Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 1 Item 1 Type of Violation: General

California Code of Regulations, Title 8, Section 1670(b)(17) Personal Fall Arrest Systems, Personal Fall Restraint Systems and Positioning Devices
1670(b)(17): (17) Personal fall arrest systems shall not be attached to hoists, except as specified in these Orders, nor shall they be attached to guardrails.

Violation: On and prior to 04/24/15, the employer failed to comply with the above safety order by allowing its contracting employees to use the guardrails identified in construction safety order of the Title 8 standards as anchorage to secure the lifelines. Employees of Bragg Crane and Recon were observed to have attached their lanyards to the railings while standing on the scaffolding platform during the hoisting of the expander inlet spool to the ground. The employer was determined to have adopted guardrails as an anchorage to be tied off to in its fall protection policies while employees are working on scaffold platform.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $800.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 2 Item 1 Type of Violation: Willful-Serious

California Code of Regulations, Title 8, Section 3328(c) Machinery and Equipment
3328(c): (c) Machinery and equipment with defective parts which create a hazard shall not be used.

Violation: On and prior to 02/18/15, the employer failed to isolate or repair the leaking heat exchanger tube bundle in 8E-39B, located in Unit 8. The effluent leak from 8E-39B entered the FCC main column raising the pressure in the column negatively impacting a safe FCC emergency shutdown.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $70000.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
                     Torrance, CA 90502

Citation 3 Item 1 Type of Violation: Willful-Serious

5189(f)(1)(B)(2): (1) The employer shall develop and implement written procedures that provide clear instructions for safely conducting activities involved in each process consistent with the process safety information and shall address at least the following.
(B) Operating limits:
2. Steps required to correct and/or avoid deviation; and...

Violation: On and prior to 02/18/15, the employer failed to implement the FCC Emergency Shutdown Procedure that would have maintained the steam-induced pressure barrier between the main column and the FCC reactor. The employer dropped the steam mass flow rate below the mass flow rate mandated in the FCC Emergency Shutdown Procedure (Ref: OM-02-301). The loss of the steam-induced pressure barrier allowed hydrocarbons to flow from the main column, through the FCC system, to an ignition source in the Electrostatic Precipitator.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $70000.00
State of California
Department of Industrial Relations
Division of Occupational Safety and Health
Process Safety Management Unit - South
2000 E. Mc Fadden Avenue, Suite 208
Santa Ana, CA 92705
Phone: (714) 558-4600 Fax: (714) 558-4614

Inspection #: 1042440
Inspection Dates: 02/18/2015 - 08/03/2015
Issuance Date: 08/13/2015
CSHO ID: L4203
Optional Report #: 001-15

Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 4 Item 1 Type of Violation: Willful-Serious

5189(j)(2)(B): (B) Inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

Violation: On and prior to 02/18/15, the employer did not ensure that its mechanical integrity program was implemented and followed RAGAGEP such as ANSI/IISA-S84.01-2004 (IEC 61511-1MOD), Clauses 8.2-8.2.3, 11.1-11.9.2 and 16.1-16.3.3. Requirements: "Safety Instrumented System (SIS) shall be designed in accordance with codes, standards, or practices. The owner/operator shall determine that the equipment is designed, maintained, inspected, tested, and operating in a safe manner." A Safety Instrumented System (SIS) for emergency shutdown and interlocks in the Electrostatic Precipitator system was not properly designed, maintained and or operable on the above date.

Corrected During Inspection

Date By Which Violation Must be Abated: 
Proposed Penalty: 
Corrected During Inspection: $70000.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 5 Item 1 Type of Violation: Willful-Serious

California Code of Regulations, Title 8, Section 5189(j)(3) Process Safety Management of Acutely Hazardous Materials
5189(j)(3): (3) Equipment deficiencies. The employer shall correct deficiencies in equipment which are outside acceptable limits defined by the process safety information in subsection (d) before further use, or in a safe and timely manner provided means are taken to assure safe operation.

Violation: On and prior to 02/18/15, the employer used a defective FCC spent catalyst slide valve between the FCC reactor and the regenerator during an emergency shutdown and failed to provide safe means to assure safe operation.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $70000.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty Page 9 of 28 Cal/OSHA-2 Rev 12/2014
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 6 Item 1 Type of Violation: Willful-Serious

California Code of Regulations, Title 8, Section 6815(b) Opening Pipe Lines and Equipment
6815(b): (b) Lines and equipment containing flammable liquids shall be emptied of their contents, washed out, or steamed before being opened, as is practical.

Violation: On and prior to 02/18/15, the employer failed to isolate the FCC main column or empty the hydrocarbon contents of the FCC main column prior to initiating maintenance on the flue gas expander during the FCC emergency shutdown. When the steam-induced pressure barrier was compromised between the FCC reactor and the main column by cutting the steam mass flow rate below the required steam mass flow rate in the FCC reactor, the hydrocarbons flowed from the main column through the FCC system, found an ignition source in the ESP, and caused the explosion.

Corrected During Inspection

Date By Which Violation Must be Abated: 
Proposed Penalty: 
Corrected During Inspection $70000.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 7 Item 1 Type of Violation: Willful-Serious

California Code of Regulations, Title 8, Section 6815(c) Opening Pipe Lines and Equipment
6815(c): (c) Precautions shall be taken to prevent ignition by eliminating or controlling sources of
ignition before opening lines or equipment where flammable liquids or vapors may be present.

Violation: On and prior to 02/18/15, the employer failed to take precautions, during the FCC
emergency shutdown, to prevent ignition by eliminating or controlling sources of ignition in the
Electrostatic Precipitator (ESP) prior to the employer reducing the steam-induced mass flow rate in
the FCC reactor. As a consequence, hydrocarbons flowed from the main column through the FCC
system and into the ESP followed by the explosion.

Corrected During Inspection

Date By Which Violation Must be Abated: 
Proposed Penalty: $70000.00

Corrected During Inspection

$70000.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation & Item 1 Type of Violation: Serious

5189(d)(2)(D): Safe upper and lower limits for process variables such as temperatures, pressures, flows, levels and/or compositions; and,

Violation: On and prior to 02/18/15, the employer failed to include, in the Process Safety Information (PSI), the safe upper and lower steam mass flow rate limits to maintain a safe pressure barrier between the main column and the FCC during a FCC emergency shutdown.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $21600.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
               Torrance, CA 90502

Citation 9 Item 1   Type of Violation: Serious

5189(d)(2)(E): The consequences of deviations, including those affecting the safety and health of employees.

Violation: On and prior to 02/18/15, the employer failed to include, in the Process Safety Information, the consequences of deviations for failing to maintain the FCC reactor steam mass flow rate above that of the main column during a FCC emergency shutdown.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $9000.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty  Page 13 of 28  Cal/OSHA-2 Rev 12/2014
Citation and Notification of Penalty

**Company Name:** EXXONMOBIL REFINING & SUPPLY COMPANY

**Establishment DBA:** and its successors

**Inspection Site:** 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 10 Item 1 Type of Violation: **Serious**


5189(d)(3)(B): The employer shall document that the equipment complies with the criteria established in subsection (d)(3)(A) in accordance with recognized and generally accepted good engineering practices.

Violation: On and prior to 02/18/15, the employer failed to ensure that PSI was developed, implemented, and met RAGAGEP, such as, ISA-S84.01-2004 (IEC 61511-1Mod), Clauses 8.2-8.2.3, 11.1-11.9.2 and 16.1-16.3.3 Requirements: Safety Instrumented System (SIS) shall be designed in accordance with codes, standards, or practices. "The owner/operator shall determine that the equipment is designed, maintained, inspected, tested, and operating in a safe manner." The Safety Instrumented Systems (SIS) in the Electrostatic Precipitator did not follow RAGAGEP.

**Corrected During Inspection**

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See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 11 Item 1  Type of Violation: Serious

California Code of Regulations, Title 8, Section 5189(e)(1) Process Safety Management of Acutely Hazardous Materials
5189(e)(1): The employer shall perform a hazard analysis appropriate to the complexity of the process for identifying, evaluating, and controlling hazards involved in the process and shall determine and document the priority order for conducting process hazard analyses based on the extent of process hazards, number of potentially affected employees, age of the process and process operating history, using at least one of the following methodologies. (A) What-If; (B) Checklist; (C) What-If/Checklist; (D) Hazard and Operability Study (HAZOP); (E) Failure Mode and Effects Analysis (FMEA); or (F) Fault-Tree Analysis. NOTE: The employer may utilize other hazard analysis methods recognized by engineering organizations or governmental agencies. In the absence of (A) - (F) or other recognized hazard analysis methods, the employer may utilize a hazard analysis method developed and certified by a registered professional engineer for use by the process hazards analysis team.

Violation: On and prior to 02/18/15, the employer failed to perform a process hazard analysis for identifying, evaluating, and controlling hazards in the electrostatic precipitator (ESP) operating with broken and bypassed safety critical devices (SIS) including the ESP CO analyzers, A02120 and A02121, during the FCC emergency shutdown.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $7200.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 12 Item 1 Type of Violation: Serious

5189(f)(1)(A): The employer shall develop and implement written procedures that provide clear instructions for safely conducting activities involved in each process consistent with the process safety information and shall address at least the following. (A) Steps for each operating phase: 1. Start-up; 2. Normal operation; 3. Temporary operations as the need arises; 4. Emergency operations, including emergency shutdowns, and who may initiate these procedures; 5. Normal shutdown; and, 6. Start-up following a turnaround, or after an emergency shutdown.

Violation: On and prior to 02/18/15, the employer failed to develop and implement a safe-park procedure for the FCC Unit during the FCC emergency shutdown.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $7200.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 13 Item 1 Type of Violation: Serious


Violation: On and prior to 02/18/15, the employer failed to maintain a safe pressure differential in the pipe, connecting the FCC reactor overhead to the main column, by having not monitored the correct pressure transmitter on the main column during the FCC emergency shutdown. The pressure transmitter (PT#2119) to be monitored, located near the end of the FCC overhead pipe in the main column, had been broken and was not operative during the 02/18/15 FCC emergency shutdown.

Corrected During Inspection

Date By Which Violation Must be Abated: Proposed Penalty: Corrected During Inspection $7200.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
                   Torrance, CA 90502

Citation 14 Item 1  Type of Violation: Serious

California Code of Regulations, Title 8, Section 5189(f)(4) Process Safety Management of Acutely Hazardous Materials
5189(f)(4): (4) The employer shall develop and implement safe work practices to provide for the control of hazards during operations such as opening process equipment or piping and control over entrance into a facility by maintenance, contractor, laboratory or other support personnel. These safe work practices shall apply to employees and contractor employees.

Violation: On and prior to 02/17/15, a variance from safety policies & procedures for safe blinding, confined space entry and LOTO of 2K1 Expander in the FCC was issued. The 02/17/15 variance was the same variance that was issued on 01/11/12 except that the 01/11/12 version only covered confined space entry and hot work. The employer failed to consider or discuss changes such as a leaking spent catalyst slide valve, defective CO Analyzers (ESP), heat exchanger 8E-39B leaking into the main column, and the loss of the steam induced pressure barrier between the main column and the FCC Reactor. Therefore, the employer did not give clear and complete health & safety instructions to maintenance employees so a valid job safety & environment impact analysis "JSEA" could be conducted.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $21,600.00

See pages 1 through 4 of this Citation and Notification of Penalty for Information on employer and employee rights and responsibilities.
Citation and Notification of Penalty Page 18 of 28 Cal/OSHA-2 Rev 12/2014
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY

Establishment DBA: and its successors

Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 15 Item 1 Type of Violation: Serious

California Code of Regulations, Title 8, Section 5189(1)(1) Process Safety Management of Acutely Hazardous Materials
5189(1)(1): The employer shall establish and implement written procedures to manage changes (except for replacement in kind) to process chemicals, technology, and equipment, and changes to facilities.

Violation: On and prior to 02/18/15, the employer failed to establish and implement a written procedure to modify or manage changes to the steam mass flow rate below the required mass flow rate stated in the employer’s FCC Emergency Shutdown Procedure (Ref: OM-02-301). As a consequence of lowering the steam mass flow rate, the steam-induced pressure barrier between the FCC reactor and the main column became insufficient and could not prevent the hydrocarbons from flowing through the FCC system and finding an ignition source in the ESP.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $7200.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 16 Item 1  Type of Violation: Serious

5189(l)(2)(A): (2) The procedures shall assure that the following are addressed prior to any change:
(A) The technical basis for the proposed change;

Violation: On and prior to 02/18/15, the employer failed to address the technical basis for reducing the steam mass flow rate in the FCC reactor below the required steam mass flow rate stated in the FCC Emergency Shutdown Procedure (Ref: OM-02-301). As a consequence, the steam-induced pressure barrier between the FCC reactor and the main column became insufficient and did not prevent the hydrocarbon from flowing from the main column, through the FCC system, to an ignition source in the ESP.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $7200.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 17 Item 1  Type of Violation: Serious

(5189(1)(2)(B): (2) The procedures shall assure that the following are addressed prior to any change:
(B) Impact of change on safety and health;

Violation: On and prior to 02/18/15, the employer failed to address the impact of change on safety and health, when reducing the steam mass flow rate in the FCC reactor riser below the required steam mass flow rate as stated in the employer’s FCC Emergency Shutdown Procedure (Ref: OM-02-301). The reduction of steam mass flow rate compromised the steam-induced pressure barrier between the FCC reactor and the main column, allowing hydrocarbons to flow through the FCC system and eventually reaching an ignition source in the Electrostatic Precipitator.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $7200.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 18 Item 1  Type of Violation: Serious

California Code of Regulations, Title 8, Section 5189(l)(2)(C) Process Safety Management of Acutely Hazardous Materials
5189(l)(2)(C): (2) The procedures shall assure that the following are addressed prior to any change:
(C) Modifications to operating procedures;

Violation: On and prior to 02/18/15, the employer failed to implement their written procedure to manage changes or to complete a management of change (MOC) to the FCC Emergency Shutdown Procedure (Ref: OM-02-301) when they reduced steam mass flow rate below the required steam pressure rate into the FCC reactor riser for maintaining a pressure barrier between the FCC reactor and the main column. As a consequence, the steam-induced pressure barrier between the FCC reactor and the main column became insufficient and did not prevent hydrocarbons flowing from the main column into the FCC reactor and eventually to an ignition source in the Electrostatic Precipitator.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $7200.00
Citation and Notification of Penalty

Company Name: EXXONMOBIL REFINING & SUPPLY COMPANY
Establishment DBA: and its successors
Inspection Site: 3700 WEST 190TH STREET
Torrance, CA 90502

Citation 19 Item 1  Type of Violation: Serious

California Code of Regulations, Title 8, Section 5189(n) Process Safety Management of Acutely Hazardous Materials
5189(n): Emergency Planning and Response. The employer shall establish and implement an Emergency Action Plan in accordance with the provisions of Section 3220. NOTE: The employer may use the business plan for emergency response submitted pursuant to subdivision (a) of Section 25503.5 and subdivision (b) of Section 25505 of the Health and Safety Code, to the extent that the requirements of subsection (n) are met.

Violation: On 02/18/15, the employer failed to activate the employee alarm system or the Emergency Notification System (ENS) at the ESP area to provide warning for emergency actions to contractor employees, working near and at the Electrostatic Precipitator (ESP), prior to the ESP explosion. On 02/18/15 at 8:30AM, ExxonMobil Operations initiated an evacuation of the expander, FCC structure, and ESP to ExxonMobil employees, but failed to notify some contractor employees who were working at and near ESP. The hydrocarbon explosion occurred at 8:48AM. The Division requested documents on 06/12/15 from ExxonMobil showing the Emergency Notification System activation prior to the explosion. As of 07/16/15, the employer failed to provide the Division with such documents.

Corrected During Inspection

Date By Which Violation Must be Abated: Corrected During Inspection
Proposed Penalty: $21600.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.
See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.