

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT <i>ENGINEERING & COMPLIANCE</i> APPLICATION PROCESSING AND CALCULATIONS	PAGES 21	PAGE 1
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	PROCESSED BY Belinda C. Wan	CHECKED BY

PERMITS TO OPERATE

COMPANY NAME BP West Coast Products LLC
BP Wilmington Calciner

MAILING ADDRESS P.O. Box 1028
Wilmington, CA 90748-1028

EQUIPMENT LOCATION 1175 Carrack Avenue
Wilmington, CA 90748

FACILITY ID 131249 (CYCLE 1)

CONTACT PERSON Adrian Rosu
(562) 499-3210

PROPOSED CHANGES TO PERMITS:

Proposed additions are underlined and proposed deletions are shown as ~~strikeouts~~.

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
Process 1: CALCINED PETROLEUM COKE PRODUCTION					P13.1
System 2: LIME RECEIVING/UNLOADING AND STORAGE					S20.1
STORAGE SILO, HOP0006, LIME, 290 SQ. FT. TOTAL FILTER AREA, WITH FABRIC FILTER, HEIGHT:51 FT 7 IN; DIAMETER: 12 FT A/N: 420218	D8			PM: (9) [RULE 404, 2-7-1986; RULE 405, 2-7-1986]	C1.2 D322.1 D381.1 E102.1 E184.1 K67.2
System 3: PETROLEUM COKE CALCINING AND APC					S7.2, S20.1

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
SCRUBBER, <u>LIME FOR SCRUBBING</u> , SPRAY CHAMBER REACTOR, DRY0001, SO2 ABSORBING A/N 517770 A/N 421463	C68	C69 D104			D323.1
CONVEYOR, SCREW, SC0006, WEIGH FEEDER WITH CONVEYOR, LIME SLAKING AND INJECTION SYSTEM A/N: 420217	D9			PM: (9) [RULE 405, 2-7-1986]	C1.3 D323.2
LIME SLAKER, LS0001, LIME, LIME SLAKING AND INJECTION SYSTEM A/N: 420217	D10	C11		PM: (9) [RULE 405, 2-7-1986]	C1.6 D323.2
COMPARTMENT, WATER SPRAY/ASPIRATOR A/N: 420217	C11	D10		PM: (9) [RULE 404, 2-7-1986]	
BAGHOUSE, BH0007, ECOLAIRE, MODEL 12-8400 SERIES "83", WITH A 1500 HP EXHAUST BLOWER, WITH BAGHOUSE LEAK DETECTION SYSTEM, 107780 SQ. FT., A/N: 527338 A/N: 516273	C69	C68, S71		PM: (9) [RULE 404, 2-7-1986; RULE 405, 2-7-1986]	D12.1 <u>D28.2</u> D29.1 D322.1 D381.3 E71.1 E102.1 E193.4 H23.6 K40.2 K67.2
STACK, STK 0001, PROCESS STACK A/N: 527338 A/N: 516273	S71	C69			D82.1

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(10) Please refer to Section J of the facility permit for NESHAP/MACT requirements.

**Please refer to Sections F and G of the facility permit for the monitoring, recordkeeping, and reporting requirements.

CONDITIONS:

The operator shall comply with the terms and conditions which are set forth below:

FACILITY CONDITIONS

F33.1 The operator shall comply with the requirements and conditions of the Approval to Construct/Modify issued by the U. S. EPA for this facility.

All requirements and conditions of the Approval to Construct/Modify issued by the U. S. EPA on December 11, 1980 (Ref. NSR 4-4-9/LA 80-03) and subsequent amendments on November 4, 1986 and May 6, 1998 are incorporated into this permit. Compliance with this permit shall be considered as compliance with EPA Approval to Construct/Modify)

[RULE 1703 – PSD Analysis, 10-7-1988; 40 CFR 52 Subpart A, 3-12-1996]

PROCESS CONDITIONS

P13.1 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
PM	District Rule	1158

[RULE 1158, 6-11-1999]

[Processes subject to this condition: 1]

S7.2 The following conditions shall apply to all coke handling and related devices from this system:

The operator shall regularly wash exterior conveyors and return belts, overhead structures and ground area down to the coke laden water return system to avoid accumulation of coke dust.

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[RULE 1158, 7-11-2008; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Systems subject to this condition: Process 1, System 3]

S20.1 For the purposes of determining compliance with District Rule 405, solid particulate matter emissions shall be based on the combined emissions from all points of this system.

[RULE 405, 2-7-1986]

[Systems subject to this condition: Process 1, System 1, 2, 3]

DEVICE CONDITIONS

A. Emission Limits

B. Material/Fuel Type Limits

None

C. Throughput/Operating Limitation

C1.2 The operator shall limit the material processed to no more than 4608 ton(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as lime

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D8]

C1.3 The operator shall limit the material processed to no more than 2700 ton(s) in any one calendar month.

For the purpose of this condition, material processed shall be defined as lime

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D9]

C1.6 The operator shall limit the loading rate to no more than 2700 ton(s) in any one calendar month.

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For the purpose of this condition, loading rate shall be defined as dry lime charged to the lime slaker.

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition : D10]

D. Monitoring/Testing Requirements

D12.1 The operator shall install and maintain a(n) differential pressure gauge to accurately indicate the differential pressure across the bags.

The operator shall record the parameter being monitored once every 24 hours.

[RULE 1303(a)(1)-BACT, 5-10-1996, RULE 1303(a)(1)-BACT, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C54, C69, C70, C73, C76, C77]

D28.2 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted to determine SOx emissions at the outlet of the baghouse.

The test shall be conducted to demonstrate compliance with SOx emission limits specified by permit condition E71.1.

The District shall be notified of the date and time of the test at least 30 days prior to the test.

The test shall be conducted using previously approved District test methods.

The test shall be conducted at least annually.

Source test shall be conducted when the coke calciner plant is operating at 80% or greater of maximum capacity.

[RULE 1703 – PSD Analysis, 10-7-1988; 40 CFR Subpart A, 3-12-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]]

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[Devices subject to this condition : [C69]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below:

<u>Pollutant(s) to be tested</u>	<u>Required Test Method(s)</u>	<u>Averaging time</u>	<u>Test Location</u>
PM10 emissions	Approved District method	District –approved	Outlet
		method	

[RULE 1303(b)(2)-Offset,5-10-1996; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : C69]

D322.1 The operator shall perform annual inspection of the equipment and filter media for leaks, broken or torn filter media, and improperly installed filter media.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : D8, C54, D61, D62, C69, C70, C73, C76, C77]

D323.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a semi-annual basis, at least, unless the equipment did not operate during the entire semi-annual period. The routine semi-annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emission (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emissions and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2) Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual

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"Visible Emission Evaluation", and report any deviations to AQMD.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)- Periodic Monitoring, 12-12-1997; RULE 401, 3-21984; RULE 401, 11-9-2001]

[Devices subject to this condition :D20, C66, C67, C68]

D323.2 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours.

If any visible emission (not including condensed water vapor) are detected that last more than three minutes in any one hour, the operator shall verify and certify within 24 hours that the equipment causing the emissions and any associated air pollution control equipment are operating normally according to their design and standard procedures and under the same conditions under which compliance was achieved in the past, and either:

- 1). Take corrective action(s) that eliminates the visible emissions and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit; or
- 2) Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", and report any deviations to AQMD.

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The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions;
- 3). Date and time visible emission was abated; and
- 4). All visible emission observation records by operator or a certified smoke reader.

[RULE 3004(a)(4)- Periodic Monitoring, 12-12-1997; RULE 401, 3-21984; RULE 401, 11-9-2001]

[Devices subject to this condition :D1, D2, D3, D4, D5, D6, D7, D9, D10, D12, D13, D14, D15, D16, D17, D18, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D55, D56, D60, D63, D64, D65, D74, D91, D110, D111, D112, D113, D114, D115]

D381.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on an annual basis, at least, unless the equipment did not operate during the entire annual period. The routine annual inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emission (not including condensed water vapor) are detected , the operator shall take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit.

The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions; and
- 3). Date and time visible emission was abated.

[RULE 3004(a)(4)- Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

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[Devices subject to this condition : D8, D62]

D381.3 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever there is a public complaint of visible emissions, whenever visible emissions are observed, and on a monthly basis, at least, unless the equipment did not operate during the entire monthly period. The routine monthly inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emission (not including condensed water vapor) are detected, the operator shall take corrective action(s) that eliminates the visible emissions within 24 hours and report the visible emissions as a potential deviation in accordance with the reporting requirements in Section K of this permit. The operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- 1). Stack or emission point identification;
- 2). Description of any corrective actions taken to abate visible emissions; and
- 3). Date and time visible emission was abated.

[RULE 3004(a)(4)- Periodic Monitoring, 12-12-1997; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : C69]

E. Equipment Operation/Construction Requirements

E71.1 The operator shall not discharge or cause the discharge from this equipment for a maximum 2-hour average, SO₂ in excess of 131 pounds per hour or 2.55 pounds per ton of green coke feed. The emission limit of 2.55 pounds per ton of green coke feed shall not apply during periods of startup and shutdown when green coke feed rates are low or zero. Compliance with this condition shall be determined by performance tests and/or continuous emission monitoring conducted at the exhaust of the stack.

[RULE 1703 – PSD Analysis, 10-7-1988; 40 CFR 52 Subpart A, 3-12-1996]

[Devices subject to this condition : C69]

E102.1 The operator shall discharge dust collected in this equipment only into closed containers.

[RULE 1303(a)(1)-BACT, 5-10-1996]

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[Devices subject to this condition : D8, C54, D61, D62, C66, C69, C70, C73, C76, C77]

E184.1 The operator shall thoroughly clean the filters in the filter vents immediately after each load of material is received.

[RULE 1303(a)(1)- BACT, 5-10-1996; RULE 401, 3-2-1984; RULE 401, 11-9-2001]

[Devices subject to this condition : D8]

E193.4 The operator shall operate and maintain this equipment according to the following requirements:

The operator shall maintain the bag leak detection system (BLDS) in the manifolds or connecting ducts joining the baghouse outlets.

The operator shall calibrate the bag leak detection system (BLDS) for expected exhaust stack particulate concentration so that the detectors will accurately alert the equipment operator of the occurrence of broken or leaking bags.

Documentation verifying the calibration of the bag leak detection system (BLDS) shall be maintained on file and made available upon request of District personnel.

The bag leak detection system (BLDS) shall be equipped with visual and audible alarms.

[RULE 1155, 12-04-2009]

[Devices subject to this condition : C69]

H. Applicable Rules

H23.6 This equipment is subject to the applicable requirements of the following rules and regulations:

Contaminant	Rule	Rule/Subpart
PM	District Rule	1155

[RULE 1155, 12-04-2009]

[Devices subject to this condition: C69]

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K. Recordkeeping/Reporting

K40.2 The operator shall provide to the District a source test report in accordance with the following specifications:

Emission data shall be expressed in terms of mass rate (lbs/hr). In addition, solid PM10 emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

[RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition: C69]

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

The name of the person performing the inspection and maintenance of the filter media

The date, time and results of the inspection

The date, time and description of any maintenance or repairs resulting from the inspection.

[RULE 3004(a)(4)- Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D8, C54, D61, D62, C69, C70, C73, C76, C77]

BACKGROUND

BP West Coast Products LLC, BP Wilmington, with Facility ID 131249 is both NOx and SOx RECLAIM Cycle 1 facility that also belongs to the Title V program. BP West Coast Products LLC, BP Wilmington, with Facility ID 131249 produces high quality, petroleum coke from green coke by heating it in a 120 MMBtu per hour rotary kiln and combusting the volatile hydrocarbons at its facility located at 1175 Carrack Avenue, Wilmington, CA 90748.

According to the New Source Review database, West Coast Products LLC, BP Wilmington Calciner, with Facility ID 131249 has a potential to emit 1920 lb per day of NOx, 828 lb per day of CO, 674 lb per day of PM₁₀, 3144 lb per day of SOx and 43 lb per day of ROG.

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In 2010, BP West Coast Products LLC, BP Wilmington, with Facility ID 131249 reported 210.648 tons per year of NO_x, 239.852 tons per year of SO_x, 24.245 tons per year of total suspended particulate matter, 87.125 tons per year of CO and 3.408 tons per year of ROG.

BP West Coast Products LLC, BP Wilmington, with Facility ID 131249 submitted application no. 517770 on December 30, 2010 to resolve the issue of the Prevention of Significant Deterioration (PSD) permit stating sodium alkali is used in the scrubbing system whereas the Title V permit states lime is used. The operation uses lime as stated in the Title V permit. BP is requesting changing all references to “Sodium Alkali Scrubbing System” to “Lime Scrubbing System” to be consistent with facility’s Title V permit. The equipment description for the scrubber C68 in the Title V Facility permit will be updated to add “Lime for Scrubbing” to resolve this issue of the use of lime instead of sodium alkali in the scrubber as specified in the PSD permit.

The discrepancy between the existing PSD permit and the Title V permit in describing the material used in the scrubbing system was discovered during preparation of the Title V 2010 First Half Semi-Annual Monitoring (SAM) Report. Lime is referenced in the Title V permit under AQMD Device IDs D8, D9, D10 and permit conditions C1.2, C1.3 and C1.6. The PSD permit needs to be updated by changing the sodium alkali used in the scrubbing system to lime to reflect what is actually used in the petroleum coke calcination plant at 1175 Carrack Avenue, Wilmington, California. Since the separate PSD permit will be ultimately integrated into the Title V Facility Permit, the equipment description for dry scrubber C68 will be updated by adding “Lime for Scrubbing” in the Title V Facility Permit.

BP Wilmington Calciner submitted application no. 517769 on 12-30-2010 to request the elimination of the facility’s separate Prevention of Significant Deterioration (PSD) permit and to incorporate the PSD permit into the facility’s Title V permit. The PSD permit was originally issued by EPA on 12-15-1980 under permit no. NSR 4-4-9/LA 80-03 to Martin Marietta Carbon for the construction of a petroleum coke calcining facility. The Clean Air Act requires each state to include a PSD program in its SIP. However, the SIP for SCAQMD does not include a PSD program. EPA Region 9 has current partial PSD delegation authority with South Coast Air Quality Management District. The Partial Delegation Agreement is intended to delegate the authority and responsibility to AQMD for issuance of initial PSD permits and for PSD permit modifications where the applicant does not seek to use the emission calculation methodologies promulgated in 40 CFR 52.21 (NSR Reform) but not set forth in AQMD Regulation XVII. Only regulation XVII will be used for all new and modified permits, consistent with this Partial PSD Delegation Agreement. Therefore, BP Wilmington Calciner’s separate PSD permit can not be eliminated but can be integrated into the Title V Facility permit by replacing the use of sodium alkali with lime in scrubber C68.

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Based on a comparison of the PSD permit and the Title V permit shown below, the existing Title V permit already incorporates all relevant portions of the PSD permit except for the annual source testing condition for SOx emissions at the outlet of the lime scrubbing system baghouse C69 when the coke calcination plant is operating at maximum capacity. The PSD permit will be modified by the addition of the annual source testing condition D28.2 for SOx emissions to baghouse C69 of the Title V Facility Permit. This revision is considered a Title V Permit Revision and RECLAIM Facility Permit amendment since BP Wilmington Calciner was already issued an initial Title V Facility Permit effective October 3, 2008. This Title V Facility Permit amendment is classified as a Title V De Minimis Significant Permit Revision to add the annual source testing condition for SOx emissions to existing baghouse C69 of the Title V Facility Permit of the petroleum coke calcination plant at 1175 Carrack Avenue, Wilmington, California since it does not require any significant change in monitoring terms or conditions and no emission increase is expected since the proposed project simply involves changing the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit.

BP Wilmington Calciner submitted application no. 527388 on 9-16-2011 to request a change in permit condition to add the annual source testing condition for SOx emissions at the outlet of the lime scrubbing system baghouse C69 when the coke calcination plant is operating at 80% or greater of maximum capacity to the Title V facility Permit. The PSD permit issued by EPA in 1980 specifies annual source testing condition for SOx emissions at the outlet of the lime scrubbing system baghouse C69 when the coke calcination plant is operating at maximum capacity. Since the current Title V Facility Permit does not include this annual source testing condition, condition D28.2 will be added to existing baghouse C69 to demonstrate compliance with the maximum 2-hour average SOx emission limit of 131 pounds per hour or 2.55 pounds per ton of green coke feed.

BP WEST COAST PRODUCTS, LLC
BP WILMINGTON CALCINER
FACILITY ID 131249

PSD PERMIT	TITLE V PERMIT
EPA Approval to Construct/Modify (Ref. 4-4-9/LA 80-03) issued 12/11/1980 and amended 11/04/1986 and 5/06/1998	Facility Condition F33.1 which states that the operator shall comply with the requirements and conditions of the Approval to Construct/Modify issued by the U. S. EPA for this facility will be revised to show separate PSD permit issued by EPA is fully incorporated into the Title V Facility Permit..
Performance test for the <u>sodium alkali scrubbing system baghouse stack</u> shall be conducted at least annually for SOx emissions at the maximum capacity	The performance test requirement for the lime scrubbing system baghouse stack to be conducted at least annually for SOx emissions at 80% or

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of the petroleum coke calcination plant.	<p>greater of the maximum capacity of the petroleum coke calcination plant shall be added as a permit condition (D28,2) to C69 for the Title V Facility Permit. In addition, condition D82.1 – The operator shall install and maintain a CEMS to measure SO_x concentration in ppmv and the CEMS will convert the actual SO_x concentrations to mass emission rates (lb/hr) and record the hourly emission rates on a continuous basis. CEMS for SO₂ (dry) with a range of 0-300 ppm has been recertified by SCAQMD on 7-15-2011.</p> <p>Operation of the lime slaker identified as device D10 is limited to 2700 tons of dry lime charged to the lime slaker in any one calendar month instead of sodium alkali.</p>
Written reports of excess emissions be submitted to EPA Region IX for every calendar quarter (to be eliminated)	Title V deviation reports are now submitted to SCAQMD under Title V reporting requirements whenever there is an emissions exceedance
Sulfur content of the green coke feed shall be no greater than 3.0 percent as determined by ASTM method D3177 or other equivalent methods approved by EPA and that the sulfur content shall be determined on a daily basis, at a minimum. This requirement in the original PSD permit dated 12-11-1980 no longer applies since the SO ₂ emission limits in the PSD permit did not change as a result of removing the green coke sulfur limit and its analysis on a daily basis(to be eliminated). A condition was added that the CEMS could be used for enforcement purposes.	RECLAIM SO _x emission limit of 2.55 lb per ton of material is based on Rule 1703 for PSD analysis. Condition D82.1 – The operator shall install and maintain a CEMS to measure SO _x concentration in ppmv and the CEMS will convert the actual SO _x concentrations to mass emission rates (lb/hr) and record the hourly emission rates on a continuous basis. CEMS for SO₂ (dry) with a range of 0-300 ppm has been recertified by SCAQMD on 7-15-2011.
EPA shall be notified by telephone within 48 hours following any failure of air pollution control equipment or process equipment as well as notify the EPA within 15 days of such failure. (to be eliminated)	Failure of air pollution control equipment or process equipment is reported to SCAQMD as Title V deviations using Title V Form 500N deviation. Title V deviation and breakdown notifications are made to SCAQMD when there are malfunctions.
BP Wilmington Calciner shall not discharge into the atmosphere or cause the discharge of SO ₂ in excess of 131 pounds per hour or 2.55 pounds per ton of green coke feed, maximum 2 hour average from the exhaust stack S71 for sodium alkali scrubbing system baghouse. (to be added as Title V facility Permit condition)	Condition E71.1 specifies that the operator shall not discharge or cause the discharge from this equipment for a maximum 2-hour average SO ₂ in excess of 131 pounds per hour or 2.55 pounds per ton of green coke feed for baghouse C69. The emission limit of 2.55 pounds per ton of green coke feed shall not apply during periods of startup and shutdown when green coke feed rates are low or zero. Compliance with this condition shall be determined by performance tests and/or continuous emission monitoring conducted at the exhaust of the stack.
EPA shall be notified 30 days prior to conducting the SO ₂ performance test on the lime scrubbing system	The requirement to provide the referenced 30 day performance testing notification can be eliminated

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baghouse stack. (to be eliminated)	because a SOx CEMS is installed that continuously measures emissions.
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COMPLIANCE RECORD REVIEW

A search of the AQMD Compliance Database shows that there was one Notice of Violation No. P51966, issued on May 14, 2010 for failure to comply with permit conditions which limit SO₂ emissions to only 131 pounds as over a two hour average or 2.55 pounds per ton of green coke feed but the case was resolved on 3/17/2011. Otherwise, there are currently no other outstanding compliance issues concerning the facility.

PROCESS DESCRIPTION

BP West Coast Products LLC, BP Wilmington, with Facility ID 131249 produces high quality, petroleum coke from green coke by heating it in a 120 MMBtu per hour rotary kiln and combusting the volatile hydrocarbons at its facility located at 1175 Carrack Avenue, Wilmington, CA 90748. Waste heat is recovered as high pressure steam which can be used for electrical power generation.

Green petroleum coke, which is manufactured at the BP Los Angeles Refinery, is fed to the rotary kiln (13.5 feet internal diameter x 270 feet in length). The kiln includes a combination burner capable of firing natural gas and diesel oil which is rated at a maximum capacity of 120 MMBtu per hour. An oxygen injection system is used to increase the efficiency of the kiln system.

Gases from the kiln enter the pyroscrubber afterburner where most entrained particulate combusts or settles out. Residual organics and other combustible gases are oxidized in the chamber, which has a normal residence time of 10 seconds. Gases leave the pyroscrubber at a temperature of no less than 2200⁰F. During normal operation, the hot gases pass through the waste heat recovery boiler and air pollution control systems. The hot by-pass stack located at the exit of the pyroscrubber is for emergency use only to protect downstream equipment in case of a low water level in the steam drum, fan failure, or a boiler feed water pump failure.

Heat is recovered from the flue gas in a waste heat boiler. The boiler generates approximately 300,000 pounds of high pressure steam per hour, which in turn is used by a turbine generator to generate electricity.

The flue gas leaves the waste heat boiler at a temperature of 450⁰F and enters a spray dryer reactor (30 feet in diameter by 55 feet high). A lime slurry is introduced through an atomizer

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which generates liquid droplets. These droplets react with the sulfur oxides in the flue gas to form calcium sulfates and sulfites. The gas leaves the spray dryer at about 210⁰F and enters a baghouse. The baghouse consists of twelve modules, each contains 168 teflon-coated fiberglass bags, 8 inches in diameter by 26 feet in length.

The flue gas is drawn through the baghouse by an induced draft fan and discharged to the atmosphere through a stack with an internal diameter of 104 inches and a height from flow disturbances of 85 feet.

The calcined coke leaving the kiln is cooled in a rotary cooler before being conveyed to storage silos. Occasionally, the calcined coke exiting the cooler is either too hot to be processed by downstream equipment, or downstream equipment (typically a conveyor) breaks down. In such cases, the calcined coke must be diverted to a scraper conveyor, conveyor C0013, which dumps to an outdoor coke collection area known as the silo 5 emergency dump area. A front-end loader is used to scoop the diverted coke from the silo 5 area into the portable coke cleanup hopper, which is connected to the calcined coke cleanup conveyor. The cleanup conveyor returns the coke to conveyor C0014 and from there, it is combined with other calcined coke product.

EMISSIONS CALCULATION (No Change in Emission Estimates)

1. Application No. 517770 - Dry Scrubber C68 – Change the use of sodium alkali to lime in the PSD Permit

PSD permit specifies the use of sodium alkali in the scrubbing system whereas the Title V permit states lime is used. The operation uses lime as stated in the Title V permit. The PSD permit needs to be updated by changing the sodium alkali used in the scrubbing system to lime to reflect what is actually used in the petroleum coke calcination plant at 1175 Carrack Avenue, Wilmington, California. “Lime for Scrubbing” was added to the equipment description of the dry scrubber C68 in the Title V Facility Permit.

No emissions of PM and PM₁₀ are charged to A/N 517770 since the dry scrubber C68 is an air pollution control equipment

For PM: R1 = R2 = 0 lb per hour = 0 lb per day = 0 lb per year

For PM₁₀: R1 = R2 = 0 lb per hour = 0 lb per day = 0 lb per year

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2. Application No. 517769 – Title V/PECLAIM Facility Permit Revision

BP Wilmington Calciner submitted application no. 517769 on 12-30-2010 to modify the facility's separate Prevention of Significant Deterioration (PSD) permit originally issued by EPA to Martin Marietta Carbon on 12-15-1980 for the construction of a petroleum coke calcining facility and to incorporate the PSD permit into the facility's Title V permit. This Title V Facility Permit amendment is classified as a Title V De Minimis Significant Permit Revision to add the annual source testing condition D28.2 for SOx emissions to existing baghouse C69 when the coke calcination plant is operating at 80% or greater of maximum capacity to the Title V Facility Permit of BP Wilmington Calciner located at 1175 Carrack Avenue, Wilmington, California.

3. Application No. 527388 – Addition of Source Testing Condition D28.2 to Lime Scrubbing System Baghouse C69

With the modification of the current Title V Facility Permit to add the annual source testing condition for SOx emissions at the outlet of the lime scrubbing system baghouse C69 when the coke calcination plant is operating at 80% or greater of maximum capacity will be added to the Title V Facility Permit. The addition of the annual source testing condition does not result in an emission increase or emission decrease of any air contaminant.

No emissions of PM and PM₁₀ are charged to A/N 527388 since the lime scrubbing system baghouse C69 is an air pollution control equipment .

For PM: R1 = R2 = 0 lb per hour = 0 lb per day = 0 lb per year

For PM₁₀: R1 = R2 = 0 lb per hour = 0 lb per day = 0 lb per year

FEE SUMMARY:

The fees paid for these applications are shown in Table 1 below:

Application No.	Application Type	Facility ID	Fee Submitted	Required Permit Processing Fee
517769	Title/ RECLAIM Facility Permit Revision – No Evaluation	131249	\$861.52	\$ 861.52

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517770	Administrative Change of Condition to Change the Use of Sodium Alkali To Lime in Dry Scrubber C68 in PSD Permit	131249	\$684.58	\$684.58
527388	Change of Condition of Hot Baghouse C69	131249	\$3,114.35	\$ 3,114.35
Total			\$4,660.45	\$4,660.45

RULE EVALUATION:

PART I SCAQMD REGULATIONS

Rule 212 Standards for Approving Permits and Issuing Public Notices
11/14/97 Rule 212 requires public notice for the construction of a new source at a facility if 1) it is located within 1000 feet of a school; 2) any emission increase exceeds the daily maximums as specified in subsection (g) of this rule; or 3) any emission increase in toxic air contaminants for which a person may be exposed to a Maximum Individual Cancer Risk (MICR) of 1 in a million or greater . A public notice is not required here because the source is not located within 1000 feet of a school. Furthermore, no emission increase is expected since the proposed project simply involves changing the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit.

Rule 401 Visible Emissions
11/9/2001 Visible emissions are not expected as a result of this project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit.

Rule 402 Nuisance
05/07/76 This rule prohibits the discharge of air contaminants that cause injury, detriment, nuisance, or annoyance to a considerable number of persons; endanger the comfort, health or safety of any person; or cause injury to property. Public nuisance is not expected as a result of this project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit.

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Rule 403 Fugitive Dust
06/03/05 Fugitive dust is not expected as a result of this project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit.

Rule 405 Solid Particulate Matter
02/07/86 Changing the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit will not have a significant effect on emissions of solid particulate matter from the facility.

Rule 1155 Particulate Matter (PM) Control Devices
02/04/2009 Operation of existing baghouse C69 is subject to, and complies with Rule 1155. Rule 1155(e)(3) requires a baghouse leak detection system (BLDS) for Tier 3 baghouses. Baghouse C69 is classified as a Tier 3 baghouse because its filter area is 107780 square feet which is more than the minimum limit of 7500 square feet for Tier 3 baghouses. The BLDS manufacturer is Auburn Systems and the model is Triboflow Model 2500-2. The manufacturer submitted a Certificate of Compliance that confirms that the BLDS complies with Rule 155(e)(3)(B) and (C). Operation of existing baghouse C69 with existing baghouse leak detection system (BLDS) will comply with the provisions of this rule since emissions of particulate matter from the spray scrubber C68 are controlled by baghouse C69 which qualifies as BACT for emission control of particulate matter

Rule 1158 Storage, Handling, and Transport of Coke, Coal and Sulfur
07/11/2008 Operation of the petroleum coke calcining facility will continue to comply with Rule 1158 after changing the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit .

Reg. XIII New Source Review for VOC, CO, PM₁₀, and NH₃ Emissions
12/06/02 This proposed project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit will not have a significant effect on PM₁₀ emissions. Therefore, BACT and emission offset evaluations are not required under New Source Review. Because no emission increase of PM and PM₁₀ is expected, New Source Review (NSR) does not apply to this proposed project.

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Reg. XIV
06/05/09

Toxics

Rule 1401 New Source Review of Toxic Air Contaminants

There will be no increase in toxic air contaminants from this proposed project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit . Because there is no increase in emission of toxic contaminants due to these modifications, a health risk assessment is not required. Compliance with this rule is expected because this proposed project does not cause an increase in health risks.

Reg. XVII

Prevention of Significant Deterioration (PSD)

BP West Coast Products LLC, BP Wilmington Calciner with Facility ID 131249 is subject to Prevention of Significant Deterioration (PSD) since the facility emits more than 200 tons per year of NOx and more than 200 tons of SOx per year. The proposed change does not result in a significant increase of any regulated air pollutant. Therefore, there is no PSD evaluation required.

Reg. XX
05/06/05

Regional Clean Air Incentives Market (RECLAIM)

BP West Coast Products LLC, BP Wilmington Calciner with Facility ID 131249 is both NOx and SOx Cycle I RECLAIM facility. It is therefore subject to Reg XX. However, RECLAIM does not apply to this proposed project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit since there are no emissions of NOx and SOx from this project.

Reg. XXX
11/14/97

Title V Permits

BP West Coast Products LLC, BP Wilmington, with Facility ID 131249 was issued an initial Title V facility permit on October 3, 2008 and was issued a revised Title V facility permit on October 29, 2009 after application no. 496111 was submitted on 2-13-2009 for administrative revision to update equipment description and some permit conditions of the initial Title V facility permit issued on October 3, 2008. Application no. 517769 was submitted for a Title V De Minimis Significant Permit Revision and RECLAIM Facility Permit Amendment to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit. The proposed permit will be submitted to EPA for a 45-day review period upon completion of AQMD's evaluation before a final permit is issued. EPA will comment and submit recommendations to AQMD during the 45-day period.

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PART II STATE REGULATIONS

CEQA California Environmental Quality Act

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid, or eliminate identified significant adverse impacts of these projects be considered. Because this proposed project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit does not result in an increase of PM₁₀ emissions, no further CEQA review is required.

PART III FEDERAL REGULATIONS

CONCLUSION:

Based on the evaluation above, this proposed project to change the use of sodium alkali to lime in dry scrubber C68 in the PSD permit and incorporating the PSD permit into the Title V Facility Permit results in no increase of PM and PM₁₀ emissions. I recommend Permits to Operate for the dry scrubber C68 and the baghouse C69 with the conditions listed in the Conditions Section of this evaluation since this project is expected to comply with AQMD, State, and Federal Rules and Regulations.

Recertification Report of the RECLAIM CEMS for NO_x and SO_x Emissions from the Rotary Kiln and Pyroscrubber on October 26, 2009 shown as Attachment A by Carey Willoughby is included with this evaluation.