



U.S. Department of Justice

Environment and Natural Resources Division

90-5-2-1-07109/3

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March 14, 2007

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Matthew T. Klein, Assistant Commissioner  
Indiana Department of Environmental  
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100 North Senate Avenue  
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Re: United States v. BP Exploration & Oil Co.

Dear Counsel:

Enclosed please find a copy of the Fifth Amendment to Consent Decree, signed by the court. The Amendment was entered on February 23, 2007. Please feel free to contact me should you have any questions.

Sincerely,

  
Robert D. Brook  
Assistant Chief

enclosure

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF INDIANA  
HAMMOND DIVISION

UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	Civil No. 2:96 CV 095 RL
	)	
and	)	Judge Rudy Lozano
	)	
THE STATE OF INDIANA, STATE OF OHIO, and	)	
the NORTHWEST AIR POLLUTION	)	
AUTHORITY, WASHINGTON,	)	
	)	
Plaintiff-Intervenors,	)	
	)	
v.	)	
	)	
BP EXPLORATION & OIL CO., ET AL.	)	
	)	
Defendants.	)	

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**FIFTH AMENDMENT TO CONSENT DECREE**

WHEREAS, the United States of America (hereinafter "the United States"); the State of Indiana, the State of Ohio, and the Northwest Pollution Control Authority of the State of Washington (hereinafter "Plaintiff-Intervenors"); and BP Products North America Inc. (successor to BP Exploration and Oil, Co., and Amoco Oil Company), and West Coast Products LLC (the owner of refining assets previously owned by Atlantic Richfield Company) (hereinafter, collectively, "BP") are parties to a Consent Decree entered by this Court on August 29, 2001 (hereinafter "the Consent Decree"); and

WHEREAS BP sold its Mandan and Salt Lake City Refineries to Tesoro Petroleum Corporation (now known as Tesoro Corporation) ("Tesoro") on September 6, 2001, and Tesoro assumed the obligations of the Consent Decree as they relate to the Mandan and Salt Lake City

Refineries pursuant to the First Amendment To Consent Decree, which was approved and entered as a final order of the Court on October 2, 2001; and

WHEREAS, BP sold its Yorktown refinery to Giant Yorktown, Inc., ("Giant") on May 14, 2002, and Giant assumed the obligations of the Consent Decree as they relate to the Yorktown Refinery pursuant to the Second Amendment of the Consent Decree, which was approved and entered as a final order of the Court on June 7, 2002; and

WHEREAS, BP sold a hydrogen plant located at its Texas City Refinery to Praxair on August 6, 2004 and Praxair assumed the obligations of the Consent Decree as they relate to that hydrogen plant pursuant to the Third Amendment of the Consent Decree, which was approved and entered as a final order of the Court on October 25, 2004; and

WHEREAS a Fourth Amendment to the Consent Decree was entered by the Court on June 20, 2005, that, inter alia, established final SO<sub>2</sub> and NO<sub>x</sub> emission limits for a number of FCCUs owned and operated by BP; and

WHEREAS, the United States and Tesoro have reached agreement on final SO<sub>2</sub> limits for the Mandan Refinery; and

WHEREAS, as a part of this agreement, the United States and Tesoro have further agreed to modify the terms of the Consent Decree to: (a) require Tesoro to install certain NO<sub>x</sub> controls on the Mandan FCCU/CO Furnace; (b) allow Tesoro to burn limited quantities of fuel oil in the Mandan CO Furnace (subject to the SO<sub>2</sub> emission limits hereby established and the NO<sub>x</sub> emission limits to be established in the future pursuant to this Amendment); and (c) allow Tesoro to direct sour water stripper gas to an ammonium sulfide concentration unit as an alternative to directing such gas to the SRU as currently required by the Consent Decree; and

WHEREAS, the United States, Tesoro, and each of the Plaintiff-Intervenors agree that amending the Consent Decree to incorporate the foregoing agreements is in the public interest; and

WHEREAS the terms of this Amendment do not affect any rights of interests of BP, Giant or Praxair; and

WHEREAS, Paragraph 85 of the Consent Decree requires that this Amendment be approved by the Court before it is effective;

NOW THEREFORE, the United States, Plaintiff-Intervenors and Tesoro hereby agree that, upon approval of this Amendment by the Court, the Consent Decree shall be amended as follows:

1. Paragraph 14 of the Consent Decree is amended by adding the following new subparagraph I at the end thereof:

**"I. Installation of Selective Non-Catalytic Reduction ("SNCR") – Mandan Refinery:**

A. Beginning no later than March 1, 2007, Tesoro shall use a NOx CEMS to monitor performance of the Mandan Refinery FCCU/CO Furnace and to report compliance with the terms and conditions of the Consent Decree.

B. Tesoro shall install and begin operation of an SNCR system on the Mandan Refinery FCCU/CO Furnace no later than the scheduled major maintenance turnaround of the FCCU/CO Furnace next following the effective date of the Fifth Amendment to the Consent Decree (currently scheduled for 2009, but no later than December 31, 2010). The SNCR system shall be designed and installed in accordance with good engineering practice to reduce NOx emissions as much as feasible.

C. Tesoro will demonstrate the performance of the SNCR over an eighteen (18) month period. The demonstration shall begin on the earlier of: (i) the date the Mandan Refinery FCCU and CO Furnace achieve normal operations following the turnaround during which the SNCR is installed or (ii) 180 days after the restart of the FCCU/CO Furnace following that turnaround. During the demonstration, Tesoro shall optimize the performance of the SNCR system and shall consider the effect of the operating considerations identified in Appendix E to the Consent Decree. No later than 90 days after the end of the 18 month demonstration period, Tesoro shall report to EPA the results of the 18-month demonstration as specified in Paragraph 14.F. of

this Consent Decree, with the exception that inlet NO<sub>x</sub> and O<sub>2</sub> concentrations to the SNCR will not be recorded or reported. In this report, Tesoro may propose final 7-day rolling and 365-day rolling average NO<sub>x</sub> emission limits for the Mandan Refinery FCCU/CO Furnace and shall comply with such limit until EPA establishes the final 7-day rolling and 365-day rolling average limits. EPA will use the information in the demonstration report, CEMS data collected during the demonstration, the information identified in Paragraph 14.F., and all other available and relevant information to establish a the final 7-day and 365-day rolling average NO<sub>x</sub> emission limits for the Mandan Refinery FCCU/CO Furnace in accordance with Paragraph 14.F.ii.. In no event shall the final 365-day emission limit established by EPA require more than a 60% reduction in NO<sub>x</sub> emissions as compared to the average 365-day rolling average continuous monitoring results prior to the turnaround during which the SNCR is installed.

D. Tesoro shall comply with the emission limit set by EPA at the time such emission limit is set by EPA, provided that if the emission limit set by EPA is more stringent than the limit proposed by Tesoro, Tesoro shall comply with the more stringent limit no later than 45 days after receipt of notice thereof from EPA. If Tesoro disagrees with the more stringent limit set by EPA, it shall invoke dispute resolution within the same forty-five (45) day period.

2. Paragraph 16 of the Consent Decree is amended by revising subparagraph G as follows:

"G. All CEMS installed and operated pursuant to this agreement will be installed, certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 C.F.R. §§ 60.11, 60.13 and Part 60 Appendix F, with the exception of the SO<sub>2</sub> CEMS on the Mandan CO Furnace, which shall be allowed a Relative Accuracy of  $\pm$  5.0 ppm compared to the reference method. These CEMS will be used to demonstrate compliance with emission limits.

3. Paragraph 17.A.i is amended by:

- a. deleting the word "and" from the end of subparagraph b. thereof;
- b. revising subparagraph c thereof to read as follows:
  - "c. in connection with firing acid soluble oil at the Alkylation unit; and"
- c. adding the following new subparagraph d. to the end thereof:
  - "d. up to a daily average of seven (7) barrels per hour in the CO Furnace."

4. Paragraph 29.E is amended to read as follows:

"On or before June 1,2001, at Mandan, BP shall reduce emissions of NO<sub>x</sub>-by 435-tpy by routing its sour water stripper gas from the CO boiler to the SRU and/or the ammonium sulfide concentration unit, as described in Appendix A of this Fifth Amendment."

5. The following new paragraphs 33A and 33B are added between Paragraphs 33 and 34:

“33A. Emissions Data. For the Mandan Facility and Salt Lake Facility, in the quarterly report that is due on July 30 of each year, Tesoro shall provide a summary of annual emissions data at the Covered Refinery for the prior calendar year. The summary shall include:

- i) Estimation (in tons per year) of NO<sub>x</sub>, SO<sub>2</sub>, CO and PM emissions for all heaters and boilers;
- ii) Estimation (in tons per year) of NO<sub>x</sub>, SO<sub>2</sub>, CO and PM emissions from each FCCU;
- iii) Estimation (in tons per year) of SO<sub>2</sub> emissions from each Sulfur Recovery Plants;
- iv) Estimation (in tons per year) of SO<sub>2</sub> emissions from each flare; and
- v) The basis for each estimate required in this subparagraph (i.e. stack tests, CEMS, PEMS, etc.) and an explanation of methodology used to calculate the tons per year emitted.

33B. Exceedances of Emission Limits. For the Mandan Facility and Salt Lake Facility, in each quarterly report, Tesoro shall identify each exceedance of an emission limit required or established by this Consent Decree that occurred during the calendar quarter covered by that report and, for any emission unit subject to a limit required or established by this Consent Decree that is monitored by a CEMS or PEMS, any periods of CEMS or PEMS downtime that occurred during the prior calendar quarter. For each exceedance and/or each period of CEMS or PEMS downtime, Tesoro shall include the following information:

- i) For emissions units monitored with CEMS or PEMS:
  - (1) the duration of the exceedance(s) and/or CEMS or PEMS downtime expressed as a percentage of operating time in a calendar quarter; and
  - (2) identification of each applicable rolling average period in which Tesoro exceeded the limit and/or in which CEMS or PEMS downtime occurred, the date and time

of the CEMS or PEMS downtime (if applicable), average emissions during the averaging period, and any identifiable cause of the exceedance (including startup, shutdown or malfunction) and/or CEMS or PEMS downtime; and

- ii) For emissions units monitored through stack testing:
  - (1) a summary of the results of stack test; and
  - (2) a copy of the stack test report.”

The undersigned representatives are fully authorized to enter into the terms and conditions of this Fifth Amendment. This Fifth Amendment may be executed in several counterparts, each of which will be considered an original.

#### ORDER

Before the taking of any testimony, without adjudication of any issue of fact or law, and upon the consent and agreement of the Parties, it is:

ORDERED, ADJUDGED and DECREED that the foregoing Fifth Amendment to the Consent Decree is hereby approved and entered as a final order of this court.

Dated and entered this 22<sup>nd</sup> day of Feb, 2007.

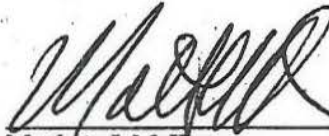
/s/ Rudy Lozano  
United States District Judge

WE HEREBY CONSENT to the foregoing Fifth Amendment to the Consent Decree entered in *United States, et al., v. BP Exploration and Oil Co., et al.*, Civil No. 2:96 CV 095 RL on August 29, 2001.


FOR PLAINTIFF THE UNITED STATES OF AMERICA

Date:

2/15/07



Matthew J. McKeown  
Acting Assistant Attorney General  
Environment and Natural Resources Division  
U.S. Department of Justice

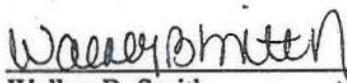


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FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Date: \_\_\_\_\_



Walker B. Smith

Director

Office of Civil Enforcement

Office of Enforcement and Compliance Assurance

U.S. Environmental Protection Agency



Ariel Rios Building

1200 Pennsylvania Ave., N.W.

Washington, D.C. 20460

WE HEREBY CONSENT to the foregoing Fifth Amendment to the Consent Decree entered in *United States, et al., v. BP Exploration and Oil Co., et al.*, Civil No. 2:96 CV 095 RL on August 29, 2001.

FOR TESORO CORPORATION:

Date: February 5, 2007    
Charles S. Parrish  
Senior Vice President, General Counsel  
and Secretary

## Appendix A

### Supplemental Environmental Project Process Change

The Ammonium Sulfide Concentrate Unit (ASD unit) will convert the sour water stripper overhead gas to ammonium sulfide solution. A simplified process flow diagram for the ASD unit is included as Figure One. The sour water overhead stream (process stream #2) contains significant concentrations of ammonia and reduced sulfur species. The sour water stripper gas will be reacted in an absorber tower with water (process stream #5) and anhydrous ammonia (process stream #4) to produce concentrated ammonium sulfide (process stream #6). The concentrated ammonium sulfide product will be shipped offsite for further processing into a finished fertilizer product.

The ASD unit will also provide short-term redundant sulfur management capacity for the entire refinery during periods when the refinery's sulfur recovery plant (SRP) is offline. Refinery acid gas (process stream #1) will be processed in a manner identical to the sour water stripper gas.

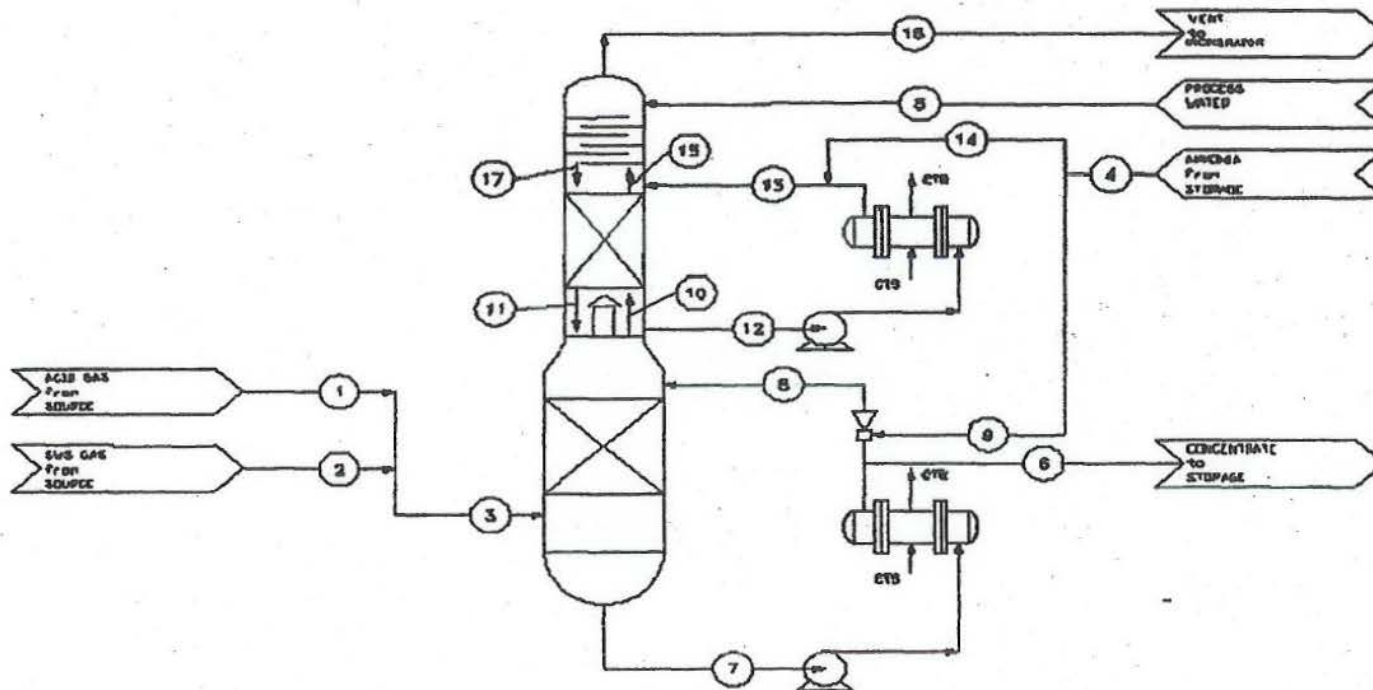
Under normal operations the ASD unit will have one point source of air emissions. The vendor supplying this technology (Tessenderlo Kerley, Inc (TKI)) has estimated the potential ammonia and hydrogen sulfide emissions from the pressure control valve at the top of the absorber tower (process stream #16). That pressure control valve will vent to the SRP incinerator during normal operations. TKI estimates that there will be no emissions of ammonia and that the emissions of hydrogen sulfide will total approximately 0.5 pounds/hour. Incremental NO<sub>x</sub> emissions from the incinerator will be about zero pounds/hour (basis: NO<sub>x</sub> as NO); similarly the incinerator's incremental SO<sub>2</sub> emissions would also be approximately 1.0 pounds/hour.

In the event of ASD unit shutdown, Tesoro will take the following actions:

- For short term outages, the Sour Water Stripper will be shutdown, and sour water will be stored in tankage designed for that purpose.
- For shutdowns that exceed the refinery's sour water storage capability, Tesoro will restart the Sour Water Stripper and direct the overhead vapors to the SRP until such time that the ASD unit can be returned to service.

In the event of ASD unit over pressure malfunction, the unit may relieve as designed to the refinery flare. If the over pressure malfunction cannot be resolved within a reasonable time, Tesoro will initiate the shutdown procedure described above. ASD unit venting to the SRP incinerator and refinery flare will be evaluated against the Flaring Incident criteria defined in this Consent Decree. Should a Flaring Incident occur, the event will be subject to the Root Cause analysis subject to Acid Gas Flaring incident requirements of this consent decree.

FIGURE ONE -ASD UNIT SIMPLIFIED PROCESS FLOW DIAGRAM



CERTIFICATE OF SERVICE

I hereby certify that on February 22, 2007, a copy of Plaintiff United States' Fifth Amendment to Consent Decree was duly served upon the following parties by United States mail, postage prepaid, to the following:

John K. McManus  
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Office of the Attorney General  
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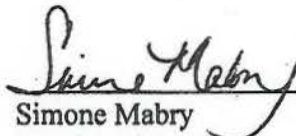
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Legal Assistant