BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

February 12, 2024

Daniel Ingram
Refinery Manager
Martinez Refining Company LLC
3485 Pacheco Boulevard
Martinez, California 94553

Re: Alternative emissions monitoring system ("AEMS") under Regulation Section 6-5-503.2

Dear Mr. Ingram:

I am in receipt of your request for approval, pursuant to Air District Regulation 6, Rule 5 ("Rule 6-5") Section 503.2, for Martinez Refining Company LLC ("MRC") to use an alternative emissions monitoring system ("AEMS") in lieu of quarterly source testing to ensure compliance with the limit on total PM_{10} ("TPM") emissions established under Rule 6-5, Section 301.3. As you know, the Air District has also extensively reviewed related source test data provided by MRC as part of settlement discussions in MRC's litigation challenging the Air District's amendments to Rule 6-5.

Based on the Air District's comprehensive evaluation of the source test data provided by MRC, and subject to further validation pursuant to United States Environmental Protection Agency ("EPA") Method 301, MRC's use of an AEMS to ensure compliance with Rule 6-5 is approved pursuant to the protocol detailed below. I am issuing this approval concurrently with the execution of the settlement agreement between the Air District and MRC in *Martinez Refining Company LLC v. Bay Area Air Quality Management District*, Contra Costa County Superior Court Case No. MSN21-1568 ("Agreement"), and this approval shall take effect at the same time as that Agreement.

I. Summary and Purpose of AEMS

Rule 6-5 applies to refineries in the Bay Area, including the refinery located in Martinez, California that is owned and operated by MRC ("Refinery"). It requires that, pursuant to Section 6-5-301.3, effective July 21, 2026, such refineries shall not cause TPM emissions from refinery fluidized catalytic cracking units ("FCCUs") that exceed

0.010 grains per dry standard cubic foot, corrected to 5% oxygen ("TPM Emission Limit"). Rule 6-5 provides two options for refineries to measure TPM emissions from their FCCUs. First, a refinery may conduct quarterly source testing by measuring TPM emissions from its FCCU, pursuant to Section 6-5-503.1. Second, if authorized by the Air Pollution Control Officer ("APCO"), a refinery may use an AEMS that the APCO has determined is functionally equivalent to such quarterly source testing to measure TPM emissions from its FCCU, pursuant to Section 6-5-503.2.

In order to comply with the TPM Emission Limit established by Rule 6-5, MRC is implementing changes at the Refinery to reduce emissions from the FCCU. MRC has requested permission to utilize the provision in Section 6-5-503.2 allowing the use of an AEMS in order to demonstrate the Refinery's compliance with the TPM Emission Limit. The approved AEMS set forth herein authorizes and requires MRC to use the online continuous emissions monitoring systems ("CEMS") installed on the Refinery FCCU's Carbon Monoxide Boilers ("COBs") to provide continuous monitoring of (i) ammonia ("NH_3") and (ii) sulfur dioxide ("SO_2") in the COBs' flue gas as inputs to a correlation equation ("Correlation Equation") for calculating condensable particulate matter ("CPM") emissions from the FCCU based on the NH_3 and SO_2 continuous emissions data from those CEMS. The AEMS is based on a fixed amount of filterable particulate matter ("FPM") from each COB, as derived from prior source testing. Total PM is calculated by adding the result of the correlation equation to the FPM amount for each COB.

The CEMS that serve as the foundation for the AEMS provides for continuous assessment of FCCU TPM emissions in a way that is not possible through the quarterly source testing established by Section 6-5-503.1. The AEMS is based on extensive source testing using, among other things, the source test methodology prescribed by Rule 6-5. Based on the Air District's staff's review and analysis of the source testing and other data provided by MRC, I have determined that the AEMS, if validated pursuant to EPA Method 301 as detailed below, will provide for greater transparency with more complete and continuous assessment of TPM emissions than could be achieved by the quarterly source testing provided for in Section 6-5-503.1. I have also determined that the AEMS, if validated pursuant to EPA Method 301, will provide for a means of measuring compliance with Rule 6-5's TPM Emissions Limit in a manner that is functionally equivalent to the quarterly source testing provided for in Section 6-5-503.1.

The AEMS shall be subject to a validation process as set forth below. Please note that the process set forth in this approval differs in some respects from the process set forth in MRC's request for approval and accompanying exhibit.

II. Scope and Applicability of AEMS Approval

This approval is limited to the FCCU facility and operations as they exist on the date that the APCO approves the Established Operational Parameters proposed by MRC, as provided in Part IV.D. below. This approval does not apply in the event of any

material change to the FCCU facility and its operations (i.e., a change that requires a permit or other regulatory approval) after the APCO has approved the Established Operational Parameters, unless the APCO modifies this approval in writing to apply to that change.

III. Correlation Equation and Calculation Methodology

The AEMS will calculate TPM through a correlation equation that calculates CPM and uses a fixed constant for FPM based on source testing at each individual COB. In summary, TPM is determined as follows:

TPM = CPM + FPM

This TPM calculation will be performed at each COB based on CPM and FPM values calculated for each COB according to the methods specified below.

A. CPM Calculation Using Correlation Equation:

As requested by MRC, the Air District approves the use of the Correlation Equation below to calculate CPM in grains per dry standard cubic foot (gr/dscf) corrected to 5% O_2 from NH_3 and SO_2 measurements from the continuous emissions monitors on each COB:

$$CPM = \left(\frac{1}{379.5}\right) * \left(\left(\frac{NH3\ ppmv}{1{,}000{,}000}\right) - \left(\frac{SO2\ ppmv}{1{,}000{,}000}\right) * 0.03\right)) * \left(\frac{123.5}{1.5}\right) * 7000$$

Where:

- 1/379.5=ratio of moles per one dscf using the ideal gas law
- NH_3 ppmv = measured NH_3 concentration corrected to 5% O_2 as measured by each COB CEMS in parts per million by volume ("ppmv")
- SO_2 ppmv = measured SO_2 concentration corrected to 5% O_2 as measured by each COB CEMS in ppmv
- 1/1,000,000 = conversion from ppm to fraction
- 0.03 = ratio of sulfur trioxide (SO_3) formed to SO_2 in COB stack
- 123.5 = average molecular weight between ammonium bisulfate and ammonium sulfate based on MRC source test data which shows a ratio of 1.5 between NH_3 and sulfate ("SO_4"). This would indicate for every one mole of ammonium bisulfate [$(NH_4)HSO_4$] there is one mole of ammonium sulfate [$(NH_4)_2SO_4$]
- 1.5 = ratio between NH_3 and SO_4 based on source test data which translates to 1.5 moles of NH_3 and 1 mole of SO_4
- 7000 = conversion from pounds to grains

CPM will be calculated for each COB individually, using NH_3 and SO_2 data measured by the CEMS in the stack for that COB.

B. FPM Calculation

As requested by MRC, the AEMS is based on a constant for FPM in each COB. The table below shows the initial FPM values ("Initial FPM Values") that shall be used to calculate TPM during the First-Year Validation Period, as described below. All FPM values are in gr/dscf corrected to 5% oxygen.

COB1	COB2	COB3
0.0038	0.0047	0.0059

These values were derived from source testing conducted by MRC using EPA Method 5B on the COBs in July through October of 2022.

If MRC believes that subsequent source testing warrants adjustment to any Initial FPM Values, it may request in writing that the APCO adjust these values. Any such request must be based on source test data using either EPA Method 5B or EPA Method 201A, provided, however, that MRC must use the same source test method that was used to set the Initial FPM Values to request any modification to any of these values in the future and also to demonstrate compliance as part of the AEMS. Accordingly, if MRC wishes to use EPA Method 201A in source tests to request a modification to the Initial FPM Values, it must first revalidate the Initial FPM Values using EPA Method 201A. MRC may only use a modified FPM Value if the APCO has issued written approval for MRC to do so ("Modified FPM Value").

As further described below, as part of the First-Year Validation process, the Initial FPM Value, and any Modified FPM Value approved by the APCO, shall be replaced by the average (mean) value of all source tests conducted on each COB during the First-Year Validation Period ("Validated FPM Value").

C. Accuracy of the Continuous Emissions Monitors

Given the role of data collected by the CEMS in the AEMS, all CEMS must meet appropriate standards of accuracy and data availability. Specifically, MRC must ensure that the NH_3, SO_2, and O_2 CEMS meet the certification and maintenance requirements in both 40 CFR Part 60, Appendix B Performance Specifications and Appendix F Quality Assurance requirements, and the Air District's Manual of Procedures, Volume V. The NH_3 and SO_2 CEMS must also meet alternative annual Relative Accuracy ("RA") and Field Accuracy Test ("FAT") standards of ten percent (10%). Each NH_3, SO_2 and O_2 CEMS must provide valid, certified data sufficient to ensure that the data availability requirements in Sections IV.E and VI.A below are satisfied. No later than January 1, 2026, MRC shall submit an application to the Air District to amend its Title V Major

Facility Review Permit and shall request in that application to have these 10% RA and FAT standards, and the 90% quarterly data availability, added as enforceable permit conditions in its Major Facility Review Permit for the FCCU for the NH_3, SO_2, and O_2 CEMS. The Air District shall process MRC's application with a goal of incorporating the 10% RA and FAT standards, and 90% data availability, into MRC's Major Facility Review Permit for the FCCU.

IV. First-Year Validation Period

A. Overview

Commencing with the July-to-September calendar quarter in 2026 and continuing through the subsequent three (3) calendar quarters (collectively, the "First-Year Validation Period"), the Air District will use the AEMS to determine the FCCU's compliance with the TPM Emission Limit.

The purposes of the First-Year Validation Period are to: (1) confirm that the AEMS is functionally equivalent to quarterly source testing in determining compliance with the TPM Emission Limit set forth in Section 6-5-301.3; and (2) confirm the operational parameters necessary to ensure that the AEMS continues to measure TPM emissions in an unbiased and precise manner.

If the APCO determines that the source tests conducted during the First-Year Validation Period show that the AEMS measures TPM emissions in an unbiased and precise manner in conformance with EPA Method 301 as specified in Section IV.C, **then the AEMS shall be deemed valid**. In that event, to confirm that the AEMS remains valid, MRC shall conduct additional source testing in subsequent years subject to Section VI below.

If the APCO determines that the source tests conducted during the First-Year Validation Period do not show that the AEMS measures TPM emissions in an unbiased and precise manner in conformance with EPA Method 301, **then the AEMS shall be deemed invalid**, and MRC will thereafter be required to demonstrate compliance with the TPM Emission Limit using quarterly source testing under Section 6-5-503.1, unless the APCO subsequently approves a revised AEMS pursuant to Section V (the "Refinement Process") described below.

B. Source Testing

During the First-Year Validation Period, MRC shall conduct source tests at least quarterly on each COB (a minimum of four (4) source tests on each COB). Each of these source tests shall include not fewer than three (3) runs on each COB. MRC shall conduct each of these source tests in compliance with all provisions of Section 6-5-503.1, with the option to use EPA Method 5B instead of EPA Method 201A for FPM where permitted as

specified in Section III.B., above. MRC shall submit the results of all source tests to the Air District as specified below.

C. Validation of the AEMS

The Air District shall use EPA Method 301 to determine the validity of the AEMS as compared with the standard EPA source test methods specified in Section 6-5-503.1. The Air District will compare the source test results from the First-Year Validation Period with the simultaneous AEMS results using the portions of EPA Method 301 relevant to the determination of bias and precision, specifically Section 11 of EPA Method 301 concerning the comparison with validated methods. The AEMS must meet the precision standard of Method 301, applying alternate calculation procedures detailed in EPA Performance Specification 18, Section 12.3.2 for single, rather than paired, train sampling runs. The AEMS must either meet the bias standard of Method 301 or apply the appropriate bias correction specified in the Method. In addition, the Air District will calculate the standard deviation of the source tests for each COB. The Air District will use this standard deviation metric to determine if future source tests are within the expected variability of source test results, as further detailed below.

To facilitate the Air District's review and validation of the AEMS, MRC shall submit all source test results conducted during the First-Year Validation Period to the Source Test Section of the Air District, within sixty (60) days of each source test completion. All process and operational data necessary for the Air District to perform a complete review of the source test results must be included in each report. In addition, following the conclusion of the First-Year Validation Period, MRC shall provide the Air District with its written evaluation of all source test results and a comparison with the AEMS measurements in conformance with EPA Method 301 ("AEMS Evaluation"). MRC's AEMS Evaluation shall include and utilize the results of all source tests conducted during the First-Year Evaluation Period unless MRC provides substantial evidence of source testing issues, including contamination, that led to unreliable results and receives written concurrence from the APCO that a particular test run can be excluded. MRC shall provide its AEMS Evaluation to the Air District Source Test Section within sixty (60) days of the conclusion of the First-Year Validation Period.

In the event that the Air District determines that MRC's AEMS Evaluation is incomplete or that additional information is necessary for the Air District to review that evaluation, MRC shall provide the additional information to the Air District as promptly as possible and, in any event, in no more than thirty (30) days after a request by the Air District to correct deficiencies or provide additional information.

MRC shall also include in its AEMS Evaluation a proposed Validated FPM Value for each COB based on the average (mean) value of all source tests conducted on that COB during the First-Year Validation Period.

Within sixty (60) days of receipt of the above complete AEMS Evaluation from MRC, the APCO shall issue its written determination of whether the AEMS is valid based on its determination whether the quarterly sources tests conducted during the First-Year Validation Period show that the AEMS measures TPM emissions in an unbiased and precise manner in conformance with EPA Method 301. The APCO's determination shall also indicate whether the Air District has approved MRC's proposed Validated FPM Values and, if not, shall specify the Validated FPM Values that the APCO has determined is appropriate.

MRC may request an extension for any of the reporting or source testing deadlines set forth in this Section IV or Sections V or VI if it believes that events beyond its reasonable control have prevented it from meeting that deadline. The APCO will not unreasonably deny such a request.

If the APCO determines that the AEMS is valid, then MRC shall continue to use the AEMS to measure compliance with the TPM Emission Limit, subject to Section VI below.

If the APCO determines that the AEMS is invalid or that MRC has not provided sufficient information for the APCO to reach a definitive determination regarding the validity of the AEMS, then MRC shall thereafter be required to demonstrate compliance with the TPM Emission Limit using quarterly source testing under Section 6-5-503.1, unless the APCO subsequently approves a revised AEMS during the Refinement Process. During the first quarter after MRC submits its AEMS Evaluation, MRC shall continue to use the AEMS; MRC shall also conduct source testing during that first quarter, which shall include not fewer than three (3) runs on each COB. MRC shall conduct each of these source tests in compliance with all provisions of Section 6-5-503.1, with the option to use EPA Method 5B instead of EPA Method 201A for FPM where permitted under this approval.

D. Operational Parameters:

MRC must ensure that the FCCU operating conditions under which the AEMS will be used to measure TPM emissions are consistent with ensuring that the AEMS will be sufficiently precise and unbiased for all COBs. For example, COB firebox temperature may be a factor in ensuring complete combustion of organic compounds entering the COB. Partially combusted organic compounds could increase CPM emissions in a manner that would not be captured by the AEMS as currently designed. Therefore, low COB firebox temperatures may result in conditions where the AEMS is not functionally equivalent to source testing. For these reasons, in order for the AEMS to validly measure TPM emissions, MRC must ensure that the FCCU operates within the operational parameters on which the AEMS is based.

To address the foregoing concerns regarding operational parameters, MRC shall develop for Air District review and approval both a list of established operational parameters ("Established Operational Parameters") for FCCU operations and a testing plan covering all operational parameters that are potentially relevant to TPM emissions from the FCCU and COBs ("Operational Parameters Testing Plan").

MRC may address a particular parameter through one of the following means: (1) establish through substantial evidence and source test data that, over the anticipated operating conditions, a particular parameter does not impact TPM emissions to an extent where the AEMS would fail the bias and precision tests of EPA Method 301; (2) demonstrate through substantial evidence that the impact of a particular parameter on TPM emissions is accounted for by other parameters either in the AEMS and/or for which an operational window has been set; (3) set limits on the values of the parameter as part of the AEMS that would ensure the operation of the FCCU and COBs are consistent with the conditions necessary to ensure that the AEMS calculates TPM in an unbiased and precise manner in conformance with EPA Method 301 ("Operating Window"); or (4) incorporate the parameter into the AEMS based on substantial evidence including source test data. Using the example of COB firebox temperatures, MRC could set a minimum COB firebox temperature during the First-Year Validation Period that would then become an operational constraint for that COB for use of the AEMS.

1. Established Operational Parameters

No later than March 1, 2026, MRC shall submit proposed Established Operational Parameters to the Air District for review and approval. For each operating parameter potentially relevant to TPM emissions from the FCCU and COBs, the Established Operational Parameters must be addressed in one of the four methods listed above. If MRC determines, with the APCO's written concurrence, that an additional parameter needs to be incorporated into the AEMS , this submittal must include a plan for monitoring that parameter in a fashion providing equivalent accuracy and availability as required of CEMS in Sections III.C. and IV.E These Established Operational Parameters shall be utilized by the APCO both during the First-Year Validation Period and, if applicable, during Ongoing Source Testing to ensure that the FCCU is operating within the operational conditions for which the AEMS has been established and validated.

The Established Operational Parameters shall address at least the following operational parameters of the FCCU, COBs and ESPs: stripping rate, regenerator blower rate, coke burn, Flexigas flow rate, FCCU feed API, COB firebox temperature, FCC regen flue gas CO, ESP power consumption, and ESP spark rate.

2. Operational Parameters Testing Plan

No later than March 1, 2026, MRC shall submit a proposed Operational Parameters Testing Plan to the Air District for review and approval. The proposed plan

shall incorporate MRC's proposed Established Operational Parameters and shall include, for each parameter subject to an Operating Window all of the following: (1) a requirement for MRC to monitor whether the FCCU is operating within the specified Operating Window; (2) a requirement for MRC to maintain records of such monitoring documenting the measured parameter values for a period of at least five (5) years; (3) a mechanism by which MRC will identify in real time any operation when the FCCU is operating outside the Operating Window for that parameter; and (4) a requirement that MRC report any such operation outside the Operating Window to the Air District within ninety-six (96) hours (collectively, "Operational Window Monitoring Provisions"). MRC's proposed Operational Parameters Testing Plan shall address all of the Established Operational Parameters.

The Air District and MRC will work collaboratively to ensure that the Operational Parameter Testing Plan is adequate to allow the Air District to undertake its evaluation of the AEMS during the First-Year Validation Period. No later than July 1, 2026, APCO shall either approve the Operational Parameter Testing Plan, including the Established Operational Parameters and any modifications ("Approved Testing Plan"), or notify MRC that the Air District lacks sufficient information to do so.

E. Data Availability

During the First-Year Validation Period, MRC shall ensure that the AEMS generates COB-specific valid hourly-average TPM emissions measurements for at least 90% of the COB operating hours in each quarter. For purposes of this paragraph, the AEMS shall be deemed to be generating valid hourly-average TPM emissions measurements if (i) the FCCU and related equipment is operating in conformance with the Operating Window for all Established Operational Parameters identified in the Approved Testing Plan, and (ii) the NH_3, SO_2 and O_2 CEMS on each COB are providing valid, certified data. MRC may not use the AEMS for hourly periods where the AEMS is not generating valid hourly-average TPM emissions measurements for any hours exceeding 10% of the COB operating hours in a quarter. Any operation during such hourly periods exceeding 10% of the COB operating hours in a quarter shall constitute operating without an approved AEMS under Section 6-5-503.2. If the AEMS fails to generate valid hourly-average TPM emissions measurements for more than 75% of the COB operating hours in any quarter, then the APCO may determine that the AEMS is invalid, subject to the Refinement Process and related provisions as specified herein.

V. Refinement Period

A. Refinement Process

If, as a result of the validation process conducted during the First-Year Validation Period, the APCO determines that the AEMS is not valid, MRC and the APCO shall meet and confer and use all reasonable good faith efforts for a period of eighteen (18) months

(or longer, upon written agreement) (the "Refinement Period") to refine the AEMS, if possible, so that it can satisfy the validation requirements listed above. Such refinements could potentially involve changes to the operating parameters of the FCCUs and COBs or changes to the AEMS.

During the Refinement Period, MRC shall be required to demonstrate compliance with the TPM Emission Limit using quarterly source testing under Section 6-5-503.1, unless and until the APCO provides written notice of approval of a refined or revised AEMS.

B. Final Determination

If, at any point during the Refinement Period, the APCO and MRC are able to agree upon refinements to the AEMS or the operating parameters of the FCCU or COBs that the APCO determines satisfy the validation requirements listed above, then the APCO shall approve a refined or revised AEMS ("Revised AEMS") and shall promptly provide MRC written notice of that approval. Thereafter, MRC shall use the Revised AEMS to measure compliance with the TPM Emission Limit, pursuant to Section VI. below.

If the APCO has not approved a Revised AEMS by the conclusion of the Refinement Period, then the AEMS shall automatically terminate and be revoked without any further action required by the Air District.

VI. Ongoing Operations, AEMS Reporting, and Source Testing after First-Year Validation Period

In the event that the APCO determines that the AEMS is valid as a result of the source testing conducted during the First-Year Validation Period, the following provisions shall apply to MRC's operation of the FCCU.

A. Data Availability

MRC shall ensure that the AEMS generates COB-specific valid hourly-average TPM emissions measurements for at least 90% of the COB operating hours in each quarter. For purposes of this paragraph, the AEMS shall be deemed to be generating valid hourly-average TPM emissions measurements if (i) the FCCU and related equipment is operating in conformance with the Operating Window for all Established Operational Parameters identified in the Approved Testing Plan, and (ii) the NH_3, SO_2 and O_2 CEMS on each COB are providing valid, certified data. MRC may not use the Approved AEMS for hourly periods where the Approved AEMS is not generating valid hourly-average TPM emissions measurements for any hours exceeding 10% of the COB operating hours in a quarter. Any operation during such hourly periods exceeding 10% of the COB operating hours in a quarter shall constitute operating without an approved AEMS under

Section 6-5-503.2. If the AEMS fails to generate valid hourly-average TPM emissions measurements for more than 75% of the COB operating hours in any quarter, then the APCO may determine that the AEMS is no longer valid, in which case the APCO shall so notify MRC, and MRC shall thereafter be required to demonstrate compliance with the TPM Emission Limit by quarterly source tests pursuant to Section 6-5-503.1. In that event, MRC may re-apply for approval of a modified AEMS.

B. AEMS Reporting

After the completion of the First-Year Validation Period, MRC shall report AEMS results to the Air District within thirty (30) days after the conclusion of every calendar quarter. The reports shall be in a spreadsheet, delimited text file, or other electronic format that enables access to relevant numeric results and calculations ("Quarterly AEMS Report"). Each Quarterly AEMS Report shall include hourly average measurements for O_2, SO_2, NH_3, and TPM emissions as calculated by the AEMS, with a summary of the quarterly-average TPM emissions averaged over the entire quarter. Each Quarterly AEMS Report shall also include records that demonstrate compliance with the Established Operational Parameters, including but not limited to all information specified in the Operational Window Monitoring Provisions, and provide MRC's analysis of whether the FCCU complied with the TPM Emission Limit based on the AEMS results for the preceding twelve (12) months. The Air District shall determine compliance with the TPM Emission Limit by calculating a rolling four (4) quarter average of AEMS results at the end of each calendar quarter.

C. Ongoing Source Testing

After the First-Year Validation Period, MRC shall conduct further source testing at least once per year on each COB in compliance with all provisions of Section 6-5-503.1. However, if the Validated FPM Values used in the AEMS were set based on Method 5B, then Method 5B shall be used to measure FPM in these annual source tests. This annual source testing shall take place no later than the anniversary of the first source test conducted during the First-Year Validation Period. The annual source test results shall be reported to the Air District no later than sixty (60) days after the completion of the annual source test ("Annual Source Test Report").

At least thirty (30) calendar days prior to conducting any source tests that MRC will include in its Annual Source Test Report, MRC shall notify the Air District of its intent to conduct such tests. MRC may, in its election, conduct more than one source test per COB each year for inclusion in the Annual Source Test Report, provided however, that (i) MRC must first notify the Air District as required by the preceding sentence for any source test that will be included in the Annual Source Test Report, and (ii) any source test for which MRC has given such notice to the Air District must be included in the Annual Source Test Report unless MRC provides substantial evidence of source

testing issues, including contamination, that led to unreliable results and receives written concurrence from the APCO that a particular test run can be excluded.

The Air District shall compare the results of all source tests reported in the Annual Source Test Report for each year, as well as any source tests conducted by the Air District during that year ("Annual Results"), to the simultaneous calculations by the AEMS and the data generated by the source tests conducted during the First-Year Validation Period. For each COB, the average source test results will be compared with the average simultaneous results of the AEMS. The difference between the average source test results on each COB and the average simultaneous results of the AEMS must be within 1.5 standard deviations of the results from the First-Year Validation Period. In addition, for each COB, the average source test results may not differ from the average value calculated by the AEMS by more than 30%. If the Annual Results do not meet both of these requirements, then the APCO shall notify MRC that the AEMS is no longer valid, and MRC shall thereafter be required to demonstrate compliance with the TPM Emission Limit by quarterly source tests pursuant to Section 6-5-503.1. In that event, MRC and the Air District shall meet and confer as set forth below.

In addition, after the First-Year Validation Period, the APCO shall review the value used for the contribution of FPM to TPM and, if necessary, adjust it as follows. In the event that any FPM source test that MRC conducts for any COB in order to comply with requirements in its Title V Major Facility Review Permit shows a measured value that varies by more than ±10% from the Validated FPM Value utilized in the AEMS for that COB, then the APCO shall establish a revised Validated FPM Value for that COB based on the new source test results or additional source testing.

In the event that MRC desires to replace the current fluid catalytic cracking catalyst inventory with a materially different type of fluid catalytic cracking catalyst after the First Year Validation Period (a "catalyst change"), MRC shall first submit a written engineering report to the APCO demonstrating that the AEMS will continue to measure TPM emissions in an unbiased and precise manner in conformance with EPA Method 301. A catalyst change does not include the use of a different type of catalyst due to an emergency or temporary supply disruption, or a replacement of fresh catalyst that has substantially identical physical and chemical characteristics. MRC shall not implement a catalyst change unless it has received written approval by the APCO. If requested by the APCO, MRC shall further validate the AEMS by providing subsequent source testing results. Any additional source testing will be evaluated as set forth in this Section V.C.

D. Subsequent Refinement Period

If the AEMS is deemed invalid pursuant to section VI.C above, then MRC and the Air District shall meet and confer and use all reasonable good faith efforts for a period of one (1) year (or longer, upon written agreement of both parties) to refine the AEMS so that it measures TPM emissions in an unbiased and precise manner in conformance with

EPA Method 301 (the "Subsequent Refinement Period"). If, at the conclusion of the Subsequent Refinement Period, the APCO has not issued a written determination that a revised version of the AEMS measures TPM emissions in an unbiased and precise manner in conformance with EPA Method 301, then approval of the AEMS shall automatically terminate and be revoked.

VII. Other Requirements

All records associated with the initial and ongoing validation of the AEMS shall be retained by MRC as long as the AEMS is being used to demonstrate compliance, and for a period of five (5) years thereafter. MRC must make these records, and all other records required to be kept under this approved AEMS, available to the Air District upon request.

Sincerely,

Philip M. Fine
Executive Officer/APCO

cc: Greg Nudd, Deputy Executive Officer of Science & Policy
Dr. Meredith Bauer, Deputy Executive Officer of Engineering & Compliance
Alexander Crockett, Esq., General Counsel