

**Bay Area Air Quality Management District**

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**Permit Evaluation  
and  
Statement of Basis  
for  
RENEWAL  
of  
MAJOR FACILITY REVIEW PERMIT**

**for  
CRITERION CATALYSTS & TECHNOLOGIES, L.P.  
Facility # A0227**

**Facility Address:**

2840 Willow Pass Road  
Pittsburg, CA 94565

**Mailing Address:**

P.O. Box 5159  
Pittsburg, CA 94565-0659

Application Engineer: Dharam Singh  
Site Engineer: Dharam Singh

Application: 25461

September 2017

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## **Title V Statement of Basis**

### **A. Background**

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the “potential to emit” (as defined by BAAQMD Regulation 2-6-218) more than 100 tons per year of PM<sub>10</sub>, a regulated air pollutant.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all “applicable requirements” (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

Pursuant to Regulation 2, Rule 6, section 416, the District has reviewed the terms and conditions of this Major Facility Review permit and determined that they are still valid and correct. This review included an analysis of applicability determinations for all sources, including those that have been modified or permitted since the issuance of the initial Major Facility Review Permit. The review also included an assessment of all monitoring in the permit for sufficiency to determine compliance.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0227.

This facility received its renewed Title V permit on December 15, 2008. Although the current permit expired on December 14, 2013, it continues in force until the District takes final action on the permit renewal. This application is for a permit renewal.

The standard sections of the permit have been upgraded to include new standard language used in all Title V permits.

New sources and abatement devices have been added to the permit, and archived sources and abatement devices have been deleted from the permit.

The following permit applications have been approved since the last Title V permit renewal. These applications will be folded in this permit renewal instead of processing them as minor revisions individually.

Application #	Description	Date of Receipt
21823	X1 Bulk Bag Unloading Station, S12 through S16	04/07/2011
22820	Change of Conditions 13093, 13097, and 15672	11/30/2010
22844	Change of Condition 15672	12/03/2010
24919	Emergency Diesel Fire Pump Engine, S612	10/09/2012
25657	Change of Conditions 8468, and 16736	08/28/2013
25835	Modification and change of Condition 16736	11/13/2013
28225	Change of Condition 16736	08/24/2016

The proposed permit shows all changes to the permit in strikeout/underline format.

## B. Facility Description

Criterion Catalysts & Technologies, L.P. is a catalyst manufacturing facility comprised of process equipment such as kilns, mullers, dryers, blenders, pelletizers, extruders, etc.; material handling equipment such as conveyors, screeners, elevators, hoppers, etc.; storage silos; storage tanks; bagging/packaging units; and abatement devices such as baghouses, dust collectors, after burners, oxidation catalyst, and selective catalytic reduction. Emissions from the facility are primarily PM<sub>10</sub>.

There has been no significant increase in PM-10 emissions due to the modification of the existing sources, change of conditions, and addition of new sources after the issuance of the last Title V permit renewal. The increase in emissions are presented in the following table.

Application #	PM10 (ton/yr)
21823	0.045
22820	0.0
22844	0.0
24919	0.0
25657	0.0
25835	0.0
28225	0.0

## **C. Permit Content**

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit.

The Title Page identifies District and Plant Contact information and includes the permit issuance signature and date.

### Changes to Permit:

- The District address has been updated.
- The name and phone number for the Responsible Official and Facility Contact have been updated.

## **I. Standard Conditions**

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District's General Provisions and Permitting rules.

### Changes to Permit:

- The dates of adoption and approval of rules in Standard Condition I.A have been updated.
- SIP Regulation 2, Rule 1 – Permits, General Requirements and SIP Regulation 2, Rule 2 Permits, New Source Review and Prevention of Significant Deterioration have been deleted from Standard Condition I.A.
- BAAQMD Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants and SIP Regulation 2, Rule 6 – Permits, Major Facility Review have been added to Standard Condition I.A.
- Permit issuance and expiration dates in Section I.B will be updated as indicated.
- The District and EPA mailing addresses have been updated in Standard Conditions I.F and I.G. District and EPA E-mail addresses that may be used for submitting reports have been added to Standard Conditions I.F and I.G.

## **II. Equipment**

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit more than 2 tons per year of a “regulated air pollutant” (as defined in BAAQMD Rule 2-6-222) or 400 pounds per year of a “hazardous air pollutant” (as defined in BAAQMD Rule 2-6-210).

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an “A” and a number (e.g., A24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an “S” number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or “A”) device. If the primary function of a device is a non-control function, the device is considered a source (or “S”).

The equipment section is considered a part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a District Permit to Operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District’s regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

Following are explanations of the differences in the equipment list between the time that the facility originally applied for a Title V permit renewal and the permit proposal date:

Sources S111, S112, S113, S114, and abatement device A14 were archived.

Changes to Permit:

- New/modified sources (S12, S13, S14, S15, S16, and S612) will be added to Section II of the permit.
- Archived sources (S-107, S111, S112, S113, S114, S420, and S514) and archived abatement device (A14) will be deleted.
- Descriptions of sources (S509, S511, S512, and S513) will be updated.
- Outlet grain loading for abatement devices, A3, A42, A52, and A53, will be updated.
- Sources controlled by A4, A58, A320, A380 and A390 will be updated.

**III. Generally Applicable Requirements**

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District Permit to Operate. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g.,

particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered “significant sources” as defined in BAAQMD Rule 2-6-239.

#### Changes to Permit:

Table III has been updated by adding/deleting the following rules and standards to conform to current practice:

- Amendment dates will be updated for: BAAQMD Regulation 1; Regulation 2, Rule 1; Regulation 2, Rule 5; Regulation 8, Rule 3; and SIP Regulation 9, Rule 1 and for California Health and Safety Code provisions and 40 CFR Part 61, Subpart M and 40 CFR Part 82, Subpart F.
- SIP Regulation 2, Rule 1, General Requirements, will be deleted.
- SIP Regulation 8, Rule 3, Organic Compounds – Architectural Coatings will be added.
- Regulation Title or description of requirements for Subpart F, 40 CFR 82.156, 82.161, and 82.166 will be updated.
- The dates of adoption or approval of the rules and their “federal enforceability” status in Table III will also be updated.

#### **IV. Source-Specific Applicable Requirements**

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are “federally enforceable” and a “Y” (yes) indication will appear in the “Federally Enforceable” column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the “Federally Enforceable” column will have a “Y” for “yes”. If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations of all the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District's or EPA's websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

**Complex Applicability Determinations**

**112(j)**

The facility is not subject to 112(j) of the Clean Air Act because it is not a major source of hazardous air pollutants (HAP). No HAP is emitted from any source at this facility.

**Compliance Assurance Monitoring (CAM)**

NOx emissions from the kilns, S7 and S413 are abated by the SCR, A58. Each kiln is equipped with a non-resettable totalizing fuel meter for natural gas. The kilns are equipped with a continuous emission monitor (CEM) for NOx. The kilns are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) as per § 64.2(b)(1)(vi) (exempting emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method) because S7 and S413 are subject to a permit condition (condition ID#13100, part 8) that requires the use of a CEM for NOx.

Calciner, S606, is equipped with a SCR, A605, to control NOx emissions, a CO Catalyst Oxidizer, A606, to control CO emissions, and with a non-resettable totalizing fuel meter to measure and record natural gas usage. The calciner is equipped with a continuous emission monitor (CEM) for NOx and CO. The calciner is not subject to 40 CFR Part 64, Compliance Assurance Monitoring as per § 64.2(b)(1)(vi) (exempting emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method) because S606 is subject to a permit condition (condition ID #15672, part 12) that requires the use of CEMs for NOx and CO.

Pre-abatement potential to emit (PTE) for PM<sub>10</sub> from each PM<sub>10</sub> source at the facility is less than 100 tpy, therefore they are not subject to CAM as per § 64.2(a) (general applicability). PM-10 PTE calculations based on the maximum throughput rate for the source and unabated emission factor from USEPA, AP-42 for similar materials/operation are as follows:

Source #	Source Description	Pollutant	Emission factor, lb/ton	Reference	Maximum Annual Throughput, tpy	Pre-abated emissions, lb/yr	Pre-abated emissions, TPY
S1	X1 Muller	PM-10	0.06	1	13140	788.4	0.394
S2	X1 Dryer	PM-10	0.06	1	13140	788.4	0.394
S3	X1 Dried Product Elevator	PM-10	0.06	1	13140	788.4	0.394



<b>Source #</b>	<b>Source Description</b>	<b>Pollutant</b>	<b>Emission factor, lb/ton</b>	<b>Reference</b>	<b>Maximum Annual Throughput, tpy</b>	<b>Pre-abated emissions, lb/yr</b>	<b>Pre-abated emissions, TPY</b>
S4	X1 Dried Product Screener	PM-10	0.06	1	13140	788.4	0.394
S5	X1 Longs Breaker	PM-10	0.06	1	13140	788.4	0.394
S6	X1 Kiln Feed Conveyor	PM-10	0.06	1	13140	788.4	0.394
S7	X1 Kiln	PM-10	0.06		13140	788.4	0.394
S8	X1 Calcined Product Elevator	PM-10	0.06	1	13140	788.4	0.394
S9	X1 Calcined Product Screener	PM-10	0.06	1	13140	788.4	0.394
S10	X1 Calcined Product Packaging	PM-10	0.06	1	13140	788.4	0.394
S11	X1 Calcined Product Conveyor	PM-10	0.06	1	13140	788.4	0.394
S12	X1 BBU Unloader Station	PM-10	0.06	1	13140	788.4	0.394
S13	X1 BBU Conveyor Feeder	PM-10	0.06	1	13140	788.4	0.394
S14	X1 BBU Drag Conveyor	PM-10	0.06	1	13140	788.4	0.394
S15	X1 BBU Muller Feeder Surge Bin	PM-10	0.06	1	13140	788.4	0.394
S16	X1 BBU Muller Feeder	PM-10	0.06	1	13140	788.4	0.394
S19	X1 Recycle Station	PM-10	0.06	1	13140	788.4	0.394
S104	H1 Blending Tank T-1	PM-10	0.134	2	13140	1760.76	0.881
S105	H1 Blending Tank T-2	PM-10	0.134	2	13140	1760.76	0.881
S106	H1 Blending Tank T-3	PM-10	0.134	2	13140	1760.76	0.881

<b>Source #</b>	<b>Source Description</b>	<b>Pollutant</b>	<b>Emission factor, lb/ton</b>	<b>Reference</b>	<b>Maximum Annual Throughput, tpy</b>	<b>Pre-abated emissions, lb/yr</b>	<b>Pre-abated emissions, TPY</b>
S303	Alumina Receiving Fluidstat Station	PM-10	0.06	1	36500	2190	1.1
S304	Alumina Silo 1	PM-10	0.46	2	36500	16790	8.395
S305	Alumina Silo 2	PM-10	0.46	2	36500	16790	8.395
S306	Alumina Silo 3	PM-10	0.46	2	36500	16790	8.395
S307	Alumina Silo 4	PM-10	0.46	2	36500	16790	8.395
S308	Alumina Silo 5	PM-10	0.46	2	36500	16790	8.395
S309	Alumina Recirculate Fluidstat Station	PM-10	0.06	1	36500	2190	1.1
S310	Alumina Measuring Fluidstat Station	PM-10	0.06	1	41063	2464	1.232
S311	Alumina Bulk Bag unloader	PM-10	0.06	1	17520	1051	0.525
S312	Alumina repackaging Station	PM-10	0.06	1	12480	748.8	0.375
S313	Fines Grinder Feed Hopper System	PM-10	0.06	1	4380	262.8	0.131
S314	Reground Fines Storage Silo	PM-10	0.46	2	4380	2014.8	1.01
S315	Reground Fines Storage Silo	PM-10	0.46	2	4380	2014.8	1.01
S316	Reground Fines Storage Silo	PM-10	0.46	2	4380	2014.8	1.01
S317	Reground Fines Storage Silo	PM-10	0.46	2	4380	2014.8	1.01

<b>Source #</b>	<b>Source Description</b>	<b>Pollutant</b>	<b>Emission factor, lb/ton</b>	<b>Reference</b>	<b>Maximum Annual Throughput, tpy</b>	<b>Pre-abated emissions, lb/yr</b>	<b>Pre-abated emissions, TPY</b>
S318	Fines Weigh Hopper Blow Pot	PM-10	0.06	1	4380	262.8	0.131
S319	Fines Bag-out Stations 1 & 2	PM-10	0.06	1	4380	262.8	0.131
S320	Fines Grinder	PM-10	26	1	4380	113880	56.94
S321	Alumina Storage Silo	PM-10	0.46	2	9636	4432.56	2.216
S322	Fines Tanker Truck Delivery System	PM-10	0.06	1	4380	262.8	0.131
S323	Fines Grinder Feed Hopper System (secondary)	PM-10	0.06	1	4380	262.8	0.131
S401	X2 Muller	PM-10	0.06	1	14235	854.1	0.427
S407	X2 Dryer	PM-10	0.06	1	14235	854.1	0.427
S408	X2 Dried Product Elevator	PM-10	0.06	1	14235	854.1	0.427
S409	X2 Dried Product Screener	PM-10	0.06	1	14235	854.1	0.427
S410	X2 Longs Breaker	PM-10	0.06	1	14235	854.1	0.427
S412	X2 Kiln Feed Conveyor	PM-10	0.06	1	14235	854.1	0.427
S413	X2 Kiln	PM-10	0.06	1	14235	854.1	0.427
S414	X2 Calcined Product Elevator	PM-10	0.06	1	14235	854.1	0.427
S415	X2 Calcined Product Screener	PM-10	0.06	1	14235	854.1	0.427
S416	X2 Calcined Product Packaging	PM-10	0.06	1	14235	854.1	0.427
S417	X2 Calcined Product Conveyor	PM-10	0.06	1	14235	854.1	0.427

<b>Source #</b>	<b>Source Description</b>	<b>Pollutant</b>	<b>Emission factor, lb/ton</b>	<b>Reference</b>	<b>Maximum Annual Throughput, tpy</b>	<b>Pre-abated emissions, lb/yr</b>	<b>Pre-abated emissions, TPY</b>
S418	X2 Recycle Station	PM-10	0.06	1	14235	854.1	0.427
S504	H2 Blending Tank T-1	PM-10	0.134	2	18980	2543.32	1.271
S505	H2 Blending Tank T-2	PM-10	0.134	2	18980	2543.2	1.271
S506	H2 Blending Tank T-3	PM-10	0.134	2	18980	2543.2	1.271
S507	H2 Liquids/Solids Blender	PM-10	0.134	2	18980	2543.2	1.271
S509	H2 Kiln Feed Conveyor	PM-10	0.06	1	18980	1139	0.569
S510	H2 Kiln	PM-10	0.06	1	18980	1139	0.569
S511	H2 Product Conveyor	PM-10	0.06	1	18980	1139	0.569
S512	H2 Product Screener	PM-10	0.06	1	18980	1139	0.569
S513	H2 Product Packaging	PM-10	0.06	1	18980	1139	0.569
S515	H2 Solid Additive Hopper A	PM-10	0.06	1	21900	1314	0.657
S516	H2 Solig Additive Hopper B	PM-10	0.06	1	21900	1314	0.657
S517	H2 Product Recycle Station	PM-10	0.06	1	18980	1139	0.569
S518	H2 Calcined Feed System	PM-10	0.06	1	18980	1139	0.569
S519	H2 Spherical Hopper system	PM-10	0.06	1	18980	1139	0.569
S520	H2 Calcined Feed Bag-out Station	PM-10	0.06	1	18980	1139	0.569
S600	X3 Dried Extruder, Screener, Conveyor	PM-10	0.06	1	13140	788.4	0.394

Source #	Source Description	Pollutant	Emission factor, lb/ton	Reference	Maximum Annual Throughput, tpy	Pre-abated emissions, lb/yr	Pre-abated emissions, TPY
S601	X3 Fines Surge Hopper	PM-10	0.06	1	13140	788.4	0.394
S602	X3 Alumina Surge Hopper	PM-10	0.06	1	13140	788.4	0.394
S603	X3 Extruder	PM-10	0.06	1	13140	788.4	0.394
S604	X3 Dryer	PM-10	0.06	1	13140	788.4	0.394
S606	X3 Calciner	PM-10	0.06	1	13140	788.4	0.394
S612	Emergency Standby Diesel Fire Pump Engine	PM-10	0.0022 lb/hp-hr	3	8760 hrs/yr	2582.5	1.29

Footnotes:

1 = USEPA AP-42, Section 11.24, Metallic Mineral Processing, Table 11.24-2

2 = USEPA AP-42, Section 11.12, Concrete Batching, Table 11.12-2

3 = USEPA AP-42, Section 3.3, Gasoline and Industrial Engines, Table 3.3-1

**Federal Regulation 40 CFR Part 60, Subpart III, Standards of Performance for Stationary Ignition Internal Combustion Engines**

Emergency fire pump, S612, is powered by a diesel fired compression ignition (ci) engine. The engine is not subject to this subpart as per 60.4200(a)(1)(ii). The fire pump engine was installed in 1996.

**Federal Regulations 40 CFR Part 63, Subpart ZZZZ, NESHAPS for Stationary Reciprocating Internal Combustion Engines (RICE) requirements.**

Emergency fire pump, S612, is powered by a diesel fired compression ignition (ci) engine. The engine is not subject to emission and operating limitations, fuel requirements, performance testing, initial compliance, and notification requirement of this subpart. The engine is subject to the following requirements: (1) maintenance procedures of Table 2d, Part 4; (2) general maintenance for safety and to minimize emissions; (3) limited operation for non-emergency maintenance checks and testing; and (4) continuous compliance and recordkeeping.

**CCR Title 17, Section 93115 ATCM for Stationary Compression Ignition Engines**

All reporting requirements of Airborne Toxic Control Measure (ATCM) section 93115.10(a)(3) and (5) are met by the CI fire pump, S612.

**District permit applications not included in this proposed permit**

This facility sends many permit applications to the District every year. Review of the following permit applications was not completed in time to include the results in this Title V permits. The Title V permit will be revised periodically to incorporate these applications as permit revisions following the procedures in Regulation 2, Rule 6, Major Facility Review.

Application #	Project Description
28384	Modify Existing fines system
28453	Change of Condition – H2 A56 Afterburner

**Changes to Permit:**

- The table IV-A will be modified by adding sources S12, S13, S14, S15, and S16 and abatement device A4 and by updating Condition ID #8444.
- The table IV-B will be modified by adding abatement devices A6 and A57.
- The tables IV-C and IV-D will be modified by adding Condition ID #16736. A3 will be added to Table IV-C. A2, A43, and A58 will be added to Table IV-D.
- The tables IV-E and IV-F will be modified by updating Condition ID #16736. A3 will be added to Table IV-E.
- A49 will be added to Table IV-G.
- Table sequencing will be updated for Tables IV-I through IV-AA. Table IV-I and IV-R will be deleted. New designations are Tables IV-I though IV-Y.
- A32, A38, A39, A320, A380, and A390 will be added to Table IV-I.
- A33, A34, A35, A36, and A37 will be added to Table IV-J.
- A40 will be added to Table IV-K.
- A44, A45, A46, A47, A4, A40, A48, and A601 will be added to Table IV-L.
- A50 will be added to Table IV-M.
- A48 will be added to Table IV-N.
- The table IV-O will be modified by adding S417, S418 (moved from the Table IV-P), and Condition ID #16736. A42 will be added to Table IV-O.
- The table IV-P will be modified by deleting S417, S418 (moved to the table IV-O), and updating Condition ID #16736. A52, A53, and A55 will be added to Table IV-P.
- The tables for S107, S111, S112, S113, S114, and S420 are deleted since these sources have been archived.
- The table IV-R will be updated by deleting S509 (moved to the table IV-S), and S514 since this source has been archived. A54 and A56 will be added to Table IV-R.
- The table IV-S will be modified by adding S509 (moved from the Table IV-R), and Condition ID #16736. A55 will be added to Table IV-S.
- A607 and A603 will be added to Table IV-T.
- A601 will be added to Table IV-U.
- A602 will be added to Table IV-V.
- The table IV-W will be modified by updating Condition ID #15672.
- The table IV-X will be modified by adding A603 and by updating Conditions ID #13097 and ID #15672.
- A604, A605, and A606 will be added to Table IV-Y.
- A new table IV-Z will be added for S612, Emergency diesel fire pump engine.

## V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10, which provides that a major facility review permit shall contain the following information and provisions:

“409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

The responsible official for Criterion Catalysts & Technologies, L.P. submitted a signed Certification Statement form dated May 15, 2017. On this form, the responsible official certified that the following statements are true:

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form are in compliance and will continue to comply with the applicable requirements;

Based on information and belief formed after reasonable inquiry, the sources identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirements on a timely basis;

### Changes to Permit:

- No changes will be made to section V of the permit.

## VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and, as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier, up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting requirements have been added to the permit.

All changes to existing permit conditions are clearly shown in “strike-out/underline” format in the proposed permit. When the permit is issued, all “strikeout” language will be deleted and all “underline” language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

Conditions have also been deleted due to the following:

- Redundancy in recordkeeping requirements.
- Redundancy in other conditions, regulations and rules.
- The condition has been superseded by other regulations and rules.
- The equipment has been taken out of service or is exempt.
- The event has already occurred (i.e. initial or start-up source tests).

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO that limits a source's operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.

If necessary, a parameter monitoring requirement has been added for each abatement device. Additional monitoring requirements have been added, where appropriate, to assure compliance with the applicable requirements.

#### Changes to Permit:

- Permit condition #3344 will be revised by including A40 and referencing the application number.
- Permit condition #8444 will be revised by including sources, S12 through S16, and A4 and by updating the language.
- Permit condition #8445 will be revised by including A48.
- Permit condition #8468 will be revised by including A44, A45, A46, and A47 and correcting Part 5, by referencing the application number, and by averaging period of nickel content in the material processed.
- Permit condition #9315 will be revised by deleting source, S514 and including A54 and applicable application numbers.



- Permit condition #9984 will be revised by updating the source descriptions and including A49.
- Permit condition #13092 will be revised by updating the A50 description.
- Permit condition #13093 will be revised by including A607 and A603, referencing the application number, updating nickel content limit in the material processed, and including exhaust stack.
- Permit condition #13094 will be revised by updating the A601 description.
- Permit condition #13095 will be revised by updating the A602 description.
- Permit condition #13097 will be revised by referencing the application number, updating the nickel content limit, including exhaust stack, exhaust grain loading limit, and updating the language.
- Permit condition #13099 will be revised by updating the descriptions for S2, S407, A6, and A57.
- Permit condition #13100 will be revised by updating the descriptions for A2, S43, and A58.
- Permit condition #13138 will be deleted because sources, S111 through S114, have been removed and no longer in operation.
- Permit condition #15672 will be revised by updating descriptions for A604, A605, and A606, adding exhaust stack with updated parameter, and updating nickel content limit.
- Permit condition #16736 will be revised by adding abatement devices, A3, A42, A52, A53, and A55; by adding sources, S3 through S10, S408 through S410, S412 through S416, S509, S511 through S513 with throughput limits; updating throughput limits for other sources, nickel content limits, baghouse flow rate and grain loading limits, and revising source test requirements.
- A new condition #22851 will be added for S612.

## **VII. Applicable Limits and Compliance Monitoring Requirements**

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several different factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of

impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation, that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements. It follows that, although Title V calls for a re-examination of all monitoring, there is a presumption that these factors have been appropriately balanced and incorporated in the District’s prior rule development and/or permit issuance. Where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation. Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring requirements only when it can support a conclusion that existing monitoring is inadequate.

### SO<sub>2</sub> Sources

# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S2 X1 Dryer, S7 X1 Kiln, S407 X2 Dryer, S413 X2 Kiln, S510 H2 Kiln, S604 X3 Dryer, S606 X3 Calciner, S612 Emergency standby diesel fire pump engine	BAAQMD Regulation 9-1-301 SIP Regulation 9-1-301	Ground level concentrations of SO <sub>2</sub> shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
S2 X1 Dryer, S7 X1 Kiln, S407 X2 Dryer, S413 X2 Kiln, S510 H2 Kiln, S604 X3 Dryer, S606 X3 Calciner	BAAQMD Regulation 9-1-311.2 SIP Regulation 9-1-311.2	50 lbs/hr	None

### **SO<sub>2</sub> Discussion:**

#### BAAQMD Regulation 9-1-301, SIP Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO<sub>2</sub> concentration requirements of Regulation 9-1-301 is at the discretion of the APCO (per BAAQMD Regulation 9-1-501). This facility does not have equipment that emits significant amounts of SO<sub>2</sub> and therefore is not required by the APCO to have ground level monitoring.

All facility combustion sources are subject to the SO<sub>2</sub> emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA’s June 24, 1999 agreement with CAPCOA and ARB, “Periodic Monitoring Recommendations for

Generally Applicable Requirements in SIP”, EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. Therefore, no monitoring is necessary to verify compliance with this requirement for S2, S7, S407, S413, and S606 since they are fired exclusively with natural gas.

S612, emergency standby diesel fire pump engine is expected to comply with Regulation 9-1-301 and 304 since the sulfur content of diesel fuel fired at this source is limited to a maximum of 0.0015% by weight or less as specified for California diesel fuel. Per the CAPCOA/ARB/EPA agreement of June 24, 1999 entitled, “Periodic Monitoring Recommendations For Generally Applicable Requirements in SIP”, compliance with the diesel fuel sulfur content limit in BAAQMD Regulation 9-1-304 will be assured by certification of the sulfur content by vendor for each fuel delivery.

BAAQMD Regulation 9-1-311.2, SIP Regulation 9-1-311.2

All combustion sources at a catalyst manufacturing facility are subject to the sulfur dioxide emission limitation of 50 lb/hr in District Regulation 9-1-311.2. Sources S2, S7, S407, S413, S510, S604, and S606 are subject to the requirements of this regulation.

S510 H2 Kiln is the highest rated (8.6 MMBTU/hr) combustion source among these sources. SO2 emissions from this source are calculated on the basis of the firing rate of 8.6 MMBTU/hr, average gross heating value of 1000 BTU/cu. ft. for natural gas, and emission factor of 0.6 lb/MM cu. ft. taken from AP-42, 7/98, Table 1.4.2.

$$\begin{aligned} \text{SO}_2 \text{ emissions} &= (8.6 \text{ MMBTU/hr})(0.6 \text{ lb/MM cu.ft.})/(1000 \text{ BTU/cu.ft.}) \\ &= 0.0052 \text{ lb/hr} \end{aligned}$$

As shown from the calculations, SO2 emissions from the highest rated combustion source, S510, and each of the other combustion sources listed above are significantly less than 50 lb/hr, therefore no monitoring is necessary to verify compliance with Regulation 9-1-311.2

PM Sources

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
1* (see footnote)	BAAQMD Regulation 6-1-301 SIP Regulation 6-301	Ringelmann 1.0	None
1* (see footnote)	BAAQMD Regulation 6-1-310 SIP Regulation 6-310	0.15 gr/dscf	None
1* (see footnote)	BAAQMD Regulation 6-1-310.3 SIP Regulation 6-310.3	0.15 gr/dscf at 6% O2	None

### PM Sources

<b>S# &amp; Description</b>	<b>Emission Limit Citation</b>	<b>Federally Enforceable Emission Limit</b>	<b>Monitoring</b>
2* (see footnote)	BAAQMD Regulation 6-1-311 SIP Regulation 6-311	4.10P <sup>0.67</sup> lb/hr, where P is process weight, ton/hr	None
3* (see footnote)	BAAQMD Regulation 6-1-303 SIP Regulation 6-303	Ringelmann 2.0	None
3* (see footnote)	BAAQMD Regulation 6-1-310 SIP Regulation 6-1-310	0.15 dscf	None

1\*- S3, S4, S5, S6, S8 thru S11, S19, S107, S303 thru S310, S408 thru S410, S412, S414 thru S418, S509, S511 thru S513, S515 thru S520, S600, S603

2\*- S1 thru S16, S19, S104 thru S106, S303 thru S323, S401, S407 thru S410, S412, S414 thru S418, S504 thru S507, S509 thru S513, S515 thru S520, S600 thru S604, S606

3\* - S612

#### **PM Discussion:**

##### BAAQMD Regulation 6, Rule 1 “Particulate Matter”, SIP Regulation 6

###### Visible Emissions, Regulation 6-1-301, SIP Regulation 6-301

BAAQMD Regulation 6-1-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S2, S7, S407, S413, S510, S604, and S606 burn natural gas exclusively, therefore, per the EPA’s June 24, 1999 agreement with CAPCOA and ARB titled “Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP”, no monitoring is required to assure compliance with this limit for these sources.

Sources (1\*) listed in the table above have no monitoring for 6-1-301, but are abated by baghouses, therefore visible emissions are not expected and monitoring is not required.

###### Visible Emissions, Regulation 6-1-303, SIP Regulation 6-303

BAAQMD Regulation 6-1-301 limits visible emissions to no darker than 2.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Since the fire pump engine, S612, will be fired exclusively with California diesel fuel with a maximum sulfur content of 0.0015% by weight, visible emissions are not expected. Moreover, the fire pump engine operates infrequently (emergency standby), so additional monitoring is not required.

### Particulate Weight Limitation, Regulation 6-1-310, SIP Regulation 6-310

BAAQMD Regulation 6-1-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable particulate emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O<sub>2</sub>. These are the “grain loading” standards.

Sources (2\*) listed in the table above have no monitoring for 6-310, but are abated by baghouses with maximum expected grain loading of 0.006 gr/dscf, which is significantly less than the standard, therefore compliance is expected and monitoring is not required.

Exceedances of the grain loading standards are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S2, S7, S407, S413, S510, S604, and S606 burn natural gas exclusively, therefore, per the EPA’s July 2001 agreement with CAPCOA and ARB entitled “CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP”, no monitoring is required to verify compliance with this limit for these sources.

Since the fire pump engine, S612, will be fired exclusively with California diesel fuel with a maximum sulfur content of 0.0015% by weight, therefore it is expected to comply with Regulation 6-1-310. Moreover, the fire pump engine operates infrequently (emergency standby), so additional monitoring is not required.

### General Operations, Regulation 6-1-311, SIP Regulation 6-311

BAAQMD Regulation 6-1-311 limits the particulate matter emission rate from any emission point to greater than the rate given in the Table 1 of the regulation for the process weight indicated.

Sources (2\*) listed in the table above have no monitoring for 6-311, but are abated by baghouses with low grain loading limits. The mass emission rate is much less than the lowest applicable limit of 1.8 lb/hr as shown below for the highest rated baghouse, therefore compliance is expected and monitoring is not required.

Baghouse, A603 abating S604, X-3 Dryer:

Basis: Exhaust flow rate = 12,000 dscfm; grain loading = 0.006 gr/dscf

PM emission rate = (12000 dscfm)(0.006 gr/dscf)(1b/7000 gr)(60 min/hr)  
= 0.62 lb/hr

### Changes to permit:

- The table VII-A will be modified by adding S12, S13, S14, S15, S16, and A4 and by updating monitoring requirements of Condition ID #8444.
- A6 and A57 will be added to Table VII-B.

- The tables VII-C and VII-D will be modified by adding monitoring requirements of Condition ID #16736. A3 will be added to Table VII-C. A2, A43, and A58 will be added to table VII-D,
- The tables VII-E and VII-F will be modified by updating monitoring requirements of Condition ID #16736. A3 will be added to Table VII-E.
- A49 will be added to table VII-G.
- Table sequencing will be updated for Tables VII-I through VII-AA. Tables VII-I and VII-R will be deleted. New designations are Tables VII-I through VII-Y.
- A32, A38, A39, A320, A380, and A390 will be added to Table VII-I.
- A33, A34, A35, A36, and A37 will be added to Table VII-J.
- A40 will be added to Table VII-K.
- A44, A45, A46, A47, A4, A40, A48, and A601 will be added to Table VII-L.
- A50 will be added to Table VII-M.
- A48 will be added to Table VII-N.
- The table VII-O will be modified by adding S417, S418 (moved from the Table VII-P) and A42 and by adding monitoring requirements of Condition ID #16736.
- The table VII-P will be modified by deleting S417, S418 (moved to the table VII-O), by adding A52, A53, and A55 and the limits for these devices, and by including Condition # 16736 in monitoring citations.
- The tables for S107, S111, S112, S113, S114, and S420 are deleted since these sources have been archived.
- The table VII-R will be updated by deleting S509 (moved to the table VII-S), and S514 since this source has been archived and by adding A54 and A56.
- The table VII-S will be modified by adding S509 (moved from the Table VII-R), A55, and monitoring requirements of Condition ID #16736.
- The table VII-T will be modified by adding A607 and A603 and by updating monitoring requirements of Condition ID #13093.
- A601 will be added to table VII-U.
- A602 will be added to table VII-V.
- The table VII-W will be modified by updating monitoring requirements of Condition ID #15672.
- The table VII-X will be modified by adding A603 and by updating monitoring requirements of Conditions ID #13097 and ID #15672.
- The table VII-Y will be modified by adding A604, A605, and A606 and by updating monitoring requirements of Condition ID #15672.
- A new table VII-Z will be added for S612, Emergency diesel fire pump engine.

### **VIII. Test Methods**

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not “applicable requirements” as defined by Regulation 2-6-202.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit.

Changes to Permit:

- The standard language at the beginning of the section VIII will be updated.

**IX. Permit Shield**

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA's "White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program." The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District's program does not allow other types of streamlining in Title V permits.

This facility has no permit shields.

Changes to Permit:

- None

**X. Revision History**

This section of the permit summarizes each revision to the permit.

Changes to Permit:

- The description of the Title V permit revisions associated with this MFR Renewal Permit (Application #25461) were added to the end of Section X.

**XI. Glossary**

Changes to Permit:

- None

**D. Alternate Operating Scenarios**

No alternate operating scenario has been requested for this facility.

**E. Compliance Status**

The responsible official for Criterion Catalysts & Technologies, L.P. submitted a signed Certification Statement form dated May 15, 2017. On this form, the responsible official certified that the following four statements are true:

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form that is(are) in compliance will continue to comply with the applicable requirement(s);

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirement(s), on a timely basis;

Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

#### **F. Differences between the Application and the Proposed Permit**

The Title V permit renewal application was originally submitted on June 7, 2013. This version is the basis for constructing the proposed Title V permit. However, some revisions will be made due to changes that were made pursuant to NSR permit applications 25657, 25835, and 28225, and per correspondences received after June 7, 2013.

Changes to the sources, permit conditions, etc., are as follows:

Archived sources (S107, S111, S112, S113, S114, S420, and S514) and archived abatement device (A14) will be deleted.

Permit condition #8468 will be revised by including averaging period of nickel content in the material processed.

Permit condition #13138 will be deleted because sources, S111 through S114, have been removed and no longer in operation.

Permit condition #16736 will be revised by adding sources, S3 through S10, S408 through S410, S412 through S416, S509, S511 through S513 with throughput limits, updating throughput limits for other sources, nickel content limits, baghouse flow rate and grain loading limits, and revising source test requirements.

Abatement devices will be included in the titles for all tables IV and VII and in permit condition device descriptions.



## **APPENDIX A**

### **GLOSSARY**

**ACT**  
Federal Clean Air Act

**APCO**  
Air Pollution Control Officer

**ARB**  
Air Resources Board

**BAAQMD**  
Bay Area Air Quality Management District

**BACT**  
Best Available Control Technology

**Basis**  
The underlying authority which allows the District to impose requirements.

**CAA**  
The federal Clean Air Act

**CAAQS**  
California Ambient Air Quality Standards

**CAM**  
Compliance Assurance Monitoring per 40 CFR Part 64

**CAPCOA**  
California Air Pollution Control Officers Association

**CEM**  
Continuous Emission Monitor

**CEQA**  
California Environmental Quality Act

**CFR**  
The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

**CO**  
Carbon Monoxide

**Cumulative Increase**  
The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Cumulative increase is used to determine whether threshold-based requirements are triggered.

**District**

The Bay Area Air Quality Management District

**EPA**

The federal Environmental Protection Agency.

**Excluded**

Not subject to any District regulations.

**Federally Enforceable, FE**

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

**FP**

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

**HAP**

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

**Major Facility**

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

**MFR**

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

**MOP**

The District's Manual of Procedures.

**NAAQS**

National Ambient Air Quality Standards

**NESHAPS**

National Emission Standards for Hazardous Air Pollutants. See 40 CFR Parts 61 and 63.

**NMHC**

Non-methane Hydrocarbons (Same as NMOC)

**NMOC**

Non-methane Organic Compounds (Same as NMHC)

**NO<sub>x</sub>**

Oxides of nitrogen.

**NSPS**

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

**NSR**

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

**Offset Requirement**

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>2</sub>.

**Phase II Acid Rain Facility**

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

**POC**

Precursor Organic Compounds

**PM**

Particulate Matter

**PM<sub>10</sub>**

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

**PSD**

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

**PTE**

Potential to Emit as defined by BAAQMD Regulation 2-6-218

**SIP**

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

**SO<sub>2</sub>**

Sulfur dioxide

**THC**

Total Hydrocarbons (NMHC + Methane)

**Title V**

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

**TOC**

Total Organic Compounds (NMOC + Methane, Same as THC)

**TPH**

Total Petroleum Hydrocarbons

**TRMP**

Toxic Risk Management Plan

**TSP**

Total Suspended Particulate

**VOC**

Volatile Organic Compounds

**Units of Measure:**

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cu. ft.	=	cubic foot
cfm	=	cubic feet per minute
dscf	=	dry standard cubic foot
dscfm	=	dry standard cubic foot per minute
g	=	gram
gal	=	gallon
gpm	=	gallons per minute
gr	=	grain
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inch
max	=	maximum
m <sup>2</sup>	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
tpy	=	tons per year
yr	=	year

## **APPENDIX B**

### **Engineering Evaluations for Applications 21823, 22820, 22844, 24919, 25657, 25835, and 28225**

**ENGINEERING EVALUATION REPORT  
CRITERION CATALYSTS & TECHNOLOGIES, LP  
PLANT NUMBER 227  
APPLICATION NUMBER 21823**

**BACKGROUND**

Criterion Catalysts & Technologies, LP (Criterion) has been operating a catalyst manufacturing plant in Pittsburg, CA. The plant is a Title V facility. Criterion has submitted an application to obtain an authority to construct and a permit to operate a bulk bag unloader station, a BBU conveyor feeder, a BBU drag conveyor, a BBU muller feeder surge bin, and a BBU muller feeder. The system is proposed to reduce any cross contamination of raw materials that presently exists via the existing pneumatic system. The new system will be operated to feed an existing muller, S-1, during Zeolyst production (specialty mixture of alumina and tungsten with little amount of nickel), and during other limited production runs, which require nickel carbonate as raw material.

Particulate emissions from the new system will be abated by the existing baghouse, A-4. There will be no net increase in PM10 and Nickel emissions facility wide because raw material throughput at the muller, S-1, will remain at the current permitted level. However, PM10 and Nickel emissions are calculated to estimate plant cumulative increase, and to determine if it triggers BACT requirements of Regulation 2-2-301, and TBACT requirements of Regulation 2-5. BACT and TBACT are discussed below.

The application covers the following sources:

- S-12 X1 Bulk Bag Unloader Station, Custom made, 1.5 tph.**
- S-13 X1 BBU Conveyor Feeder, Custom Design, 1.5 tph.**
- S-14 X1 BBU Drag Conveyor, Custom Design, 1.5 tph.**
- S-15 X1 BBU Muller Feeder Surge Bin, Custom Design, 1.5 tph.**
- S-16 X1 BBU Muller Feeder, Custom Design, 1.5 tph.**

**EMISSIONS CALCULATIONS**

PM10 emissions from these sources are calculated on the basis of maximum exhaust flow rate of 1,116 cfm, a grain loading of 0.006 gr/dscf (existing condition) of the baghouse, A-4, and operating schedule of 260 min./day (24 batches/day; 10 min./batch of new station operation, and 20 min./day of super sack unloading), and 365 days/yr.

$$\begin{aligned} \text{PM-10 emissions} &= (0.006 \text{ gr/dscf}) (1,116 \text{ cfm}) (260 \text{ min/day}) \\ &\quad (365 \text{ days/yr}) / (7,000 \text{ gr/lb}) \\ &= \mathbf{90.78 \text{ lb/yr}} \\ &= \mathbf{0.045 \text{ tpy}} \end{aligned}$$

**PLANT CUMULATIVE INCREASE**

$$\text{PM10} = 0.045 \text{ TPY}$$

**TOXIC EMISSIONS AND HEALTH RISK SCREENING ANALYSIS**

Nickel emissions are calculated assuming nickel content in the PM10 emissions same as in the raw material processed through the sources.

**Material throughput at each source:**

1. Nickel containing fines = 100 tons/yr
2. Nickel carbonate = 60 tons/yr

**Nickel composition:**

1. Nickel containing fines = 3% max.
2. Nickel carbonate = 64.5%

**Nickel emissions** = (90.78 lb/yr) [(100 tons) (3%)+(60 tons) (64.5%)] / (160 tons)  
**= 23.6 lb/yr**

Nickel emissions exceed the chronic toxic trigger level of 0.43 lb/yr given in the Table 2-5-1 of Regulation 2-5, and therefore require health risk screening analysis. A health risk screening analysis was performed (toxic memo dated 8/9/2010) and the results indicate a maximum cancer risk of 1.9 in a million, a chronic hazard index (HI) of 0.083, and an acute HI of 0.19. In accordance with District Regulation 2-5, these risk levels are acceptable with application of TBACT.

The emissions are controlled by a baghouse. A baghouse with exhaust grain loading of 0.01 gr/dscf or less is considered TBACT for this operation. The sources comply with the TBACT requirements.

**STATEMENT OF COMPLIANCE**

On the basis of the information submitted, the sources and the baghouse will comply with the requirements of Regulation 6, Rule 1 for particulate and visible emissions. The grain loading of the exhaust from the baghouse will be less than 0.15 gr/dscf.

The project is categorically exempt from CEQA review per Regulation 2-1-312.11. The applicant has submitted a completed Appendix H. The project will not have any significant environmental effect, and satisfies criteria of "no net increase in emissions". A health risk screening analysis is required due to the emissions of Nickel. The results of the analysis are acceptable per Regulation 2, Rule 5. The emissions are controlled by a baghouse, and comply with TBACT requirements. A baghouse with exhaust grain loading of 0.01 gr/dscf or less is considered TBACT for this operation.

PM10 emissions are less than 10 lb/day, and therefore are not subject to the BACT requirements of Regulation 2-2-301.

Offset requirements of Regulation 2-2-303 are not triggered for PM10 emissions.

Public notification requirements of Regulation 2-1-412, Public Notice, Schools, are not triggered because there is no school within 1000 feet of the emission point.

PSD, NSPS, and NESHAPS requirements do not apply.

**PERMIT CONDITIONS**

The permit condition ID# 8444 is revised by adding the new sources, throughput limit, concentration limits of nickel and nickel compounds, and updating the language.

**RECOMMENDATIONS**

It is recommended that Criterion be issued an Authority to Construct the sources described in the background section of this report.

**BY:** \_\_\_\_\_  
Dharam Singh AQE II



**ENGINEERING EVALUATION REPORT  
CRITERION CATALYSTS & TECHNOLOGIES, LP  
PLANT NUMBER 227  
APPLICATION NUMBER 22820**

**BACKGROUND**

Criterion Catalysts & Technologies, LP (Criterion) has been operating a catalyst manufacturing plant in Pittsburg, CA. The plant is a Title V facility. Criterion has submitted an application to make amendment to the permit conditions for S-600 (X-3 Extruder, conveyor), S-604 (X-3 Dryer), and S-606 (X-3 Calciner). The proposed amendment is to increase the nickel and nickel compounds content limit from 0.84% to 3.0% in the processing materials.

In order to reduce nickel emissions and its health risk impact due to the proposed amendment, Criterion is proposing: (i) to replace calciner baghouse (A-603) fabric filter media with a higher efficiency fabric thereby reducing the exhaust grain loading limit from 0.006 gr/dscf to 0.005 gr/dscf, (ii) to reduce the stack exit diameter from 46" to 34" by adding a 2.5' conical reducer, and (iii) adding a stack extension of 5' resulting in a total stack extension of 7.5'.

There will be no net increase in PM10 emissions because raw material throughput at these sources will remain at the current permitted levels. However, Nickel emissions will increase. Nickel emissions are calculated to determine if it triggers TBACT requirements of Regulation 2-5. TBACT is discussed below.

The application covers the following sources:

- S-600 X-3 Dried Extruder, Screener, Conveyors.**
- S-604 X-3 Dryer.**
- S-606 X-3 Calciner.**

**EMISSIONS CALCULATIONS**

Nickel emissions from these sources are calculated on the basis of maximum exhaust flow rate of 13,736 dscfm, a grain loading of 0.005 gr/dscf (proposed reduced limit) of the stack, P-603, nickel content of 3%, and operating schedule of 365 days/yr.

$$\begin{aligned} \text{Nickel emissions} &= (0.005 \text{ gr/dscf}) (13,736 \text{ dscf/min.}) (1440 \text{ min./day}) \\ &\quad (365 \text{ days/yr}) / (7,000 \text{ gr/lb}) (3\% \text{ Ni}) \\ &= \mathbf{155.0 \text{ lb/yr}} \\ &= \mathbf{0.018 \text{ lb/hr}} \end{aligned}$$

**PLANT CUMULATIVE INCREASE**

PM10 = 0.0 TPY

**TOXIC EMISSIONS AND HEALTH RISK SCREENING ANALYSIS**

Nickel emissions exceed the chronic toxic trigger level of 0.43 lb/yr given in the Table 2-5-1 of Regulation 2-5, and therefore require health risk screening analysis. A health risk screening analysis was performed (toxic memo dated 3/3/2011) including nickel emissions from two other recent permit applications # 21823 and # 21356 as part of the same "project" as defined in Regulation 2-5-216. The results indicate a maximum cancer risk of 6.5 in a million, a chronic hazard index (HI) of 0.28, and an acute HI of 0.27. In accordance with

District Regulation 2-5-302, these risk levels are acceptable with application of TBACT.

The change of conditions (current application) will individually have a maximum cancer risk of 1.1 in a million, a chronic hazard index (HI) of 0.046, and an acute HI of 0.012. In accordance with District Regulation 2-5-301, these risk levels are acceptable with application of TBACT.

The emissions are controlled by baghouses. A heated (>150 deg. F) baghouse with exhaust grain loading of 0.006 gr/dscf or less is considered TBACT for this operation. The sources comply with the TBACT requirements.

#### **STATEMENT OF COMPLIANCE**

On the basis of the information submitted, the sources and the baghouses will comply with the requirements of Regulation 6, Rule 1 for particulate and visible emissions. The grain loading of the exhaust from the baghouses will be less than 0.15 gr/dscf.

The project is categorically exempt from CEQA review per Regulation 2-1-312.11. The applicant has submitted a completed Appendix H. The project will not have any significant environmental effect, and satisfies criteria of "no net increase in emissions". A health risk screening analysis is required due to the emissions of Nickel. The results of the analysis are acceptable per Regulation 2, Rule 5. The emissions are controlled by a baghouse, and comply with TBACT requirements. A baghouse with exhaust grain loading of 0.006 gr/dscf or less is considered TBACT for this operation.

Offset requirements of Regulation 2-2-303 are not triggered for PM10 emissions.

Public notification requirements of Regulation 2-1-412, Public Notice, Schools, are not triggered because there is no school within 1000 feet of the emission point.

PSD, NSPS, and NESHAPS requirements do not apply.

#### **PERMIT CONDITIONS**

The permit conditions ID# 13093, 13097, and 15672 are revised by updating the nickel content limit, exhaust grain loading limit, and adding the modified stack parameter.

#### **RECOMMENDATIONS**

It is recommended that Criterion be issued Authority to construct modification with amended permit conditions ID# 13093, 13097, and 15672 for the sources described in the background section of this report.

**BY:** \_\_\_\_\_  
Dharam Singh AQE II

**ENGINEERING EVALUATION REPORT  
CRITERION CATALYSTS & TECHNOLOGIES, LP  
PLANT NUMBER 227  
APPLICATION NUMBER 22844**

**BACKGROUND**

Criterion Catalysts & Technologies, LP (Criterion) has been operating a catalyst manufacturing plant in Pittsburg, CA. The facility is a Title V facility.

Criterion operates a Calciner, S606, abated by a baghouse (A604), a NO<sub>x</sub> selective catalyst reduction system (A605), and a CO catalyst oxidizer (A606). The calciner was originally permitted on 5/19/1998 with permit condition ID# 15672. Part 8 of the condition is the BACT requirement for CO emissions, while part 9 limits CO annual emissions. Part 8 of the condition has been amended four times since the issuance of the original permit. The amendments were proposed by Criterion because of various operational concerns, and lack of data.

After operating the calciner for over 12 years, and reviewing data and operating conditions, Criterion has proposed to reinstate the amended condition of February 1999. The current version of part 8 (amended on 4/22/2008 at the request of Criterion) includes an instantaneous requirement of duct burner flameout exemption. As presented in the episode history, there are very few times when the condition actually applies (21 times in 11 years). The time frame of the episodes and excess CO emissions are minimal and do-not exceed the annual CO limit. In fact, CO emissions from the source are in the range of 200 to 700 lb/yr and 1 to 2 lb/day. The non-compliance event creates tremendous amount of effort to investigate and create report with insignificant outcome.

In view of the presented facts, the permit condition is amended as proposed by the applicant. The amendment does not trigger any new regulatory requirements, and the source will continue to comply with the BACT requirements for CO, and its emission limit (19,524 lb/yr) of part 9 of the permit condition.

The proposed changes in the permit conditions are considered administrative in nature.

The application covers the following source:

**S-606            X3- Calciner.**

**EMISSIONS CALCULATIONS**

CO emissions from S606 will remain limited to 19,524 lb/yr (refer condition #15672, part 9). No change is proposed for this limit.

**PLANT CUMULATIVE INCREASE**

CO = 0.0 TPY

**STATEMENT OF COMPLIANCE**

Source, S606, continues to comply with the applicable regulatory requirements, and permit conditions.

**PERMIT CONDITIONS**

The permit condition ID# 15672, part 8 is amended as proposed.

**RECOMMENDATIONS**

It is recommended that Criterion be issued amended permit condition ID# 15672 for the calciner, S-6.

**BY:** \_\_\_\_\_  
Dharam Singh AQE II

**ENGINEERING EVALUATION REPORT  
Criterion Catalyst & Technologies  
PLANT NUMBER 227  
APPLICATION NUMBER 24919**

**Background:**

Criterion Catalyst & Technologies has been operating an emergency diesel fire pump engine since 1996 at the facility in Pittsburg, CA. The fire pump engine lost the exemption due to the revision of Regulation 2-1-114.2, therefore the applicant has applied to obtain a permit to operate.

**S-612 Emergency Diesel Fire Pump Engine, John Deere, Kohler, 134 hp.**

**Emission Calculations:**

Emission calculations are not required because the fire pump engine is neither subject to a health risk screening analysis nor to a plant cumulative increase. It was installed in 1996.

**Plant Cumulative Increase:**

None, because the fire pump engine meets the criteria of loss of exemption.

**Toxic Emission And Health Risk Screening Analysis:**

A health risk screening analysis is not required for the fire pump engine meeting the criteria of loss of exemption.

**Statement of Compliance:**

The fire pump engine complies with the requirements of Regulation 9-1-304. Sulfur content of diesel (0.0015%) is less than 0.5%.

The fire pump engine will comply with the requirements of Regulation 9-8-530 (monitoring and record keeping). Permit condition includes these requirements.

The fire pump engine is expected to comply with visible emission standards of Regulation 6, Rule 1.

The fire pump engine is subject to and meets the Stationary Diesel Engine Air Toxics Control Measure (ATCM) requirements. The ATCM requirements are included in the standard permit condition ID# 22851 (for an emergency fire pump engine)

BACT and offset requirements of Regulation 2-2-301 & 2-2-302 are not triggered for a "Loss of Exemption" source.

Regulation 10 - New Source Performance Standard, and Regulation 11 - Hazardous Pollutants requirements are not triggered.

Because this application is ministerial under the District's CEQA Guidelines (Regulation 2-1-311), the requirements of the California Environmental Quality Act (CEQA) are not triggered. The engineering evaluation requires only the application of standard permit conditions in accordance with Permit Handbook Chapter 2.3.1.

The source is not subject to the public notification requirements of Regulation 2-1-412 because the fire pump engine is not subject to a health risk screening analysis.

### Permit Conditions

The fire pump engine is subject to the standard permit condition ID# 22851 for a fire pump meeting the "Loss of Exemption Criteria"

CONDITION ID# 22851 -----

1. Operating for reliability-related activities is limited to no more than 34 hours per year per engine which is the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25. This emergency fire pump is subject to the current National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems."

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations]

2. The owner or operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, state or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating while mitigating emergency conditions or while emission testing to show compliance with District, state or Federal emission limits is not limited.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(B)(3)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(G)(1)]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.

- a. Hours of operation for reliability-related activities (maintenance and testing).
- b. Hours of operation for emission testing to show compliance with emission limits.
- c. Hours of operation (emergency).
- d. For each emergency, the nature of the emergency condition.
- e. Fuel usage for each engine(s).

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(I), (or, Regulation 2-6-501)]

5. At School and Near-School Operation:

If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:

The owner or operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:

- a. Whenever there is a school sponsored activity (if the engine is located on school grounds)
- b. Between 7:30 a.m. and 3:30 p.m. on days when school is in session. "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(1)] or (e)(2)(B)(2)]

**Recommendations:**

It is my recommendation that a Permit to Operate (waive A/C) be issued to Criterion Catalyst & Technologies for the fire pump engine described in the background section of this report.

**Exemptions:**

None.

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**By:** Dharam Singh, PE  
Air Quality Engineer

**ENGINEERING EVALUATION REPORT  
CRITERION CATALYSTS & TECHNOLOGIES, LP  
PLANT NUMBER 227  
APPLICATION NUMBER 25657**

**2840 Willow Pass Road  
Pittsburg, CA 94565**

**BACKGROUND**

Criterion Catalysts & Technologies, LP (Criterion) has been operating a catalyst manufacturing plant in Pittsburg, CA. The plant is a Title V facility. Criterion has submitted an application requesting some modifications to the permit.

The applicant has proposed to change the status of the existing permitted sources S-502, Nickel Nitrate Solution Tank and S-420, Cold Cleaner to exempt sources. The request for S-502 has been withdrawn. The status of S-420 will be changed to an exempt source as per Regulation 2-1-118.4.

The source S-514, H2 Kiln Bypass Chute and Hopper was removed and will be archived.

An administrative amendment (nickel content averaging time) to Permit Condition ID#8468, Part 7 is requested to maintain consistency with Permit Condition ID#3344, Part 7. The sources subject to these permit conditions process the material having the same nickel content.

The applicant proposed to upgrade the filter media in four baghouses, A-3, A-42, A-52, and A-53 with a high efficiency filter media. Currently the baghouses are permitted with a maximum exhaust grain loading of 0.15 gr/dscf. With the new filter media, maximum exhaust grain loading of 0.003 gr/dscf is proposed thereby resulting in lower particulate emissions. The other process parameters such as exhaust flow rate, material throughput at the abated sources, nickel concentration, etc. will remain unchanged. Since the permit conditions for the abated sources do not have these parameters, the applicant has agreed to get them incorporated as a baseline. The material throughput limits, the highest of the last three years, and the representative nickel concentration will be incorporated in the permit conditions.

The stack, P-43, has corroded and will be replaced. The height of the new stack will be 8 feet taller than the old one and the diameter will be reduced to 2 feet. The dispersion of exhaust from the new stack will be better than the previous one because of increased height and reduced diameter.

The application covers the following sources and abatement devices:

**S-7 X1 Kiln.**

**S-314 Reground fines storage silo TK-70112.**

**A-3 Baghouse, abating S-3, S-4, S-5, S-6, S-8, S-9, S-10, and S-11.**

**A-42 Baghouse, abating S-408, S-409, S-410, S-412, S-414, S-415, S-416, S-417, S-418.**

**A-52 Baghouse, abating S-515.**

**A-53 Baghouse, abating S-516.**

**EMISSIONS CALCULATIONS**

Emission calculation is not required for any proposed changes to the permit.



**PLANT CUMULATIVE INCREASE**

PM10 = 0.0 TPY

**TOXIC EMISSIONS AND HEALTH RISK SCREENING ANALYSIS**

Nickel emissions will not increase due to any of the proposed changes and therefore do-not require health risk screening analysis.

**STATEMENT OF COMPLIANCE**

On the basis of the information submitted, the sources and the baghouses will continue to comply with the requirements of Regulation 6, Rule 1 for particulate and visible emissions. The grain loading of the exhaust from the baghouses will be less than 0.15 gr/dscf.

The project is categorically exempt from CEQA review per Regulation 2-1-312.2 for upgrading baghouses. The project will not have any adverse environmental effect.

Offset requirements of Regulation 2-2-303 are not triggered for PM10 emissions.

Public notification requirements of Regulation 2-1-412, Public Notice, Schools, are not triggered because there is no school within 1000 feet of the emission point.

PSD, NSPS, and NESHAPS requirements do not apply.

**PERMIT CONDITIONS**

The permit condition ID #8468 is revised by updating the nickel averaging time, and permit condition ID #16736 is revised by incorporating the material throughput and nickel content limits, and baghouses exhaust flow rates and grain loading limits. Permit condition ID# 16736 is also updated by deleting sources, S-216, S-220, S-221, S-222, and baghouses, A-22, A-23, A-24, because they were removed and archived earlier. The revisions are shown in the underline/strikeout format.

COND# 8468 -----

For S-314 through S-317, Reground fines storage silos  
S-318, Fines weigh hopper blow pot  
S-319, Fines bagout stations, and  
S-320, Fines grinder  
S-322, Fines tanker truck delivery system  
(Revision: A# 21356; A# 25657)

1. The owner/operator shall ensure visible particulate emissions from each source S-314 through S-320, and S-322 shall not exceed Ringelmann 1.0 for more than 3 consecutive minutes in any hour or result in fallout on adjacent property in such quantities as to cause a public nuisance per Regulation 1-301. (basis: Regulation 1-301, 6-1-301; SIP Regulation 6-301)
2. The owner/operator shall not exceed the following

material/catalyst throughput limits during any consecutive twelve month period.

S-314 through S-317: 4,380 tons,  
S-318: 4,380 tons,  
S-319: 4,380 tons,  
S-320 & S-322: 4,380 tons,  
(basis: cumulative increase)

3. Only one silo among sources S-314 through S-317 shall be in active loading operation from source S-313 at any one time.  
(basis: cumulative increase)
4. The owner/operator shall route all particulate emissions from sources S-314 through S-320, and S-322 under negative pressure to specified Dust Collector A-44, A-45, A-46, or A-47.  
(basis: Regulation 6-1-301, 6-1-310, 6-311; SIP Regulation 6-301, 6-310, 6-311; Cumulative increase; TBACT; toxic risk screen)
5. The owner/operator shall abate emissions from sources S-314 through S-320, and S-322 by the properly maintained Dust Collector A-44, A-45, A-46 or A-47 at all times that S-314 through S-320, and S-322 are in operation. A District approved bag failure warning device shall be installed and maintained on A-40 (Dust Collector).  
(basis: Regulation 6-1-301, 6-1-310, 6-1-311: SIP Regulation 6-301, 6-310, 6-311; cumulative increase; TBACT; toxic risk screen)
6. The outlet loading for Dust Collector A-44, A-45, A-46 and A-47 shall not exceed 0.005 grain/dscf. The airflow rate from A-44, A-45, A-46 and A-47 shall not exceed 3,000 scfm from each unit.  
(basis: cumulative increase; TBACT; toxic risk screen)
7. The nickel content of the materials processed by the handling and grinding equipment (S-314 through S-320, and S-322) shall not exceed 7% by weight in any 24-hour averaging period.  
(basis: toxic risk screen)
8. In order to demonstrate compliance with the above conditions, the owner/operator shall maintain the following records on site and made available for District inspection for a period of five years from the date on which a record was made.
  - a. The daily throughput of product at source S-318, S-319, S-320, and S-322 summarized on a monthly basis.
  - b. Total daily hours of operation, summarized on

a monthly basis.  
(basis: Regulation 2-6-501; cumulative increase)

COND# 16736 -----

For S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-19,  
S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416,  
S-417, S-418, S-509, S-511, S-512, S-513, S-515, S-516, S-517, S-518,  
S-519, and S-520:  
(Revision: A# 25657)

1. The owner/operator shall not exceed the following material throughput limits per consecutive 365 day period.

S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10: 4,900 tons (at each source);  
S-11 : 11,000 tons;  
S-19 : 3,667 tons;  
S-222 : 900 tons;  
S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416: 6,100 tons (at each source)  
S-417 : 12,000 tons;  
S-418 : 12,000 tons;  
S-509, S-511, S-512, S-513: 8,370 tons (at each source);  
S-515 : 1,700 tons;  
S-516 : 3,300 tons;  
S-517 : 16,000 tons;  
S-518 : 16,000 tons;  
S-519 : 16,000 tons.  
S-520 : 16,000 tons  
(basis: cumulative increase; baseline)

2. The owner/operator shall operate in such a manner that the total particulate grain loading of the exhaust from the baghouses, A-3, A-42, and A-55 , shall not exceed 0.003 gr/dscf, and from the baghouses, A-52, A-53, shall not exceed 0.006 gr/dscf. These limits shall be demonstrated by conducting a source test per Part #4 below.  
(basis: baseline TBACT; Toxic risk screen)

3. The materials processed shall not exceed the following nickel content limits:

- a. Maximum daily average of 10% by wt., maximum monthly average of 3.63% by wt., and maximum 12-month rolling average of 1.7% by wt. at S-3, S-4, S-5, S-6, S-7, S-8, S-9, and S-10.
- b. Maximum daily average of 4.5% by wt., maximum monthly average of 3.78% by wt., and maximum 12-month rolling average of 2.1% by wt. at S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416, S-417, and S-418.
- c. Maximum daily average of 20% by wt., maximum monthly average of 7.87% by weight, and maximum 12-month rolling average of 7.94% by weight at S-515.

- d. Maximum daily average of 7% by wt., maximum monthly average of 1.36% by weight, and maximum 12-month rolling average of 1.43% by weight at S-516.
  - e. Maximum daily average of 5.5% by wt., maximum monthly average of 4.28% by weight, and maximum 12-month rolling average of 2.67% by weight at S-509, S-511, S-512, S-513, S-517, S-518, S-519, and S-520.  
(basis: baseline; Toxic risk screen)
4. The owner/operator shall conduct a District approved source test in accordance with the District's Manual of Procedures to demonstrate compliance with part #2 mentioned above and with BAAQMD Regulation 6-1-310, SIP issuance. The manager of the Source Test Section of the District shall be notified at least seven (7) days prior to the test date. A copy of the test report shall be submitted to the District within 30 days of the test date. Such source test shall be conducted annually or at the first opportunity the representative materials are processed after 12 months of the previous test with a copy of the test report submitted to the District. Source test report shall be kept on-site for at least five years from the date of the source test, and be made available to the District staff for inspection.  
(basis: Regulation 6-1-310; SIP Regulation 6-310; baseline;TBACT; Toxic risk screen)
5. Visible particulate emissions from the baghouses, A-3, A-42, A-52, A-53, and A-55 shall not exceed Ringelmann 1.0 for more than 3 consecutive minutes in any hour or result in fallout on adjacent property in such quantities as to cause public nuisance.  
(basis: Regulation 1-301, 6-1-301; SIP Regulation 6-301)
6. The owner/operator shall abate particulate matter emissions from the sources by the respective properly maintained baghouses at all times the sources are operating. A District approved bag failure warning device must be in operation at all such times.  
(basis: Regulation 6-1-301, 6-1-310, 6-1-311; SIP Regulation 6-301, 6-310, 6-311; cumulative increase)
7. The owner/operator shall operate in such a manner that maximum airflow rate from the baghouses shall not exceed the following limits:
- A-3 : 5,500 acfm
  - A-42: 8,600 acfm
  - A-52: 1,200 acfm
  - A-53: 1,200 acfm
  - A-55: 11,000 acfm
- (basis: baseline; cumulative increase)
8. In order to demonstrate compliance with part #1, the

owner/operator of these sources shall keep daily records of material throughput in a District approved logbook. The records shall be kept on-site for at least five years from the date of data entry, and shall be made available to the District staff for inspection.  
(basis: cumulative increase)

**RECOMMENDATIONS**

It is recommended that Criterion be issued Permit to Operate (waive Authority to construct modifications) with modifications and amended permit conditions ID# 8468 and ID# 16736 the sources/abatement devices described below.

- S-7 X1 Kiln.
- S-314 Reground fines storage silo TK-70112.
- A-3 Baghouse, abating S-3, S-4, S-5, S-6, S-8, S-9, S-10, and S-11.
- A-42 Baghouse, abating S-408, S-409, S-410, S-412, S-414, S-415, S-416, S-417, S-418.
- A-52 Baghouse, abating S-515.
- A-53 Baghouse, abating S-516.

Archive source S-514, H2 Kiln Bypass Chute and Hopper.

The parameters for the stack, P-43 will be updated.

**EXEMPTIONS**

The following source status shall be changed to exempt per the cited Regulation.

- S-420 Cold cleaner  
[Exemption per Regulation 2-1-118.4]

**2-1-118 Exemption, Surface Preparation and Cleaning Equipment:** The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

118.4 Equipment, including solvent cold cleaners using an unheated solvent mixture for surface preparation, cleaning, wipe cleaning, fluxing or stripping by use of solutions with a VOC content less than or equal to 50 grams per liter (0.42 lb/gal).

**BY:** \_\_\_\_\_  
Dharam Singh, PE  
Air Quality Engineer II

**ENGINEERING EVALUATION REPORT  
CRITERION CATALYSTS & TECHNOLOGIES, LP  
PLANT NUMBER 227  
APPLICATION NUMBER 25835**

**2840 Willow Pass Road  
Pittsburg, CA 94565**

**BACKGROUND**

Criterion Catalysts & Technologies, LP (Criterion) has been operating a catalyst manufacturing plant in Pittsburg, CA. The plant is a Title V facility. Criterion has submitted an application to upgrade the filter media in H2 Nuisance Baghouse (A-55) with a high efficiency filter media. Currently the baghouse is permitted with a maximum exhaust grain loading of 0.15 gr/dscf. With the new filter media, a maximum exhaust grain loading of 0.003 gr/dscf is proposed thereby resulting in lower particulate emissions. The other process parameters such as exhaust flow rate, material throughput at the abated sources, nickel concentration, etc. will remain unchanged. Since the permit conditions for the abated sources (S-511, S-512, S-513) do not have these parameters, the applicant has agreed to get them incorporated as a baseline. The material throughput limits, the highest of the last three years, and the representative nickel concentration will be incorporated in the permit condition ID# 16736.

The application covers the following abatement device:

**A-55 Baghouse, abating S-509, S-511, S-512, S-513, S-517, S-518, S-519, S-520.**

**EMISSIONS CALCULATIONS**

Emission calculation is not required for the proposed change to the permit.

**PLANT CUMULATIVE INCREASE**

PM10 = 0.0 TPY

**TOXIC EMISSIONS AND HEALTH RISK SCREENING ANALYSIS**

Nickel emissions will not increase due to the proposed change and therefore do-not require health risk screening analysis.

**STATEMENT OF COMPLIANCE**

On the basis of the information submitted, the sources and the baghouse will comply with the requirements of Regulation 6, Rule 1 for particulate and visible emissions. The grain loading of the exhaust from the baghouse will be less than 0.15 gr/dscf.

The project is categorically exempt from CEQA review per Regulation 2-1-312.2 for upgrading the baghouse. The project will not have any adverse environmental effect.

Offset requirements of Regulation 2-2-303 are not triggered for PM10 emissions.

Public notification requirements of Regulation 2-1-412, Public Notice, Schools, are not triggered because there is no school within 1000 feet of the emission point.

PSD, NSPS, and NESHAPS requirements do not apply.

**PERMIT CONDITIONS**

The permit condition ID #16736 is revised by incorporating the material throughput and nickel content limits, and baghouse exhaust flow rate and grain loading limit. The revisions are shown in the underline/strikeout format.

COND# 16736 -----

For S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-19, S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416, S-417, S-418, S-509, S-511, S-512, S-513, S-515, S-516, S-517, S-518, S-519, and S-520:  
(Revision: A# 25657; A# 25835)

1. The owner/operator shall not exceed the following material throughput limits per consecutive 365 day period.

S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10: 4,900 tons (at each source);  
S-11 : 11,000 tons;  
S-19 : 3,667 tons;  
S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416: 6,100 tons (at each source)  
S-417 : 12,000 tons;  
S-418 : 12,000 tons;  
S-509, S-511, S-512, S-513: 8,370 tons (at each source);  
S-515 : 1,700 tons;  
S-516 : 3,300 tons;  
S-517 : 16,000 tons;  
S-518 : 16,000 tons;  
S-519 : 16,000 tons.  
S-520 : 16,000 tons  
(basis: cumulative increase; baseline)

2. The owner/operator shall operate in such a manner that the total particulate grain loading of the exhaust from the baghouses, A-3, A-42, and A-55, shall not exceed 0.003 gr/dscf, and from the baghouses, A-52, A-53, shall not exceed 0.006 gr/dscf. These limits shall be demonstrated by conducting source test per Part #4 below.  
(basis: baseline TBACT; Toxic risk screen)

3. The materials processed shall not exceed the following nickel content limits:
  - a. Maximum daily average of 10% by wt., maximum monthly average of 3.63% by wt., and maximum 12-month rolling average of 1.7% by wt. at S-3, S-4, S-5, S-6, S-7, S-8, S-9, and S-10.
  - b. Maximum daily average of 4.5% by wt., maximum monthly average of 3.78% by wt., and maximum 12-month rolling average of 2.1% by wt.

- at S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416, S-417, and S-418.
- c. Maximum daily average of 20% by wt., maximum monthly average of 7.87% by weight, and maximum 12-month rolling average of 7.94% by weight at S-515.
- d. Maximum daily average of 7% by wt., maximum monthly average of 1.36% by weight, and maximum 12-month rolling average of 1.43% by weight at S-516.
- e. Maximum daily average of 5.5% by wt., maximum monthly average of 4.28% by weight, and maximum 12-month rolling average of 2.67% by weight at S-509, S-511, S-512, S-513, S-517, S-518, S-519, and S-520.

(basis: baseline; Toxic risk screen)

4. The owner/operator shall conduct a District approved source test in accordance with the District's Manual of Procedures to demonstrate compliance with part #2 mentioned above and with BAAQMD Regulation 6-1-310, SIP Regulation 6-310. The manager of the Source Test Section of the District shall be notified at least seven (7) days prior to the test date. A copy of the test report shall be submitted to the District within 30 days of the test date. Such source test shall be conducted annually or at the first opportunity the representative materials are processed after 12 months of the previous test with a copy of the test report submitted to the District. Source test report shall be kept on-site for at least five years from the date of the source test, and be made available to the District staff for inspection.  
(basis: Regulation 6-1-310; SIP Regulation 6-310; baseline; TBACT; Toxic risk screen)
5. Visible particulate emissions from the baghouses, A-3, A-42, A-52, A-53, and A-55 shall not exceed Ringelmann 1.0 for more than 3 consecutive minutes in any hour or result in fallout on adjacent property in such quantities as to cause public nuisance.  
(basis: Regulation 1-301, 6-1-301; SIP Regulation 6-301)
6. The owner/operator shall abate particulate matter emissions from the sources by the respective properly maintained baghouses at all times the sources are operating. A District approved bag failure warning device must be in operation at all such times.  
(basis: Regulation 6-1-301, 6-1-310, 6-1-311; SIP Regulation 6-301, 6-310, 6-311; cumulative increase)
7. The owner/operator shall operate in such a manner that the maximum airflow rate from the baghouses shall not exceed the following limits:

A-3 : 5,500 acfm  
A-42: 8,600 acfm  
A-52: 1,200 acfm



A-53: 1,200 acfm

A-55: 11,000 acfm

(basis: baseline; cumulative increase)

8. In order to demonstrate compliance with parts #1 & #3, the owner/operator of these sources shall keep daily records of material throughput in a District approved logbook. The records shall be kept on-site for at least five years from the date of data entry, and shall be made available to the District staff for inspection.  
(basis: cumulative increase)

#### **RECOMMENDATIONS**

It is recommended that Criterion be issued Authority to construct modification with amended permit conditions ID# 16736 for the following abatement device.

**A-55 Baghouse, abating S-509, S-511, S-512, S-513, S-517, S-518, S-519, S-520.**

**BY:** \_\_\_\_\_  
Dharam Singh, PE  
Air Quality Engineer II

**ENGINEERING EVALUATION REPORT  
CRITERION CATALYSTS & TECHNOLOGIES, LP  
PLANT NUMBER 227  
APPLICATION NUMBER 28225**

**2840 Willow Pass Road  
Pittsburg, CA 94565**

**BACKGROUND**

Criterion Catalysts & Technologies, LP (Criterion) has been operating a catalyst manufacturing plant in Pittsburg, CA. The plant is a Title V facility. Criterion has submitted this application proposing to remove source testing requirements for baghouses, A-52 and A-53 in part 2 of the permit condition ID# 16736.

A source test was conducted on 9/17/2015, which had significant deviations from the standard test protocol due to the batch nature and short duration of operation. There is little, if any, merit in testing the source as per conclusion in the memo dated 10/28/2015 from Tim Underwood of Source Test Section of the District for "Outside Test OS-5949". A copy of the memo and results of the source test are attached.

The application covers the following sources:

**S-515 H2 Solid Additive Hopper A, abated by A-52.  
S-516 H2 Solid Additive Hopper B, abated by A-53**

**EMISSIONS CALCULATIONS**

Emission calculation is not required for the proposed change to the permit condition.

**PLANT CUMULATIVE INCREASE**

PM10 = 0.0 TPY

**TOXIC EMISSIONS AND HEALTH RISK SCREENING ANALYSIS**

None is required.

**STATEMENT OF COMPLIANCE**

On the basis of the information submitted, the sources and the baghouses will continue to comply with the requirements of Regulation 6, Rule 1 for particulate and visible emissions. The grain loading (0.006 gr/dscf) of the exhaust from the baghouses is less than 0.15 gr/dscf.

The project is categorically exempt from CEQA review per Regulation 2-1-312.12. The project will not have any adverse environmental effect.

Offset requirements of Regulation 2-2-303 are not triggered for PM10 emissions.

Public notification requirements of Regulation 2-1-412, Public Notice, Schools, are not triggered because there is no school within 1000 feet of the emission point.

PSD, NSPS, and NESHAPS requirements do not apply.

**PERMIT CONDITIONS**

The permit condition ID #16736 is revised by deleting requirement of source testing in Part 2 for A-52 and A-53 as proposed by the applicant and recommended by Source Test Section of the District. The revisions are shown in the underline/strikeout format.

COND# 16736 -----

For S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-19, S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416, S-417, S-418, S-509, S-511, S-512, S-513, S-515, S-516, S-517, S-518, S-519, and S-520:  
(Revision: A #25657; A #25835; A #28225)

1. The owner/operator shall not exceed the following material throughput limits per consecutive 365 day period.

S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10: 8,000 tons at each source  
S-11 : 8,000 tons;  
S-19 : 3,667 tons;  
S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416: 9,000 tons at each source  
S-417 : 9,000 tons;  
S-418 : 9,000 tons;  
S-509, S-511, S-512, S-513: 12,000 tons at each source  
S-515 : 1,700 tons;  
S-516 : 3,300 tons;  
S-517 : 12,000 tons;  
S-518 : 12,000 tons;  
S-519 : 12,000 tons;  
S-520 : 12,000 tons.  
(basis: cumulative increase; baseline)

2. The owner/operator shall operate in such a manner that the total particulate grain loading of the exhaust from the baghouses A-3, A-42, and A-55, shall not exceed 0.003 gr/dscf, and from the baghouses A-52 and A-53 shall not exceed 0.006 gr/dscf. These limits shall be demonstrated by conducting a source test per Part #4 below for A-3, A-42, and A-55. Source test for A-52 and A-53 is not required.  
(basis: baseline; TBACT; Toxic risk screen; significant deviation from source test protocol for A-52 and A-53)

3. The materials processed shall not exceed the following nickel content limits:
  - a. Maximum daily average of 7% by wt., maximum monthly average of 6% by wt., and maximum 12-month rolling average of 6% by wt. at S-3, S-4, S-5, S-6, S-7, S-8, S-9, and S-10.

- b. Maximum daily average of 7% by wt., maximum monthly average of 6% by wt., and maximum 12-month rolling average of 6% by wt. at S-408, S-409, S-410, S-412, S-413, S-414, S-415, S-416, S-417, and S-418.
  - c. Maximum daily average of 15% by wt., maximum monthly average of 15% by wt., and maximum 12-month rolling average of 7% by wt. at S-515.
  - d. Maximum daily average of 15% by wt., maximum monthly average of 15% by wt., and maximum 12-month rolling average of 7% by wt. at S-516.
  - e. Maximum daily average of 8% by wt., maximum monthly average of 7% by wt., and maximum 12-month rolling average of 7% by wt. at S-509, S-511, S-512, S-513, S-517, S-518, S-519, and S-520.  
(basis: Toxic risk screen; baseline)
4. The owner/operator shall conduct a District approved source test in accordance with the District's Manual of Procedures to demonstrate compliance with part #2 mentioned above and with BAAQMD Regulation 6-1-310, SIP Regulation 6-310. The manager of the Source Test Section of the District shall be notified at least seven (7) days prior to the test date. A copy of the test report shall be submitted to the District within 30 days of the test date. Such source test shall be conducted annually or at the first opportunity the representative materials are processed after 12 months of the previous test with a copy of the test report submitted to the District. Source test report shall be kept on-site for at least five years from the date of the source test, and be made available to the District staff for inspection.  
(basis: Regulation 6-1-310; SIP Regulation 6-310; TBACT; Toxic risk screen; baseline)
5. Visible particulate emissions from the baghouses, A-3, A-42, A-52, A-53, and A-55 shall not exceed Ringelmann 1.0 for more than 3 consecutive minutes in any hour or result in fallout on adjacent property in such quantities as to cause public nuisance.  
(basis: Regulation 1-301, 6-1-301; SIP Regulation 6-301)
6. The owner/operator shall abate particulate matter emissions from the sources by the respective properly maintained baghouses at all times the sources are operating. A District approved bag failure warning device must be in operation at all such times.  
(basis: Regulation 6-1-301, 6-1-310, 6-1-311; SIP Regulation 6-301, 6-310, 6-311; cumulative increase)
7. The owner/operator shall operate in such a manner that the maximum airflow rate from the baghouses shall not exceed the following limits:
- A-3 : 5,500 acfm
  - A-42: 8,600 acfm

A-52: 1,200 acfm  
A-53: 1,200 acfm  
A-55: 11,000 acfm  
(basis: cumulative increase; baseline)

8. In order to demonstrate compliance with parts #1 & #3, the owner/operator of these sources shall keep daily records of material throughput in a District approved logbook. The records shall be kept on-site for at least five years from the date of data entry, and shall be made available to the District staff for inspection.  
(basis: cumulative increase)

**RECOMMENDATIONS**

It is recommended that Criterion be issued the revised permit conditions ID# 16736 for the following sources.

**S-515 H2 Solid Additive Hopper A, abated by A-52.**  
**S-516 H2 Solid Additive Hopper B, abated by A-53**

**BY:** \_\_\_\_\_  
Dharam Singh, PE  
Air Quality Engineer II