or from one or more refineries which are part of an aggregate baseline, the terminal could be included as an extension of the refinery, resulting in a single baseline for both. If not, the terminal would need to develop it's own 1990 baseline as a blender. It is correct that if complete method 1 data is not available for the terminal, it would then default to the statutory baseline.(7/1/94)

6. **Question:** When no oxygenate was used in 1990, how are oxygenated values calculated from non-oxygenated? What oxygenate is used, at what volume?

Answer: Oxygenate values are not required in the baseline calculations if no oxygenate was used in 1990.(7/1/94)

7. **Question:** If a refinery makes major post-1990 operating changes (like shutting down an FCC unit to go into the lube business), can this be accounted for in the baseline development?

Answer: No, unless it meets the criteria for a work-in-progress adjustment or other adjustment (i.e., was contracted for prior to or in 1990, etc. See section 80.91(e)(5)). The anti-dumping baseline is based on 1990 operations.(7/1/94)

8. **Question:** If loss of refinery throughput due to poor operation (not extenuating circumstances) was greater than 12% of normal, can that be equivalent to, say, 1-1/2 months of shutdown or otherwise accounted for using auditor judgement?

Answer: No. Adjustments can be made to the 1990 baseline only when meeting the stipulated criteria for work-in-progress, extenuating circumstances, etc. However, you can petition for consideration of a special situation if you cannot meet the baseline determination requirements of the regulation.(7/1/94)

9. **Question:** In an area where conventional gasoline is consumed and no longer supplied by the same company as in 1990, can the new supplier substitute or add the prior company's volume and/or baseline quality to its own?

Answer: No. Each producer and supplier of gasoline must have it's own baseline parameter values, volumes and emission values - whether they are individual or statutory. Any excess volume must comply with the statutory baseline.(7/1/94)

10. **Question:** A blender was producing gasoline in leased tankage in 1990. The blender subsequently purchases the tanks and moves them to a different physical location. Do the baseline properties and volumes associated with the leased tanks "move" to the new blending location?

Answer: To the extent that blending operations remain the same, yes, the baseline associated with that operation should be used at the new location.(7/1/94)

11. **Question:** If a refinery produces more conventional gasoline in a compliance period than Veq (equivalent 1990 baseline volume), it must use the statutory gasoline as the performance standard for the additional production. This results in several questions: Does the refinery meet 125% of the statutory baseline sulfur, olefin and T90 for the added volume? What sulfur, olefin and T90 does the refinery use for the statutory/regulatory baseline -- summer, winter or annual?

Answer: The regulations have been amended in a manner that eliminates the calculation for Veq. The refinery must meet a maximum of 125% of it's compliance baseline which is calculated in accordance with section 80.101(f)(). The statutory baseline values used in this calculation are contained in section 80.91(c)(5)(iv), which are seasonally weighted summer/winter baseline fuel properties.(7/1/94)

G. BASELINE DEVELOPMENT - CALCULATIONS

1. **Question**: Should Method 2 calculation include produced, transferred and purchased blendstock (i.e., all blendstocks used in the refinery's 1990 gasoline.)?

Answer: Yes, all blendstocks should be included. The phrase "produced in the refinery" has been removed from both method 2 and method 3 definitions via the technical amendments.(7/1/94)

2. **Question:** Can refiners reduce the number of significant figures required for emissions values from 4 to 3 (the fourth significant figure is not meaningful in these calculations)?

Answer: No. Section 80.90(g) states that emission values shall be determined to four (4) significant figures.(7/1/94)

3. **Question:** Should seasonal emissions for each refinery be calculated and weighted to produce an aggregated baseline or should the seasonal parameters be weighted and the emissions calculated with these seasonal averages?

Answer: Refinery baseline emissions are calculated from the Complex Model, which is seasonal. Thus baseline emissions must be calculated separately for summer and winter, and then combined into a year-round baseline. You cannot determine baseline emissions based on annually aggregated fuel parameter values. However, the seasonal, individual refinery baseline values for sulfur, olefins and T90 should also be aggregated into year-round values.(7/1/94)

4. **Question:** The baseline volume for a blender as described at § 80.91(f)(1)(v) does not include the opportunity for inclusion of oxygenate volume. Is this intended?

Answer: Section 80.91(f)(1)(v) does not exclude oxygenate from the baseline volume. It only excludes blendstocks produced and sold as blendstocks, and exported gasoline.(7/1/94)

5. **Question:** Can a refiner include a terminal with a refinery in developing a common baseline if the terminal is under long-term lease to (as opposed to owned by) the refinery (80.91)?

Answer: Yes, if it meets the definition and requirements of section 80.91(e)(1)(i).(7/1/94)

6. **Question:** If the importer becomes the supplier to a marketer who imported gasoline in 1990, can the importer add the marketer's 1990 volume to the importer's 1990 volume? (isn't this analogous to buying a refinery and adding it to your baseline?) Would the parameter values for the marketer's volume be the CAAA default values?

Answer: No, the importer cannot add the marketer's 1990 volume to it's own to create a new 1990 volume. As described in section 80.91, the requirements for an importer are not analogous to those for a refiner. Any imported volume exceeding the 1990 baseline volume (e.g. the marketer's volume) would have the statutory baseline values.(7/1/94)

7. **Question:** Generally, small, simple refiners wish to establish their baseline using gasoline shipments, using Method 1 and Method 3 data (these refiners are generally operated nearly steady-state, on an essentially constant crude diet and there is no internal accounting for blendstocks, and there is no intermediate storage for these components). Will EPA allow the auditor to confirm an assessment, by means other than actual component data, as to whether the refiner has met the 10% component criteria?

Answer: No. For method 3 data calculation, the only way to confirm that post-1990 fuel meets the 10% component criteria is to evaluate actual component data.(7/1/94)

8. **Question:** Must refiners defer to regulatory references to blendstock produced on a batch basis, as all blendstocks made by refiners are produced from continuous processes (even purchased blendstocks are received at regular intervals and are typically blended on a fairly uniform basis)?

Answer: Yes. Even continuous streams are only measured periodically and it would be best to apply the measurements to the volume produced most closely to the time of the measurement. In other words, break up the continuous stream into discrete batches for calculation purposes.(7/1/94)

H. BASELINE DEVELOPMENT - LATE DATA COLLECTION

1. **Question:** What happens if refiners need to go beyond 9/15/94 to collect winter data?

Answer: Refiners collecting data after December 15, 1993 must submit a baseline by September 1, 1994. If there has not been enough time to collect sufficient winter data due to the seasonal nature of winter fuel production, EPA can consider a petition for less than minimum data.(7/1/94)

2. **Question:** If a refiner was forced to shut down prior to and during 1990 as a result of bankruptcy, what alternatives are available (other than assuming the default statutory baseline in the event the refinery is subsequently started)?

Answer: Section 80.91(b)(1)(ii) of the regulations clearly state that a refinery not in operation for at least 6 months in 1990 gets the statutory baseline.(7/1/94)

3. **Question:** A refinery was in operation for >6 months in 1990, shutdown after 1990 and insufficient data was collected to develop an individual baseline. Does this refinery develop a baseline or does it get the statutory baseline if:

a) it re-opens after 12/31/94 -- can it collect CY 1995 or later data?

Answer: Section 80.91(b)(1)(ii) of the regulations state that a refiner in this situation shall have the statutory baseline.(7/1/94)

b) it re-opens after 6/15/94 and can collect sufficient summer/winter data in CY 1994?

Answer: If sufficient 1990 and post-1990 data is collected prior to January 1, 1995, the refinery must develop an individual baseline.(7/1/94)

c) it re-opens after 6/15/94 but cannot collect sufficient summer/winter data in CY 1994?

Answer: If insufficient 1990 and post-1990 data is collected prior to January 1, 1995, the refinery shall have the statutory baseline.(7/1/94)

d) it re-opens before 6/15/94 and can collect sufficient summer/winter data in CY 1994?

Answer: The refiner must develop an individual baseline.(7/1/94)

e) it re-opens before 6/15/94 but cannot collect sufficient summer/winter data in CY 1994?

Answer: The refiner must develop an individual baseline. If insufficient data was collected, EPA would consider a less than minimum data petition.(7/1/94)

I. MINIMUM DATA REQUIREMENTS

1. **Question:** How is data excluded, i.e., are there statistically abnormal requirements, like 3 standard deviation?

Answer: There are no specific provisions in the regulation for excluding data. If a submitter feels data should be excluded, they must petition for EPA approval.(7/1/94)

2. **Question:** Define weighting of data for combined EPA methods based on a) assuming all gasoline pool data points are equivalent, or b) assuming Method 1 or Method 3a finished gasoline pool data points on finished batches are superior to Method 2 or Method 3b component data points on weekly grab samples and should be weighted by a factor of at least 2 to 1.

Answer: The weighting of data when combining method data is dependent on the individual situation. Weighting should be determined based on the technical judgement of the refiner and the baseline auditor, to be evaluated and approved by EPA.(7/1/94)

3. **Question:** What if there are only 1 or 2 1990 data points? Should they be used? Must they be used? Can the auditor use judgement (i.e., would the points fall on a representative 1990 curve)?

Answer: Any 1990 data must be used in the baseline determination, unless the refiner petitions to exclude the data, subject to EPA approval.(7/1/94)

4. **Question:** For Method 3, do post-1990 volume and volume sampled need to be supplied?

Answer: Yes. Post-1990 volume must be supplied to determine the accuracy of post-1990 volumetric fraction. Sample volume is required in the method 3 blendstock calculation.(7/1/94)

5. **Question:** When combining M1, M2 and M3, when is the data sufficiency requirement met?

Answer: The data sufficiency requirements are met when the minimum data requirements for the final supplemental method have been fulfilled. As stated in the regulation, if method 1 data is supplemented with method 2 data, the data sufficiency requirements for method 2 must be met.(7/1/94)

6. **Question:** If 4 batches/week of gasoline were produced in 1990, and 1 batch/week was tested, will

this be acceptable in lieu of the minimum data? It is equivalent to blendstock testing for 6 months and better than using post-1990 data and backcasting.

Answer: The regulations require that at least half of the batches must have been sampled to satisfy the minimum data requirements. However, EPA will consider a petition for less than minimum data if it can be clearly shown that the available data is sufficient in quality and quantity to develop a baseline. EPA cannot state whether one half of the required data is sufficient or not without evaluating the specific situation.(7/1/94)

7. **Question**: How do we handle results from two different labs (refinery and outside) which differ?

Answer: Technical and engineering judgement must be used to develop an explanation for and/or solution to the discrepancy. This explanation/solution must be supported by the baseline auditor, and is subject to EPA review and approval.(7/1/94)

8. **Question:** Can we exclude 1990 data on a given parameter if post-1990 data via a better test method was later collected?

Answer: Data can only be excluded if it can be shown, to EPA's satisfaction, that the data is not within the normal range of values expected for the gasoline or blendstock sample. This data could only be excluded if the testing or labelling could be shown to be improper, or the data is in some other way unacceptable as verified by an auditor.(7/1/94)

9. **Question:** Are we to use the best data (whether it's 1990 or post-1990) or meet the requirements of the regs (i.e., hierarchical manner, including everything)?

Answer: A baseline determination must meet the requirements of the regulation. The goal is to develop the most representative 1990 baseline, as defined by the requirements and criteria in the regulation.(7/1/94)

10. **Question:** What is determined first: WIP/extenuating circumstance; M1; M2; M3; oxy/non-oxy basis?

Answer: First, an unadjusted baseline must be developed based on the available data. Then any adjustments are made to develop the adjusted baseline. Oxygenated and non-oxygenated fuel parameter values shall be determined for both the adjusted and unadjusted baselines.(7/1/94)

11. **Question:** If good 1990 data on 3 of 5 streams is available, and 1993 data on all 5 streams, should refiners use that part of the 1993 data missing for the 2 streams, or use all of the 1993 data? Isn't the goal to minimize backcasting and use the best data?

Answer: The regulations state that if there is insufficient Method 1 and Method 2 data for a baseline parameter value determination, it must supplement that data with all available Method 3 data (the 1993 data), until the Method 3 sampling requirements have been met.(7/1/94)

12. **Question:** Should refiners use all available Method 2 and Method 3 data to supplement Method 1 data or just until there's enough?

Answer: As the regulation states, a refiner is only required to use sufficient Method 2 or Method 3 data until the minimum data requirements of that method have been met. Thus a refiner must use the first data collected which is sufficient to meet the minimum requirements. Should additional data be available, the refiner is encouraged to use it since presumably its use would result in a more accurate baseline. However, the refiner is not required to do this.(7/1/94)

13. **Question:** Are sampling requirements based on 50% of volume or on one-half of the number of batches?

Answer: Sampling requirements are based on the number of batches, not the volume, over a minimum of six months.(7/1/94)

J. INCLUDED GASOLINES

1. **Question:** Aviation gasoline has a low RVP, high octane, 10% aromatics and could be used as gasoline. Can it be included in the baseline determination? Is aviation gasoline considered finished gasoline?

Answer: If a fuel is exempted from the gasoline RVP and/or lead requirements, exclude that volume from the baseline determination.(7/1/94)

2. **Question:** Are specialty batches of gasoline (e.g. test fuels for the Auto-Oil research program) included in the baseline? Or are they considered "not introduced into commerce"?

Answer: Specialty batches of gasoline in very limited volumes may be interpreted to be "not introduced into commerce," subject to EPA approval.(7/1/94)

3. **Question:** For refiners who purchase blendstocks, how do other refineries' gasoline fit into the baseline?

Answer: Purchased blendstocks are included in a refinery's baseline. Purchased gasoline is not included in a refinery's baseline calculation. The only exception would be when the producing refinery is able to demonstrate that such gasoline was sold as a blendstock, and is not included in that refiner's baseline. In this case, the purchaser is responsible for including the blendstock in a baseline.(7/1/94)

4. **Question:** For purposes of baseline development, does the operation of the refinery have to be arms length from the import activities? If the refinery ships blendstocks to the leased storage facilities, are these considered to be blendstocks transferred to others?

Answer: No, the refinery operation does not need to be separate from the import activities in any way. Such a refiner would file two baselines, one for each type of operation. If blendstocks are shipped to leased storage, this is not considered transferred to others, since the fuel is still under that refiner's control/operation.(7/1/94)

K. METHOD 3 DATA

1. **Question:** If winter sulfur data was collected in 1991, but the results were in error, should refiners resample, or can they backcast using reasonable estimates and technical judgement?

Answer: This would depend on the individual situation. If the error could be corrected in a simple, straightforward manner, it may be possible to use the data, subject to auditor verification and EPA approval.(7/1/94)

2. **Question:** How does backcasting work? Are the numbers used in the Method 3 calculation the original post-1990 numbers or the backcasted numbers?

Answer: The Method 3 equations use the post-1990 parameter values to calculate the adjusted baseline parameter value. Subsequent calculations are based on this adjusted baseline parameter.(7/1/94)

3. **Question:** The RIA/preamble language indicates that Method 3-blendstock data is superior to Method 3-finished gasoline data. Is there a hierarchy in their use, i.e., must Method 3-blendstock data be used first? This would be opposite to the way Methods 1 and 2 are set up.

Answer: The regulations specify no hierarchy between the two types of Method 3 data.(7/1/94)

4. **Question:** Butane is exempted from the Method 3-finished gasoline requirements - are oxygenates? Since 1992 gasoline was subject to the oxy\fuel requirements, can oxygenates be exempted unless the change significantly affected fuel parameter values (by X%)?

Answer: No. Paragraph 80.91(e)(4) requires both oxygenated and non-oxygenated baselines to be determined, so oxygenate is not exempted. Butane is exempted because of the change in the RVP standard between 1990 and later years.(7/1/94)

5. **Question:** Since Method 3-finished gasoline data cannot be used unless it meets certain requirements, does it have to be backcasted?

Answer: Yes. Gasolines must be similar to start with to be able to have confidence in the backcasting adjustment (projecting changes between the future year gasoline and 1990 gasoline). Despite such similarities, however, backcasting is still required.(7/1/94)

L. TEST METHODS

1. **Question:** What fuel parameters are acceptable via which test methods? Will all tests be considered industry standard methods?

Answer: API has prepared a list of alternate test methods that could be considered industry standard methods for each of the baseline fuel parameters. EPA is currently evaluating this list, but will use it along with other available information to evaluate petitions for the use of alternate test methods.(7/1/94)

2. **Question:** Are adjustments made to parameters for future vs. current test methods?

Answer: If a known bias can be shown, parameters should be adjusted based on the test method used. This will only be considered as part of an alternate test method petition.(7/1/94)

3. **Question:** Please clarify what is meant by industry standard.

Answer: API has assisted EPA in determining industry standard by preparing a list of alternate test methods in use in 1990. Other test methods may also be considered, but there must be concurrence from the auditor that such test methods were acceptable in 1990 and used correctly.(7/1/94)

4. **Question:** The RIA method for aromatics and olefins doesn't result in agreement with finished gasoline, i.e., the sum of the blendstock parameters doesn't equal the finished gasoline value (>6% delta). Are alternative methods okay?

Answer: Alternative test methods may be considered, based on the individual situation as explained in an alternate test method petition.(7/1/94)

5. **Question:** Can a bias/correlation be used to adjust baselines from alternate lab methods to EPA-specified methods to enhance accuracy? That is, since EPA will be comparing new data to old data, old data should be adjusted to be comparable to new data (reg. test method).

Answer: If a known bias can be shown, parameters may be adjusted based on the test method used. This will only be considered as part of an alternate test method petition.(7/1/94)

6. **Question:** For purposes of developing baselines, EPA has established limits for negligible levels of aromatics, olefins, benzene, sulfur and oxygen in gasoline blending components. If the levels of any of these properties are below these "negligible limits" (which are similar to very low level test reproducibility limits), they may have been considered to be zero in the refinery baseline development. As a result, a refinery may have a baseline parameter value that is below the test tolerance. At these low concentrations, they could be in technical violation of the regulations simply because of testing accuracy. How can this be handled?

Answer: Section 80.91(d)(3) was written to promote simplification of baseline determination and to excuse testing in certain limited circumstances. If a refiner can "show" that a fuel component exists only in negligible quantities in a blendstock stream, testing that stream for the component in question is not required, and a value of zero is assigned to that component. The fuel components to which this provision applies are aromatics, olefins, benzene, sulfur, and oxygen content. Negligible quantities are defined as levels which fall below the minimum levels given in §80.91(d)(3). Note that this provision is not a requirement, but rather an option.

The negligible quantities provision applies only to Method 3 data collection for two reasons. First, the provision applies only to blendstocks, not finished gasoline. Since only Method 2 and 3 data are blendstock data, the provision cannot apply to Method 1 data. Second, the primary action of the negligible quantities provision is to excuse testing in certain cases. The only time when a refiner must choose whether or not to do additional testing is when considering the sufficiency of its Method 3 data.

The negligible quantities provision reduces the burden placed on refiners collecting Method 3 data to satisfy the minimum data requirements. If a refiner can "show" that a fuel component exists only in negligible quantities, testing for the blendstock stream in question is not required. Instead, a refiner can assume that the level of a component is zero. Clearly, the "showing" indicates engineering judgement or past experience. A "showing" cannot refer to actual test data for the blendstock stream in question, because the very purpose of the negligible quantities provision is to excuse testing. Thus if a refiner has data on the stream in question, that data must be used in the determination of the baseline per §80.91(d)(1)(i)(B).

Although the provision was designed to simplify baseline determinations, some refiners questioned the use of zero values for components which existed in negligible quantities. Instead, they proposed the use of the minimum values given in the provision. Doing so would negate the original intention of the provision to simplify baseline determinations, but would also recognize that the minimum values represent values below which the components cannot be measured accurately. Although the use of the minimum values would result in slightly dirtier (more lenient) baselines, the EPA has decided to allow the use of the minimum values in lieu of zero values at the refiner's discretion.

A refiner could too easily generate a fictitiously more lenient baseline if EPA allowed test data to be used as a showing of negligible quantities. Such a refiner could test a given blendstock stream for components that are known to be essentially absent, and then lay claim to the minimum values given in the negligible quantities provision. The EPA has chosen to interpret the negligible quantities provision in a manner that is consistent with the original intent, provides additional flexibility, and yet maintains the primary goal of developing baselines which accurately represent a refiner's actual 1990 production.

One caveat on the use of actual data in the baseline determination should be clarified. If a refiner measures a blendstock stream and discovers that the measured component level of that stream is below the applicable range for the test method used, the low end of the applicable range may be substituted for

the actual measured value in the baseline determination. For example, if a sulfur test method has an applicable range of 20 - 200 ppm and a blendstock stream is discovered to have a sulfur content of 11 ppm with that test method, the stream can be assumed to contain 20 ppm for the purposes of determining the baseline.(1/30/95)

M. SUMMER/WINTER CLARIFICATION

1. **Question:** Must the 3 months of summer or winter data be consecutive?

Answer: No.(7/1/94)

2. **Question**: In determining summer/winter data, does the actual data go to a given season on a batch basis?

Answer: Per the Direct Final Rulemaking, for Method 1, actual per batch data is used define the season of that batch.(7/1/94)

3. **Question:** Is Puerto Rico considered a domestic producer? There are no federal RVP standards there--do they use summer fuels in the winter complex model?

Answer: Puerto Rico refineries are considered federal gasoline producers. If their fuel remains seasonally the same throughout the year, they meet the criteria of a refiner marketing in an area with no seasonal changes, and they are only required to provide three months of data. In such a case, all fuels would be evaluated by the seasonal Complex Model which matches their year-round season. If the fuel does change seasonally, then they are required to provide data on both the "summer" fuel and "winter" fuel.(7/1/94)

4. **Question:** Revise the minimum required data from 3 months of summer and 3 months of winter to 12 weeks each.

Answer: Per the technical amendments, when using Method 1 actual per batch data, a month is defined as 4 weeks, and therefore the 3 month season is equivalent to 12 weeks.(7/1/94)

5. **Question:** For baseline purposes, how is summer fuel made early in the year (e.g., February) handled?

Answer: This situation is clarified by the new season definition given in the technical amendments. For Method 1, actual per batch data, any summer RVP fuel produced in February is considered summer volume and is included in the summer calculations. Otherwise, the determination for the month of February is made based on the volumes of winter RVP and summer RVP fuel produced in that month. If more than 50 percent of the fuel is summer fuel, February is a summer month.(7/1/94)

6. **Question:** Does summer quality gasoline go with the summer calculation?

Answer: The technical amendments clarify handling of summer and winter data. For method 1 data, all summer quality gasoline is included in the summer calculation. For method 2 and 3 data, all data from a given month is considered summer or winter, based on the volumes of summer and winter fuel produced. If more than 50 percent of the fuel is summer fuel, that month is considered a summer month.(7/1/94)

7. **Question:** If there is little difference between summer and winter component composition, can refiners use less than the minimum required data?

Answer: Based on the baseline data, a petition for less than minimum data would be considered in this situation.(7/1/94)

8. **Question:** Producers in California may not have 3 months of winter data. What do they do?

Answer: If three months of winter data are not available, a petition for less than minimum data would be considered.(7/1/94)

9. **Question:** One refiner made 7# RVP gasoline beginning in March in order to begin blending down the vapor pressure in the market, but did not make 9# gasoline until late April. Does the 7# product count as summer gasoline in the baseline calculation (it meets the Federal standard for summer)?

Answer: If the fuel meets summer volatility standards, it should be considered summer fuel. This is true in a case where the low RVP gasoline was produced to blend down RVP in preparation for the summer season.(7/1/94)

10. **Question:** Does EPA preclude refiners with batch per batch summer and winter data from using that data? By defining monthly data, more specific data seems to be unacceptable.

Answer: The technical amendments allow the use of specific method 1, per batch data in the seasonal calculations. If such data is not available, then the data is defined on a monthly basis.(7/1/94)

N. LOW PARAMETER VALUES

1. **Question:** If baseline sulfur or olefins are very low, how is 125% of these numbers determined for compliance?

Answer: EPA expects to apply a lower threshold value, based on the lower limits of the test methods used to measure the fuel parameters. For example, if a baseline sulfur parameter value of 3 ppm is given based on a test method with a valid range of 1000 to 5 ppm, the parameter value would be 5 ppm, 125% of that being 6.25 ppm.(7/1/94)

2. **Question:** Many refiners have reported certain 1990 parameter values at a "less than" value. For a refiner who can demonstrate that his parameter values are less than the quantity deemed negligible (i.e. 30 ppm sulfur), may she/he assume the negligible values adopted by EPA?

Answer: Yes.(7/1/94)

O. BLENDERS/IMPORTERS[9]

1. **Question:** How is imported gasoline, which is then blended, accounted for (i.e., as an import or as a blend)? What if it can be demonstrated that it was used as a blendstock?

Answer: Imported gasoline requires a separate baseline. If it can be shown that this fuel was never sold as is, then it can be treated as a domestic blendstock.(7/1/94)

2. **Question:** If a blender or importer has finished gasoline data for all but one parameter, can it develop a baseline value for that parameter or use the statutory value for that parameter?

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[9] This section assumes that the importer is not also a domestic refiner.(7/1/94)

Answer: A blender or importer must have complete method 1 data. If not, that blender's or importer's baseline is the statutory baseline. The statutory baseline cannot be used partially. However, it may be possible to petition for approval of less than minimum data.(7/1/94)

3. **Question:** If a blender or importer has finished gasoline data on 29 of 30 shipments, will EPA allow it to develop its own baseline?

Answer: The regulations state that a blender or importer must have method 1 data on every 1990 batch. However, it may be possible to petition for approval of less than minimum data.(7/1/94)

4. **Question:** Who accounts for imported finished gasoline blended with blendstock?

Answer: If the blendstock added to the imported finished gasoline is oxygenate, then the blending activity is ignored and the finished gasoline is reported by the importer. If some other blendstock is blended to the imported finished gasoline, e.g., to create a different grade of fuel, then the imported finished gasoline is treated as a blendstock and is reported in the blender's baseline.(7/1/94)

5. **Question:** In 1990, a refinery sent unfinished gasoline to a terminal. Is the baseline of the terminal, or of an entity (the blender) which happens to use the terminal's facilities? If the refinery wants to become a blender, does it get the terminal's baseline?

Answer: If the refinery and terminal are owned by the same entity or have a long term agreement, then they are treated as one operation, developing one baseline which includes both. If not, the refinery produced no gasoline in 1990 and thus does not have a baseline, and would have to use the statutory baseline. The baseline applies to the owner of the gasoline, whether that is the terminal operator or an entity using the terminal's facilities.(7/1/94)

6. **Question:** If a terminal uses Method 1 data to establish a baseline, and it received gasoline from a refinery, isn't the gasoline going to be double counted?

Answer: If the gasoline received from the refinery leaves the terminal unchanged, it is not included in the terminal baseline. If the fuel is blended with anything other than oxygenate, the fuel must be included in the terminal baseline.(7/1/94)

7. **Question:** Can blenders substitute statutory baseline values for those parameters for which they have no Method 1 data?

Answer: No. The statutory baseline values must be used together. If a blender does not have complete method 1 data, they must use the complete statutory baseline.(7/1/94)

8. **Question:** Will EPA allow an importer to use known Method 1 type data for previously tested volume but not for untested volume?

Answer: If an importer has complete method 1 data, it must be used. However, complete method 1 data is required on every batch. If such data is not available, the importer defaults to the statutory baseline.(7/1/94)

9. **Question:** Even if an importer had sufficient imports in 1990 to establish an RFG baseline, it is likely that all of the RFG parameters were not identified. In this case, would the importer default to the statutory baseline?

Answer: Under § 80.91(b)(4), if an importer is unable to meet the requirements for baseline-setting under Method 1 for all parameters, the importer must use the statutory baseline. However, if an importer is also a foreign refiner, under § 80.91(b)(4)(ii) that importer must determine its individual baseline if 75% of the gasoline produced at its foreign refinery in 1990 was imported into the U.S. This baseline must be set using the three Methods available to domestic refiners. In addition, if the importer is also a domestic refiner, under § 80.101(f)(3) the importer would use the volume-weighted average of the refiner's refinery baselines.(7/1/94)

10. **Question:** If a blender has data on 1 or 2 parameters, should they come up with the rest, or use the statutory baseline?

Answer: If a blender has complete method 1 data, it must be used. If not, the blender must comply with the statutory baseline.(7/1/94)

11. **Question:** For blenders that purchased gasoline, raffinate, and ethanol and splash blended them into a truck in 1990 and now wishes to register for blending of conventional gasoline, must he:

Use method 1 or use the statutory baseline?
Have an outside audit of his baseline?

Answer: If complete method 1 data is available, it must be used to develop an individual baseline. Individual baselines must be audited. If complete method 1 data is not available, the blender must comply with the statutory baseline. Using the statutory baseline does not require an outside audit.(7/1/94)

P. E300/T90, E200/T50

1. **Question:** Can refiners linearize the distillation curve between points or must refiners curve fit data on every sample? Is linear interpolation using a table of values considered calculating E200 and E300 "direct from the data"?

Answer: Refiners should use the most accurate means available to determine values for E200 and E300. If these parameters can be measured directly, such direct measured values should be used. If E200 and E300 must be converted from distillation data, nonlinear curve-fitting would be considered more accurate than linear interpolation since distillation curves are generally non-linear, and therefore should be used.(7/1/94)

2. **Question:** Can refiners use the E300 and E200 conversion equations in lieu of re-graphing the distillation data?

Answer: Refiners should use the most accurate means available to determine values for E200 and E300. If these parameters cannot be measured directly, they must be converted from distillation data via curve-fitting. Only if no distillation data exists can the conversion equations be used.(7/1/94)

3. **Question:** For those with graphical data on E200/E300, will EPA allow use of either the equation or graphical for both baseline and compliance?

Answer: Graphical approaches to calculating E200 and E300 for all fuels (i.e. both baseline and compliance fuels) can be used when curve-fitting or linear interpolation are not feasible. The conversion equations provided in the regulations can only be used if the only data available to a refiner is T50 and T90 measurements (i.e. no other distillation data is available).(7/1/94)

4. **Question:** In determining E200 and E300, will EPA allow D-86 distillation point averaging of gasoline grade data which is ± 20°F before graphing?

Answer: E200 and E300 values should be calculated separately for each batch of gasoline. If error bars are associated with distillation data for repeat tests on a given batch, the results may be averaged for the purposes of graphing and/or curve-fitting.(7/1/94)

5. **Question:** Does EPA have curves showing the effects of different oxygenate levels on the resulting T50/T90?

Answer: The Agency has developed no such curves. However, since the Complex Model requires the use of E200 and E300 instead of T50 and T90, the effects of different oxygenate levels on E200 and E300 can be back-calculated from the resulting dilution of the base gasoline.(7/1/94)

Q. CLOSELY INTEGRATED FACILITIES

1. **Question:** A refiner establishes a single 1990 baseline representing several facilities according to the **closely integrated facilities** provision in §80.91(e)(1). In 1996, one of the facilities in question shuts down. Is the refiner allowed to change its 1990 baseline to exclude the influence of the shut-down refinery on its baseline?

Answer: In general, no. Under the **closely integrated facilities provision**, two or more facilities are assumed to operate as a single refinery. If one of the facilities shuts down, the situation is analogous to the shut-down of one or more blendstock producing units in single-facility refinery. In both cases, since the 1990 situation remains unchanged, so also should the 1990 baseline.

The regulations provide few means for recalculation of a refinery baseline due to changes that occurred after 1990. One of these involves **aggregation** [see §80.101(h)]. Aggregation allows a multi-refinery refiner to group its individual baselines, representing separate refineries, together for a single set of compliance calculations. Aggregation thus occurs after the baselines for the individual facilities have been calculated and approved. In addition, there are no criteria that must be met before use of an aggregate baseline will be approved. Aggregated baselines may be recalculated according to §80.91(f)(4) in the event that one refinery is shut down or changes owners.

The closely integrated facilities provision [§80.91(e)(1)] is distinct and separate from the aggregation provision. In order to take advantage of the closely integrated facilities provision, a refiner must show that 1) the facilities in question were proximate to one another in 1990, and 2) their 1990 operations were significantly interconnected. A single baseline is developed which represents all the facilities in question. There is no regulatory provision for recalculating such a baseline if one facility is shut down or changes owners.

The EPA may consider making a change to a refiner's baseline if **one of the facilities included in a closely integrated facilities baseline is sold to another refiner rather than simply being shut down**. Under these conditions, the 1990 production may be double-counted as the sold refinery uses its own baseline representing gasoline it produced in 1990. Such situations will be evaluated on a case-by-case basis. (7/15/96)