

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

UNITED STATES OF AMERICA,	)	
	)	
v.	)	Criminal No. 4:07-cr-434
	)	
BP PRODUCTS NORTH AMERICA INC.	)	Honorable Gray Miller
	)	
Defendant.	)	

STATEMENT OF FACTS

The United States of America and the Defendant, BP Products North America Inc. ("BP Products" or "the Defendant") agree and stipulate that if this matter were to come to trial, the United States would prove the following facts regarding the Defendant's conduct beyond a reasonable doubt:

Introduction

1. On March 23, 2005, at the BP Products refinery located in Texas City, Texas (hereinafter "BP Products Texas City refinery") in the Southern District of Texas, a catastrophic explosion occurred when hydrocarbon vapor and liquid released to the open air reached an ignition source. The explosion caused the deaths of 15 contractor employees at the BP Products Texas City refinery, who were located in temporary trailers approximately 150 feet from where the hydrocarbons were released to the open air. Their names were: Glenn Bolton, Lorena Cruz-Alexander, Rafael Herrera, Daniel Hogan, Jimmy Hunnings, Morris King, Larry Linsenbardt, Arthur Ramos, Ryan Rodriguez, James Rowe, Linda Rowe, Kimberly Smith, Susan Taylor,



Larry Thomas, and Eugene White. The explosion also caused the injuries of at least 170 other workers at the BP Products Texas City refinery.

BP Products Texas City Refinery Operations

2. At all relevant times, BP Products, a subsidiary of BP plc, owned and operated the BP Products Texas City refinery, within the Southern District of Texas.
3. Prior to December 1998, the Texas City refinery was owned by Amoco. In December 1998, Amoco merged into a subsidiary of BP plc. At the time of the merger, the Texas City refinery was owned by Amoco Oil Company, a subsidiary of Amoco. BP Products is a successor to Amoco Oil Company. As of March 23, 2005, the Texas City refinery was the largest refinery owned by BP Products in the United States. The Texas City refinery covered more than 1200 acres, employed approximately 1800 permanent BP Products staff and approximately 2000 contract workers.
4. Within the BP Products Texas City refinery, there were 29 different refining units and four chemical units that had the collective capacity to process 460,000 barrels of crude oil per day into components including gasoline, jet fuel, diesel fuel, and chemical feed stocks.
5. During operations at the BP Products Texas City refinery, if it was necessary to release hydrocarbon vapors to the open air, the refining units used three methods: a "flare system," a "blowdown stack," or direct atmospheric vents.
6. A flare system allowed hydrocarbon vapors to be released through the top of a tall pipe structure, where a flame burned off the hydrocarbon vapors in order to combust hazardous air pollutants before they were emitted into the air, and ensured that the hydrocarbons did not reach

an ignition source away from the flare. Most of the BP Products Texas City refinery process units used the flare system for controlling hydrocarbon releases during an emergency or upset.

7. A blowdown stack employed a large drum to receive hydrocarbon vapors and liquids. In a properly designed and functioning blowdown stack system, hydrocarbon liquids were received into the blowdown drum and sent to a closed sewer system, and hydrocarbon vapors were released up through a "stack," a large pipe directly above the drum, and then directly to the open air. A blowdown stack did not use a flame at the top to burn off excess hydrocarbons and instead vapors containing hazardous air pollutants were released directly to the open air. If not properly operated, designed and maintained, in some circumstances, hydrocarbon vapors and liquids released from the blowdown stack had the potential to reach a ground level ignition source and explode.

Requirements Under the Clean Air Act

8. The Clean Air Act ("CAA"), Title 42, United States Code, Section 7401 *et seq.*, is the Nation's comprehensive air pollution control statute. As part of the 1990 CAA amendments, Congress promulgated Section 112(r)(7), Title 42, United States Code, Section 7412(r)(7), to "prevent accidental releases of regulated substances" from facilities such as the BP Products Texas City refinery. Section 112(r)(7) in turn authorizes the Administrator of the Environmental Protection Agency ("EPA") to promulgate "release prevention, detection and correction requirements" to prevent the accidental releases. Title 42, United States Code, Section 7412(r)(7)(A). The regulations are known as Risk Management Plan ("RMP") regulations and are set forth at Title 40, Code of Federal Regulations ("C.F.R."), Part 68.

9. Under the RMP regulations, BP Products must implement prevention, detection and correction requirements set forth in 40 C.F.R. Part 68, in order to prevent explosions such as the explosion that occurred on March 23, 2005, at the BP Products Texas City refinery. 40 C.F.R. § 68.12(d)(3).

BP Products Texas City Refinery ISOM Unit, Blowdown Drum and Stack

10. One of the refining units at the BP Products Texas City refinery used for processing gasoline components was the Isomerization Unit ("ISOM unit"). The main function of the ISOM unit was to increase the octane in a component of gasoline. A component in the ISOM unit was known as the Raffinate Splitter. "Raffinate" is a term given to components of gasoline that are in the process of or have been refined. The Raffinate Splitter was a single distillation tower with a height of 164 feet and an approximate volume of 3700 barrels. The Raffinate Splitter received a raffinate feed. The splitter divided the total raffinate into light and heavy raffinate. Raffinate that came from the Raffinate Splitter was referred to as a "light end hydrocarbon," and could be blended into gasoline. As a light end hydrocarbon, raffinate from the Splitter was highly volatile and could ignite easily.

11. The Raffinate Splitter was equipped with relief valves and headers to release excess pressure if necessary during a startup.

12. During a normal startup, BP Products written procedures required that excess hydrocarbon vapors from the Raffinate Splitter could be relieved only through a piping system known as the "3-pound vent" to a flare, which would burn off any excess hydrocarbons.

13. Although no written procedures authorized the practice, the Raffinate Splitter relief valves could be bypassed by a manual valve known as the "8-inch chain valve," which bypassed the 3-pound vent and instead went to a blowdown stack known as the "F-20 blowdown stack."

14. The F-20 blowdown stack was designed to operate with a "quench system," where water could be injected into the blowdown drum to cool the hydrocarbon vapors and change some of the hydrocarbon from vapors to liquids, which were sent to a closed sewer system. Remaining hydrocarbon vapors were sent through the stack and released directly to the open air.

15. BP Products was permitted to release hydrocarbons from the F-20 blowdown stack to the open air only in the case of an emergency or process upset or other events known as "startups" or "shutdowns," and only if BP Products provided advance notice to the Texas Commission on Environmental Quality ("TCEQ") that it was going to use the F-20 blowdown to release hydrocarbons during a startup or shutdown.

Location of Contractor Employees at the BP Products Texas City Refinery

16. During operations at the BP Products Texas City refinery, it was a common practice for BP Products employees and contractor employees to work in temporary trailers that were placed in the vicinity of blowdown stacks where hydrocarbons could have been released into the open air and reached an ignition source.

Explosion of March 23, 2005

17. In the month prior to March 23, 2005, the ISOM unit was undergoing a non-cycle ending "turnaround," where the unit was shut down and maintenance and repairs could be performed on different components in the unit.

18. On March 23, 2005, the Raffinate Splitter was undergoing a "startup" where after having been shut down for a month, it was being re-started for its operation to increase octane in unleaded gasoline. The startup process required sending up to 22,000 gallons of product to the Raffinate Splitter, the interior of which would be subjected to pressure up to 40 pounds per square inch (psi) and temperatures as high as 300 degrees Fahrenheit.

19. The Raffinate Splitter was viewed by BP Products Texas City refinery workers as one of the more basic units at the refinery to start up and operate. The startup of the Raffinate Splitter, however, was recognized as the most difficult or dangerous phase of operation for that unit, due to the re-introduction of hydrocarbons, elevated temperature and pressure.

20. The startup procedure for the Raffinate Splitter involved the work of several operators and supervisory personnel. BP Products was required by federal regulations to ensure that written procedures were established and implemented for the ISOM startup process. 40 C.F.R. § 68.69(a). The written procedures that operators were required to follow, and supervisors were required to ensure were followed, were the Standard Operating Procedures for the Raffinate Splitter Following a Turnaround ("SOP"). BP Products was also required to ensure that alarm systems and process safety components in the ISOM unit were operating correctly to enable supervisors and operators to perform startups at the Raffinate Splitter in a safe manner. 40 C.F.R. § 68.73(b).

21. By the morning of March 23, 2005, several procedures required for ensuring the mechanical integrity and a safe startup of the Raffinate Splitter had either not been established or were not being implemented. These included the following:

a. BP Products failed to notify non-essential contractor employees and all non-essential BP Products employees located in temporary trailers in close proximity to the Raffinate Splitter that the startup was going to take place.

b. The Raffinate Splitter bottoms area was filled above the level that was permitted under written procedures for startups, though this had become a common practice for startups of the Raffinate Splitter.

c. The ISOM unit control board operator had filled the Raffinate Splitter tower with feed, but raffinate was not being emptied from the Raffinate Splitter. A level instrument on the control board indicated to the operator that the level in the tower was decreasing when in fact it was increasing. Other information reflected the rising level of raffinate feed in the Raffinate Splitter. The control board panel did not automatically calculate and display to the operator that the mass balance was changing.

d. Alarms in the Raffinate Splitter and in the blowdown stack failed to function, or were ignored.

e. Excess pressure was relieved by sending hydrocarbons through the 8-inch bypass valve to the F-20 blowdown stack instead of to the 3-pound vent system that led to a flare. Although this had not been authorized, it had also become a common practice for startups of the Raffinate Splitter for several years.

f. BP Products was releasing hydrocarbons into the open air through the F-20 blowdown stack during startups although BP Products had repeatedly failed to provide advance notice to TCEQ that it would be releasing the hydrocarbons during the startups.

g. BP Products did not believe that an overfill of the Raffinate Splitter was a credible threat and chose not to perform a “what-if” scenario for an overfill of the Raffinate Splitter or the F-20 blowdown stack.

h. BP Products had failed since at least 1999 to perform a relief valve study on the ISOM unit to determine whether the F-20 blowdown stack had the capacity to safely release excess hydrocarbons.

22. At approximately 1:15 p.m. on March 23, 2005, after excessive liquid, pressure and temperature had built up inside the Raffinate Splitter for several hours, hydrocarbon vapors and liquids were released through relief valves and headers from the Raffinate Splitter to the F-20 blowdown stack. The volume of the hydrocarbon liquid was so great that it exceeded the capacity of the F-20 blowdown stack and released directly out the top of blowdown stack into the open air.

23. Hydrocarbon liquid flowed down the outside of the F-20 blowdown stack and reached ground level. At that point, a vapor cloud formed and migrated away from the blowdown stack, reaching an ignition source, believed to be the running engine of a truck parked near the blowdown stack. Upon reaching the ignition source, the hydrocarbon vapor cloud from the blowdown stack exploded, resulting in 15 deaths and at least 170 injured persons.

Failures to Establish and Implement Procedures to Ensure the
Ongoing Mechanical Integrity of the Raffinate Splitter and F-20 Blowdown Stack Before the
Explosion of March 23, 2005

24. Pursuant to 40 C.F.R. § 68.73(a), BP Products was required to ensure the mechanical integrity of the following process equipment at the BP Products Texas City refinery:

(1) Pressure vessels and storage tanks;

- (2) Piping systems (including piping components such as valves);
- (3) Relief and vent systems and devices;
- (4) Emergency shutdown systems;
- (5) Controls (including monitoring devices and sensors, alarms and interlocks); and
- (6) Pumps

40 C.F.R. § 68.73(a).

25. Pursuant to 40 C.F.R. § 68.73(b), BP Products was required to “establish and implement written procedures to maintain the ongoing integrity of process equipment” listed above in Paragraph 24.

26. The SOP for startup of the Raffinate Splitter following a turnaround required that operators relieve excess hydrocarbons to a 3-pound venting system that sent the hydrocarbons to a flare where they would be burned off rather than released to the open air. However, because use of the 3-pound venting system extended the duration of startup, BP Products supervisory operations personnel allowed ISOM operators instead to use an 8-inch bypass valve to release hydrocarbons to the F-20 blowdown stack and to the open air, even though this was not authorized under the SOP.

27. The SOP allowed filling the Raffinate Splitter bottoms area to only 50% of its capacity. Instead ISOM supervisors regularly allowed operators to fill the Raffinate Splitter bottoms area to over 100% of its capacity (approximately 10 feet), in an effort to expedite the startup process and prevent damage to other components of the Raffinate Splitter, even though this was not authorized by the SOP. Moreover, by filling the bottoms area to over 100% of capacity, operators could not readily measure the actual volume in the tower, because the level instruments were incapable of reading any level over 100% of the bottoms area (approximately 10 feet of the 164-foot tower).

28. From in or about January 1999 until on or about March 23, 2005, BP Products did not believe that an overflow of the Raffinate Splitter was a credible scenario and chose not to perform a "what-if" scenario for an overflow of the Raffinate Splitter or the F-20 blowdown stack.

29. From in or about January 1999 until on or about March 23, 2005, BP Products chose not to perform a relief valve study on the ISOM unit to determine whether the F-20 blowdown stack had the capacity to release excess hydrocarbons safely.

30. In March 2002, BP Products environmental personnel informed BP Products engineering and operations management that it was possible to switch the ISOM unit relief valves and header system to a flare, but it would be necessary to conduct a relief valve study. BP Products engineering and operations management concluded that switching to the flare was not required for environmental compliance. At this time, neither engineering, operations nor safety management investigated whether the blowdown should be switched to a flare for safety purposes. As a result, the components in the ISOM unit, including the Raffinate Splitter, continued to vent hydrocarbons to the F-20 blowdown drum and stack.

31. In or about April 2003, the F-20 blowdown drum and stack were inspected. The inspections showed the following deficiencies:

- a. The F-20 blowdown drum was designed and installed with a quench system that was used to reduce hydrocarbon vapors to a liquid that would be sent to the sewer system. The quench system was found no longer to operate; and

b. Baffles in the F-20 blowdown drum were used to reduce the amount of hydrocarbon vapor that was released out of the stack. Several baffles were corroded, had fallen to the bottom of the F-20 blowdown drum, and did not operate as designed.

32. From in or about January 1999 until on or about March 23, 2005, despite being aware of deficiencies in the blowdown stack, BP Products did not prevent operators from using the F-20 blowdown stack during startups until the explosion on March 23, 2005, even though BP Products did not know the amount of hydrocarbons that were being sent to the F-20 blowdown stack.

33. In 1994, Amoco, which then owned the BP Products Texas City refinery, implemented Process Safety Standard 6 ("PSS 6"). PSS 6 required the following for blowdown systems such as the F-20 blowdown:

1. New blowdown stacks which discharge directly to the atmosphere are not permitted.
2. If still required, existing blowdown systems will be replaced with connections to depressure via another processing unit, a hydrocarbon recovery system, or flare when the size of the existing facility is outgrown.

34. In 1997, despite the requirements stated in PSS 6, the F-20 blowdown stack was replaced in kind by Amoco with another blowdown stack.

35. From in or about January 1999 until on or about March 23, 2005, despite adopting PSS 6, and despite being informed in or about April 2003 that the F-20 blowdown drum's quench system and baffles were not operating as designed, BP Products failed to replace the F-20 blowdown stack with a flare.

36. On or about March 21, 2005, BP Products maintenance personnel informed ISOM operations supervisory personnel that critical alarms had not been properly inspected in accordance with BP Products maintenance inspection requirements and part of the written SOP

for startup following a turnaround. Despite being informed of this, ISOM supervisory operations personnel allowed the startup to proceed on March 23, 2005.

37. The written SOP required instruments in the Raffinate Splitter tower to be functioning properly before startup. The required instrument checks were not completed prior to the March 23, 2005, startup. BP Products was aware for several years that questions had been raised as to whether a sight glass on the Raffinate Splitter tower used to visually check the level of product in the tower was functioning properly. Despite this, BP Products allowed the startup of the Raffinate Splitter to proceed on March 23, 2005.

Failures to Provide Information of Known Hazards to Contractors
at the BP Products Texas City Refinery before the Explosion of March 23, 2005

38. BP Products was required under federal regulations to ensure the safety of all contractors performing maintenance or repair, turnaround, major renovation or specialty work on processes at the BP Products Texas City refinery. 40 C.F.R. § 68.87(b)(2). BP Products was also required to inform all contractors of the known potential fire, explosion or toxic release hazards related to the contractors' work at the BP Products Texas City refinery. 40 C.F.R. § 68.87(b)(2).

39. At the BP Products Texas City refinery, written procedures required that a Management of Change ("MOC") be implemented whenever temporary trailers were placed within the refinery. Written procedures also prohibited placing temporary trailers in the vicinity of process units unless and until an MOC had been performed to ensure that process safety risks had been taken into account, including the risk of fire or explosion to a temporary trailer.

40. On or about March 23, 2005, at least 50 trailers at the BP Products Texas City refinery were in close proximity to blowdown stacks or flares. Of those 50 trailers, only four were

confirmed as having been properly assessed for occupancy under required written procedures for an MOC.

41. From in or about September 2004 until on or about March 23, 2005, BP Products failed to implement written MOC procedures that were required for safe placement of the trailers to be occupied by the JE Merit and Fluor contract employees in the vicinity of the ISOM blowdown stack during the startup for the Raffinate Splitter. The specific failures to perform and implement the MOC for the trailers included:

- a. BP Products personnel failed to seek final approval for occupancy of the JE Merit trailer from the ISOM unit Superintendent;

- b. BP Products failed to consider the risk of fire and explosion to contract employees that could be located within 350 feet of the blowdown stack, as required by American Petroleum Institute Standard 521, even though BP Products was aware of specific prior hydrocarbon releases from the blowdown stack; and

- c. BP Products failed to prevent vehicular traffic in the vicinity of the blowdown stack during startup which would have reduced the risk of ignition near the blowdown stack in the event of a hydrocarbon release as occurred on March 23, 2005.

42. BP Products was aware that from in or about 1991 until March 23, 2005, there had been at least 19 prior releases of hydrocarbons directly into the open air from the blowdown stack.

43. From in or about January 1999 until on or about March 23, 2005, BP Products was aware that there had been instances of releases of hydrocarbon liquids, referred to as "puking" from blowdown stacks. During this same time period, BP Products personnel witnessed hydrocarbon vapors released from the F-20 blowdown stack during startups and normal

operating processes. During this same time period, BP Products operations management failed to ensure that these incidents were adequately investigated.

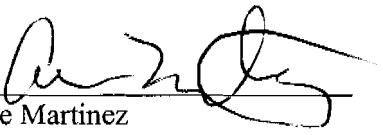
44. During this same time period, BP Products personnel were aware that fires would occur at the F-20 blowdown stack during lightning storms, caused by hydrocarbons that had ignited due to the F-20 blowdown stack being struck by lightning. BP Products operations management failed to ensure that these fires were adequately investigated.

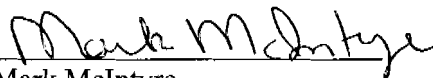
45. From in or about January 2002 until March 23, 2005, BP Products employees informed BP Products safety management of their concerns that trailers occupied by employees should not be placed in the vicinity of flares. As a result of this, BP Products safety management personnel informally implemented a prohibition against placing trailers near flares as a result of these warnings. However, BP Products safety management personnel did not apply the same prohibition against placing trailers near blowdown stacks.

46. In or about August 2004, BP Products operations management personnel were informed that a hydrocarbon release occurred at a blowdown stack in the Ultracracker unit, a refining process unit located near the ISOM unit. An investigation showed that during the incident, a pressure vessel was overfilled, a critical alarm failed to function properly, diesel fuel was released from that unit's blowdown stack, and trailers occupied by contractor employees were in the vicinity of the Ultracracker unit. BP Products operations management personnel failed to alert any contractors that a similar incident (overfilled pressure vessel, non-functioning critical alarm, hydrocarbon release out of a blowdown stack) occurring in the ISOM unit could result in a catastrophic explosion, because unleaded gasoline from the ISOM unit was much more volatile than diesel fuel.

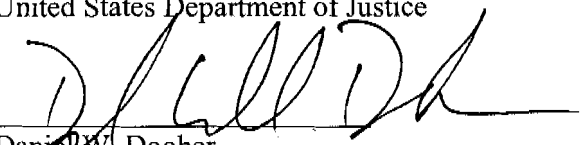
47. On or about March 23, 2005, BP Products did not have procedures requiring that it inform contractors in and around the ISOM unit that there was going to be a startup for the Raffinate Splitter, and of the potential for fire and explosion that could result from hydrocarbons releases during startups of the Raffinate Splitter. As a result, BP Products failed to inform the contractors in and around the ISOM unit of the startup of the Raffinate Splitter.

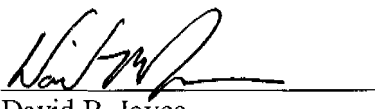
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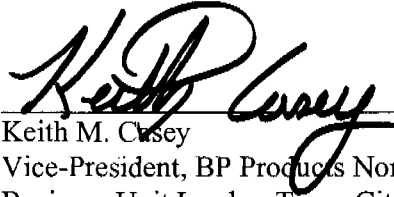
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After consulting with counsel and pursuant to the plea agreement entered into this day between the BP Products North America Inc., and the United States, BP Products North America Inc., does hereby stipulate that the above Statement of Facts is true and accurate, and that had the matter proceeded to trial, the United States would have proved the same beyond a reasonable doubt.

Date:

10/24/07



Keith M. Casey
Vice-President, BP Products North America Inc.
Business Unit Leader, Texas City Refinery
Corporate Representative for
Defendant BP Products North America Inc.

I am BP Products North America Inc.'s attorney. I have carefully reviewed the above Statement of Facts with the Corporate Representative. To my knowledge, the corporation's decision to stipulate to these facts is an informed and voluntary one.

Date:

10/24/07



Carol Dinkins, Esq.
Counsel for BP Products North America Inc.