FINAL REPORT

Intercontinental Terminals Company Tank Farm Fire

1943 Independence Parkway La Porte, TX 77571

Harris County Fire Marshal's Office

Case Number 1903-00046

Investigator Jim Hargraves, Jr. 95F33 – IAAI-FIT, ECT



Bureau of Alcohol, Tobacco, Firearms and Explosives

Case Number 782035-19-0029

Special Agent Eric Evers – IAAI-CFI



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Final Report

HCFMO Lead Investigator J. Hargraves 95F33



Harris County Fire Marshal's Office

OCA: 190300046

Printed: 11/20/2019 13:43

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 11/18/2019 14:00:00, Monday

Supervisor: SINGLETON, J. (F09130) Supervisor Review Date / Time: 11/18/2019 17:12:34, Monday

Contact: Reference: Follow-up

Jim Hargraves, Jr. - 95F7 Lieutenant Fire/Arson Investigations Harris County Fire Marshal's Office 2318 Atascocita Road Humble, TX 77396

Final Report - Intercontinental Terminals Company Tank Farm Fire

ABSTRACT:

An initial report was written and submitted by Investigator Dennis Lee (95F24), but due to the size and scope of the incident a report detailing what occurred after Sunday March 17, 2019 would need to be written by the Lead Investigator who was assigned to complete the investigation. That task fell to Investigator Jim Hargraves, Jr. (95F33) who with the assistance of Special Agent Eric Evers with the Bureau of Alcohol, Tobacco, Firearms, and Explosives conducted an investigation, determining the origin and cause of the fire. Investigator Hargrayes was also assisted by Lieutenant Gustavo Lopez and Investigator John Ledford in conducting interviews of the employees of ITC. Through those interviews it was determined that the pump for Tank 80-8 had been replaced in December of 2018. Documents were requested through subpoenas and thorough the examination of those documents it was determined that a large leak occurred 30 minutes prior to the fire, thus releasing a large amount of product. Subsequent to the release there was a mechanical failure of equipment. The hypothesis at this point of the investigation was that the failure of equipment and the product release caused the fire that occurred on March 17, 2019. The hypothesis was confirmed once investigators were allowed to enter the "hot zone" on April 9, 2019. The manifold area of tank 80-8 was photographed in place and great care was taken to not disturb any of the components of the manifold, but to photograph them in place. This task took four insertions to the hot zone with Investigator Hargraves and Special Agent Evers conducting two insertions. The interviews that were conducted are in the interview section of this document and the Supplements that were written are in the Supplements tab of this document.

This report will detail those events. It should be noted that the Harris County Fire Marshal's Office and Bureau of Alcohol, Tobacco, Firearms and Explosives worked very closely in completing the work products needed to make this final report possible.

ASSIGNMENT:

On Sunday, March 17, 2019 at approximately 10:33 hours, a fire occurred at petrochemical facility commonly known as Intercontinental Terminals Company. The address provided is 1943 Independence Parkway, which is in La Porte, unincorporated Harris County, Texas. A secondary address for the facility is 2621 Tidal Road, which

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is in Deer Park, unincorporated Harris County, Texas. The chemicals involved along with the difficulty in extinguishing the fire prevented entry into the fire scene for approximately one week. Another obstacle to the investigation of the fire was the fact that the scene had to be deemed safe and that the chemicals involved had to be sufficiently remediated so that an investigation could occur.

On Wednesday, March 20, 2019 at approximately 03:03 hours, the fire was extinguished. This was done with the assistance of personnel from ITC, CIMA, and other industrial fire companies that had been requested to assist with firefighting operations. It should be noted that due to the volatile nature of the chemicals involved, entry into the tank farm was delayed until the area was deemed safe by safety officials.

The Houston Ship Channel is a large, commercial waterway used for interstate and international transportation of goods. The waterway is a vital artery for these goods, especially the oil and gas industry. Any interruption in transportation of goods could cause significant financial impact.

Special Agent Eric Evers with the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) assisted the Harris County Fire Marshal's Office with the origin and cause investigation of the fire. Special Agent Evers authored the origin and cause section of this report with input from participating HCFMO Investigators.

SCENE DESCRIPTION:

The tank farm where the fire occurred is known throughout the company as the Second 80's. This is because the tanks located within the tank farm are 80,000 barrel tanks. They are approximately 120' tall and 40' in diameter. The tanks are of welded construction and have a wall thickness of approximately 1-1/2". The tank farm itself is approximately 328,000 square feet with piping and equipment throughout. The Second 80's contained 15 tanks in a 3 x 5 construction. Tank 80-8 the focus of this investigation was in the middle of the tank farm.

The Legal Description of the property is as follows: TRS 4F-2 & 4G-1 (IMPS ONLY) (LAND*0440990010032) (POLLUTION CONTROL) ABST 646 G ROSS. The complex is located within the Houston Ship Channel Industrial Complex and is located on Independence Parkway which runs in a north to south direction. Independence Parkway is a concrete two-way road surface in good condition.

The weather conditions for the day of the fire was reported at Ellington Field on March 17, 2019 at approximately 09:53 hours is as follows was that the air temperature was 55°F, the humidity was 38%, the winds were out of the East North East at 8 MPH, and the skies were mostly cloudy.

The weather conditions for the day that the fire was extinguished was reported at Ellington Field on March 20, 2019 at approximately 02:50 hours is as follows was that the air temperature was 52°F, the humidity was 82%, the winds were Calm at 0 MPH, and the skies were fair.

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The weather conditions for the day of the examination was reported at Ellington Field on April 9, 2019 at approximately 09:50 hours, is as follows was that the air temperature was 75 °F, the humidity was 61%, the winds were out of the West at 9 MPH, and the skies were fair.

SCENE SAFETY / AIR MONITORING:

Proper personnel protective equipment was used by investigators during the fire scene examination including Class B HAZMAT suits, multi-gas detectors, Rubber boots and rubber gloves with nitrile inner gloves.

Air Quality readings were provided by on site monitoring and the Harris County Fire Marshal's Office HAZMAT team. Constant monitoring of the scene was conducted and once it was determined that entry into the hot zone could be made, HAZMAT personnel were attached to the investigative team as well as third party air monitoring. Due to the chemicals present, it was determined that Class B HAZMAT suits along with canister type air filters with Full Face masks would be utilized while operating in the hot zone.

FIRE SUPPRESSION SYSTEMS/ALARMS:

Fire Sprinkler System - No automatic system present - The tank farm did have large diameter fire monitors present to provide firefighting capabilities. A low pressure malfunction with the fire pump prevented it from being utilized to assist in controlling the fire during the incipient stage.

Fire Alarm System - No automatic fire alarm system was present. Witnesses reported a radio system was used. Once the fire was observed, notifications for the fire team to respond were made and employees responded to their assigned stations. The tanks are monitored via SCADA in the Control Room, and have notifications programmed by the operators to alert if any abnormalities are detected.

ELECTRICAL AND NATURAL GAS DISTRIBUTION SYSTEMS:

Location of Power Meter - Power is supplied to the tank farm via a transformer bank located near the rail car and truck manifold. The power is supplied by a 7kV transformer and all wiring is run underground in conduit and all connections are made up in Class 1 vapor and dust explosion proof junction boxes. Circuit breakers are variable in nature and are rated at 1200 amps. The power supplied is three phase and is used to power large, high horsepower electrical motors used to drive the pumps located on the manifolds of the tanks.

Location of Gas Meter - The gas shut off for each tank is located at the tank manifold. There are intakes at the docks to allow product to be moved from the ship dock to the tanks. There are also intakes at the truck manifold and rail car yard manifold that allow product to be moved from tank trailers and rail cars to the tank farm as well.

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The levels for the tanks are monitored in a control room and the levels are recorded using SCADA data. Data provided to the Harris County Fire Marshal's Office from a subpoena served to ITC shows that product was being released from tank 80-8 for approximately 30 minutes. Approximately 9,000 gallons or 220 Barrels of Butane enriched Naphtha would have been released during this time period. A barrel according to the American Petroleum Institute is approximately 42 U.S. gallons for reference.

ORIGIN AND CAUSE OF THE FIRE:

Investigator Hargraves took over as Lead Investigator on Tuesday, March 26, 2019 and conducted multiple on scene interviews as well as on site and off site inspections. Investigators with the HCFMO and ATF were present for the fire scene examination that occurred on April 9, 2019. Investigators agree, that based on the interviews conducted, the data collected, scene examination and the site visits the fire is accidental in nature. The ATF case number is 782035-19-0029. See the comprehensive, co-authored ATF/HCFMO Origin and Cause Determination report for further details.

Injuries or Fatalities:

Two medics with Clear Lake Medical Corps were evaluated at Houston Methodist St. John`s hospital. Lt. Weido and Morgan were evaluated after being exposed possibly to Benzene. This occurred on Wednesday, March 20, 2019. A supplement was completed by Investigator S. Keesler.

Scene Documentation:

Images were captured at various times during the scene. Digital cameras, drones, and video recorders were utilized to capture the scene and provide a true representation of the scene as scene on the many dates mentioned above in the report. The images were captured directly to an internal memory card in the device and transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Evidence:

All items from the manifold were left in place and were not disturbed during the scene examination that occurred on April 9, 2019. All of the items were later transported from the scene to a business called Stress Engineering Services, Inc. and is located at 42403 Old Houston Highway in Waller, Waller County, Texas. The items were photographed by Investigator Hargraves and are a true representation of the scene as observed on September 10, 2019. The photos were saved to an internal memory card and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Canine Usage:

See their supplement for further information.

INTERVIEWS:

Investigator Signature	Supervisor Signature

Harris County Fire Marshal's Office OCA: 190300046

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Numerous interviews were conducted by Investigators with the Harris County Fire Marshal's Office. They were overseen by Lieutenant G. Lopez and were audio recorded and supplements were completed for each interview that occurred. Interviews were conducted starting on March 18, 2019 and continued until the scene was released by HCFMO. A site visit was conducted at Stress Engineering Services, Inc. on September 10, 2019 to photograph parts belonging to the manifold of Tank 80-8. All of the interviews conducted along with site visits and the scene examination were completed as supplements and uploaded to the reporting system of the Harris County Fire Marshal's Office.

NARRATIVE:

Investigators explored the hypothesis that the fire was the result of a mechanical failure near the pump, seal pot and coolant assembly within the manifold of Tank 80-8, thus causing a leak and subsequent ignition of the fire. The reason for the belief for a mechanical failure was that the data collected from the SCADA system showed a product release for approximately 30 minutes prior to the fire. Employees were interviewed and were asked about their knowledge of any issues in and around the tank farm on the day of the fire. Some of the employees remembered that shortly before seeing the smoke cloud there was a noise like "rail cars coupling". This would be a sound familiar to most of the employees as there is a railyard within their property. This sound would indicate a moving part that was in motion and then suddenly stopping that motion. The instant stopping of the moving part would or is likely to produce friction, heat and sparks from the metal to metal contact. This would be the primary ignition source and the sequence would be that the leaking vapor product from the tank was ignited by the failure of the equipment from suddenly coming to a stop. With the hypothesis of mechanical failure formed, the data had to be tested and unfortunately that would have to wait until the hot zone was deemed safe to enter. Investigators continued to explore the mechanical failure hypothesis through the interview of process control operators and determine the validity of the processes involved in monitoring, repairing and replacement of field products. That led investigators to speak to the process operators, control room manager and repair personnel. This included millwrights, electricians, as well as operators, and anyone that was responsible for the equipment.

The site was examined on April 9, 2019 and was conducted with representatives from ITC, Harris County Fire Marshal's Office Investigations, Harris County Fire Marshal's HAZMAT, and Bureau of Alcohol, Tobacco, Firearms, and Explosives along with Harris County Fire Marshal's Office Safety. Upon taking pictures, it was observed by myself and Special Agent Evers what appeared to be studs laying in the pump housing. It appeared to be three of the four studs that would be used to hold the seal face to the flange using nuts and washers. The nuts were not located as there was a blanket of firefighting foam on the ground surrounding the manifold. The nuts could also have been mixed in to the debris that was on the concrete pad of the manifold. In any case they were not located visually by this entry team. It was also observed that the seal pot was dislodged and was sitting at approximately a 45° angle. It was also observed that the metal coolant lines that were attached to the seal pot had wrapped around the seal pot. A final hypothesis of mechanical failure within the manifold of the tank was

Investigator Signature Supervisor Signature

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Contact: Reference: Follow-up

agreed upon by Investigators.

MISCELLANEOUS:

A site visit was performed at Stress Engineering Services, Inc., located at 42403 Old Houston Highway, Waller, Texas 77484. This is where the manifold items were moved from Tank 80-8 to be stored for future testing and examination. I, Investigator Hargraves took a series of photographs using a Canon EOS Rebel digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network. The photographs were of items of interest particularly the seal pot flange and the studs that were observed from the site examination of the tank farm on April 9, 2019. One stud remained in the flange and two were able to be photographed and one was heavily damaged and appeared melted. These photographs along with the examination of parts support the hypothesis of a mechanical failure within the manifold of Tank 80-8. An overview picture of the entire plant and the location of the tank farm and tank of origin has been uploaded as a reference to this supplement.

SUMMARY:

The fire that occurred at the Intercontinental Terminals Company on March 17, 2019 was the result of a failure within the manifold power frame of Tank 80-8. The failure within the power frame resulted in an uncontained release of Naphtha enriched with Butane. Foul play and malicious intent along with other unintentional causes were ruled out by investigators. Investigators were unable to rule out various other failure scenarios within the seal pot and coolant assembly, along with failures involving the electric motor of the power frame or the potential ignition of the free flowing, ungrounded ignitable liquid. Based upon the interviews of the employees, witnesses and the field examination the nature of this fire is classified as Accidental, per the description in NFPA 921.

--EOR--JOH

Investigator Signature

Supervisor Signature

Initial Report

Original Investigator Response by D. Lee 95F24



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OCA: 1903-00046

Additional Name List

N	ame Code/#	Name (Last, First, Middle)	Victim of Crime #	DOB	Age	Race	Sex
1) \	WI 1	DICKERSON, JEREMY			47	W	\overline{M}
	Address			Н:			
	Empl/Addr			B:			
			Mobi	ile #:			
2) 1	WI 2	FEHL, DANIEL TYLER			27	W	M
	Address			Н:			
	Empl/Addr			B:			
			Mobi	ile#:			
3) 1	WI 3	CAPETILLO, DAVID	Ī		32	W	M
	Address		!	H:			
	Empl/Addr			В:			
			Mobi	ile#:			
4) 1	WI 4	WILKE, CHRISTOPHER RYAN			30	W	М
• /	Address			Н:			
		Deer Park Fire Department, 2211 East X St. Deer Park Tx 77536		B: 281-478	3-728	21	
			Mobi	ile #:			
5) 1	WI 5	PARKER, MICHAEL WILLIAM	I		49	W	M
	Address			Н:	.,		
	Empl/Addr	Deer Park Fire Department, 2211 E X St. Deer Park Tx 77536		B: 281-478	3-728	21	
			Mobi	ile #:			
6)	<i>IO</i> 2	MORGAN, GREGORY	Ī		54	W	M
0 / -	Address		•	Н:			
	Empl/Addr	Clear Laker Emergency Medical, 16920 N Texas Ave Webster Tx		B: 281-488	3-307	8	
			Mobi	ile#:			
7) 1	IO 3	WEIDO, FRANK			51	W	M
. ,	Address			Н:			
	Empl/Addr	Clear Lake Emergency Medical C, 16920 N Texas Ave Webster Tx		B: 281-488	3-307	8	
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Incident Report Additional Name List

Harris County Fire Marshal's Office

OCA: 1903-00046

Additional Name List

Name Code/# Name (Last, First, Middle)	Victim of Crime # DOB Age Race Sex
10) WI 9 RICHARDSON, ALICE	57 W F
Address	H:
Empl/Addr	В:
	Mobile #:
11) WI 6 GUIDRY, TIMOTHY S	40 W M
Address	Н:
Empl/Addr	В:
	Mobile #:

INCIDENT/INVESTIGATION REPORT

Harris County Fire Marshal's Office

Case # 1903-00046

1 =	None	2 = Burned $3 = C$	ounterfeit / Forged	4 = Damaged / Vandalized $5 = Recovered$ $6 = S$	Seized 7 = Stolen 8 = Unknown
IBR	Status	Quantity	Type Measure	Suspected Type	Up to 3 types of activity
	-				
BU	FORL), J. (F09186)			
	Assis	IBR Status Assisting Of		IBR Status Quantity Type Measure Assisting Officers	IBR Status Quantity Type Measure Suspected Type Assisting Officers

Suspect Hate / Bias Motivated: NONE (NO BIAS)

INCIDENT/INVESTIGATION REPORT

Narr. (cont.) OCA: 1903-00046 Harris County Fire Marshal's Office

NARRATIVE

Investigators were requested for a fire investigation.

REPORTING OFFICER NARRATIVE

		OCA
Harris County Fire Marshal`s Office		1903-00046
Victim	Offense	Date / Time Reported
HOLLEY, CARL EDWARD	FIRE (UNDETERMINED)	Sun 03/17/2019 12:48

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ASSIGNMENT:

On Sunday March 17, 2019 at 1241 I, Investigator D. Lee unit 95F24 of the Harris County Fire Marshal's Office was dispatched by Cypress Creek Emergency Communications Center to an investigation request from Sargent T. Hilton of the Harris County Fire Marshal's Office regarding an industrial fire. I arrived on scene at 1410 to find a large storage tank on fire.

I determined the scene was un-safe to enter.

Daytime conditions existed on my arrival.

No weather conditions to report at this time. Weather conditions will be provided once an estimated fire time is established.

Scene Safety/Air Monitoring:

The scene was unsafe to enter on my arrival.

ORIGIN AND CAUSE OF FIRE:

Pending investigation.

INJURIES OR FATALITIES:

No injuries or fatalities were reported at this time.

SCENE DOCUMENTATION:

I documented the scene with a series of digital photographs using my county-assigned Canon Rebel T3 digital camera with a built-in flash. I copied the photographs from the camera's SD card to the FORAY photo management system at the Harris County Fire Marshal's Office.

EVIDENCE:

None.

K9 Usage:

None.

INTERVIEWS:

I was unable to interview anyone on my initial response.

INSURANCE INFORMATION:

The property is insured through Home First Insurance.

MISCELLANEOUS:

I identified the responsible party as Mr. Carl Holley DOB whose whose and who can be reached at the second driver's license number is

SUMMARY:

This is an active investigation. Currently unable to enter the scene because several tanks are still burning.

This investigation is on-going.

Reporting Officer: LEE, D. Printed By: JHARGRAVES, 11/20/2019 13:42 Page 6

REPORTING OFFICER NARRATIVE

OCA 1903-00046 Harris County Fire Marshal's Office Date / Time Reported Victim Offense HOLLEY, CARL EDWARD $FIRE\ (UNDETERMINED)$ Sun 03/17/2019 12:48

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End DPL

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11/20/2019 13:42

Incident Report Related Property List

Harris County Fire Marshal's Office

OCA: 1903-00046

1	Property Description CHEMICALS				Make			Model			Caliber
	Color	Serial No.		Value			Qty		Unit	Jurisdi	ction
					\$500, 00	00.00		1.000			Locally
	Status	Date	NIC#		State #			Local #		OAN	
	Burned	03/17/2019									
	Name (Last, First, Middle	e)				DOB			Age	Race	Sex
	Holley, Carl Edwa					61	W	M			

Notes

R_CSOIBR Printed By: JHARGRAVES, 11/20/2019 13:43 Page 8

Supplement Reports and follow up investigations



March 18, 2019
Interview with James Menger
Interview with Robert Surguy



Printed: 11/20/2019 13:43

OCA: 190300046

Harris County Fire Marshal's Office

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Case Status: ACTIVE Case Mng Status: ACTIVE **Occurred:** 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEE, D. (F09043) **Date / Time:** 03/18/2019 17:00:00, Monday

Supervisor Review Date / Time: 03/27/2019 06:04:47, Wednesday Supervisor: SCHOONOVER, S. (F09121)

Contact: Reference: Follow-up

D. Lee unit 95F24 Harris County Fire Marshal's Office Supplemental Report

On Monday March 18, 2019 at 0929 I, Dennis Lee unit 95F24 along with Investigator Lieutenant G. Lopez unit 95F7 and Investigator K. Pulley unit 95F32 of the Harris County Fire Marshal's Office returned to the fire scene to conduct follow-up information gathering. Units arrived on scene at 1034.

The scene was unsafe to enter due to numerous storage tanks still burning.

I identified and interviewed a witness, Mr. James Menger DOB SSN who stated he works for Clean Harbors, the neighboring facility. He stated he saw an approximate 20 foot wide column of smoke near the tank but could not see the source of the smoke. He stated CIMA was called and he awaited further instructions.

I identified the ITC rep as Mr. Robert Surguy DOB L . He stated everyone is accounted for and no injuries have been reported. He stated the fire source appears to be near a valve manifold. He stated at this time, there are five tanks involved, that each hold approximately 80,000 barrels of product.

He identified two of the products involved as naphtha and xylene.

I determined through interviews that the person in the immediate vicinity at the time of the fire is Mr. Tim Guidry. No other information available on Mr. Guidry.

Mr. Guidry is scheduled to return to work Tuesday, March 19 at 1600.

No other information available at this time.

The investigation continues.

End

DPL

March 19, 2019 Interview with Timothy Guidry



Printed: 11/20/2019 13:43

OCA: 190300046

Harris County Fire Marshal's Office

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Case Status: ACTIVE Case Mng Status: ACTIVE **Occurred:** 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: *LEE*, *D.* (F09043) **Date / Time:** 03/19/2019 12:26:00, Tuesday

Supervisor Review Date / Time: 04/30/2019 06:54:23, Tuesday Supervisor: SCHOONOVER, S. (F09121)

Contact: Reference: Follow-up

D. Lee unit 95F24 Harris County Fire Marshal's Office Supplemental Report

On Tuesday March 19, 2019 at 1226 I, Dennis Lee unit 95F24 along with Investigator Lieutenant G. Lopez unit 95F7 of the Harris County Fire Marshal's Office drove to 1030 Ethyl Corp Road in unincorporated Harris County Texas to conduct follow-up information gathering. Units arrived on scene at 1300.

DL I identified and interviewed a witness, Mr. Timothy Guidry DOB who stated he is employed by International Terminals Company as a Supervisor.

Mr. Guidry stated he was in the plant yard performing a hydro-test on tank 80-18 which has been identified as being approximately 600 feet south of tank #80-8.

He stated he saw flames in the area between tanks 80-8 and 80-11. He stated he saw flames extending to near the top of the tank. He stated he then went to the nearest fire suppression monitor and tried to put water on the fire. He stated that due to the angle of the monitor in relation to tank 18-8, he could not get a direct shot and instead, had to spray tank 18-11 and bounce water back to 18-8.

He stated the motor on tank 80-8 was probably running at the time and that the pump on 80-11 should not have been running.

He stated tank 80-8 contained Naphtha and that there was approximately 40 to 41 feet of product in the tank. He stated tank 80-11 contained Lubrizol, which he identified as a form of mineral oil.

End **DPL**

Investigator Signature

Supervisor Signature

March 19, 2019 Interview with Jeremy Dickerson



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 03/19/2019 19:20:00, Tuesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/26/2019 15:47:34, Tuesday

Contact: Reference: Follow-up

On March 19, 2019 at about 19:20 hours I, Lieutenant Gustavo Lopez, interviewed Jeremy Dickerson in my county vehicle in regards to this incident. Jeremy stated that he was working in the BP and base oil position and went to the office control room when he heard over the Tim on the radio stated that there was a fire. He went to the fire house to open all doors and help in putting water on the tanks. He went to the monitor that was in front of Tank 9 and saw the fire between Tank 9 and Tank 8. He was not able to put water on Tank 8 and banked it off of Tank 9 and Tank 11. He also put water on other tanks to cool them down. Jeremy stated that he heard a roar and saw fire coming from the manifold of Tank 9. He described how the naptha and butane are placed in the tanks, especially Tank 8. He also stated that the contents were to be transferred out and then filled with new product. The interview was recorded via audio and will be attached to this supplement. Recorded statement will be uploaded to Foray undert his cause number due to the file is to large to be attached to this supplement. End of supplement........

Investigator Signature Supervisor Signature

Printed: 11/20/2019 13:43

March 20, 2019
Interview with Rodney Reed
Interview with Chris Collier
Interview with David Capetillo



Harris County Fire Marshal`s Office

arshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 03/20/2019 16:00:00, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/25/2019 19:38:15, Monday

Contact: Reference: Follow-up

On March 20, 2019 I, Lieutenant Gustavo Lopez, was at Trans Star due to a meeting and Chief Rodney Reed with HCFMO, stated that Chris Collier, with SETRAC, informed him that Chief Petrilla, Fort Bend County EMS, informed him (Chris) that personnel in the rehab had stated something about a generator on fire that had spread to the tank. I obtained Chris Collier's contact number of

At 17:48 hours, I called Chris Collier and informed him of what Chief Reed had told me. She stated that firefighters had stated that a generator that workers were working with had caught on fire. Also that the firefighters were not allowed to put it out due to the procedures of the plant. Chris stated that he will send me an email with Chief Petrilla's information. End of supplement..............

D. Lee Unit 95F24 Harris County Fire Marshal`s Office Supplemental Report

On Wednesday March 20, 2019 at 1022 I, Dennis Lee unit 95F24 along with Investigator Lieutenant G. Lopez unit 95F7 of the Harris County Fire Marshal's Office drove to 1030 Ethyl Corp Road in unincorporated Harris County Texas to conduct follow-up information gathering. Units arrived on scene at 1059.

Investigators identified and interviewed a witness, Mr. David Joseph (Joe) Capetillo DOB who stated he is employed by International Terminals Company as an Area Pumper.



Printed: 11/20/2019 13:43

Mr. Capetillo stated he was making his rounds and that everything appeared to be operation routinely when he heard a call on the radio that there was a fire and that everyone needed to respond. Mr. Capetillo stated he got his gear and went to the North side of the plant on Tidal Road. He stated he saw fire at or near the manifold on tank 80-8. He stated the flame was shooting straight up from the manifold. He further stated there is a butane injection line on the piping and that he saw fire coming from the injection line piping. He stated the injection line and the entire manifold were engulfed in flame.

Mr. Capetillo used the monitor located at the north side of the tank yard to spray water in the direction of tank 80-8. He stated he could see paint starting to peel on tank 80-11 but stated tank 80-11 was not on fire at the time. The investigation continues.

End DPL

March 21, 2019
Interview with Chief Petrilla
Interview with Chief Arroyo
Interview with Shane Bridges
Interview with Keith Vasquez
Interview with Clyde Coxie
Interview with Rob Thompson
Interview with Jeremy Dickerson



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 03/21/2019 11:11:06, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/25/2019 19:37:30, Monday

Contact: Reference: Follow-up

On March 21, 2019 at 11:11 hours I, Lieutenant Gustavo Lopez, made contact with Assistant Chief Petrilla at

He spoke to the Deer Park firefighters with the first in engine who showed him pictures of the fire when they arrived. According to firefighters, it looked like there was a generator that had caught on fire that was next to the tank. From what Chief Petrilla stated, it looked like a small-large welder, but could not tell from the picture. I then asked him about not being allowed to put the fire out. He stated that from what the Deer Park firefighters stated, is that they were not allowed to go and he stated that he does not know the procedures and would not want to guess.

On this same day at 11:59 hours, I made contact with Deer Park Fire Department Assistant Chief Phillip Arroyo at He stated that around 10:30 hours, an engine was being requested from Deer Park to respond to the ITC fire. Chief Arroyo responded and was the first on scene with Deer Park. On his arrival, he gave a size up and established Command for his department. He met with ITC Command (Carl Holley) and asked if there was air monitoring in place and the Chief Holley stated no. Chief Arroyo then requested HCFMO Hazmat Team to respond. On their arrival, according to Chief Arroyo, Hazmat met up with David Wade. Chief Arroyo stated that Engine 31 responded with five or six firefighters and on their arrival, they staged for about 2 hours before being assigned. He will get me the list of names and phone numbers of them. At 13:00 hours I received the following text from Chief Arroyo:

Greg Bridges (give him a couple of hours as he's sleeping due to working nights)+1

Shane Bridges1
Clyde Coxie
James Varley
Christian Zubia
Matt Callas
Keith Vasquez
Tommy Archer

I called Shane Bridges at 13:50 hours and stated that he and Keith Vasquez made the scene on the First Relief team for Deer Park Fire Department, this was about 19:30 hours, but not sure of the exact time. He stated that they were staged far enough and he was able to take pictures of the fire but that two tanks were in the way. He stated that there were multiple tanks on fire. He stated that he did take pictures and will send them via email.

I called Keith Vasquez at 14:14 hours and he confirmed that he was on the First Relief Team with Shane Bridges. He stated that they were in staging until released between 02:00 and 03:00 hours Monday morning. He also stated E31 was assigned to RIT because the ITC was going to attempt to "make the block", meaning attempt to close the valve. Due the valve was not able to be closed due to the fire and the metal of the tanks making noises, E31 was sent back to staging. (Recording)

At 14:28 hours, I spoke with Clyde Coxie who was the officer in charge of E31. She stated that on their arrival,

Investigator Signature Supervisor Signature

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Harris County Fire Marshal's Office

OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 03/21/2019 11:11:06, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/25/2019 19:37:30, Monday

Contact: Reference: Follow-up

they checked in at Staging and were not initially given orders due to other apparatus were being sent in. They were eventually sent in with the Valero team for manpower. They were then assigned as the RIT team to back up the team that was going to block (turn off) the valve on Tanks 2 and 3. Due to the fire, waist keep in water, and the tanks making sounds, the decision was made to not block the tanks and units were ordered back off. They went back to staging and were released. He also stated that he heard that ITC personnel were making a transfer from one tack to another and the gasket failed. He stated that he did not hear this from an ITC personnel. (Recoding)

At 16:33 hours, I received a phone call from Rob Thompson related to follow up in another fire. I informed him that we have been busy with the ITC incident and I apologized for not returning his phone call in a timely manner. The reason for the phone call is because a neighbor might have suspect information on a case that HCFMO is working. Mr. Thompson stated that his brothers John Burdett and Jonathan Burdett work at ITC but did not work the day of the fire. Mr. Thompson stated that John informed him that they were they "were pumping that shit out" when the pump caught on fire. I asked him for a contact number for John and was hesitant because he does not want to get his brother in trouble. (Recording)

At 16:23 I made contact with Jeremy Dickerson and asked if we could meet for a follow up interview and he agreed to meet at ITC at the new Command site. At 17:12 hours I arrived at the ITC incident to interview Jeremy Dickerson and was informed that Incident Command was moved to 2621 Tidal Road. I arrived at Tidal road at approximately 17:35 hours and I called Jeremy to inform him that I was there. Jeremy got into my count vehicle and conducted a second interview. I asked him to give me a rundown of what he did when he arrived at work on Sunday (refer to recorded interview). I asked him about if they had removed the contents of Tank 8 to clean the tank and he stated no. I then informed him that he mentioned something like that and he stated no. I then asked him what is a pig and what is it used for. He explained the process and that it is documented on paper. I asked him if the documentation takes place before the pig is sent down the line or after. He stated that it is done after (refer to recorded interview). After the interview was completed, I reviewed his original recorded statement in reference to what I thought was the removal of contents and determined that when the contents were to be transferred out and then filled with new product is what he meant by removal of contents.

Recordings will be uploaded into Foray due to files are too large to upload in this supplement

March 20, 2019
Interview with Frank Weido
Interview with Gregory Morgan



Harris County Fire Marshal's Office

OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: KEESLER, S. (F09124) Date / Time: 03/21/2019 17:40:00, Thursday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/24/2019 12:14:31, Wednesday

Contact: Reference: Follow-up

On Wednesday March 20, 2019 I was contacted by Lt. Lopez at approximately 16:15 hours in reference two fire fighter being evaluated from the ITC incident at Houston Methodist ST. Johns Hospital. I responded to the hospital and arrived at approximately 16:57 hours.

Houston Methodist St Johns Staff advised they had no fire fighter being treated at the hospital. I asked if they had any first responders being treated from the chemical plant fire. They advised they had to Clear Lake Medical Corp Medics being evaluated and were currently in Emergency Room #9. I walked back to room #9 and met with Lt Frank Weido and Medic Gregory Morgan who were receiving oxygen via a nose canal. They both advised they came in POV after being released from the scene and returning the Medic Unit.

Lt Weido advised they were deployed with Set Trac task Force and responded in CLEMC Medic 530. I was assigned Task Leader assigning transport units. No patients were transported during my time as a Team leader. We had shift briefing this morning at 06:30. All units were staged in staging area south of the incident. At Approximately 08:15 we had a strong smell of Benzene at the EMS Command Post and Staging Area. At Approximately 08:20 hours we were advised over the radio that high levels of Benzene in the area south of the incident. At Approximately 08:30 Plant alarms activated advising to shelter in place. CIMA advised us to evacuate and stage at the Love's Gas Station. Cy-Fair, Atascocita, La Porte and Acadian Ambulance was assigned to me and we all evacuated to Love's. We were in the smell approximately twenty minutes from the time we first smelled it till we moved out. I will complete a full report for Set Trac and Chief Hunter with CLEMC once released from hospital. I wanted to come in to be checked due to We are just being evaluated and will be released later this evening. The hospital completed lab took X-Rays.

Medic Gregory Morgan advised he was assigned to CLEMC Medic 530 along with Lt Weido and was with during the event. When we were coming back I noticed my throat felt irritated and a headache. We got the unit back to the station and decided to come over here to get checked out. We came over together for precautionary. We got here to the hospital at approximately 15:27 hours. We have had all the lab work and X-rays done and just waiting for doctor to check by and be released. I am feeling better after receiving O2.

I left both patient with a business card and asked them to contact if anything changes or were going to be admitted. I also told them if Chief Hunter has any questions for me to please feel free to contact me.

S. Keesler 95F23 End of Supplement

March 22, 2019 Attempt to interview John Burdett



Printed: 11/20/2019 13:43

OCA: 190300046

Harris County Fire Marshal's Office

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 03/22/2019 13:15:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/25/2019 19:38:56, Monday

Contact: Reference: Follow-up

On March 22, 2019 at 12:43 hours I, Lieutenant Gustavo Lopez, arrived in the area of 2621 Tidal Road. At the main curve, there was a road block and I was informed that I was not able to get to the ITC location at 2621 Tidal Road due to the concrete dike, around the 15 tanks, breached. The purpose of this follow-up is to conduct an interview on John Burdett. At 13:11 hours I arrived at Ethyl Road determined that the interview should be conducted with Investigator Hargraves. I returned to service.

End of supplement.....

Investigator Signature

Supervisor Signature

March 22, 2019
Subpoena service. Contact with Robert Surguy,
Alice Richardson, Matt Kuryla, Russell Lewis,
and Linda Primrose.



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Case Status: *ACTIVE* Case Mng Status: ACTIVE **Occurred:** 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) **Date / Time:** 03/22/2019 19:15:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/26/2019 11:23:22, Tuesday

Contact: Reference: Follow-up

On March 22, 2019 about 19:15 hours Assistant Chief James Bolton and I, Lieutenant Gustavo Lopez, arrived at 1030 Ethyl Road, checked in at the front desk, and met with Robert E. Surguy. He was informed that we had a subpoena to issue and other paperwork. He took us inside and we met with PIO Alice Richardson who then took us into a room. We informed her that we had a subpoena to issue and a Consent to Search form to be reviewed. Attorney Matt Kuryla was the first attorney to make contact with us and I presented him the subpoena and consent to search. He took both documents and went to consult with other attorneys. After about 15 minutes, he, Attorneys Russell Lewis and Linda Primrose, and Alice Richardson were in the room. Attorney Lewis added wording to the Consent to Search and all attorneys agreed to allow Alice Richardson to be served and to also sign the Consent to Search. Both documents will be uploaded to the attachment section of this supplement.

End	of suppl	ement		 	
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March 23, 2019 Interview with Cindy Williams



Printed: 11/20/2019 13:43

OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Harris County Fire Marshal's Office

Investigator: FARRIS, D. (F09041) Date / Time: 03/23/2019 15:00:47, Saturday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/25/2019 19:33:54, Monday

Contact: Reference: Follow-up

On 3-23-19 at approximately 12:20 hours, Investigator Farris with the Harris County Fire Marshal's office Arson Division, received an e-mail from Captain Weston requesting that i contact a witness about some possible information of the cause of the fire. Investigator Farris contacted Cindy Williams at and was able to leave a voice mail. She later returned the call and at approximately 14:45 hours Investigator spoke to Mrs. Williams via telephone.

She stated that she was talking to a friend of hers and they said that they knew a person who worked as a Control Room Operator for the ITC company and that they were out working on the tank next to the tank that caught fire when it kicked on and they fire started at the motor.

She stated that the operator had his cell phone out in the field with him and was able to take pictures and video of the fire when and where it originated.

Mrs WIlliams stated that she did not want to identify her friend.

Investigator Farris advised her that someone from the Harris County Fire Marshal's office would contact her on Monday 3-25-19 and set up a time and place for a face to face interview. She stated that she would be ok.

Investigator Farris recorded the phone interview and it will be placed in the e-files tab of this supplement.

Investigator Signature

Supervisor Signature

March 26, 2019
Interview with Russell Lewis regarding interviews with Carl Holley, Timothy Guidry, David Capetillo and John Burdett.



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Harris County Fire Marshal's Office

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 03/26/2019 14:00:00, Tuesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/26/2019 15:47:19, Tuesday

Contact: Reference: Follow-up

On March 26, 2019 at 12:48 hours Investigator Jim Hargraves and I, Lieutenant Gustavo Lopez, arrived at 1030 Ethyl Road and made contact with Attorney Russell Lewis. He was informed that we needed to re-interview Carl Holley, Timothy Guidry, David Joseph Capetillo, and do an initial interview on John Burdett. He was also informed that we would want to interview them this week, preferably tomorrow (3/27/2019), and for him to call me at the end of business day today to determine if arrangement have been made. Investigators then left the location.

End of supplement.....

Investigator Signature

Supervisor Signature

March 26, 2019 Attempt to contact Cindy Williams



Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Harris County Fire Marshal's Office

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/26/2019 15:53:34, Tuesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 03/30/2019 14:06:59, Saturday

Contact: Reference: Follow-up

SUPPLEMENT:

On Tuesday, March 26, 2019, at approximately 13:49 hours, I, Investigator Hargraves, employed by the Harris County Fire Marshal's Office did attempt to contact Cindy Williams in reference to information that she had pertaining to the ITC Tank Farm fire. I dialed the number provided for Williams as and it went straight to voicemail, to which I left a message for her to contact me. I again attempted to contact Williams at 13:59 hours and received voicemail again and again left a message. A TLO search yielded a home phone land line number belonging to Williams and at 14:17 hours, I dialed the number provided as but it rang multiple times with no answering device to pick up to leave a message, so I disconnected the phone call. At 14:26 hours, I attempted to contact Williams for the third time and it again went straight to voicemail and I again left a message for her to contact me. I attempted to contact her again for the fourth time at 15:32 hours, and again was met by a voicemail message and I again left a message for her to contact me.

Five attempts were made to contact Williams today, Tuesday, March 26, 2019, but the attempts were unsuccessful. I will continue to contact Williams so that we can setup a meeting to discuss the information that she has pertaining to the investigation.

--EOR-JOH 95F33

Investigator Signature

Supervisor Signature

March 27, 2019
Interview with John Burditt
Interview with Tim Guidry
Interview with David Capetillo



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/27/2019 14:13:00, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 00:18:22, Friday

Contact: Reference: Follow-up

SUPPLEMENT:

On Wednesday, March 27, 2019 at approximately 14:13 hours, I, Investigator Hargraves and Lieutenant Lopez both employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC).

Upon arrival at approximately 16:18 hours, we met with representatives with the company. They are attorneys representing the company. They are identified as Kent Mayo with Baker Botts, LLP, and Tom Kajander in house counsel for ITC and Ivan Rodriguez with Phelps Dunbar, LLP. They advised that one of the people we were wanting to interview was held up in traffic due to a train which had delayed our arrival for over an hour. They did advise that John Burditt was available and a room to conduct the interview was secured. The room was a conference room on the second floor of the office located at the address mentioned above. I advised that we would like to interview the people one at a time and initially Tim Guidry was to be interviewed first, but due to his delay Burditt was selected.

INTERVIEW OF JOHN BURDITT

At 16:34 the interviews began with Lieutenant Lopez, Investigator Hargraves, Kent Mayo, and John Burditt present. The interview was audio recorded and all parties were identified by introducing themselves before any questions were asked. I asked John Burditt what his role at the company was and he stated that he is with the Operations Division with Intercontinental Terminals Company as the Crew 1 Shift Manager. He stated that he was responsible for all of the operational aspects within the tank farm involving land, marine and tank to tank operations. I asked how many people he was responsible for and he stated that it varied from 28 to 35 personnel. I asked if he knew what materials were within the tank farm and he stated that it varied from customer to customer. He stated that the tank farm received the product from the customer and based upon the orders from the customer determined how the product was to be distributed whether by land, rail or water. I asked if he was working the day of the incident, Sunday, March 17, 2019 and he stated that he was not. I asked if he working either the day before or day after and he said that he was not. He stated that he was relieved by Tim Guidry. Burditt mentioned that Guidry is not his normal relief, but that Guidry was stepping up for Kevin Young who was on vacation. I asked how long that he had worked in the industry and he stated for 32 years. I asked how long he had been employed with ITC and he stated 14 years. I then asked how he traveled within the complex and he stated that he has a company truck that allows him access to all portions of the tank farm. He stated that this is the safest from of travel as they have two public roads to traverse, those being Tidal Road and Independence Parkway.

The interview continued and I asked what his scope of practice entailed and he stated that it was to ensure that all safety procedures and protocols are followed and adhered to. I asked him to tell me about Friday Morning when he was relieved. He stated that he was relieved by Tim Guidry who was stepping up for Kevin Young who is his

Investigator Signature Supervisor Signature

Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/27/2019 14:13:00, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 00:18:22, Friday

Contact: Reference: Follow-up

normal relief, due to Young being on vacation. I asked what chemicals he dealt with on a regular basis and he stated that they are "Clean Chemicals" like Naphtha and Benzene. He stated that they sometimes deal with some oils and gasolines, but it is dependent on the customer. He said that his main focus is to be on the lookout for unsafe practices and anything that appears out of the ordinary and especially any different smells. I asked what the procedures for reporting a fire are and he said that if a fire is found, the supervisor on duty is notified and then the supervisor contacts security to activate the fire alarm and to get the emergency response team to respond to the fire house to obtain firefighting equipment. He stated that the fire truck is a fully operational fire truck and that the personnel have firefighting ensembles to fight industrial fires. He further stated that the members in the fire brigade are trained in industrial firefighting techniques and procedures. I asked if he knew any of the procedures that occur within the tank farm pertaining to mixing and blending and he said that he knew that it occurred, but that he did not know about the specifics of those operations. He stated that the operators were responsible for that information. He mentioned that "shots" are made within the tank farm and that those "shots" are performed by the operator and that the specifics of those "shots" are specified by the customer through an order. All of the processes are dictated by the customer and verified by the company according to Burditt. I asked what type of tanks where involved with the fire and he described them as "IFR" which stands for Internal Floating Roof. I asked him about the purge process and he stated that was done by a different division. I asked about the "PIG" process and he said that process takes place when a tank is taken out of service. He stated that when the tank is cleaned out it is then turned over to Special Services Division. He said that Special Services documents the "PIG" process and it is done by paper and computer. He said that process is known as a clean out and that it is dictated by the customer and ITC follows what the customer has asked for. I asked if there were any clean out orders for the tank, 80-8 issued for the weekend and he said there were not. He did say that clean out orders are received during the week Monday through Friday, during normal business hours. He said that Process Safety must be notified and that they verify that all of the procedures are followed safely. I asked about when a chemical is brought in how they know what they are dealing with and he stated that they have a materials list and it is issued for each customer order. He mentioned dealing with gasoline and I asked about that procedure. He said that sometimes they deal with gasoline, but it is very rare, and that any blending occurs on the vessel and not within the tanks. He stated that the blends are loaded in a specific gravity order and that by gravity within the vessel it performs the blending operation. Information was obtained that Burditt had spoken with a family member and had mentioned an issue with the "PIG" and that was the reason for the fire. When Burditt was told that his brother had told us the information, he became upset and denied saying that. Lt. Lopez said that his brother Rob Thompson had told him about the "PIG" failure and that something happen in the line. Burditt denied saying this. After that, the interview was concluded and Burditt was upset that his brother would say something like that, but that he understood that we had to follow every lead. He then left the room.

INTERVIEW OF TIM GUIDRY

Tim Guidry was the next interview that was conducted. The interviews began with Lieutenant Lopez, Investigator Hargraves, Kent Mayo, and Tim Guidry present. I asked what size Inlet valves were on the tank and he stated

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Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/27/2019 14:13:00, Wednesday

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that they were approximately 12" in diameter, about the size of a large pizza. I asked if he was working the weekend of the incident and he stated that he was. I asked what his focus was and he stated that it was safety. He said that he likes to leave it like he found it, or better. I asked him how many orders he was dealing with on the day of the incident and he said that he did not know. I asked if there was a difference between the terms Manager and Supervisor and he said that there were. He said that he is a supervisor and that his manager is Kevin Young. Guidry said that Young was on vacation and that he was the acting Shift Manager while Young was out. I Guidry who he relieved the day of the incident and he said it was Russell Taylor. I asked if Taylor had passed on any issues and he said that he had not. He said that the main function of the plant was to receive product in and ship product out. He said that is dictated by the customer orders. He said that any order that the customer sends in has to be approved by the company to ensure that it meets safety guidelines. I asked if the company has safety culture, and he said that it is everyone's responsible. He said that if any employee finds an unsafe condition that they have the authority to stop the process immediately. I asked if employees receive training on safety and he said that they all receive annual and bi-annual training. I asked what a normal day was for him and he said that all of the supervisors arrive about an hour early and that most days the crew consists of between 25 to 27 personnel. He said that a safety meeting is then conducted to ensure that everyone is committed to safety and knows the safety procedures for the day. I asked where is that conducted and he said that it takes place at the change house near the 100 tank farm. I asked about the day of the incident and he said that it was the last day of the shift and he said that there was nothing abnormal that day. He remembered going to the traffic office to get the orders for the day. He said he discussed with traffic about which tanks were going offline and I then asked if any repairs were occurring that day and he said no. I then asked about 80-8 tank and he said that were on a "Campaign" filling that tank. He said that it was scheduled to have Butane offloaded from the trucks and then pumped into the tank. He said that after each truck, the recirculating tank must run for four hours to ensure proper blending. He said that they receive inject orders the day before the procedure and he had orders for injection to be done on Friday and Saturday. I again asked about any repairs to tank 80-8 and he said that ere were none. I asked about the injection process and he said that Butane is injected into the 80-8 tank to sweeten the mix. I asked what was in that tank and he said Naphtha. I asked how many barrels the tank held and he stated 80,000 Barrels. It should be noted that a Barrel is 42 Gallons and a Drum is 55 Gallons and they are two different units of measure within the chemical industry. He said that anytime the injection process is occurring, the pump must be running and that after the truck is done offloading Butane, the pump must run for at least four hours to ensure proper mixing and blending within the tank. I asked if there was an indicator that showed the pump was operational and he stated that in the Control Room there is an indicator that shows the pump is operational. He further stated that there is a sheet to indicate when the pump was started and when the pump was stopped. Each time the time is documented for this procedure. I asked about how relief is done, and he said that each person is responsible for relieving their counterpart and to ensure they know where they are at the process they are responsible for.

I asked Guidry what he was doing prior to the fire and he stated that he was at Barge Dock 4 preparing for an offloading procedure. He said that prior to offloading a sample must be done using a Teledyne. He said he hooked up the Teledyne to Nitrogen to purge it in preparation for the rail cars that were coming in. He said the Teledyne

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was used to measure Oxygen levels and to make sure the levels were within the customer's specification. He said after that he went to go check on Tank 80-16 as it had recently been hydro tested and he wanted to ensure that the tank was still draining and he found that it was. He said that as he was finishing at Tank 80-16, he heard a "Noise", looked up and saw fire. He said that it was elevated on the tank about 7 to 8 feet. I asked what the "Noise" sounded like, and he said it sounded like when railcars couple together. He said he then reported the fire via handheld radio and said he told the Emergency Response Team to respond the to the 1st and 2nd 80's tank farm. He said he then went to the Security Office to notify them and activate the fire alarm. He said he then made a phone call the Vice-President and Vice President of Safety to report that there was a fire at the tank farm. He said he then went to the truck manifold which is a 2" manifold and tried to use the monitor there located between Tank 80-7 and 80-10, but that the water pressure was not sufficient.

I asked again about the Butane, and he said that it is a liquid and that it has to have the pump running. I asked who was in charge of that and he said the Pumper operator responsible for the tank. He said that the truck operator can operate the valves at the truck, but he has to get word from the Pumper to make sure the valves are opened properly. Once he sees the indicators that the pump is running they hit the inject valves and then the truck operator opens the valves on the truck. After the required amount of Butane is received, the pump is left on for at least four hours after offloading. I asked what happened if the pump is left on and he said that as long as there is product in the tank the pump is constantly recirculating product.

I asked if he saw anyone leaving the area when the tank was on fire and he said that he did not. He said that he knew the Pumper operator Joe had left the area, but he did not see him. He said that he heard Joe say that the monitor needed more pressure, so he went to that ware and checked to see if that was the case and it was. Guidry stated that he found that the monitor had low pressure. He said he didn't know where Joe was, but that he dropped his shit and got there fast as soon as the fire was reported. I asked when he reported the fire and he stated that at approximately 10:00 hours. I asked what the fire procedures where and he said that first they try to handle in house, but if it is large they call CIMA, which is the Channel Industries Mutual Aid. He said that Operations does not request the aid. I asked if he knew how much time elapsed for when the help from CIMA was requested and he said that he did not. He said he remembers that the fire was at aground level and that he saw a wall of fire engulfing 80-8 and 80-11. I asked if he remembered the noise if there was any pinging or high pitched whistles and he said that he did not remember hearing that type of noises. I asked if he knew the PSI rating of the tank and he said that he did not. He said that he knows that the roof suppresses vapor. I asked if he knew anything about fugitive vapors and he said that he did not but he believes that it is released to the atmosphere. I thanked him for the information and the interview was concluded.

INTERVIEW OF DAVID JOSEPH CAPETILLO

After speaking with Tim Guidry, I had opportunity to speak with the operator responsible for the 80's tanks the day of the incident. That person is identified as David Joseph "Joe" Capetillo. His title at ITC is Pumper, Level II

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and has been with ITC for approximately four (4) years. He stated that he was on duty the day of the incident. He arrived at work at approximately 05:30 hours and began his regular routine of changing out in the change house and getting ready for the day. He stated that before work began that day all of the employees attended a tailgate safety briefing. Capetillo stated that those briefings occur before every shift. He stated that they were down on manpower for the day and that there are usually six (6) pumpers on shift. On the day of the incident they only had five (5) on duty and Jeremy was carrying an extra load for the day.

He said that after the briefing he made his relief with Tyler and they discussed the "moves" that were going on and what was running in the pipelines. He said that he remembered a barge was loading on the 5 & 6 dock from tank 80-21. He stated that he was in the CCR (Control Room) and he said that all of the pumpers are in the CCR so they can monitor their "stops" and that they can also program their "stops" so that they can have enough time to leave the CCR and close the appropriate valves at the tank they are going to "stop".

I asked what he was doing at the time of the incident and he said that he was at Tank 100-43, because it was not communicating with the CCR. He said he was taking a "Saub" rate at approximately 10:00 hours. I asked how he arrived at Tank 100-43 and he stated that he drove there. He said prior to his arrival at Tank 100-43 he stopped by Tank 80-18. He said that the tank had recently undergone hydrostatic testing and that it was full of water and was draining out. He stopped by the tank to ensure that it was still draining and to check the rates on that tank. He said that at approximately 10:03 hours, he herd Tim (Tim Guidry) callout on the radio about a fire. He said he remembered Tim state that there was a real bad fire in the 80's. He said that he got in his truck and "floored it" to Tidal Road. He said that he remembered getting his bunker gear and going down Tidal Road toward Independence Parkway to the third 80's. He said he put his bunker gear on and told Security to lock the gate open as the fire truck was right behind him. He said he then drove to Tank 80-12 and got out to find a water monitor to begin cooling other tanks. He stated that he found a monitor between Tank 80-10 and 80-7 and turned the monitor toward the manifold and turned on the water. He found that the water pressure was "low" and he screamed on the radio that he needed more pressure. He said that while he was there waiting for the increase in pressure, the insulation on Tank 80-11 began to catch fire and that Tank 80-11 was beginning to catch on fire. He said that he stayed as close to the Dike Wall as he could, but that was all he could remember.

I asked who was first in at the tank farm and he said that he was. He said that he did not see any other personnel in the tank farm. He said that at some point he met up with Tim Guidry around the area of Tank 80-12 and 80-19 and he said that he remembered meeting with other personnel at that area as well. I asked if he remembered hearing any "whistling" and he said he remembered hearing a "whistling" sound like noise pressure. I asked if he heard any "pinging" and he said that he did not.

I asked what his duty was that day and he said that Jeremey had asked him to take over the 80's tanks for him and he agreed. I asked when that trade occurred and he said before the safety meeting. I asked if his relief, Tyler Fehl had said anything about the 80's, like any issues or problems and he said there was nothing wrong with the 80's. I asked if any failures had been reported and he said no. I asked if there were any blending processes occurring and he said no. I asked if there were any injection or pump circulations occurring and he said no. I asked if there

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were any "PIG" operations scheduled and he said no. I asked what he normally works on and he said that he works on LPG, BP and 80's as a pumper. I asked if he had a cellular telephone with him and he said that he had the company issued intrinsically safe phone. I asked what it looked like and he said that it looks like a "brick". I asked who is allowed to have cellular telephones and he said supervisors and managers have those special phones. I asked if he knew of anyone having a phone in the tank farm and he said he did not know of anyone having a cell phone in the tank farm. I asked if he had a cell phone on him at the time of the incident and he denied, and he even stated that when the event occurred he did not have the intrinsically safe cell phone on him. He said that once the incident began his goal was to put the fire out. He was scarred for himself, but wanted to be safe and return to his family.

--EOR-

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March 27, 2019
Received video of tank farm fire from
Russell Lewis



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Investigator: HARGRAVES, J. (F09168) Date / Time: 03/27/2019 17:45:00, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:23:27, Friday

Contact: Reference: Follow-up

SUPPLEMENT

On Wednesday, March 27, 2019 at approximately 17:45 hours, I, Investigator Hargraves and Lieutenant Lopez, both employed by the Harris County Fire Marshal's Office did receive a black, 16 GB USB Sandisk thumb drive from Russell Lewis an attorney with Baker Botts, LLC representing ITC. The thumb drive contained a video showing the tank farm fire. The video was viwed on the attorney's computer at ITC.

The thumb drive was taken directly to the Evidence Room of the Harris County Fire Marshal's Office located at 2322 Atascocita Road which is in Humble, unicorporated Harris County, Texas. It was placed in Locker number 1 for safe keeping with Evidence Tag # 1.34.2458570.75692.

--EOR--JOH 95F33

Investigator Signature

Supervisor Signature

March 28, 2019 Interview with Derek Walker Interview with Brian Burrell Interview with David Thomas Interview with Reynaldo Arrendondo Interview with Greg Mathias Interview with Gerald Holmes Interview with Steve LaPorte Interview with Kevin Young Interview with Juan Diaz Interview with Thomas Carswell Interview with Trino Galindo Interview with Tyler Fehl Interview with Jeremy Dickerson Interview with Jesus Bravo Interview with Carl Holley



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Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/28/2019 15:14:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:27:59, Friday

Contact: Reference: Follow-up

SUPPLEMENT:

On Thursday, March 28, 2019 at approximately 15:14, I, Investigator Hargraves and Lieutenant Lopez both employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC). All interviews were audio recorded and uploaded Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

INTERVIEW OF DEREK WALKER

I interviewed Derek Walker and he is the Special Services Supervisor. He was not on duty at the time of the fire and was notified at home about the incident. He stated that there were no "PIG" operations scheduled for the weekend nor on the day of the incident. He was asked when the last "PIG" operation was performed on tank 80-8 and he said that he did not know. I asked how orders are generated and he said that all orders are done by the traffic office and are done by a person identified as Kayla Bridges.

I asked him to describe the "PIG" process and he stated that the pig is inserted into the line and then the line is pressured to 100 to 110 PSI to propel the "PIG" within the line. He said that the "PIG" is approximately 2`` in diameter larger than the pipeline it is being inserted into. He said that the company uses a range of "PIG`s" from 6" all the way to 22". I asked how a "PIG" is cleared if it becomes clogged, and he stated that they send another "PIG" into the line, and if that one becomes obstructed, they do not keep filling the line with "PIG`s". He stated that the "PIG" is not used to separate chemicals, and is used to clean out the line to prepare for a new chemical or per the customer requests. He was asked who does the repairs to equipment and he stated that is done by Maintenance. He said that his group does the "LOTO" which stands for Lock out, Tag out. He also said that the maximum operating pressure for the lines is 100 PSI or 100 pounds per square inch. I asked who was responsible for maintenance and he said Carlton "Spud" Homfield. I asked what his group, Special Services was responsible for and he said that they handled tank cleaning, degassing, new construction and tie-ins. Walker stated that it is very seldom for work to be done without being scheduled and nothing was scheduled for that weekend.

Work orders are received per customer requests from Monday 8:00 AM - 4:30 PM, and then moved to the appropriate group for work to be done. I asked what the main components of the tank are and he said that it is the sump, lateral and dock line. He then stated if Butane is injected into the process, then land traffic uses the same manifold so that there are no reactions. I asked how the piping is routed and he stated that each pipeline is labeled and dedicated to the specific tank.

I asked about the alarm system for the tank and he described that the pump will send an alarm if a 10 pound differential is detected. He further stated that the pump will shut off automatically and an alarm will be sent to the control room. It will also state which tank is in alarm and an audible alarm will also sound in the control room.

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INTERVIEW OF BRIAN BURRELL

Spoke with Instrumentation Technician Brian Burrell. He was on duty and at the Number one (1) dock. He heard the alarm and saw smoke, but was not in the area of tank farm at the time of the incident. Refer to audio recording for further details.

**INTERVIEW OF DAVID THOMAS - P#

I then interviewed David Thomas who is a Switch Operator, Level IV and has been employed with the company for approximately 7 years. He was on duty and in the railyard in the northwest corner of the plant and was not near the tank farm at the time of the incident. Refer to audio recording for further details.

**INTERVIEW OF REYNALDO ARRENDONDO - P#

I then interviewed Reynaldo Arrendondo who is a Dockman, Level III and has been employed with the company for approximately 5 years. He was on duty and was located at the Number two, three (2, 3) dock and was not near the tank farm at the time of the incident. Refer to audio recording for further details.

**INTERVIEW OF GREG MATHIAS - P#

I then interviewed Greg Mathias who is a Dockman and has been employed with the company for approximately 22 years. He was on duty and was located at the Number seven, eight (7, 8) and was not near the tank farm at the time of the incident. Refer to audio recording for further details.

**INTERVIEW OF GERALD HOLMES - P#

I then interviewed Gerald Holmes who is an operator and was on the Number one (1) dock. He was not near the tank farm at the time of the incident. Refer to the audio recording for further details.

**INTERVIEW OF STEVE LaPORTE - P#

Steve La Porte was interviewed and is employed as a Marine Operator. He has been with the company for 20 years. He was on duty and at the docks at the time of the incident. Refer to the audio recordings for further details.

**INTERVIEW OF KEVIN YOUNG - P#

Kevin Young was on vacation at the time of the incident. Tim Guidry was covering for him while he was on

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vacation. He is the Shift Manager and has been employed with the company for 15 years. He stated that he did not arrive on scene until 9:45 or 10:30 PM. He said that he grabbed his bunker gear and headed to the 80's manifold. He said he stopped in to meet with the Carl Holley in the CIMA trailer and get a situation report. He was assigned to be the operations chief of the south division. That assignment came from Corey Guiccione who was the safety specialist at the time of the incident.

I asked if there was any issues with fire water supply and he said there had been issues previously, but that issue had been repaired prior to the fire. I asked if he knew of any issues with any mechanicals at tank 80-8 and he said that he did not know of any issues. I asked if he knew of any issues with valves or instrumentation and he said that he did not.

Tim Guidry was covering for Young while he was on vacation and the question was asked how he felt about Guidry and his capabilities. Young stated that he found Guidry to be knowledgeable, capable, honest, and dependable, knows what is "going on" and maintains a good flow of communication. I asked about how product enters the tank and he stated that for the 80's tank farm it enters through the manifold for the specific tank and even though the tank capacity is 80,000 Barrels, the safe fill level may be 75,000 Barrels. A barrel is approximately 42 gallons. Young did state that all of the employees are committed to safety and that they are all aware of the safety procedures that they are to follow.

**INTERVIEW OF JUAN DIAZ - P#

After Kevin Young was interviewed, Juan Diaz was the next employee interviewed. He stated that he is a Maintenance Technician in the Valves and Hydraulics Section of Maintenance for the facility at Deer Park. He has been employed by the company for approximately 13 years, but has worked at the plant since 1988. Diaz was on duty at the time of the incident and was also working overtime. He was in the Administration Building building a wall, when he heard the emergency alarms going off. He looked out the window and saw smoke. He said he exited the building and got in his truck and went to Vopak on Tidal Road. He stated that he was by himself, but he stayed of the radio due to the amount of traffic. He said after a while, his supervisor called to bring drinking water to the firefighters and he complied. He further stated that he did errands as requested by his supervisor. Refer to the audio recordings for further details.

**INTERVIEW OF THOMAS "TOMMY" CARSWELL - P#

The next employee interviewed was Tommy Carswell. He is a switchman and has been employed by the company for approximately 6-1/2 years. He stated that he was on duty at the time of the fire. He was located in the railyard and could see the fire in the 80's tank. He heard a supervisor on the radio state there was a fire and then heard the emergency alarms. He said once he heard the alarms, he left the railyard and went to Shelter "A" which is the Scale Building. He stated that he stayed at the Scale Building until 18:00 hours (6:00 PM). Refer to the audio

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recordings for further details.

**INTERVIEW OF TRINO GALINDO - P#

Trino Galindo was interviewed next. He is the Jetty Master - Dock Supervisor and has been employed by the company for 15 years. He stated that he was on duty at the time of the incident. He stated that he was in the Marine Traffic Coordinator Building when he heard on the radio that there was a fire in the Second 80's. He stated that he remained at the Marine Traffic Coordinator Building through the night so as to not abandon the dock. He stated that he was relieved at 21:00 hours and went home. He stated that he has not heard anyone discussing possible cause for the fire nor has he heard about a cell phone video showing the fire. Refer to the audio recordings for further details.

**INTERVIEW OF TYLER FEHL - P#

Tyler Fehl was interviewed and he is a Pumper Level IV and was working the night shift on Saturday March 16, 2019 the night before the incident. He stated that he was not on duty at the time of the incident but did come back in to assist with the response. He stated that he was relieved by Joe Capetillo. He said that during their pass off he reported no issues with the 80's tank farm and that there were no special operations occurring with tank 80-8. I asked if anyone was talking about what happened and that no one knew. He did state that tank 80-8 was close to being "full". I asked if it had an alert system and he stated that it did. He said that he told Joe to watch "top off" on two tanks, 80-8 and 80-24. He stated that he had finished off loading the second truck of butane at approximately 22:30 hours on Saturday, March 16, 2019. He then said that would mean that the circulation pump would need to run for a minimum of eight (8) hours. I asked if any butane trucks came in after the last off load or in the early morning hours and he said that he did not know. He said that the tank has both manual shut off and a remote shut off that is located at the Control Room. I asked if the pump was still running when Joe relieved him and he said that it was. I asked if the Control Room is always staffed and he said that someone is always in the Control Room and that is a dedicated person. He said that the dedicated person on the morning of the incident was Steve Mathias. I asked if there is a display or an indicator within the Control Room that shows the pump in operation and he said that there is. Refer to the audio recordings for further details.

**INTERVIEW OF JEREMY DICKERSON - P#

The next person interviewed was Jeremy Dickerson. He is a Pumper and has been employed with the company for approximately 18 years. He stated that he was in the Control Room with Dr. D, who is Steve Mathias. He said that Mathias was responsible for rates within the operation. I asked what his duty station was that day and he said he was working on BP and Base Oils. He said that he was originally assigned to the 80's tank farm, but that since Joe Capetillo was working on overtime he asked what Joe wanted to work and Joe took the 80's tank farm. I asked if Dickerson knew of any issues within the 80's tank farm and he said that there were no mechanical issues or any

Harris County Fire Marshal`s Office

OCA: 190300046

Printed: 11/20/2019 13:43

THE INFORMATION BELOW IS CONFIDENTIAL - FOR USE BY AUTHORIZED PERSONNEL ONLY

Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/28/2019 15:14:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:27:59, Friday

Contact: Reference: Follow-up

other issues that he knew of.

I asked if regular cell phones were allowed within the tank farm and he said no. He said the only phones allowed are the intrinsically safe cell phones issued by the company. He said that they can have their regular cell phones in their bags in the buildings, but that they have to be away from any equipment dealing with the tanks or process operations.

I asked if he heard or saw any indications on the boards for any alarms or indications of an issue in the 80's tank farm and he said everything was within normal operating limits. I asked prior to the incident were there any audible or visual alarms heard or seen and he said no. I asked how he knew there was a fire and he said that he heard it on the radio. He said that all of the screens showed normal. He said he then looked out the window and could see fire and smoke. He said he went to the fire house which is in close proximity to the Control Room and opened the doors to the fire house, because he knew ERT would be responding. ERT stands for Emergency Response Team. After opening the doors to the fire house he got in a truck and went to the tank farm to assist with the fire monitors. I asked if he saw anyone coming out of the tank farm and he said that he did not. I asked if he had heard about what might have caused the fire or seen a video taken showing a leak prior to the fire or that a process might have gone wrong and he said that he had not heard or seen anything like that.

I asked if he knew of any repairs made to the pump on tank 80-8 and he said that over a year ago a pump was replaced due to a noise. He said that he did not know who reported it, but overheard a conversation about the pump being repaired. He stated that all of the pumper personnel know when a pump is taken out of service and when it is returned to service. Refer to the audio recordings for further details.

**INTERVIEW OF JESUS BRAVO - P#

I then interviewed Jesus Bravo who is an ERT member and is a member of the Safety Division. He has been employed with the company for approximately 4 years. He stated that he was not on duty at the time of the incident, but when notified responded to the incident. He stated that he was recalled by the Safety Lead for the company. He did make mention that he had been in the plant from approximately 06:00 hours to 10:00 hours, due to a contractor using equipment in the BD`S area. He stated that he was there issuing permits for work to the contractors in the BD area.

I asked if he knew of any safety concerns within the 80's tank farm and he said that he did not. I asked if there were any permits issued for work in the 80's tank farm for the weekend, and he said there were not. He said there was no reason for Safety to be in the 80's tank farm. I asked if there were any welders, generators or equipment in the 80's tank farm and he said no. He said that for any work to be performed a work permit must be issued by a Safety member. He also said that any tools that are to be used in and around the tank must be approved by a Safety member.

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Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/28/2019 15:14:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:27:59, Friday

Contact: Reference: Follow-up

**INTERVIEW OF CARL E. HOLLEY - P#

The last interview of the day was with Carl Holley. Holley is the Vice President of Safety and Health Operations and has been employed by the company for 38 years. He stated that he was at home at the time of the incident and he was notified by phone about a fire in the tank farm. He said it was a male voice, but that he was unsure of the identity of the male voice. He said that when he arrived, he saw black, billowing smoke, but no flames were visible. He said that he believed that it was a failure of a gasket or flange because he saw flames emitting from a flange area based on what he was seeing at the time of his arrival.

He made contact with the on duty supervisor, Tim Guidry who told him that he heard a "pop" and then saw fire. I asked if he knew of any video of the fire prior to being contacted or had he been showed a video, and he said that no one has approached or shown him any such video. I then asked who was allowed to have cell phones and he said that regular cell phones are not allowed. He said that the company provides intrinsically safe cell phones to managers and other key personnel. He said that he parked approximately 150` south on the road and made entry into the tank farm. He said that he could see several tanks on fire. I asked which ones and he said 80-8, 8-0-9 and 80-12. I asked if he was aware of any issues with the fire water supply and he said that if there were any issues that he would be notified, but he was not aware of any issues. He said that no major issues had been reported prior to the fire.

I asked what the safety culture is like for the company, and he said that it is the top priority and that the core values of the company begins with safety. I asked him to describe the fire that he saw and he described it as a liquid fire at ground level and then a pressure driven fire at approximately 3` to 6` off the ground.

--EOR-JOH 95F33

Investigator Signature

Supervisor Signature

March 26, 2019 Interview with Cindy Williams



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/28/2019 20:47:12, Thursday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 03/28/2019 20:49:53, Thursday

Contact: Reference: Follow-up

SUPPLEMENT:

On Tuesday, March 26, 2019 at approximately 18:09 hours, I, Investigator Hargraves employed by the Harris County Fire Marshal's Office did receive a voicemail from Cindy Williams. I contacted Williams and introduced myself and why I was calling. She stated that she knew of the existence of a video that showed the fire prior to its growing to what was seen on the news. She said that the person that has the video was a person that was working in the control room at the facility. She said the person was in the tank farm at the time of the fire and that he had a cell phone and that person is scared because they are not to have cell phone in the tank farm. She said that she obtained the information from her son. I asked her to provide me with a written statement and she asked if she could attempt to get more information and I told her absolutely. She was hesitant, and I told her that she was doing the right thing and that she was brave. I appealed to her and she agreed to contact me on Friday when she wakes up. I did tell her that if I did not hear from her on Friday morning that I would contact her Friday afternoon.

--EOR--95F33

Investigator Signature

Supervisor Signature

March 28, 2019 Interview with Cindy Williams



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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/28/2019 20:48:41, Thursday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 03/28/2019 20:49:21, Thursday

Contact: Reference: Follow-up

SUPPLEMENT:

On Thursday, March 28, 2019 at approximately 10:09 hours, I, Investigator Hargraves employed by the Harris County Fire Marshal's Office did receive a voicemail from Cindy Williams. I returned the voicemail at approximately 10:18 hours and spoke with Williams for approximately nine minutes. During the conversation she stated that she no longer wished to meet as she still did not know the name of the person involved and no longer wished to participate with the investigation any further. She stated that she suffered from anxiety and that she was nervous for being involved. She then stated that the person that had the video had since destroyed the video and was extremely nervous about having it. I told her that could possibly cause bigger issues as it was no destroying or tampering with evidence and she became even more agitated. I told her that if she did not want to be involved any further that I understood, but I asked that she provide my information to the person that had the video and have them contact me. I told her to tell them that we could work out any issues, but that by hiding evidence or even destroying it could be an even bigger problem. She then stated that she would try to get some information over the weekend and that she would contact me on Monday. I told her that I would await her phone call and that I really wanted to talk to the person that had the video and she stated that she understood. I then disconnected the phone call.

--EOR-95F33

Investigator Signature

Supervisor Signature

March 29, 2019 Interview with Cindy Williams



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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/29/2019 08:11:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:23:40, Friday

Contact: Reference: Follow-up

SUPPLEMENT

On Friday, March 29, 2019 at approximately 08:11 hours, I, Investigator Hargraves received a voicemail from Cindy Williams. I returned her phone call and she sounded very tired. I placed the call on speaker phone and the call was recorded. She stated that she had further information about the possible video of the fire at the ITC Tank Farm. She said that the name Jeff or Jeffrey kept coming up and it seemed important to her. She said that she was getting information from her son and she refused to give information about her son. She said he is Supervisor and does training for a company like ITC. I asked if the son worked for ITC, because we had a Williams scheduled for interviews and she said no.

She said that she was tired and that she had not sept in approximately 72 hours. I told her to get some sleep and that if she had any further information to contact me. I then disconnected the telephone call. The recorded message was uploaded to the Foray system at the Harris County Fire Marshal's Office.

--EOR--JOH 95F33

Investigator Signature

Supervisor Signature

March 29, 2019
Interview with Steve Mathias
Interview with Isaac Salazar
Interview with Derrick Jackson
Interview with Sedrick Miller
Interview with Chris Rivers
Interview with Bryan Yancey
Interview with Lance Green
Interview with Kevin Willams
Interview with Colt Tate



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 03/29/2019 08:29:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:22:58, Friday

Contact: Reference: Follow-up

SUPPLEMENT:

On Friday, March 29, 2019 at approximately 08:30, I, Investigator Hargraves and Lieutenant Lopez both employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC). All interviews were audio recorded and uploaded Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

**INTERVIEW OF STEVE MATHIAS - P#

The first interview of the day was with Steve Mathias also known as Dr. D. He has been employed by the company for approximately 34 years. He was on duty at the time of the incident and was assigned as the Control Room Operator. He states that there are no windows within the Control Room, but that you can leave the room and see out the windows. He said that he has five (5) screens that he is responsible for. In the top left screen is the alarm screen, in the bottom left screen is the pipeline rates, in the top right screen is the Valve, Docks and Tank Summary, and in the bottom right screen is the thermal oxidizer screen. The fifth screen is used to receive SCATA data CBT's, orders and miscellaneous other programs within the computer system. He said that not every operator has their screens setup the same way, but all of them agree that the top left screen is the Alarm screen and is accepted as a standard setup.

I asked who else was with him in the control room at the time of the incident and he said Jeremy Dickerson. I asked that prior to the incident if any alarms sounded or appeared on the alarm screen and he said no. I asked how he found out about the fire and he said that he heard Tim Guidry on the radio say that there was a fire. He said that he then looked at the screen for the 80's and all appeared normal and there were no alarms either audible or visual. He also had opportunity to see the pump screen and the indicator for the pump was "green". I asked about the alarm scale and he said they have three colors, red, purple, and orange. Red is a level 1 alarm and is an immediate health and safety issue. Purple is a Level II alarm and requires immediate attention, but is not as serious as red. Orange, is a Level III alarm and requires attention but is a lower level than red and purple. He saw no color alarms flashing on the screen. I asked about the high temperature alarms and the other alarms on the tank and he explained that for the temperatures, anything above 130°F will sound the alarm. If the temperature rises to 140°F the alarm rating changes and if it is still not attended to, at 150°F the pump will shut down automatically. He knows that the high temperature alarm was set for the pump for 130°F.

Mathias is not a member of the ERT and remained in the control room. He stated that he stayed at his station and monitored the other tanks within the plant. I asked if there were any cameras in the area for remote monitoring and he said there were not. I asked if data was recorded prior o, during and after the incident and he said that data is captured by the "TREND" report. He said that the "TREND" report captures all issues when a major incident occurs. I asked if the company had a way or had software capability to capture what was displayed on the screens, like a screen shot of the data he was looking at and he said that the system did not have such capabilities. I asked

Investigator Signature Supervisor Signature

Harris County Fire Marshal's Office

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Investigator: HARGRAVES, J. (F09168) Date / Time: 03/29/2019 08:29:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:22:58, Friday

Contact: Reference: Follow-up

for the "TREND" data and he said that he knew that OSHA had a copy, and the attorney that was present during the interview stated that he would get that data to us as soon as possible.

I asked if he knew of any outside contractors or work being performed in the 80's tank farm the day of the incident and he said no. I asked if he knew of any work orders being issued for that day and he said no. I asked how he communicated with pumpers out in the field, in case one of their tanks was near capacity or they needed to check something out, he said they communicate via radio.

I asked if he knew the pump for tank 80-8 was running, and he said that he had no prior knowledge about the pump running until the incident occurred. I asked if he knew of any pump issues prior to the incident and he said that he did not. I asked if anyone else was in the control room during the incident and he said that the control room is a shelter in place and he said that some employees came in to the control room due to the incident.

**INTERVIEW OF ISAAC SALAZAR - P#

I then interviewed Isaac Salazar who is an operator and has been employed with the company for approximately 10 years. He stated that he was in an area named the New Outback. He stated that he found out about the fire when he heard Tim Guidry on the radio say there was a fire. I asked if he knew the voice on the radio as Tim Guidry and he said that he did. He said that once he knew of the fire he went to shelter in place in the Change House. He said there were four other personnel with him. He said that no one knew anything about the cause of the fire. I asked if any video was being shown in the change house dealing with the fire and he said no. I asked if he was a member of the ERT and he said no. Refer to audio recordings for further details.

**INTERVIEW OF DERRICK JACKSON - P#

Derrick Jackson was the next person interviewed and his title at the company is Operator III. He said that was on duty at the time of the incident. I asked where he was assigned that day and he said the barge docks. At the time of the incident, however he was in the change house at the time of the incident awaiting a barge to connect.

He heard overt the radio that there was a fire and recognized the voice as Tim Guidry. He said that he remembered hearing small fire in the 80's and then heard the person notify Security to sound the alarms. He remembers the alarms sounding and then hearing Guidry call for all ERT members to respond.

He said that since he is not ERT he got with his supervisor Trino Gallindo and they disconnected all of the barges and vessels and shut down the docks. He said that he made sure that all of the valves were closed and that all hoses were secured. Refer to audio recordings for further details.

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Investigator: HARGRAVES, J. (F09168) Date / Time: 03/29/2019 08:29:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:22:58, Friday

Contact: Reference: Follow-up

I then spoke with Sedrick Miller who is an Operator, Level I and has been employed with the company for approximately 8 months. He stated that he was on duty at the time of the incident and was assigned to the 11-12 docks loading barges. He further stated that he was working by himself. He said that he heard on the radio that there was a fire and he looked over in the direction of the tank farm and saw smoke. He said that he remembered hearing on the radio that it was a small fire. He said that after approximately 10 minutes after the initial radio traffic about the fire he was contacted to stop all "movements". He stopped all movements and waited at the docks until approximately 17:00 hours. He said that Lance Green gave him a ride to the change house where he stayed until 18:00 hours. I asked if anyone was talking or saying what possibly caused the fire and he said no, that everyone was wandering what was going on. I asked if he was shown any video of the fire or before it got bog and he said no. Refer to audio recordings for further details.

**INTERVIEW OF CHRIS RIVERS - P#

I then spoke with Chris Rivers who is a Pumper I and has been employed with the company for approximately 5 years. He was on duty at the time of the fire and was assigned to the Base Oil area of the facility. He said that it is on the opposite side of the facility as tank 80-8. He said that he found out about the fire via radio. He said that he recognized the voice on the radio as Tim Guidry. He said that he had a truck and picked up a member of the ERT and took him to the fire house. Rivers then said that he drove to the 80's tank to help with suppression operations. I asked if he knew of a video that showed the fire prior to it becoming a larger incident and he said no. I asked if he had heard anything about a process going wrong, or any possibilities for what might have started the fire and he said that he had not. I asked if he saw anyone in the tank farm or coming from the tank farm and he said that he did not.

**INTERVIEW OF BRYAN YANCEY - P#

Spoke with Bryan Yancey who was not on duty at the time of the fire. He said that he is a switchman and is assigned to the rail yard. Yancey has been employed with the company for approximately 8 months. I asked how he found out about the fire and he said through the media. I asked if he knew about a video that might exist or any conversations about the fire and he said that no one has shown him a video or spoken to him about the fire. He said that the company is contacting him about work and assignments.

**INTERVIEW OF LANCE GREEN - P#

Spoke with Lance Geen who is an Operator II with the company. He has been employed with the company for approximately 1 year. He was on duty at the time of the incident and was working at the New Manifold. He said that the New Manifold is not close to the 80's tank farm and is closer to the docks. He said that he saw smoke in the area of the 80's tank farm and then he heard over the radio that there was a fire. He recognized the voice on the radio as that of Tim Guidry. I asked if he was on the ERT and he said that he was not. I asked if he shut

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Contact: Reference: Follow-up

everything down and he said that he did.

He said that after he shut everything down went to the change house to await instructions. He was instructed to take the drivers of the 18 wheelers to the scale house and he did. He said he then stayed at the scale house. He left the scale house to help Sedrick unhook a barge after that they went to the change house to await going home.

I asked if anyone was showing a video of the fire or was talking about a process that went bad or possibly a cause of the fire and he said that no one was talking about the fire or showed him a video.

**INTERVIEW OF KEVIN WILLIAMS - P#

I then spoke with Kevin Williams. Williams was on duty at the time of the incident and has been employed with the company for approximately 2-1/2 years. On the day of the incident he was assigned to the Docks. His title with the company is Operator II. He stated that he found out about the incident when he heard Tim Guidry over the radio saying that there was a fire. He said that he then got with the Jetty Master at the Change Master Building. He said he was placed on standby to await further instructions. He said he then received instructions from Marine Traffic to disconnect all barges and vessels. He said after doing that he awaited further instructions. I asked if he knew of anyone working in the 8-`s tank farm and as far as he knew no one was working on equipment. He said he knew that an operator named Colt was loading a truck from tank 80-18 earlier in the day and that truck was located at the E-7 scales. He said that was all that he knew.

**INTERVIEW OF COLT TATE - P#

I then spoke with Colt Tate. Tate is an Operator II and has been with the company for 13 months. Tate was on duty at the time of the incident and was assigned to the truck manifold in the Outback which is close to the docks. He said that he is not a member of the ERT. He said he was notified of the event via radio, but he said that he could not specifically identify a particular voice, due to multiple voices on the radio. He then went to the nearest muster point, and then made sure to sign the accountability sheet. He knew that it all were accounted for and awaited further instructions.

He said that Alonzo with Security stayed with them at the muster point until it was determined it was safe to go home. He said that he spoke with Kevin Williams, but doesn't remember talking about the 80-16 or the E-7 scales. He said all that he remembered was seeing smoke and then later it was confirmed to be a fire, but doesn't remember anything specific.

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--EOR-JOH 95F33

Investigator Signature

Supervisor Signature

March 30, 2019 Digital media from Russel Lewis



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HILTON, T. (F09136) Date / Time: 03/30/2019 17:06:05, Saturday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/01/2019 06:39:53, Monday

Contact: Reference: Follow-up

Supplement Report / Follow Up Investigation Lieutenant T. Hilton 95F8 Harris County Fire Marshal`s Office Fire/Arson/Explosion Investigations

On Saturday, March 30, 2019 Chief Bolton 954 and Lt. Hilton 95F8 met with Russell C. Lewis with Baker Botts LLP, who is the attorney representing ITC. He provided a black USB drive with documents pursuant to a subpoena issued by Harris County Fire Marshal`s Office (HCFMO). The USB drive was entered as evidence, placed in an envelope and labeled. The envelope was secured inside Chief Shaw`s office to make a working copy and then will be placed into the HCFMO evidence facility.

End of Supplement TDH-95F8

Investigator Signature Supervisor Signature

April 1, 2019
Interview with Aaron Baquet
Interview with Victor Flores
Interview with Sam Kerr



Harris County Fire Marshal's Office

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/01/2019 14:29:00, Monday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:14:38, Friday

Contact: Reference: Follow-up

SUPPLEMENT:

On Monday, April 1, 2019 at approximately 14:29 hours, I, Investigator Hargraves and Lieutenant Lopez both employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC). All interviews were audio recorded and uploaded Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

**INTERVIEW OF AARON BAQUET - P#

I spoke with Aaron Baquet who is an Operator IV and has been employed by the company for approximately 18 years. Baquet was on duty at the time of the incident and assigned to the 5 dock. He said that he heard there was a fire in the 80's and then heard an audible alarm. He stated that he is not an ERT member and when he heard there was a fire began to shut down the "moves". He stated that he remained at the dock until the barges were disconnected then he went to the change house to shelter in place. He said that while he was in the change house he did not hear any conversations about the cause of the fire, about a process, nor did anyone show him a video on a cell phone. He said everyone was really in shock about the fire.

**INTERVIEW OF VICTOR FLORES - P#

I then spoke with Victor Flores who is an LPG pumper and has been employed with the company for approximately 12 years. Flores was on duty at the time of the incident and is not an ERT member. He stated that he was in the control room with Steve Mathias and Juan Campos. He said that he was at his station and was getting rates on the LPG tanks. He said that he checked the pressure, circulation rate, and temperatures.

He said he was responsible for approximately 17 tanks. He heard on the radio about a fire in the 80's. He said he recognized the voice on the radio as that of Tim Guidry. After hearing the call on the radio he heard the alarm, which was an outside air horn indicating there was an emergency in the plant. He said he immediately looked at the screens and saw no visual alarms on the screens and he said there were no audible alarms sounding within the control room. He said he left his station and looked out the window toward the tank farm to see if he needed to do anything. He said he got in his truck and drove over to the tank farm. He said the fire truck was already on scene.

He said that he helped out as much as he could by unrolling hoses, make couplings and just to give a helping hand to the ERT as much as he could. He said after he did that, he went back to check on his tanks and all was ok. He then went back to the control room and began to shut down the "moves" that he had in process. He said that during the incident, he lost communications with his tanks and so he checked them manually every two hours. He said he just drove around the tank farm to ensure that nothing else was unusual. He said that he also did a perimeter check to ensure that all was secure.

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Case Status: ACTIVE **Occurred:** 03/17/2019 Case Mng Status: ACTIVE

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) **Date / Time:** 04/01/2019 14:29:00, Monday

Supervisor: HILTON, T. (F09136) **Supervisor Review Date / Time:** 04/05/2019 03:14:38, Friday

Contact: Reference: Follow-up

**INTERVIEW OF SAM KERR - P#

I then spoke with Sam Kerr who is that Marine Coordinator and has been employed by the company for approximately 40 years. He was on duty at the time of the incident and was in the Traffic Building. He said that all orders to be processed come to the traffic building. He said that he heard Tim Guidry say there was a fire in the second 80's and it sounded like he was running and out of breath. I asked if he heard any audible alarms indicating an emergency and he said not right away, but that he did hear them a short time later. He also said that in the traffic building he usually operates on channel two which is for ship traffic and channel one is for the plant. He switched some of his traffic from channel one over to channel two to reduce radio traffic.

He stated that he gave the orders to shut down all of the "moves" in process, and he said that he did this to minimize flow to the affected area. He said that he had the dock men "block-in" the vessels and barges. He stated when the "moves" in the pipeline are stopped all of the pumps will shut down and then the operators will manually shut all of the valves. He stated that all of the pumps were shut down to the best of his knowledge.

He stated that he then contacted Karl Kuhn, known as KK to come back to the plant that there was a fire. KK is the Vice President of Operations and usually comes to the plant on the weekends to see what is all going on. After speaking to KK, he called the barges and told them to stay in the fleet. He said he had two coming in one belonging to Kirby Inland and the other to American Commercial Barge Lines. He also had a vessel coming in and he kept them coming, but he said if the situation changed he would call them back. About an hour later he called the vessel back and told them to lay berth at Barbour's cut. He said the pilots were calling him and he told them they had a situation, but gave no further details. He also said that customers were calling and he referred them to management. He said the United States Coast Guard called him twice. He said that they strongly recommended closing their docks and he complied.

He said that he remained in the building and monitored the radio. He said that people came into the building to shelter in place. He said he tried to calm them down and continued to monitor phones.

--EOR-JOH 95F33

April 3, 2019
Interview with Carlton Homfeld
Interview with Mathew Anders
Interview with Christopher Robles
Interview with Marcus Wilson
Interview with David Zuniga
Interview with Michael Huffman



Harris County Fire Marshal`s Office

OCA: 190300046

Printed: 11/20/2019 13:43

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/03/2019 09:00:00, Wednesday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 11:52:46, Monday

Contact: Reference: Follow-up

SUPPLEMENT:

On Wednesday April 3, 2019 at approximately 09:00 hours, I, Investigator Hargraves, Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC). At approximately 10:30 hours, I departed ITC and the interviews were conducted by Lieutenant Lopez and Investigator Ledford until I could return. See their supplements for further details. I arrived back at ITC at approximately 12:30 hours, and was instructed that Carlton "Spud" Homfeld was scheduled for a re-interview at 13:00 hours. I then conducted the re-interview and the rest of the interviews for the day with the assistance of Lieutenant Lopez and Investigator Ledford. All interviews were audio recorded and uploaded Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

**RE-INTERVIEW OF CARLTON "SPUD" HOMFELD - P#

I re-interviewed Carlton Homfeld is also known as "Spud". He is the Director of Maintenance and was not at the plant at the time of the incident. He was in Orlando, Florida at a volleyball tournament for one of his grandchildren. He was made aware of the fire at the plant by the E-NOTIFY app on his cellular telephone. He said he then called the COO of the company identified as Bob Pennacchi about the incident. He stated that he was given an update by Pennacchi about what was going on at the plant and what was being done to mitigate the situation. He said he then called and spoke with two of his personnel Scott and Miguel about the situation as well. He said that most of the information that he obtained about the situation was from the internet. I asked if he knew about the tanks and that tank farm and he said that he did due to his 39 years of experience with the company.

I asked if he was aware of any issues with the 80's tank farm and he said that there were no issues and nothing had been written up for repairs. He stated that all maintenance issues come through his maintenance division. I asked about tank 80-8 and the manifold connected to it and if he remembered making any repairs to that area of the tank, specifically that tank. He said that in December of 2018 a pump was written up for making a "noise". He said that the Millwrights determined that the bearing was bad. He said that Operations did the "LOTO", which is a lock out, tag out. He said the replacement was a "drive-in", which meant that the mechanics brought a pump assembly to the tank and removed the old pump and replaced it with a new unit. He said that the one that was put into service had been previously rebuilt and the one removed was repaired and retained as a spare. I asked if he knew the pump unit replacing the bad unit was also bad, and he said that he did not know. He stated that once the maintenance personnel installed the pump that operations was responsible for bringing the pump back online and ensuring that everything was working properly. I asked what checks were performed by his personnel after completing installation and he stated that the pump is pressure tested both for primary seal and secondary seal to make sure it is properly seated using an inert gas like Nitrogen. Operations would then refill the pump and start the recirculation process. I asked if that was done when this pump was replaced and he stated that it would be on the work order.

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Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 11:52:46, Monday

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but said that there was no specific box to check off that the operation had been completed.

I asked about the maintenance division and how it was setup and he stated that he has four supervisors that are assigned a group of people. He said the three divisions within maintenance are Electrical, Mechanical, and Instrumentation. The Electrical supervisor is Travis Williams, Mechanical has two supervisors who are Larry Kitchens and Josh Wilson, and the Instrumentation supervisor is Matt Plant.

I then asked if Safety is present while work is performed and he said that they are present for permits for equipment entry and that they are not necessarily at the site when work is performed. I asked when the pump was replaced when the work occurred and he stated that it was done after hours. He stated that Safety or Environmental Control would issue the permits for that type of work.

I asked about the pump for the tank and he stated that the pump is rated for 3500 to 4000 barrels an hour. He stated that some of the pumps in the tank farm are variable speed and the operator can control the amount of product being moved, but he was unsure if that pump on tank 80-8 had the variable speed control. He said the Variable Frequency module allows for the motor to be sped up or slowed down depending on the operator. He further stated that all fittings are monitored for emission and that is done for state reporting purposes. The emissions testing is done by a company called Ameritech or Ameritek.

I asked if there was any gas detection that would sound an alarm in the control room if a leak was detected and he stated that gas detection is not equipped in that tank farm and it is installed at the LPG tanks.

I asked about the rebuilding process and if parts were cannibalized from other pumps and he stated that the process is not "piece meal". He said that all surfaces are checked per manufacturer specifications and if they are found to be out of tolerance they are replaced with new components. He further stated that all bearings are brand new. I asked if an old pump is rebuilt and brought back to tolerances, if it was tagged and stored to show that it had been rebuilt and he said there is not a tagging system in place. He said that no used items are stored on the shelf with rebuilt items. I asked about automation instrumentation on the pumps and he said that if the tank was installed with automation it would send data to the "SCADA" system. I asked if safety was a concern and he stated that it was a primary concern. He further stated that everyone from the owner of the company to a new hire has the right and obligation to stop a process if they believe it to be unsafe.

I asked if had overheard anything regarding a cell phone video, or a process going bad, or even a leak and he said he has not heard or seen anything in that regard. I asked if he knew who repaired the pump and he stated that it was Matt Anders and Chris Robles. He said that the mechanics are in charge and have the final say that the job is complete. They then present there completed documentation to operations and operations has mechanics sign the "LOTO" and operations then brings the pump on line.

I asked if he had conversation with anyone about the fire and he stated that he did and it was with Chris Mc Cluskey who is in his group and is a member of the ERT and as well as with Zach Everett who is also in the

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group and is also a member of ERT. Both told him that there was a fire in the terminal and they were called to respond. I asked if he asked them if they knew what happened and he said that he did not ask.

**INTERVIEW OF MATHEW ANDERS - P#

I then spoke with Mathew Anders the Millwright who was assigned to work on the pump that was making a "noise". Anders has been employed by the company for approximately 4 years, but has been in the industry working on rotating equipment, pumps, and blowers. He replaces bearings and seals as needed and makes sure that when the tolerances are not within specifications, a new pump housing is ordered. I asked what that range was and he said it was between .008"-.010", would be considered loose. I asked what type of fits he used and he said that the bearing is an interference fit in to the pump housing and that the bearing is press fit onto the shaft. I asked that when he makes repairs if there is a tagging procedure in place and he stated that if he specifically repairs the pump, he tags it as repaired and places a tag that the repair was completed.

I asked what was done if a seal was bad and he said that seals are field replaceable, whereas the pumps are removed and repaired at the maintenance building. A repaired or new pump is then installed so that that the tank can return to service.

I asked if he remembered working on the pump on tank 80-8 and he said that he did and that it was done sometime in mid-December. He said that it was a mechanical seal change and that only the seal was replaced and not the whole pump. I asked if there was a log kept of maintenance performed and he said that all of the mechanics keep and sign a daily log that is turned into Carlton "Spud" Homfeld. He said the record is also kept on the computer in the maintenance building.

I asked if he remembered who requested the pump to be repaired or replaced and he said that he did not know who reported the "noise" in the pump. I asked for him to explain the repair or replacement of a pump process. He said that he knows that the pumper reports the issue to the pumper supervisor and that supervisor then notifies the maintenance supervisor of the need for a repair on a piece of equipment. Then the mechanics receive a work order assigning them to conduct the repair or replacement. He said that he then inspect the equipment for the reported "noise" or issues per the work order. He said that he then notifies Operations that the pump needs to be run and they accommodate his request. Then, if the issue is located a schedule is made to make the repair. He then stated that when the day to make the repair arrives, Operations does the "LOTO" and he signs their form and he then places a lock on their lock to ensure that no one can energize the equipment while repairs or replacement is being made. After the equipment is repaired or replaced leak detection is performed. He said that he uses a soap-like solution and the equipment is pressured up with Nitrogen to 100 PSI. Leaks are checked for and he then spins the rotating equipment assembly by hand to ensure smooth operation and also feeling for any out of roundness issues. I asked if he removed any detectors or had any turned off when he was working on the pump at tank 80-8 and he said that the detectors are located before and after the pump. He also said that the data is recorded in the control

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room constantly. He even mentioned that the data was being transmitted from the tank even with them working on the system. He did know that the temperature sensor for the tank is very sensitive.

I asked when the pumps are repaired are the stored anywhere specifically and he stated that they were kept on a shelf in the maintenance building as well an in Conex boxes near the maintenance building. I asked if he knew what type of pump tank 80-8 had and he said that it was a XLTX/Gould pump, but that was all he knew. He had mentioned that they ordered power frames from the vendor and I asked what a power frame consisted of and he stated that it was a pump housing, shaft, adapter and bearing.

I asked if he spoke to anyone about the fire and he said that a friend called him while he was at church. He identified that person as Steve Gonzalez. He said that all of the information he learned about came from the news. He said that he was not aware of any process gong bad or any leaks prior to the fire.

**INTERVIEW OF CHRISTOPHER ROBLES - P#

Christopher Robles was interviewed as he was working with Anders on the pump in December. He has been employed by the company for 8 months. His title is Area Tech. He said that he saw the news on Sunday morning about a fire at the facility and he found out that there was a fire on Monday when he reported to work. He said that he has not spoken to anyone about the fire. All he remembers is that a repair was made to a pump about four months ago in December. He does not remember any specific work performed or what he even did. He did know that Matt Anders was the Millwright who did most of the work. HE also remembered being called out toe tank 80-8 and that both he and Anders were working. He has not heard or seen anything nor is aware of any videos, process or leaks around tank 80-8. He was asked if he remembered if they removed the pump to replace a bearing or if the y replaced a seal and he said he did not remember. He said that he has done seal repairs on other pumps but does not remember doing seal repair, specifically on pump 80-8. He said that he does remember starting work at the tank at approximately 11:00 hours and completing work at 17:00 hours. He said he was aware and does know that all of their activities are logged daily and that each person doing the work signs off on it before it is submitted to their supervisor. I asked if he has looked back on previous work on that tank and he said that he has not. I asked who had access to the daily logs and he said that "Spud" has access to everyone's logs. He further stated that if "Spud" has not received a daily log from a mechanic he calls them out at the morning meeting to get it submitted. Robles was asked if he remembered using any equipment on the day the pump was repaired and he stated that a truck for sure because they drove out to the tank farm, but unsure if a crane or "cherry-picker" was used. He said that messaged a buddy of his about the fire and sent him a link t the news about the fire. That person is identified as Zach Everett.

**INTERVIEW OF MARCUS WILSON - P#

Marcus Wilson was interviewed after Robles and he is an Operator III with ITC and has been employed by the company for approximately 3-1/2 years. He was on duty at the time of the incident and was assigned to the new

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Investigator: HARGRAVES, J. (F09168) Date / Time: 04/03/2019 09:00:00, Wednesday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 11:52:46, Monday

Contact: Reference: Follow-up

truck manifold. This manifold is located on the north side of the facility closest to the docks. He said that as he was arriving at the new truck manifold he heard Tim Guidry call out over the radio that there was a fire in the 80's and that all ERT was to respond. He is a member of the ERT so he left the new truck manifold and went to the fire house. He then grabbed his gear and got on the fire truck and responded to the 80's tank farm. He said that the fire truck was parked on the side of the road near gate 3. He said he put on his gear and assisted with firefighting operations. He said he stayed as long as he could until he was told to go home. He said he got a ride back to the change house and he kept his gear with him. He said he came back on Tuesday evening at approximately 14:00 hours and assisted in firefighting operations. He said that he has heard nothing nor did he know of any process, video or leak. He was asked if anything seemed out of place or out of the ordinary within the tank far and he said no. He was asked about safety practices and he said that safety is the name of the game and that it is taken very seriously.

** INTERVIEW OF DAVID ZUNIGA - P#

David Zuniga was the next person interviewed. He is an Operator I and has been employed by ITC for approximately 9 months. He stated that he was on duty at the time of the incident and that he was assigned to the 100's rail rack. The 100's rail rack is located on the north end of the facility close to the docks. He stated that he was working with Matt Celenias. HE said that they were loading rail cars when he heard Tim Guidry on the radio say that there was a fire. He said that they immediately shut down rail car loading and he knew that an ERT Member named Chris Bethly was working in the 12's Rack. Knowing that he contacted Bethly and told him to respond and that he would shut down what Bethly was working on. Zuniga stated that he heard the alarms sounding while he was performing his tasks. He said that after he finished, he went to the scale house rally point and there were approximately 5 other personnel there. He said that they did not speak about the fire as the focus was on personnel accountability and making sure everyone was accounted for. He said that he remained at the scale house until he was told to go home. He said he went to the change house and that the incoming supervisor told them to go home. He went home at approximately 18:00 hours. He denies knowing about or seeing any video, a process or a leak.

** INTERVIEW OF MICHAEL HUFFMAN - P#

I then spoke with Michael Huffman who is a pumper and has been employed by the company for approximately 6 years. Huffman is also a member of the ERT. He was on duty at the time of the incident and was assigned as LZ pumper. This area is near the docks. At the time of the incident he was in the control room when he heard Tim Guidry on the radio call for "all ERT to the 80's we have a big fire". He stated that he was doing an in process transfer, but that he abandoned it to go to the fire. He had a truck, so his mind was on the fire and not the process, but that he did contact the control room to shut down the process as this was going to be a large scene. He said he went to the fire house which is approximately 50' from the control room, grabbed his bunker gear and put it in his pickup truck and drove to the 80's tank farm.

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Investigator: HARGRAVES, J. (F09168) Date / Time: 04/03/2019 09:00:00, Wednesday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 11:52:46, Monday

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He said that he arrived and believed he was the first one there and did not make entry, but walked to the center of the retaining wall and saw that the fire was large and that monitors could only be used. He said he waited for more personnel to arrive so that a game plan could be formed. He said that a few moments later a game plan was formulated and the plan was to look for monitors not in use and activate them. His recon indicated that all were in use and he observed a good pattern from them and the monitors appeared to be effective.

He said that he remained with firefighting operations until he was relieved. He did not observe anything that was suspicious and he stated that he did not know of any video, process, or a leak. He said that everybody is wondering what happened. I asked if tank 80-8 would be controlled from the control room and he said that it was. He said that he was with Steve Mathias, Dr. D who was the manager of the control room at the time of the incident as well as Jeremy Dickerson. He said that the other operators were out of the control room doing their job. He said that there are four screens and the top left is the alarm screen. If there is an alarm, it makes an audible sound and that you can hear it within the room. He said that he did not hear or see any alarms in the control room at the time of the incident that would indicate there was an issue. He mentioned that some tanks have newer technology on them that provide more data to the control room, but not all of them have been fitted with the newer technology.

He said that operators do not usually stay in the control room, that they perform rounds and walk their tank farms once an hour. I asked if a log was kept of this action and he said there are no logs kept. He was asked how the company would know the walk check had not performed, and he said that they would not only if the operator said they did not do it. He stated that during the walk check the operator is looking for anything out of the ordinary. I asked if leaks could be heard more than seen and he said that it is really loud in the tank farm so a leak would be found visually rather than audibly. He stated that if a leak is found the control room is contacted and the pump is shut off remotely. If the pump continues to run after the control room is contacted, the pump is shut off manually. He said the pump is used for product movement, whether it be to a vessel or product transfer and even includes circulation of product as well. He stated that if a leak occurs or is found, it is reported immediately.

Huffman was asked how many stations were in the control room and he stated that there are seven stations. He said that he believed that 80-8 had the newer technology installed as mentioned earlier. He did not know of the tank had an alarm system. He said that some of the older tanks do not have the same technology. He said that some have level drop indicators and some do not, but he is sure that some level drop indicators.

I asked about the control room and its staffing and he said that it is 24 hours a day. He said that the control room manager must be relieved by a control room manager or a qualified operator. He said that in his six years of employment he has never seen the control room unmanned.

--EOR--JOH 95F33

April 3, 2019
Interview with Carlton Homfeld



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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) Date / Time: 04/03/2019 10:58:00, Wednesday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/09/2019 20:58:25, Tuesday

Contact: Reference: Follow-up

On April 3, 2019 at approximately 10:58 hours Investigator Dustin Ledford and I, Lieutenant Gustavo Lopez, conducted an interview on Carlton "Spud" Homfeld, who is the maintenance supervisor. He stated that he was on vacation in Orlando at the time of the fire. He was asked if he knew any repairs done to Tank 80-8, especially the pump and stated that in December, the pump was taken down for maintenance because the pump was making a "noise." He stated that the possibly the repairs consisted of a bearing, drive end, and assembly shaft. I asked him if he remembers who made the report that the pump was making a "noise" and stated that it was operations. He gets the work order and assigns the job. The repair should have taken 3-4 hours. I informed Mr. Homfeld that a second interview will have to be conducted with Investigator Hargraves. The interview concluded.

End of supplement	

Investigator Signature

Supervisor Signature

April 4, 2019 Interview with Tom Kajander



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Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/04/2019 15:51:22, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:31:41, Friday

Contact: Reference: Follow-up

On Thursday, April 4, 2019 at approximately 15:51 hours, I, Investigator Hargraves was contacted by Tom Kajander who is the in house counsel for ITC. He stated that the interviews for the two remianing employees have been scheduled. At 4pm we are scheduled to meet with Ted Little and at 6pm we are scheduled to meet with Mr. Bethly. Also, Kajander stated that he is still working on getting clearance to do a walkthrough at the maintenance warehouse. The weather and winds have made it difficult to ensure that the building is not within the Warm or Hot Zone. I advised that until it is safe to enter we would wait until it is safe to do so. I then disconnected the phone call.

--EOR--JOH 95F33

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April 4, 2019
Interview with Michael Parker
Interview with Christopher Wilke



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Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/04/2019 18:19:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:35:29, Friday

Contact: Reference: Follow-up

Follow Up Investigation Investigator D. Ledford 95F27 Harris County Fire Marshal's Office Fire/Arson/Explosion Investigations

On 04/04/2019 at 11:40 hours Investigator D. Ledford 95F27 and Lieutenant G. Lopez 95F7 responded to 2211 East X St., Deer Park, TX 77536 in unincorporated Harris County.

This was in reference to Harris County Fire Marshal's Office case number 1903-00046, Intercontinental Terminals Company (ITC) Fire Incident. Address for ITC is 1943 Independence Pkwy, La Porte, TX 77083.

Investigator Ledford arrived at 2211 East X St., Deer Park, TX 77536 at 12:10 hours. Investigators made contact with Deer Park Fire Department Medic 2's crew Michael William Parker and Christopher Ryan Wilke. Both advised that they were on duty the day of the incident and responded to the incident at ITC in Medic 2.

Investigator Ledford interviewed Mr. William Parker in the "watch office" located at the above address, this location allowed for Mr. Parker to be interviewed privately. Mr. Parker has been employed by Deer Park Fire Department for 4 years and is currently a Lieutenant/Paramedic assigned to Station 3 Medic 2. Mr. Parker advised that the day of the incident he was working with Paramedic Ryan Wilke and was at the station at the time of the incident. He was made aware of the incident through the department dispatch center and immediately walked outside the apparatus bay and could see a black plume of smoke coming from the direction of ITC. He advised they responded immediately and arrived on location on Independence Parkway shortly after Deer Park Fire Department Safety Officer 430 Tommy Archer. Upon arriving at this location Mr. Parker states he could see a fire inside the tank farm and advised Mr. Wilke that they were too close and needed to move further away. Mr. Wilke who was driving the medic unit, turned the unit around 180 degrees and stopped long enough for Mr. Parker to take photograph of the fire using his personal cell phone. Once the picture was taken they continued down Independence Parkway another 200-300 yards south and staged to provide rehab and first aid for incoming fire units.

Mr. Parker stated that he text the picture of the fire taken while turning around to his partner Ryan Wilke, he denies sending the picture to anyone else through any media platform or posting the picture on any social media site. When questioned about the whereabouts of the phone used to take the picture of the fire, Mr. Parker advised that the phone was damaged beyond repair later the same day. Mr. Parker describes having the phone in a case on his belt and it falling to the ground, landing on the screen. He states that the phones screen is black and will not power up, he has taken it to Verizon and that they were unable to repair it or retrieve any information from the phone. Mr. Parker states that his data is automatically stored into the cloud every night but because the phone was damaged prior to this automatic back up, the picture in question was not saved into the cloud. Mr. Parker advised that the

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Contact: Reference: Follow-up

cell phone is currently at his residence and should be in his bedroom closet. Mr. Parker stated he had not been advised by any persons prior our interview instructing him to destroy his phone or attempt to delete any information on said phone. Mr. Parker stated that on Monday April 1st Ryan Wilke sent the picture in question to his new phone via text message and that the picture is still on this phone. This was verified by Investigator Ledford.

Investigator Ledford Interviewed Ryan Christopher Wilke in the "watch office" located at the above address, this location allowed for Mr. Wilke to be interviewed privately. Mr. Wilke has been employed by Deer Park Fire Department for 4 years and is currently a Paramedic assigned to Station 3 Medic 2. Mr. Wilke advised that the day of the incident he was working with Lieutenant/Paramedic William Parker and was at the station at the time of the incident. He was made aware of the incident through the department dispatch center and immediately walked outside the apparatus bay and could see a black plume of smoke coming from the direction of ITC. Mr. Wilke states he took a photo of this plume prior to leaving the station and responding to the incident. Mr. Wilke describes meeting up with Safety Officer Tommy Archer at Hwy 225 and Battleground Rd. He describes following Tommy Archer down Independence and turning around 180 degrees shortly after Tommy Archer did. While turning around Mr. Wilke advised he paused the medic unit long enough for Mr. Parker to take a picture of the fire with his cell phone. He then dove the medic unit down the road to where the sheriff's office was beginning to shut the road off. Mr. Wilke states him and Mr. Parker provided rehab and first aid for incoming firefighters. Mr. Wilke states he received the picture in question the same day of the incident and that he sent the picture to his wife via text message. Mr. Wilke denies sending the picture to anyone else or posting it on any social media site and that his wife had not posted it on any social media site. Mr. Wilke sates he has received several pictures from various people of the incidents at ITC since March 17th 2019, some had been received via text message and others had been received through his Facebook Messenger.

Investigator Ledford requested a copy of any and all photographs or video Mr. Wilke currently had on his cell phone. Mr. Wilke stated was more than willing to provide all the photographs and any video he had on his cell phone pertaining to the fire at ITC on 3/17/19.

A series of digital photographs were transferred by Mr. Wilke from his cell phone onto his personal lap top computer. The digital information was then transferred to Lieutenant Lopez's county issued external hard drive and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

All audio of above interviews were recorded utilizing Lieutenant Lopez's county issued digital voice recorder. The digital information was later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Mr. Parker and Mr. Wilke were provided Investigator Ledford contact information and advised to call if they obtained any additional information or had any questions.

Investigator Signature Supervisor Signature

Printed: 11/20/2019 13:43

OCA: 190300046

Harris County Fire Marshal's Office

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/04/2019 18:19:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/05/2019 03:35:29, Friday

Contact: Reference: Follow-up

This concluded the interviews of Mr. William Parker and Mr. Ryan Wilke.

End of Supplement JDL-95F27

Investigator Signature

Supervisor Signature

April 2, 2019
Interview with Nelson Waggoner
Interview with Juan Campos
Interview with Matthew Celania



Harris County Fire Marshal's Office

OCA: 190300046

Printed: 11/20/2019 13:43

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/04/2019 18:56:38, Thursday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/09/2019 20:57:37, Tuesday

Contact: Reference: Follow-up

SUPPLEMENT:

On Tuesday April 2, 2019 at approximately 16:15 hours, I, Investigator Hargraves and Lieutenant Lopez both employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC). All interviews were audio recorded and uploaded Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

**INTERVIEW OF NELSON DWAIN WAGGONER - P

Nelson Waggoner was interviewed and was on duty at the time of the incident. He is employed as a switchman and has been employed for approximately 5-1/2 years. At the time of the incident he was assigned to the railyard and was in the rail building with Dave Thomas, known as Beemer, when they could see smoke. He stated that he had a radio, but it was on a different channel. He said that Beemer called him via radio about the fire. Waggoner is a member of the ERT and Beemer drove straight to the tank and dropped him off on Tidal Road. He said that he ran towards the fire and he saw "Meme" one of the pumpers and they began to open up water valves in an attempt to fight the fire. He stated that there were some obstacles in the way, but he stayed at that point and fought the fire. He said that it was getting hot and he left to get his bunker gear after hooking up the fire truck to a water supply. He said he then returned to fight the fire.

I asked if heard or saw anything unusual and he said there was nothing in the tank farm except, rocks, tanks and fire. He denied hearing any possible cause, or seeing a video of the fire prior to its growing in size.

**INTERVIEW OF JUAN CAMPOS - P#

I then interviewed Juan Campos who is a Pumper III, a member of ERT and was on duty at the time of the incident. He has been employed with the company for approximately 6 years. He was acting as the step-up supervisor for Tim Guidry who was covering for Kevin Young. The day of the incident he was in charge of all land traffic, which is trucks and rail cars. I asked if he remembered any deliveries between the hours of 06:00 and 10:00 hours, and he said that he did not remember any deliveries. He said Methanol Cars were being loaded in the 12's and a U-Base car in the new rack were being loaded at approximately 10:00 hours. I asked who handles the trucks and he said that is the Scale House coordinator and they call him if there are any issues with the trucks.

He said that at approximately 10:00 hours he heard Tim Guidry call out on the radio about a fire in the 80's. He was in the Safety Building at the time he heard the radio traffic and he ran directly to the fire house to get his bunker gear. He said he then got on the fire truck with other personnel and they went to the tank farm. They staged the apparatus on the Southside of tank 80-15 and started to deploy hand lines. He said that they also used the monitors on the Southside of tank 80-9 to put water on the fire. He said the other firemen tried to get water

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Investigator: HARGRAVES, J. (F09168) Date / Time: 04/04/2019 18:56:38, Thursday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/09/2019 20:57:37, Tuesday

Contact: Reference: Follow-up

on the fire from tank 80-15 monitor.

He said the fire was covering the entire manifold which is the mechanicals at the front of the tank. He said that he remained fighting the fire until relieved. I asked if he knew anything about a video about the fire and he said that he did not. I asked if he knew of any issues with tank 80-8 and he said that he did not. He said that all appeared normal and then the fire happened.

**INTERVIEW OF MATTHEW WAYNE CELANIA - P#

I then spoke with Matthew Celania who was on duty at the time of the incident. He is employed as an Operator II and has been employed for approximately 1-1/2 years. He was assigned to the Outback, but was in the 100's helping out David Zuniga, because he was loading two rail cars with Methanol. He said that he heard Tim Guidry call out about a fire and asking all ERT members to report to the 80's tank farm for a fire. Celania is not a member of the ERT. He had a vehicle and he left Zuniga at the 100's and drove Chris Bethly who was in the 12's rack to the fire house. From the fire house he went to help out with the fire. He assisted with hooking up hoses and stayed there to help out with whatever was needed. Refer to audio recordings for further details.

--EOR-JOH 95F33

Investigator Signature

Supervisor Signature

April 4, 2019
Interview with David Wascome
Interview with John Everett



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HILTON, T. (F09136) Date / Time: 04/04/2019 23:17:09, Thursday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/09/2019 20:57:56, Tuesday

Contact: Reference: Follow-up

Supplement Report / Follow Up Investigation Lieutenant T. Hilton 95F8 Harris County Fire Marshal`s Office Fire/Arson/Explosion Investigations

On Thursday, April 4, 2019 at approximately 2015 hours ITC employees made entry into the tank farm to drain tank 80-8. I walked in and observed the drone being flown inside the tank farm on the projector screen. I asked what was happening and David Wascome stated the team was sent in to drain tank 80-8 and the valve came off. He stated they had approval from this morning to go inside the tank farm to start draining tank 80-8. He stated the crew would bring the valve piece to Harris County Sherriff Department or to me (Harris County Fire Marshal's Office). When I returned a few minutes later John Everett, ITC, stated the team called and told him they dropped the valve inside the manifold. I asked what happened and he stated the entry team opened the plug to drain the pipe at the "PIG" and left the 3" pipe open 3/4". The valve came off as they were opening the drain. The radio traffic data is being recorded into the IAP software provided by The Response Group.

Entry team:
Nate Stone - ITC
Chris Meeks - ITC
Richard Sullivan - US Pump (Sub-contractor)

Entry time 20:15, removed valve at 20:33, exit 20:37 hours.

End of Supplement TDH-95F8

Investigator Signature

Supervisor Signature

April 5, 2019
Interview with Nathan Stone
Interview with Ted Little
Interview with Chris Meeks
Interview with Richard Sullivan



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/05/2019 11:15:00, Friday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 17:07:49, Monday

Contact: Reference: Follow-up

SUPPLEMENT:

On Friday April 5, 2019 at approximately 11:15 hours, I, Investigator Hargraves, Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office did respond to 1030 Ethyl Road, which is in unincorporated Harris County in reference to a follow up for this case. This follow up was to conduct interviews with employees of Intercontinental Terminals Company (ITC). At approximately 15:45 hours, we were notified that personnel were read for their interviews. All interviews were audio recorded and uploaded Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

INTERVIEW OF NATHAN STONE - Entry Team on 4-4-2018

I interviewed Nathan Stone who is a BP Pumper and a member of the ERT for ITC. He has been employed by the company for 10 years and on the ERT for 9 of those 10 years. He is also a Step-Up Supervisor for Charlie Fehl.

Nathan Stone was assigned to do a recon mission on Tank 80-8 on April 4, 2019. This was to check the level in the tank and to assess removal of product. He was assigned to operations and was assisted by Chris Meeks and a representative with US Fire Pumps named "Dickie". HE stated that the team of three entered the tank farm and assessed tank 80-8. He said that they pulled the bull plug on the PIG trap on tank 80-8. I asked if he had done this procedure before and he said that he had not. This was the first time that he has pulled a bull plug to drain a tank. He stated that at the bottom of the PIG trap is a 3" ball valve and that vale was to be operated, however it did not function properly so, the bull plug was pulled and he observed water, foam and product emit from the tank. He said that the foam was the foam used to fight the tank fire and not a piece of foam used as a PIG. No PIG was found in the line. He said that he did the work and that Meeks and "Dickie" were his safeties. He did say that the product went into the chem drain and then pumped to the outfall where it is loaded onto trucks and off loaded at tank 100-31 for storage. He stated that he was doing what he was told by David Wascome, who is the VP of Operations as well as the assigned night time Incident Commander. I asked what the tank level was and he stated that it was approximately 3-1/2` per the thermal image camera.

INTERVIEW OF TED LITTLE

I then interviewed Ted Little who has been with the company for approximately 3-1/2 years. He is not a member of the ERT, and is the scale coordinator. He was on duty at the time of the incident. He stated that he was in the traffic building and that between the hours of 6AM and 10AM they had received four trucks. All of the trucks are weighed before and after entering the facility. The weights are captured in the JDE system and the hard copies are kept in the traffic building. He said that they scale all sorts of trucks that contain many different products.

At the time of the incident he remembered hearing Shift Supervisor call out that there was a fire. He recognized the person as Tim Guidry. Little stated that he looked out the window saw smoke first then flames later on. Little

Investigator Signature Supervisor Signature

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Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/05/2019 11:15:00, Friday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 17:07:49, Monday

Contact: Reference: Follow-up

stated that he remained in the traffic building and went to the Security office which is located within the same building to help out the security guard stationed there. He assisted in making the CIMA callouts and activating the necessary alerting alarms. He used to be in charge of security and knowing that the security guard was new would be overwhelmed very quickly. He stated that he worked for another company and was familiar with what needed to be done in a situation like this. He did state that it was the first incident since he has been employed by ITC. He said that once things calmed down in security he went back to his area and remained there. I asked about the four trucks that were in the facility and he stated that they had been brought to the traffic building to shelter in place and later they were allowed to leave in their trucks.

**INTERVIEW OF CHRIS MEEKS - Entry Team on 4-4-2019 - P#

I then spoke with the second of three members of the team that had been tasked with working on tank 80-8 on April 4, 2019. He is identified as Chris Meeks. He has been employed by ITC for approximately 7 years and is the Lead HSE Specialist within the Safety Division. I asked what he was tasked to do on the night of April 4, 2019 and he stated that he was instructed to drain tank 80-8. He stated that the objective was that they were to get tank readings on tank 80-8, attempt to open the water draw on tank 80-8 and then exit. He stated that he got the info second hand from Corey Guccione as it was in a briefing for what was going to be done for the night.

He stated that he was working with Nate Stone and "Dickie" with US Fire Pumps, Nate and Chris were doing the work and that Dickie was doing the tank measurements by hand held thermal imager. There was no water draw at the PIG trap due to the valve being stuck. Both he and Nate tried and were unsuccessful. The valve would not turn. He said that they then tried to open the 2" Bull Plug on the PIG trap and that was successful in opening. He stated that nothing came out until the 2" valve on the PIG trap was opened to approximately ¾ open. He said that the PIG trap had a blind flange as well, and once the valve was opened a mix of product, foam, and water came out. He said that he did not remember who thought to use the PIG trap but figured it would work. He did state that they left with all of the tools they came in the tank farm with. Meeks was asked who gave the orders to open the PIG trap, and he said that they reported the non-operational 3" valve to Ops Chief Jesus Davilla and told him that the valve was not working. The crew was told to standby until the Incident Commander could be contacted. David Wascome was notified of the issue by Davilla and the approval to use the blind flange and 2" valve was given. I asked if anything was broken and he stated that nothing was broken only the Bull Plug was left behind after they removed it so that the tank could be drained. He said that if they had broken or damaged anything command would have to be notified immediately.

**INTERVIEW OF RICHARD SULLIVAN - US PUMPS - "DICKIE"

Richard Sullivan with US Pumps was interviewed he was tasked with Vapor Recovery and Suppression. He stated that he was working with two ITC personnel Chris and Nate. He stated that his role was to check the tank levels in and around tank 80-8 by utilizing a hand held Thermal Imaging Camera also known as FLIR (Forward Looking

Investigator Signature Supervisor Signature

Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/05/2019 11:15:00, Friday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/08/2019 17:07:49, Monday

Contact: Reference: Follow-up

Infra Red). He said he was to provide levels as well as temperatures of the liquid within the tank. He said that the image is black and white and that it shows the liquid level in the tank. He said that the color is different than the void space where there is no liquid. He said that he did not do any work, only used the camera. He said that he saw them working on a valve and that they were using a wrench. I asked if he could hear what they were saying and he said that he had an ITC radio as well as a US Fire Pumps radio and he was not paying attention to the ITC radio as much as he was to the US Fire Pumps radio, because his company was checking on him. I asked what range they had to stay as a team and he said they had to stay within 10° to 15°. He stated that he was involved in the briefing before the operation occurred. He said that he did observe the valve being opened on the manifold, but that he was on the man walk and did not see what work they were doing. HE did specifically see a pipe wrench being used. He said that he did not hear anything about a part or piece breaking, nor did he see them remove anything. I asked if he took a reading of the tank while it was draining and he said that they did not, but that it would also not register a drop. Sullivan was asked if saw fluid flowing and he said that he was wearing bunker gear, air pack, full face mask and he stated that he could see well. He further said that he was able to maintain visual contact with the team the entire time he was in the tank farm.

--EOR-JOH 95F33

Investigator Signature Supervisor Signature

April 5, 2019 Maintenance Building Examination



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/05/2019 14:30:43, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/16/2019 11:42:59, Tuesday

Contact: Reference: Follow Up Supplement

Follow Up Investigation Investigator D. Ledford 95F27 Harris County Fire Marshal's Office Fire/Arson/Explosion Investigations

On 04/05/2019 at 14:30 hours Investigator D. Ledford 95F27 toured the Intercontinental Terminals Company Maintenance Building located at 2621 Title Rd., La Porte, TX 77571 in unincorporated Harris County. This was in reference to Harris County Fire Marshal's Office (HCFMO) case number 1903-00046, Intercontinental Terminals Company (ITC) Fire Incident.

This tour was conducted by ITC supervisor C. Homfeld along with ITC Legal Team.

Investigator Ledford arrived at the ITC Maintenance Building at approximately 14:30 hours and began the tour in the main "shop" area utilized for building and repairing equipment used in the daily operations of ITC. The objective of this tour was to document the work stations, repair process and parts storage within the maintenance building. During this tour Investigator Ledford also documented three conex boxes near the maintenance building, these boxes were being used to store equipment utilized throughout the ITC plant, along with other maintenance equipment utilized in the daily operations of ITC. Documentation was accomplished by Investigator Ledford through a series of photographs. These photos were taken using a Canon digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

At approximately 15:30 hours the tour was completed and Investigator Ledford returned to the ITC Command Post.

End of Report JDL/95F27

Investigator Signature

Supervisor Signature

April 7, 2019 Lt. Schoonover Command Post assignment



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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: SCHOONOVER, S. (F09121) Date / Time: 04/07/2019 19:30:00, Sunday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/10/2019 13:55:58, Wednesday

Contact: Reference: Follow-up

On 04/07/19, Lt. Schoonover was assigned day shift 7a-7p at the ITC Command Post. Lt. Schoonover arrived at the command post and checked in. Chief Bolton provided a tour and overview of the facility. There was severe weather on this date which caused operations to suspend. Lt. Schoonover assisted in dropping off equipment at the staging site located on Independence Parkway. Lt. Schoonover remained on site until relieved by Investigator Singleton at 19:00. Chief Bolton and Chief Royall were on site until approximately 1530.

END OF SUPPLEMENT

SDS - 95F6

Investigator Signature Supervisor Signature

April 6, 2019 Interview Michael Parker Digital media



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: SINGLETON, J. (F09130) Date / Time: 04/08/2019 13:52:58, Monday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 06/30/2019 13:53:54, Sunday

Contact: Reference: Follow-up

J. Singleton (Unit 95F21)
Fire/Arson/Explosion Investigator
Harris County Fire Marshal`s Office
Office # 713.274.1660

On April 4th, 2019, I was contacted by Captain Weston assigning me to recover an original photo taken by a witness on this case. He let me know that contact information would be coming soon and to keep him updated on the recovery. On April 5th, 2019, I received contact information for the witness by Investigator Ledford. I was told he would be expecting me to contact him April 6th.

On April 6th, 2019, I made contact with Witness Michael Parker and we agreed to meet at his residence in the next hour. I traveled to his residence and Pearland and arrived at approximately 6:46 PM. Parker was very cordial and helpful in the investigation. He stated his phone was in a protective case and fell from his waist height. He did not immediately find the phone damaged. He attempted to use it a few hours later and realized it would not turn on. The Verizon employees told him the phone was damaged beyond repair. Parker stated the phone also had battery issues. I removed the device from the case and observed minor wear and tear damage to the device. It was an iPhone SE A1662. There was not apparent damage to the screen. I began to suspect a damaged battery or internal LCD. There was a high probability the phones board and memory was still operational. Parker agreed to let me take the device to the office and even provided a new battery for the device.

For the remainder of my shift on April 6th, I was unable to evaluate the device. It remained locked inside a storage compartment of my county issued vehicle. I am the only person who knows the combination to access the compartment. On April 8th, 2019 I was able to examine the device. I replaced the phones battery and temporarily installed a new LCD. The device powered on without issue and was operational. I used Oxygen Analyst to complete a classic logical extraction of the phone's data. The phone's IMEI is and running iOS 12.1.4. The screen was not password protected. The extraction was started at 5:47 PM and finished at 6:59 PM.

On April 9th, 2019, I reviewed the extracted data. I located several images, videos and messages related to the fire. Each of these were marked as `key evidence` in the Oxygen Suite. I prepared reports for the lead investigator. The original photos were extracted from /private/var/mobile/Media/DCIM. I placed a these photos on my network folder for access by other investigators. A copy will also be placed in the Adams Foray system. The device was saved to an .ofb (Oxygen Archive) to be sent to the HCFMO property room.

End of Supplement JS

Investigator Signature Supervisor Signature

April 9, 2019
Second 80s Tank Farm Examination
Investigator Hargraves



Harris County Fire Marshal's Office

OCA: 190300046

Printed: 11/20/2019 13:43

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/09/2019 07:00:00, Tuesday

Supervisor: PULLEY, K. (F09158) Supervisor Review Date / Time: 09/11/2019 11:05:42, Wednesday

Contact: Reference: Follow-up

Harris County Fire Marshal's Office Arson Bureau 2318 Atascocita Road Humble, TX 77396 Investigator Jim Hargraves, Jr. - 95F33

SUPPLEMENT:

On Tuesday, April 9, 2019 at approximately 07:00 hours, I, Investigator Hargraves, Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office did respond to 1943 Independence Parkway, which is in unincorporated Harris County. This was to conduct an origin and cause investigation for the fire that occurred at the tank farm belonging to Intercontinental Terminals Company, commonly known as ITC on March 17, 2019.

At approximately 08:00 hours, Chief Reed with the Harris County Fire Marshal's HAZMAT team conducted a safety briefing for the operations that were going to occur on site for that day. Operations teams were assigned to include representatives from the Harris County Fire Marshal's Office Investigation Division, an investigator with the Bureau of Alcohol, Tobacco, Firearms and Explosives, and representatives with ITC. I, Investigator Hargraves was assigned to Team #1. Team #1 consisted of the following personnel:

- " Investigator Jim Hargraves, Jr. HCFMO Investigations Division
- " Special Agent Eric Evers BATFE
- " HAZMAT Technician Jim Lanphear HCFMO HAZMAT Division

Team #1 was tasked with conducting the initial scene evaluation and to begin scene photographs. Prior to making entry into the tank farm all members of Team #1 were medically evaluated and cleared to make entry at the laydown yard. PPE was obtained and Team #1 donned the PPE and prepared for the entry. Team #1 was taken from the laydown yard and driven via John Deere Gator`s.

Team #1 made entry in to the tank farm assisted by ITC personnel at 09:47 hours. ITC personnel monitored air quality and assisted the team with locating tank 80-8. HAZMAT Tech Lanphear was also monitoring air quality and was also videotaping the entry using a GoPro Hero 7. The GoPro data was automatically stored onto a mini SD card and later transferred to the Harris County Fire Marshal`s Office Foray Digital Evidence System on the Harris County computer network.

Upon arrival at tank 80-8 the manifold was observed and photographs of the manifold were taken. The photographs were taken using a Cannon EOS Rebel T3. The photographs were automatically stored to an SD card and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network. After observing and documenting was complete, Team #1 exited the tank farm and decontamination was performed.

Harris County Fire Marshal`s Office

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/09/2019 07:00:00, Tuesday

Supervisor: PULLEY, K. (F09158) Supervisor Review Date / Time: 09/11/2019 11:05:42, Wednesday

Contact: Reference: Follow-up

At 10:11 hours, Team #1 was clear the scene and returned back to the laydown yard to doff the protective gear and brief the next team on what was needed to document.

Team #1 performed a second entry to continue documentation of the scene and to get pictures of other tanks that had been damaged by fire as exemplars. Again, prior to entry into the scene, all members of Team #1 were medically evaluated and cleared to make entry at the laydown yard. Team #1 was taken from the laydown yard and driven via John Deere Gator`s.

Team #1 made entry in to the tank farm assisted by ITC personnel at 13:24 hours. ITC personnel monitored air quality and assisted the team with locating tanks 80-10 and 80-11. HAZMAT Tech Lanphear was also monitoring air quality and was also videotaping the entry using a GoPro Hero 7. The GoPro data was automatically stored onto a mini SD card and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Upon arrival at tank 80-8, the photographs that were started by Team #3 were completed. The manifold at tank 80-10 was documented by photographs as an exemplar as well as the manifold for 80-11. All photographs were taken using a Canon EOS Rebel T3. The photographs were automatically stored to an SD card and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

After observing and documenting was complete, Team #1 exited the tank farm and decontamination was performed. At 13:53 hours, Team #1 was clear the scene and returned back to the laydown yard to doff the protective gear.

After the last entry it was determined that no further operations were needed into the tank farm and that the area was to be secured around the manifold of tank 80-8. This request was made and was to be worked on. The laydown yard was cleared of all HCFMO equipment and all personnel departed the area and returned to service.

--EOR-JOH 95F33

On April 9, 2019 at approximately 07:00 hours I, Lieutenant Gustavo Lopez, arrived at 1943 Independence Parkway and met with Hazmat, Chief Rodney Reed, and ITC personnel to go over the safety briefing in regards to the entries to be made for the origin and cause investigation. Team #2 consisted of HCFMO Hazmat Technician Slovarp and me. Two ITC personnel also entered and their job was to monitor air also, but not associated with HCFMO. Slovarp's assigned tasks were to monitor the air and record video via the GoPro. Prior to entry, I was medically evaluated and at 10:38 hours, Team #2 entered the hot zone and went to tank 80-8. I documented the

Investigator Signature Supervisor Signature

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Harris County Fire Marshal's Office

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Case Status: *ACTIVE* Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LOPEZ, G. (F09081) **Date / Time:** 04/09/2019 07:00:00, Tuesday

Supervisor Review Date / Time: 04/11/2019 09:45:58, Thursday Supervisor: HILTON, T. (F09136)

Contact: Reference: Follow-up

manifold with a Canon Rebel T-3 digital camera and the pictures are automatically saved on a SD card. The GoPro was a Hero-7 4k and video saved on a mini SD. Team #2 exited the tank farm and deconned at 11:08 hours. Team #2 then went to the laydown yard (where Hazmat and all the equipment located) to get medical evaluation and rehab. Other duties besides our entry consisted of assising other teams in donning and doffing hazmat suits and providing rehab. After operations were completed for the day, I went to 2322 Atascocita to submit the pictures and videos into Foray.

End of supplement.....

Investigator Signature

Supervisor Signature

April 9, 2019
Second 80s Tank Farm Examination
Investigator Ledford



Harris County Fire Marshal's Office

OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/09/2019 07:45:23, Tuesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:51:37, Monday

Contact: Reference: Follow Up Supplement

Follow Up Investigation Investigator D. Ledford 95F27 Harris County Fire Marshal's Office Fire/Arson/Explosion Investigations

On 04/09/2019 at 07:45 hours Investigator D. Ledford 95F27 arrived at 1943 Independence Pkwy., La Porte, TX 77571 in unincorporated Harris County. The site is referred to as the "laydown yard" by ITC employees and is near the 80's tank farm. This was in reference to Harris County Fire Marshal's Office (HCFMO) case number 1903-00046, Intercontinental Terminals Company (ITC) Fire Incident.

This location was being utilized as the command post/staging area for HCFMO Hazmat operation/investigations making entry into tank farm 80. Chief R. Reed 953 with Harris County Fire Marshal`s was command of Hazmat operations and Lieutenant G. Lopez 95F7 was command of Investigation operations.

Investigator Ledford assisted with setting up the staging area for HCFMO personnel and the donning of personal protective clothing as HCFMO team members prepared to enter the hot zone.

At 11:38 hours Investigator Ledford was cleared through medical and at 12:05 donned personal protective gear. At 12:37 hours Investigator Ledford along with HCFMO Hazmat Technician

S. Devries 95H14, and I.T.C. representatives entered tank farm 80. A series of digital photographs were taken by Investigator Ledford documenting the exterior of tank 80-8 from all sides showing a true 360 degree representation of tank 80-8. These photos were taken in a clockwise fashion starting at tank 80-8's manifold. Photos were taken using a Canon digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network. The task of photographing the exterior of tank 80-8 was documented by HCFMO Hazmat Technician S. Devries 95H14 utilizing a GoPro Black Hero, 4K. The digital information was saved directly to an internal mini memory card in the GoPro video camera. This information was later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Once photographs of tank 80-8's exterior had been completed, Investigator Ledford placed scene tape around the perimeter of tank 80-8's manifold, this tape was secured at one end of the manifold to itself around the pig trap, deployed around the exterior perimeter of the manifold and secured to itself around the metal staircase attached to the exterior of tank 80-8 on the opposite side of the manifold from the pig trap. This was documented by HCFMO Hazmat Technician S. Devries 95H14 utilizing a GoPro Black Hero, 4K. The digital information was saved directly to an internal mini memory card in the video camera. This information was later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Investigator Ledford then began a series of digital photographs documenting the surrounding area around tank 80-8 working in a clockwise fashion staring at the manifold on tank 80-8. Investigator Ledford was unable to complete the 360 degree documentation due to running out of time allowed to be inside the hot zone per hazmat command.

Investigator Signature Supervisor Signature

Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/09/2019 07:45:23, Tuesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:51:37, Monday

Contact: Reference: Follow Up Supplement

A blue flag on a wire was secured to the exterior piping of 80-8 on the opposite side from the manifold, this was used to mark the area of his last photograph for returning HCFMO investigators. Investigator Ledford, Hazmat Tech S. Devries and ITC representatives exited the 80's tank farm through the designated decontamination area, returned to the HCFMO command/staging area and reported to medical officer for clearance. Photos were taken using a Canon digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network. The task of photographing surround area around tank 80-8 was documented by HCFMO Hazmat Technician S. Devries 95H14 utilizing a GoPro Black Hero, 4K. The digital information was saved directly to an internal mini memory card in the video camera. This information was later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

Investigator Ledford assisted with demobilization of HCFMO Hazmat command/staging area and began site security of the "laydown yard" entrance per orders from HCFMO Captain M. Weston 95F1. Investigator Ledford remained at this post until relieved by Precinct 8 Constable Kelly Divine at 1600 hours. Investigator Ledford cleared the scene and returned to service.

End of Report JDL/95F27

Investigator Signature Supervisor Signature

April 9, 2019
Digital Media from Harris County Sheriff's
Office



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/09/2019 12:00:00, Tuesday

Supervisor: SCHOONOVER, S. (F09121) Supervisor Review Date / Time: 04/09/2019 20:56:46, Tuesday

Contact: Reference: Follow-up

SUPPLEMENT:

On Tuesday, April 9, 2019 at approximately 12:00 hours, I, Investigator Hargraves employed by the Harris County Fire Marshal's Office while out at 1943 Independence Parkway, which is in unincorporated Harris County was approached by Chief James Bolton also with the Harris County Fire Marshal's Office about a deputy having video of the fire that occurred on March 17, 2019. The video was contained on a WD My Passport 1TB portable hard drive. I was provided the portable drive by E.W. Robinson (81H73) who is employed by the Harris County Sheriff's Office in the SMAG Unit. I thanked him for the hard drive and I was instructed to place the item into evidence.

The portable drive was secured and later placed into evidence locker 1 in the Evidence Building located at 2322 Atascocita Road, which is in Humble, Harris County, Texas.

--EOR--JOH 95F33

Investigator Signature

Supervisor Signature

April 10, 2019
Examination of 2621 Tidal Rd. maintenance building by Investigator Hargraves



Harris County Fire Marshal's Office

OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/10/2019 07:00:00, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:47:18, Monday

Contact: Reference: Follow-up

SUPPLEMENT:

On Wednesday, April 10, 2019 at approximately 07:00 hours, I, Investigator Hargraves, along with Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office as well as ATF Agent Evers arrived at 1030 Ethyl Road, which is in Pasadena, unincorporated Harris County Texas, to conduct a site visit of the maintenance building belonging to Intercontinental Terminals Company.

At approximately 09:26 hours, the above group accompanied by Russell Lewis and Kelly Hanen arrived at the maintenance building and met with Carlton "Spud" Holmfeld, the maintenance manager, and mechanics Larry Kitchens and Josh Wilson. We asked to be shown and have explained the repair process. We were shown several items of machinery and the repair process was explained as well as parts used to make the necessary repairs. The items in the maintenance building were photographed as well as where the spare parts were located. Russell Lewis had to return to the main building in Pasadena, but Kelly Hanen remained with investigators and representatives of ITC until the site visit was complete. The motor used to drive the shaft was asked about and we were taken to an outdoor storage area that was covered by a tent that was open on both ends and exposed to the elements. The motors were then photographed including the data plates that were visible. After viewing the motors we all returned to the maintenance building and observed some pump and motor assemblies that were assembled. These were photographed as exemplars and the parts were explained by Homfeld and how they operate. After viewing the repair process, where the parts are stored and the storage area outside, the group departed the maintenance building and returned to 1030 Ethyl Road to drop off Kelly Hanen. At approximately 11:15 hours, Investigator Hargraves, Investigator Ledford, Lieutenant Lopez and Special Agent Evers and Kelly Hanen arrived back at 1030 Ethyl Road without incident and departed the location.

The digital photographs that show a true representation of the scene as viewed by Investigator Hargraves on Wednesday April 10, 2019 and were taken by Investigator Ledford using a Canon EOS Rebel digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

--EOR--JOH 95F33

Investigator Signature Supervisor Signature

April 10, 2019
Examination of 2621 Tidal Rd. maintenance building by Investigator Ledford



Harris County Fire Marshal`s Office

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/10/2019 09:30:01, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/16/2019 11:43:58, Tuesday

Contact: Reference: Follow Up Supplement

Follow Up Investigation Investigator D. Ledford 95F27 Harris County Fire Marshal's Office Fire/Arson/Explosion Investigations

On 04/10/2019 at 09:30 hours Investigator D. Ledford 95F27 toured the Intercontinental Terminals Company Maintenance Building located at 2621 Title Rd., La Porte, TX 77571 in unincorporated Harris County. This was in reference to Harris County Fire Marshal's Office (HCFMO) case number 1903-00046, Intercontinental Terminals Company (ITC) Fire Incident.

This tour was conducted by ITC supervisor C. Homfeld along with ITC employee L. Kitchens, J. Wilson and legal representative K. Hanen.

HCFMO Investigators J. Hargraves and Lt. G. Lopez along with A.T.F. Agent Evers were also in attendance.

Investigator Ledford along with all parties listed above arrived at the ITC Maintenance Building at approximately 09:40 hours and began the tour in the main "shop" area utilized for building and repairing equipment used in the daily operations of ITC. The objective of this tour was to document the work stations, repair process and parts storage within the maintenance building. During this tour Investigator Ledford also documented an outside storage area behind three conex boxes near the maintenance building, this area was being used to store equipment utilized throughout the ITC plant, along with other maintenance equipment utilized in the daily operations of ITC. Documentation was accomplished by Investigator Ledford through a series of photographs. These photos were taken using a Canon digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

At approximately 10:55 hours the tour was completed and Investigator Ledford, Hargraves, Lopez and Agent Evers returned to the ITC Command Post.

End of Report JDL/95F27

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OCA: 190300046

April 10, 2019 Review of "ITC HCFM 613"



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/10/2019 16:00:00, Wednesday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:50:50, Monday

Contact: Reference: Follow-up

SUPPLEMENT:

On Wednesday, April 10, 2019 at approximately 16:00 hours, I, Investigator Hargraves, along with Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office did review documentation received from Intercontinental Terminals Company, or ITC in regards to the fire that occurred on March 17, 2019. This review was conducted at the Harris County Fire Marshal's Office located at 2318 Atascocita Road, Humble, Texas.

The document reviewed was labeled "ITC_HCFM_613". This data was collected by the computer system maintained and owned by ITC. It was supplied as requested by subpoena by the law firm Baker Botts who is a firm representing ITC. The data for the tank starts on March 10, 2019 at approximately 00:00 hours, or Midnight and runs to March 22, 2019 to approximately 00:05.

--EOR-JOH 95F33

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April 11, 2019 Return of iPhone SE to Michael Parker



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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Harris County Fire Marshal's Office

Investigator: SINGLETON, J. (F09130) Date / Time: 04/11/2019 07:32:53, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/11/2019 09:44:31, Thursday

Contact: Reference: Follow-up

On April 11th, 2019, at approximately 7:33 AM, I met with Deer Park Paramedic Michael Parker at his fire station at 2211 E X St. I provided him with his iPhone SE and old phone battery. He accepted the device and thanked our office. He was happy to help. I made suggestions for him to retrieve the photos from the device through iCloud backup.

End of Supplement

JS

April 11, 2019 Review of ITT PRO Facility, Sugarland, TX



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: LEDFORD, J. (F09171) Date / Time: 04/11/2019 09:54:46, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/16/2019 11:45:07, Tuesday

Contact: Reference: Follow Up Supplement

Follow Up Investigation Investigator D. Ledford 95F27 Harris County Fire Marshal's Office Fire/Arson/Explosion Investigations

On 04/11/2019 at 09:54 hours Harris County Fire Marshal's Office Investigators D. Ledford 95F27, J. Hargraves 95F33 and Lt. G. Lopez 95F7 toured the ITT PRO facility located at 12510 Sugar Ridge, Stafford, TX 77477 in unincorporated Harris County. This was in reference to Harris County Fire Marshal's Office (HCFMO) case number 1903-00046, Intercontinental Terminals Company (ITC) Fire Incident.

Investigators arrived at the ITT PRO facility at approximately 09:45 hours. The focus of the tour was the main "shop" area utilized for building and repairing pumps, valves and monitoring/control equipment for plant optimization and efficiency systems. The objective of this tour was to document Gould pumps and there capabilities. Documentation was accomplished by Investigator Ledford through a series of photographs. These photos were taken using a Canon digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and later transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

At approximately 11:35 hours the tour was completed and Investigator Ledford, Hargraves, and Lopez returned to service.

End of Report JDL/95F27

Investigator Signature

Supervisor Signature

April 11, 2019
Interview with John Ball
Interview with Gabriel Ramirez



Harris County Fire Marshal's Office OCA: 190300046

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/11/2019 15:38:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:49:31, Monday

Contact: Reference: Follow-up

SUPPLEMENT:

On Thursday, April 11, 2019 at approximately 15:38 hours, I, Investigator Hargraves, along with Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office arrived at 1030 Ethyl Road, which is in Pasadena, unincorporated Harris County Texas, to conduct interviews at Intercontinental Terminals Company, or ITC. It should be noted that the interviews were recorded and later uploaded to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network.

**INTERVIEW OF JOHN BALL - P#

At approximately 15:38 hours I, along with Investigator Ledford, Lieutenant Lopez and Mike Strike with Phelps Dunbar interviewed John Ball. Ball is employed as a millwright and has been with ITC for approximately 10 years. He stated that he remembered working on the pump for tank 80-8 and that he found that it was making a noise. He said that to him it sounded like a bearing going out. Ball was asked if a seal went out if it would make the same noise as a bearing and he said no. He said that if the bearings are going out, it makes a vibration that you can feel. I asked if it was common to change bearings or pumps out frequently and he said that he stays busy, but could not say if that specific pump was troublesome or not.

I asked if he was tasked with rebuilding a pump if he completed it himself or did he let other people complete his work and he said that if he starts it, he finished it. I asked that when he completed a pump rebuild if there was a tag or was it preserved in any way to mark it as being rebuilt and he said that he sometimes tags a completed rebuild, but there is not a procedure in place to do it. I asked how he inspects the pump to see if it is bad or not and he said that he can turn the shaft and if it turns, it is good and if it doesn't turn it is bad. He said that usually when a pump is bad, they remove it from service and place the spare in service and the bad one is then rebuilt to become a spare. He said the pump is completely gone through and those parts that can be reused are, and those that cannot be reused are replaced with new parts. I asked if he remembered where he got the spare from 80-8 to replace the bad pump came from and he said that he could not remember where he got it.

Ball was asked how he got the order to change out the pump and he said that he received the work order from Larry Kitchens on December 4, 2018. He said that he got with Operations and got on the LOTO, which is a lock out, tag out. He said that the pump was making a noise and that he was assisted by two other millwrights Anders and Robles. It should be noted that Anders and Robles have been previously interviewed. He said that he, Anders, and Robles went out to the tank 80-8 at approximately 14:30-15:00 hours and found that the LOTO was not complete and Ball stated that he said for Operations to call him when they were ready and they left. He said that they returned at approximately 17:30-18:00 hours and started the process of removing the pump. He said that the pump was removed and taken to the shop. He then said that the spare came out of the Conex box and the spare was taken to 80-8 and put everything back together. He said that they then set clearances used the crane to set it in place. He said that they then aligned the pump and again checked clearances. He said that the seal pot was then filled and

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/11/2019 15:38:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:49:31, Monday

Contact: Reference: Follow-up

they got off of the LOTO and left the tank farm.

The lighting was called into question and he stated that the area lights were sufficient to illuminate the work area and that they did not have any supplemental light to complete their tasks. I asked how he comes to know that a pump needs work and stated that all of the requests come through the work orders. He said that usually the work order will stated that the pump is making a noise and that the millwright then goes to investigate the noise to isolate what the issue is. He said that on December 4, 2018 he went to check the noise and through his investigation he felt a vibration which is indicative of a bearing going out. He said that the vibration check is done by feel.

I asked what the seal pot was filled with and he said that it is filled with Glycol and water. I asked about the seal housing that is used to seal the pump and he said that part they do not repair. They remove a new one from the box and replace it with the bad unit and send it back to the vendor to be repaired. I asked if the ports for the coolant are marked on the seal housing and he said that they are marked in and out. He said the reason that part is replaced is that it has to be removed to rebuild the "power end" of the pump. He said that once it is replaced, the nuts are tightened in a "X" pattern to ensure an even crush on the gasket. I asked about the studs that are used to guide the seal housing as well as secure it to the pump if there was any protrusion above the nut and he said no, that they are usually flush. I asked if new studs are put in when the seal housing is changed and he said no, they are left in the pump and reused. He said to the best of his knowledge the nuts are stainless steel as well as the flat washers, but he did not know if the studs were or not.

**INTERVIEW OF GABRIEL RAMIREZ - P#

At approximately 16:26, I, Investigator Hargraves interviewed Gabriel Ramirez along with Lieutenant Lopez, Investigator Ledford, and Mike Strike with Phelps Dunbar. Gabriel Ramirez is employed by ITC as a Maintenance Electrician. HE has been with the company for a year and seven months. He has been an electrician for 8 years and is an Apprentice Electrician. He stated that he is working toward getting his State license.

He said that his job is to review work orders and perform the tasks as assigned. He said that work comes from his supervisor, Travis Williams. He said that they all get their orders in the morning and everyone gets to work on a little bit of everything within the facility. I asked if he has experience working with 3-Phase power and assemblies and he stated that he did.

The work Order for May 17, 2018 was reviewed and on that document it stated issues with grounding within the 80's tank farm. He stated that they checked the tanks and replaced wiring and ground rods as needed. I asked what would indicate a bad reading and he stated anything over 15 ohms would be bad and anything 15 and under would be a good reading. On the work order it said that some tanks were still giving bad reads, and he said that meant that they were still working on that issue and did not complete the full task that day.

The next work order reviewed was for March 21, 2018 and it read that the cathodic labels were worked on. He

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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/11/2019 15:38:00, Thursday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:49:31, Monday

Contact: Reference: Follow-up

said that was due to an audit of the facility and that they were tasked with making sure that all cathodic boxes were labeled. I asked what was in a cathodic box and he said that was the grounding for the tank. He said that within the box is a cooper bar where the lugs are attached.

The next work order reviewed was for December 16, 2018 and was for the motors on 80-8 and 80-10 not starting. Ramirez said that these two motors were fed from the same breaker. I asked what a cut-out was and he said that it is a fuse. He said that there are three cut-outs that have to be removed in order to reset the breaker. He said that they will then test the motors by starting and then stopping them in the field and then remotely starting and stopping from the CCR. He stated that the motor voltage is checked on the "LINE" side. He then said that they usually stay with the motor to make sure that everything is working correctly. I then asked what "MEG" meant and he said that it was an insulation tester and he said that the cables and motor are checked and that is what is meant by "MEGGING".

I asked if he knew the amperage rating for the cut-outs and he said that he did not. He said that when they are dialed up that the limits were turned up and asked what that meant. He said that it is due to multiple motors being run on ne breaker. He said that the limits are dialed up in order to stop the breaker from tripping, but it will not exceed the maximum allowable amperage or temperature that the breaker is rated for. He further explained if the cut-out is rated for 1000A, it will not exceed 1000A. He further stated that when it is hot outside, that they get more tripped breakers than when it is cool. He said that was due to the breaker having an amperage rating as well as a temperature rating and if either is met the breaker will trip.

It should be noted that at approximately 16:52 hours the recorder was found to be inoperable due to a dead battery. Approximately 13 minutes of the 26 minute interview were captured. Batteries were replaced and the recorder was found to be functioning properly.

--EOR-JOH 95F33

Investigator Signature

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April 11, 2019 Interview with James Hickey



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Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/12/2019 07:12:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:50:27, Monday

Contact: Reference: Follow-up

SUPPLEMENT:

On Friday, April 12, 2019 at approximately 07:12 hours, I, Investigator Hargraves, along with Investigator Ledford and Lieutenant Lopez all employed by the Harris County Fire Marshal's Office arrived at 1030 Ethyl Road, which is in Pasadena, unincorporated Harris County Texas, to conduct interviews at Intercontinental Terminals Company, or ITC. It should be noted that the interviews were recorded and later uploaded to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network. Kent Afton with Baker Botts, LLC was also in the room while the interview was conducted. Baker Botts, LLC is one of the firms representing the company.

**INTERVIEW OF JAMES HICKEY - P#

At approximately 07:12 hours, James Hickey was the last of the interviews conducted at ITC. He is employed by ITC as a maintenance electrician and has been with the company for approximately 3 years. He is a Journeyman electrician and is State licensed. He also holds an industrial certification through NCCR.

The work order bearing his name dated December 12, 2018 was reviewed and was discussed with him. This is the order that says the breaker was dialed up to the maximum. He stated that the breaker has numbers on it and when dialed up it is the maximum that it can be turned to. He said this is done for the end rush meaning the spike in amperage that occurs when the motor is started. He said that is why the breakers are turned up to offset the end rush. He said that on a 1200A breaker the end rush could be up to 2000A, but that the breaker only sees it for a moment and then the load stabilizes. He said that he could not say what the breaker was set too, because he did not know what the maximum end rush would be

The next work order that was reviewed was one dated November 12, 2018 and this one said that something was wound too tight. He stated that statement came from an operator and that he did not know what was meant by that statement either. He said that he remembered that the pump and motor on tank 80-8 ran loud, but that it was nothing that sounded out of the ordinary. He also said that some of the motors have a Variable Frequency Drive installed, that allow a soft start and stop, but the motor on tank 80-8 had a starter and that meant it was an instant on. He said that when they are called out they test on the motors and if no issues are found they call the millwrights to check the mechanicals of the pump. He said that nothing sounded out of the ordinary to him or the millwrights.

The next work order that was reviewed was one dated July 4, 2018 and it was for a breaker issue. He said that there had been a new install performed and that if you attempt to run all of the pumps at the same time it will cause the breaker to trip. He also said that temperature is a factor as well. He said that during the summer months they receive more calls for tripped breakers than when the temperatures are cooler.

The next order that was reviewed was dated December 16, 2018 and this was reporting an issue with breakers

Investigator Signature Supervisor Signature

Harris County Fire Marshal's Office OCA: 190300046

THE INFORMATION BELOW IS CONFIDENTIAL - FOR USE BY AUTHORIZED PERSONNEL ONLY

Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 04/12/2019 07:12:00, Friday

Supervisor: HILTON, T. (F09136) Supervisor Review Date / Time: 04/15/2019 14:50:27, Monday

Contact: Reference: Follow-up

tripping. He stated that they pulled the cut-outs and reset the breakers and it held. He said that the issue was during the night with one pumper and that they had resolved the issue with them trying to start too many pumps at one time. I asked about the settings on the breaker and he said that they are setting for temperature and time. He said the max temperature is set due to the warm weather and that the time is set to max to allow for more end rush before the breaker trips.

He said that the reason for them setting the time and temperature settings to the maximum is that it is difficult to get to the breakers to reset them. He said that they are directly above a pipe rack and right above the transformer bank is the main supply line which is rated at 7000V. He said with the difficulty in getting to the breakers, they are set to the max, and it is a guess sometimes, because they cannot measure the end rush due to the proximity of the 7000V line. I asked about the new install mentioned earlier and he said that Daycon had done a new install on the breakers in August of 2018. He said that shortly after the new install, the issues with the breakers tripping started to occur.

I asked about why the start/stop stations were being moved and he said that it was due to a safety issue that Exxon had. The company decided to follow the same procedures by moving the start/stop stations away from the manifolds so that if a hazard was found the operator was away from the hazard area and could safely shut down the process.

--EOR--JOH 95F33

Investigator Signature

Supervisor Signature

May 14, 2019 Demolition fire at 80s tank farm



OCA: 190300046 Harris County Fire Marshal's Office

THE INFORMATION BELOW IS CONFIDENTIAL - FOR USE BY AUTHORIZED PERSONNEL ONLY

Case Status: ACTIVE Case Mng Status: ACTIVE **Occurred:** 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: WESTON, M. (F09040) **Date / Time:** 05/14/2019 13:45:54, Tuesday

Supervisor Review Date / Time: 05/15/2019 10:28:44, Wednesday Supervisor: HILTON, T. (F09136)

Contact: Reference: Follow-up

On Tuesday, May 14, 2019 at 11:52 hours Captain M. Weston received an E-Notify notification of small fire that occured in the 80's tank farm at ITC Deer Park 1943 Independence Parkway. The fire was reported to have occured during demolition of the tanks that were involved in the fire that initiated on March 17, 2019. Lt. T. Hilton and Captain Weston responded to the location of the 80's tank farm ITC Deer Park. Upon arrival Lt. Hilton met with ITC Sr. VP Brent Weber. Weber stated that a fire occured in tank 80-15 during the demoliton process.

Lt. Hilton identified and interviewed heavy equiment operator Steven Childers. Mr. Childers stated that he was using a track hoe to demolish the remains of tank 80-15 when the residual product in the tank ignited. Mr. Childers stated that the stand by fire suppression team (US Fire Pumps and ITC ERT) quickly extinguished the flash fire within minutes.

Mr. Childers works for HazMat Special Services.

Lt. Hilton took a series of digital still images from the exterior of tank farm 80's as part of the documentation process. The images will be uploaded to the Foray image management system.

end MRW / 95F1

Investigator Signature

September 10, 2019 Examination at Stress Engineering Services



Harris County Fire Marshal's Office OCA: 190300046

THE INFORMATION BELOW IS CONFIDENTIAL - FOR USE BY AUTHORIZED PERSONNEL ONLY

Case Status: ACTIVE Case Mng Status: ACTIVE Occurred: 03/17/2019

Offense: FIRE (UNDETERMINED)

Investigator: HARGRAVES, J. (F09168) Date / Time: 09/10/2019 08:30:00, Tuesday

Supervisor: PULLEY, K. (F09158) Supervisor Review Date / Time: 09/11/2019 11:04:59, Wednesday

Contact: Reference: Follow-up

Harris County Fire Marshal's Office Arson Bureau 2318 Atascocita Road Humble, TX 77396 Investigator Jim Hargraves, Jr. - 95F33

SUPPLEMENT:

On Tuesday, September 10, 2019 at approximately 08:30 hours, I, Investigator Hargraves along with Chief Weston, both employed by the Harris County Fire Marshal's Office did take photographs of items retrieved from the ITC tank farm from Tank 80-8. A series of digital photographs that show a true representation of the items as viewed by Investigator Hargraves on Tuesday, September 10, 2019 and was taken by Investigator Hargraves using a Canon EOS Rebel digital camera with an internal flash. The images were captured directly to an internal memory card in the camera and transferred to the Harris County Fire Marshal's Office Foray Digital Evidence System on the Harris County computer network. A list of items retrieved was obtained from Cody Robinson with Stress Engineering Services and has been added to this supplement.

A list of those present is as follows:

Cody Robinson - SES - P# 281.955.2900 - cody.robinson@stress.com

Dan McCall - ITT - P# ______ - daniel.mccall@itt.com

Jim Hargraves, Jr. - HCFMO - P# - jim.hargraves@fmo.hctx.net
Mitchell Weston - HCFMO - P# - mitch.weston@fmo.hctx.net

Ben Gonsoulin - Baker Botts - P# - ben.gonsoulin@bakerbotts.com

--EOR-JOH 95F33

Investigator Signature

Supervisor Signature

Canine Report



A G E N F C Y	Agency Name HARRIS COUNTY FIRE MARSHAL`S				CALLOUT CANINE REPORT				1903-00046			
	ORI TX 1015600								Incident Type FIRE (UNDETERMINED)			
D E P L I	Incident Location	POF	RTE TY 77571			Incident Date 03/17/201	Incident Date 03/17/2019 12:48					
	Location of Canine Activity											
Ō N Y F M O F	N 1943 INDEPENDENCE PKWY, LA PORTE 77571 Call Out Time									ather		
M O E N T	03/17/2019 03/18/2019 12:48 10:39			03/18/		18/2019 0:40	0.02 Hours					
	ACTIVITY TYPE	<u> </u>	CNT LO	C TYPE	OUTCOME			STANCE FOUND	AMOUNT	UNIT	VALUE	
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A C												
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V I												
T Y												
	Supplement Re	port K9	Depl	nume.	nt							
	Supplement Report K9 Deployment K9 Handler/Investigator E. Tessier 95K1											
	Harris County Fire Marshal`s Office Fire/Arson/Explosion Investigations											
		On March 18, 2019 at 1039 hours I received a phone call from Cypress Creek Emergency										
N	Communications in regards to an industrial chemical facility fire investigation located at 1943 Independence Parkway South in unincorporated Harris County, Texas. I contacted											
Α	Investigator D. Lee by cell phone who advised me that the fire occurred in a chemical											
R R	storage tank. Investigator Lee stated the fire was still burning.											
A T	I advised Investigator Lee the canine team would not be responding to the scene due to the fact the fire was still burning.											
I V			5 501.	LI Durining.								
E End of Supplement												
	Officer Mary - (ID II) / O				Officer Ci			1 0	hiro			
I D	Officer Name (ID #) / Canine TESSIER, E. (F0909	90) / DELT	-A		Officer Signature			Supervisor Signa	ure			
	Date/Time Submitted	,			Case Status		Case Disposition	Imanila / No Co d	du 🗆 -	troditio - D	oclinad	
T A T U S	03/18/2019 10:40 Evaluation Type					- · · · · · · · · · · · · · · · · · · ·						
U S					Closed / Cleared Closed / Leads Exhau		Cleared By Arre Death of Offeno	est by Another Agency der Prosecution	Declined	Pa	ge _ 1	

Bureau of Alcohol, Tobacco, Firearms and Explosives

Case Number 782035-19-0029



ITC Tank Farm Fire



Harris County Fire Marshal Incident #1903-00046



ATF Case Number 782035-19-0029

U.S. Department of Justice

Bureau of Alcohol, Tobacco, Firearms and Explosives

Report of Investigation

Title of Investigation: ITC Tank Farm Fire	investigation Number: 782035-19-0029	Report Number:
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CAUSE AND ORIGIN REPORT

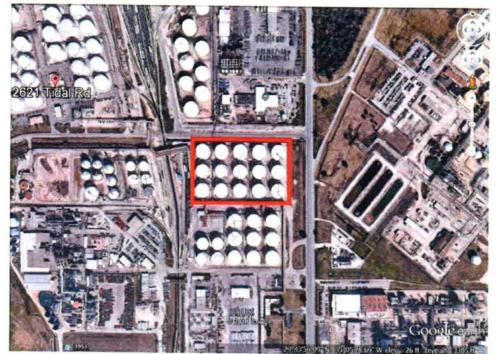
DESCRIPTION OF ACTIVITY:

ATF Certified Fire Investigator (CFI) and Harris County Fire Marshal's Office Origin and Cause Determination, 782035-19-0029.

SYNOPSIS:

1. On March 17, 2019 a fire occurred at the Intercontinental Terminals Company, LLC, located at 2621 Tidal Road, Deer Park, Texas 77536, Harris County, Southern Judicial District of Texas. A secondary address for ITC is 1943 Independence Parkway, La Porte, TX 77571. This fire burned for well over a week with intermittent flare ups. Entry by fire scene origin and cause investigators was substantially delayed by hazardous materials remediation efforts. Between product loss, infrastructure loss, environmental cleanup, and impact upon international shipping as a result of water runoff into the Houston Ship Channel, the dollar loss will be substantial. The fire is classified as ACCIDENTAL.

Prepared by:	Title:	Signature:	Date:	
Eric E. Evers	Special Agent, Houston III Field Office	E. E. E.	8-14-1	
Authorized by:	Title:	Signature:	Date:	
Alfred L. Parker II	Group Supervisor, Houston III Field Office	te	8/14/19	
Second level reviewer (optional):	Title:	Signature:	Date:	
Frederick J. Milanowski Jr	Special Agent in Charge, Houston Field Division	ATF EF 3120 2 (10-2004) For Official Use Only		



Google Earth Pre-Fire Overview of Intercontinental Terminals Company, LLC

STATUTORY AUTHORITY:

2. The Harris County Fire Marshal's Office is typically the lead investigative agency for all fire related incidents in the unincorporated areas of the county that are not overlapped by a municipality.

LOCAL GOVERNMENT CODE

TITLE 11. PUBLIC SAFETY

SUBTITLE B. COUNTY PUBLIC SAFETY

CHAPTER 352. COUNTY FIRE PROTECTION

SUBCHAPTER B. COUNTY FIRE MARSHAL

Sec. 352.013. INVESTIGATION OF FIRES. (a) The county fire marshal shall:

- (1) investigate the cause, origin, and circumstances of fires that occur within the county but outside the municipalities in the county and that destroy or damage property or cause injury; and
 - (2) determine whether a fire was the result of negligent or intentional conduct.
- (b) The commissioners court of a county, with the advice of the county fire marshal, shall adopt rules and procedures for determining which fires warrant investigation by the county fire marshal. The county fire marshal shall begin an investigation within 24 hours after the receipt of information regarding a fire that warrants investigation under commissioners court rules and procedures. The 24-hour period does not include a Sunday.

Title of Investigation:	Investigation Number:	Report Number:
ITC Tank Farm Fire	782035-19-0029	2
		<u> </u>

- (c) In the performance of official duties, the county fire marshal, at any time of day, may enter and examine a structure where a fire has occurred and may examine adjacent premises.
 - 3. The United States Department of Justice, specifically the Bureau of Alcohol, Tobacco, Firearms and Explosives derives statutory authority from:

United States Code> Title 18 > Part 1 > Chapter 40 > § 844

(i) Whoever maliciously damages or destroys, or attempts to damage or destroy, by means of fire or an explosive, any building, vehicle, or other real or personal property used in interstate or foreign commerce or in any activity affecting interstate or foreign commerce shall be imprisoned for not less than 5 years and not more than 20 years, fined under this title, or both; and if personal injury results to any person, including any public safety officer performing duties as a direct or proximate result of conduct prohibited by this subsection, shall be imprisoned for not less than 7 years and not more than 40 years, fined under this title, or both; and if death results to any person, including any public safety officer performing duties as a direct or proximate result of conduct prohibited by this subsection, shall also be subject to imprisonment for any term of years, or to the death penalty or to life imprisonment.

NARRATIVE:

- 4. On March 17, 2019, at approximately 1000 hours, employees of Intercontinental Terminals Company, LLC (ITC) reported a fire in an area of fifteen storage tanks identified as The Second 80's and specifically, on the manifold of tank 80-8. Witnesses stated that low water pressure hampered initial efforts to suppress the fire. The Deer Park Fire Department along with Channel Industries Mutual Aid (CIMA) responded to the fire.
- 5. The fire proved extremely difficult to extinguish and burned for approximately one week with additional flare ups. Tank 80-8 was near capacity containing 75,000 barrels of Naphtha or roughly 3,150,000 gallons of product. The initial tank fire spread into neighboring tanks containing Toluene, Gas Blend, Xylene, Pyrolysis Gasoline (Pygas), and base oils.
- 6. On March 17, 2019, the Harris County Fire Marshal's Office (HCFMO) commenced initial investigative activities under the legal authority of exigent circumstances. This transitioned to written consent provided by Russel Lewis of Baker Botts, LLC, and Lead Counsel for ITC.
- 7. On March 21, 2019, the Harris County Fire Marshal's Office requested the assistance of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) Houston Group III. As a result of the anticipated delay to gain entry into the scene, and the number of interviews thus far conducted by HCFMO, investigators deemed that the ATF National Response Team would not be needed.
- 8. On April 9, 2019, initial scene entry was made and the onsite fire scene examination began. These efforts concluded on April 10, 2019. As this was a hazardous materials scene, activities by the investigators were restricted and cumbersome thus limiting time in the scene and the types of tools and electronic equipment that could be taken into the general area of origin.

PARTICIPATING FIRE INVESTIGATORS:

- HARRIS COUNTY FIRE MARSHAL'S OFFICE:
 - Chief James Bolton
 - Captain Mitch Weston
 - Lieutenant Gustavo Lopez
 - Investigator Jim Hargraves Jr.
 - Investigator Dustin Ledford
- 10. HARRIS COUNTY HAZARDOUS MATERIALS RESPONSE TEAM:
 - Sign in sheet available upon request
- 11. BUREAU OF ALCOHOL, TOBACCO AND FIREARMS:
 - Special Agent Eric E. Evers, CFI
- 12. INTERCONTINENTAL TERMINALS CORPORATION, LLC:
 - Jesus Bravo
 - Hector Cadena
 - Rafa Garcia

WITNESS STATEMENTS:

- 13. The following are synopses of interviews conducted by the HCFMO as a part of the origin and cause investigation. Only relevant facts that relate to the origin and cause investigation have been included. Complete reports related to these interviews can be found in the files of the HCFMO and are identified by name, date and recording number. Multiple interviews may be included in a synopsis.
- 14. Employee Jesus Bravo, 03-28-19, #WS400100. Mr. Bravo stated that he is the Safety Specialist and has been employed by ITC for four years. All work orders must go through him as he has to issue a permit and tools to conduct repairs. There was no maintenance being conducted on the day of the fire.
- 15. Employee John Burditt, 03-27-19, #WS400095. Mr. Burditt stated that he is a Shift Manager for Crew 1 of the Operations Division and has been employed by ITC for fourteen years. He had worked the night shift and been relieved by Tim Guidry. The tank structure contains an internal floating roof with a solid roof over that. Pipeline Intervention Gadgets (PIGs) are only used when a tank is taken out of service. They are made of foam and are disposable. None were in use at tank 80-8.
- 16. Employee Tim Guidry, 03-27-19, #WS400096. Mr. Guidry stated that he was the Supervisor on duty for the weekend and has been employed by ITC for ten years. He relieved Mr. Burditt on Friday. There were no repairs being done in the terminal the day of the fire. The weather was not significant. Safety practices ensure that any employee can shut down an entire action if that employee deems the situation unsafe. On Saturday March 16, 2019, at 2230 hours, tank 80-8 was almost filled to capacity at 75,000 barrels of Naphtha leaving an estimated head space of 5,000 barrels. A second batch of Butane was being mixed into the Naphtha which requires that the pump continuously run for at least eight hours. Mr. Guidry was on the

2

80's tank farm doing chores. He heard a sound like two rail cars coupling, a sound that is not normal in or around the tanks. He was at ground level with a concrete wall approximately 7' tall blocking his view. He heard a loud pop and almost instantaneously saw fire at the manifold system to tank 80-8. He then began firefighting operations with stationary fire equipment.



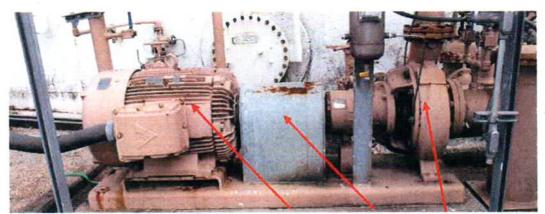
Early Photograph of Fire at Manifold Tank 80-8

- 17. Employee David Joseph Capetillo, 03-27-19, #WS400097. Mr. Capetillo stated that he has been employed by ITC for four years. He had been informed that product was being moved at tank 80-21. He began to program the stops related to this activity. Tank 100-143 was not communicating with the control room so the tank had to be physically inspected every two hours. There were no scheduled blendings, reported problems, PIGs in use, or injections scheduled in the 80's for the weekend. He heard Tim Guidry on the radio state that there was a "real bad fire" in the 80's. After retrieving his firefighting bunker gear from the firehouse, he made his way to the area in a company truck. He did not see anyone in the area to include Tim Guidry. He observed fire at the manifold and pump station of tank 80-8. He attempted to utilize the firefighting monitors at tank 80-10 and 80-7. He saw the insulation on tank 80-11 begin to burn from radiant heat exposure and then the escaping vapors at the top of the tank ignite. He thinks he was the first person on scene and did not see anyone else. There was a whistling sound emanating from tank 80-8. He did not hear a pinging sound which would have been indicative of boiling liquids.
- 18. Employee Jeremy Dickerson, 03-18/21/28-19, #WS400100. Mr. Dickerson stated that he is a Pumper and has been employed by ITC for eighteen years. He was in the Control Room with Steve Mathias when the fire started. When there is an issue in the tank farm, the monitoring screens will flash and ring to indicate a problem. There were no such warnings signaled via the control system. He heard over the radio about the fire when Tim Guidry reported it. He went to the 80's to help fight the fire. He observed some fire at 80-11 but mostly at 80-8. He utilized the fire monitor at tank 80-9 but the water stream would not reach so he attempted to bank the water off of 80-11 to reach 80-8. He did not observe anyone else in the area while attempting to fight the fire. At the time of the fire, he was not aware of any reported mechanical issues related to tank 80-8. He stated that back in December of 2018, the pump had been taken out of service for making noise. There were no alarm communications from tank 80-8 to the control room. No PIGs were being used. He was aware that a pump repair had been completed on 80-8 within the last few months.
- 19. Employee Steve Mathias, 03-29-19, #WS400103. Mr. Mathias stated that he is a Control Room Operator and has been so employed for thirty-four years. He was in the Control Room with Jeremy Dickerson. He was watching five computer screens which indicated everything was normal and there were no alarms activating. He was alerted to the fire by means of the radio as was Mr. Dickerson. He looked at the control screen for tank 80-8 which was green and indicated that everything was in a normal operational mode. A

pump for any particular tank is set to be considered in the normal range up to 130°F. The pump should set off alarms when in between 130°F and 150°F. It should shut off at 150°F. The data as related to this incident and elsewhere on the facility is captured by the "Trend System".

- 20. Employee Sam Kerr, 04-01-19, #WS400114. Mr. Kerr stated that he is the Marine Coordinator and has been employed by ITC for forty years. He was in the Traffic Building when he heard the fire reported over the radio. He took actions to shut down all pumping operations to ships in the Houston Ship Channel. Upon his questioning, no one remembered turning off the pump at tank 80-8 so he gave the order to do so.
- 21. Employee Carl E. Holley, 03-28-19, #WS400101. Mr. Holley stated that he is the Vice President of Safety, Health and Operations and has been employed by ITC for thirty-eight years. He was alerted to the fire by a telephone call while he was at home. Upon his arrival to the tank farm, he observed copious amounts of smoke and a pool fire at 80-8. He also observed a flange fire above the pool fire approximately 3' to 6' above the ground. He believes the cause of the fire to be an equipment failure at either a flange or a gasket.
- 22. Employee Matthew Anders, 04-01-19, WS#400120. Mr. Anders stated that he works on pumps and has been employed by ITC for four years. He worked on the pump for tank 80-8 in December 2018. He typically replaces bearings and seals and if the parts are out of tolerance they are discarded. At the time of the performed maintenance, he inspected the pump, ran it and did not hear any noise. So he only replaced the two stage seal and did so on site. He did not have to remove and replace the power frame (electric motor, coupling and pump affixed to a skid) in order to complete the repair. He then spins the shaft by hand to feel for any problems which he did not detect. The system was charged to 100 psi with no leaks at any flanges or connection points. There are heat sensors before and after the pump which were not disconnected to perform the maintenance. While the repairs were being made, the data continues to transfer with a constant flow of information to the Control Room. He identified the pump as being an XLTX/Gould.
- 23. Employee Chris Robles, 04-01-19, #WS400120. Mr. Robles stated that he works as an Area Technician in maintenance and has been employed by ITC for approximately eight months. He assisted Mr. Anders with the repair of the pump at tank 80-8 in December. He did not recall much about the repair conducted of the pump other than no heavy equipment was utilized. The power frame remained in place with the repair being conducted on site.
- 24. Employee Carleton Homfeld, 04-03-19 and 04-10-2019, WS#400118, WS#400119. Mr. Homfeld stated that he is Director of Maintenance and has been employed by ITC for thirty-nine years. He is aware that maintenance had been performed on the pump for tank 80-8 in December of 2018 for what he believed to be noise resulting in an imminent bearing failure and subsequent replacement. However, he is not aware of any recent issues with the pump.
- 25. On April 10, 2019, Mr. Homfeld provided investigators with a tour of the Maintenance Building and of the surrounding yard containing various power frames, pumps, motors and other items associated with the manifold systems. Mr. Homfeld stated the following to investigators. A power frame consists of an electric motor with a coupler and a pump attached to a skid. There are various power frames as spares to replace units at various tanks when major maintenance is necessary. The electric motor is typically rated at 200 horsepower with a 15" impeller in the pump housing. The motor and wires are sealed from vapors with a Class 1 rating which is explosion proof for both dust and vapor. A coolant system is over the seal to the pump. There is an oil inlet with a return line to a tank affixed to the manifold system. The coolant system is what keeps the seal within temperature ratings while the shaft rotates inside the seal kit. When

maintenance is conducted, the seal and bearing are provided in a kit supplied by Chesterton®. The surfaces are cleaned but typically not in need of resurfacing. Anti-seize is placed on the connection points. The old assembly is then placed back into the box, which has a label that specifically states "Place Used Seal in This Box". The used kit is then sent back to the company for refurbishing. Various specifications can be assigned to the old parts in need of refurbishing. Typically they require Chemraz® quality as this withstands the exposure to the majority of chemicals the unit will be exposed to. ITC adheres to a "Like-Kind" replacement which means replacing old parts with identical new parts. During the tour, investigators were shown the parts room which contained numerous shelves filled with new parts in boxes and old parts on the shelves mixed in with the new parts. When asked about determining which old parts were sufficient for re-use, Mr. Homfeld stated that decision was done primarily by a visual inspection. In the yard, were numerous power plants, electric motors, pumps etc. that varied from complete units ready for use to parts in need of re-assembly.



Exemplar Power Frame, Electric Motor, Coupler and Pump

26. ITT Pro Services – Farruk Hafeez and others, 04-11-2019, WS#400134, telephone number 281-504-6300. Mr. Hafeez is an Engineer for ITT Pro Services which services and sells Goulds Pumps. The following information was conveyed: The seal clamp bolts to the face plate of the casing. The studs are 5/8" 18UNC and do have torque specifications. The stud should stick past the nut by at least a two thread minimum. The MT and XLT parts are not physically interchangeable as they have different shafts. In their rebuild or pump maintenance system, there is a part number and a place for each item and part during the process. A torque wrench will not fit into the space to torque the studs or nuts so it is done by feel.

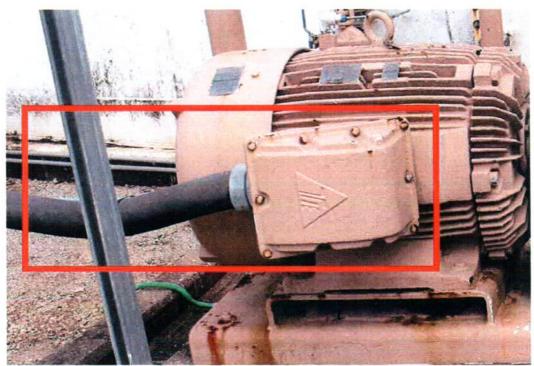
BUILDING CONSTRUCTION:

- 27. The tank yard construction was established by post-fire examination as well as information provided by ITC. The fire affected tank farm was one of many in a large industrial complex and referred to as the "80's". This name reflects that the tanks in the yard would contain 80,000 barrels of product when filled to capacity. This particular yard consisted of 15 tanks arranged in three rows of five. The area was earth covered with gravel and contained within an approximately 7' high concrete retaining wall. Metal steps and bridges granted access into the 80's over the walls as well as passage over routed pipelines within the barriers.
- 28. The tanks in the 80's are welded in place of 1 ½" plate steel. They measure 120' across by 40' tall.

- 29. A tank in the 80's would hold 80,000 barrels of product if filled to capacity. A barrel holds 42 gallons of product. Therefore, one tank filled to its maximum level would hold 3,360,000 gallons of liquid.
- 30. The fire originated at the manifold of tank 80-8. This tank was the most centrally located tank in the second row of five, and third from the west and third from the east. The manifold faces in a southeasterly direction.

UTILITIES:

31. Three-phase electrical distribution entered the 80's at the main distribution line near the semi-truck manifold located to the southwest. This also housed the variable 1200 A breakers with 7kv main electrical feed with a transformer bank directly below the main. Electrical distribution was then routed below grade. Where rising out of the earth to connect to the electric motors of the power frames, the conductors were encased in explosion proof housings.



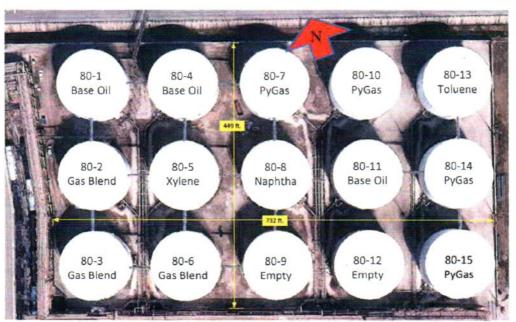
Explosion/Vapor Proof Electrical Connection at Motor

SCENE PROCESSING:

- 32. The fire occurred on Sunday March 17, 2019. As a result of fire load, extension, duration and suppression difficulties; as well as hazardous materials remediation efforts, investigators had to wait three and a half weeks to make scene entry.
- 33. On Tuesday April 9, 2019, investigators with the HCFMO and ATF were able to enter the fire scene. Agreements made between ITC and the Harris County Attorney's Office required all activity within the hot zone to be videotaped by means of a hand held camera on the ground and by means of a drone flying overhead. Level B hazardous materials protection was utilized with full face respirators. The nature of the hazardous materials personal protective equipment severely limited time in the scene and the level of work

that could be performed. In this particular scene, there was minimal physical labor necessary as there was no traditional fire scene excavation necessary.

- 34. An exterior scene examination was first conducted via camera footage provided by means of an aerial drone. This platform allowed investigators to observe the 80's tank farm before suiting up to make entry. The aerial overview along with initial interviews provided explicit detail as to where the fire originated, specifically at the manifold on tank 80-8.
- 35. There was extensive damage to twelve of the fifteen tanks. Tanks 80-1 (Base Oil) and 80-4 (Base Oil) at the northwest corner of the tank farm were upright without distortion but oxidized from thermal assault. Tanks 80-10 (Py Gas) and 80-13 (Toluene) at the northeast corner of the property were upright, not distorted and retained their white pre-fire appearance. Tank 80-11 (Base Oil) in the second row second tank over from the east was similar to the tanks in the northwest corner. All of the other tanks exhibited oxidation and collapse to varying degrees. Tanks 80-2 (Gas Blend) second row to west and tank 80-6 (Gas Blend) south row second from east were in similar condition to the area of origin tank 80-8. These three tanks exhibited the most severe fire damage and structural collapse to near ground level. There was also no discernable means of analyzing the fire patterns of the tanks alone to explain the fire dynamics of how the fire spread through the tank farm.



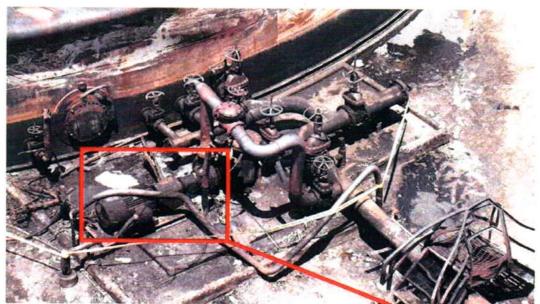
Pre-Fire Photo of 80's Tank Farm Labeled with Contents

36. Tank 80-8 was the focus of the investigation upon entry. Tank 80-8 was completely destroyed by the fire. The tank exhibited severe oxidation. The steps affixed to the wall of the tank rising upwards to the west, had come loose and fallen to the ground.



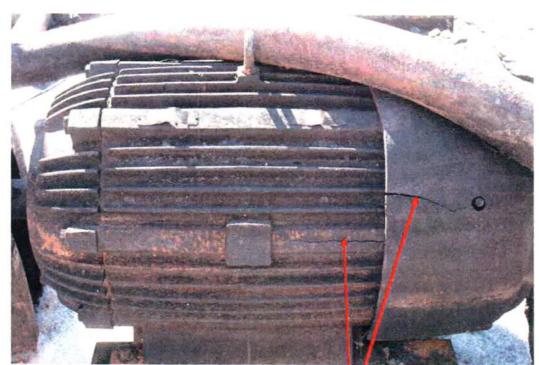
Tank 80-8 and Manifold, Origin of Fire

37. The manifold of tank 80-8 was severely damaged. All surfaces exhibited severe oxidation indicative of long term thermal exposure. The damage observed is described from left to right while facing the tank and manifold with the power frame noted first.



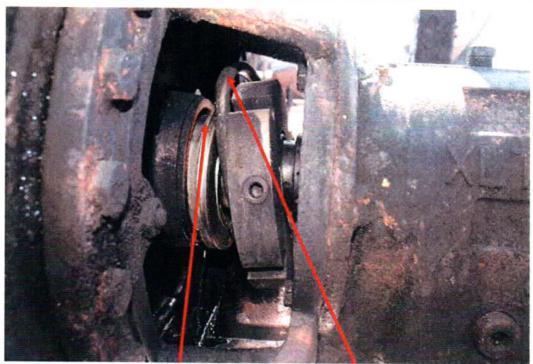
Overview of Tank 80-8 Manifold and Power Frame

38. The motor was stamped with "US Motor" and the pump was stamped with "Gould XLT-X Pump 68146". The heavy steel electric motor housing was severely oxidized and had thick cracks on both sides emanating from the rear of the motor or non-shaft side.



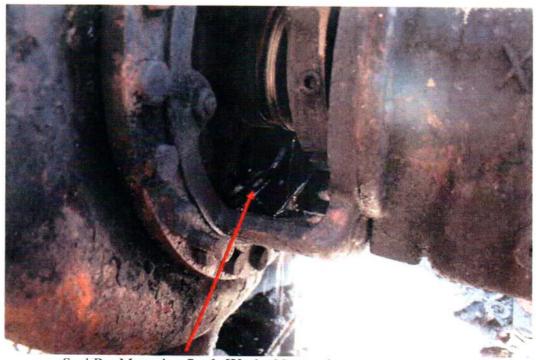
Electric Motor of Power Frame with Cracks to Housing

39. The metal coupler cover between the pump and the electric motor was askew but not oxidized like all of the other metal in the manifold. An attempt to lift the coupler protective housing was not successful as there was still at least one bolt securing it to the skid. The cover was left in place. Just past the cover was the shaft into the pump. The seal pot on the shaft was dislodged and resting at an angle away from the pump. The coolant supply and seal pot return lines had been mechanically sheared from the coolant tank and wrapped around the seal pot and shaft. This indicates that the motor had been working and the shaft was revolving shortly before ignition.



Dislodged Seal Pot and Bent Coolant Supply Lines

40. There were no nuts visible on the studs to secure the seal pot in place. The studs themselves appeared to have worked loose and were resting in the housing below the shaft. Because of the limiting factor of the hazardous materials personal protective/safety equipment, it could not be determined if the nuts worked free during operation or if they were sheared off when the seal pot came loose.



Seal Pot Mounting Studs Worked Loose from Mounting Surface

41. Past the seal pot, the shaft was pulled free of the pump and resting in the connection point. The interior of the pump and the pulled free connective surface retained a clean shiny silver metal appearance with absolutely no oxidation. Directly on the ground below the seal pot and pump were metal pieces and debris scattered about. These items were not moved but appeared to be directly related to the damage observed at the shaft, seal pot and connection point to the pump.



Dislodged Seal Pot Connection to Pump

42. Around the power frame were numerous pipes associated with the manifold. A vertical 6" to 8" in diameter pipe, located between the tank and pump and in direct proximity to the pump, was consumed on the side aligned with the pump. The damage was very similar in appearance to electrical arcing of conduit although there was no electrical associated with this pipe. The damage was from ground level to several feet above grade. Behind the power frame and to the right were two elevated and perpendicular to the ground; round valve handles which were partially consumed towards the pump. The PIG trap to the far right of the power frame and associated piping had bolts and nuts on the ground below. It appeared that the end plate had been removed and then reattached. This was done by mitigation crews in order to drain remaining Naphtha and water from tank 80-8. On top of the power frame were the remains of consumed pipes.



Overview of Power Frame with Damaged Pipe in Foreground

43. The oxidation and metal consumption patterns in the manifold provided a somewhat inverted conical pattern coming back to the dislodged seal pot from the main pump housing.

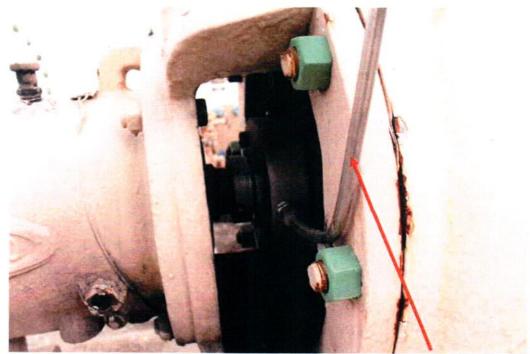


Overview of Damaged Handles Pointing Back to Power Frame

44. Other power frames and manifolds within the tank farm were examined as comparisons to tank 80-8. The power frame and manifolds at tank 80-7, 80-10 and 80-11 were viewed and documented. These units did sustain some thermal damage and exhibited minor to moderate oxidation but nowhere nearly as severe as tank 80-8. The electric motor housings were not cracked. There was no misalignment of the pump shafts. The shafts were all properly inserted into the pump housing. The coolant system, seal and bearings were all in place with the coolant supply and return lines properly routed and affixed to the oil tank. The nuts and studs were in place. All piping and valves of the manifolds were intact without any misalignments, separations or consumption. There was no debris field below the coupler and pump as was at tank 80-8.



Close Ups of Seal Pots on Fire Damaged Pumps with Studs in Place, Note Left Has Studs Extended Past Nut and Right Does Not



Close Up of Exemplar Seal Pot with Unbent and Properly Affixed Coolant Supply Line

WORK ORDERS:

- 45. Work orders for the manifold and power frame for tank 80-8 were obtained. These documents dated back approximately one year to March 21, 2018. They were thoroughly reviewed on April 10, 2019 the day after fire scene processing.
- 46. Relevant maintenance to the power frame are noted as written and in italics from both ITC computer printouts and hand written notes. Investigator observations in parentheses:
- 47. July 4, 2018, 80-8 Pumper started up 80-8 pump then it turned off and the 80-10 pump. Found tripped breaker at transformer. Megged both 80-8 and 80-10 motor leads, they megged good. (Megged is a motor insulation test) Reset breaker 80-10 got going and test 80-8 as well and they ran.
- 48. September 16, 2018, Came out for 80-8, 80-10. Found tripped breaker at transformer bank. Had to reset it.
- 49. November 12, 2018, Daily action repairs.
 - Zach Everett 80-8 pump running loud, inspected, no issues found, changed oil, flushed seal pot.
 - John Ball 80-8 pump was making noise.
 - Jimmy Looked at 80-8 with mechanical, no electrical issues found. Pumper said it was wound too tight. Didn't know what that meant, it is on a starter, pump runs.
- 50. December 4, 2018, 80-8 pump making loud nois. (sic)
 - Matthew Anders 80-8 pump bearing are (sic) going out. Valves are leaking by Supposed to be blind flange. Cleaning up spare in shop to swap out bearing housing. Incomplete.
 - John Ball and Chris Robles 80-8 tank, the pump was making noise. The pump needs bearings. Called operation Chad to LOTO pump. (LOTO is Lock Out Tag Out, a safety procedure) Valves were leaking by. Shop, getting a spare power end to install 80-08.
 - Zach Everett Shop, disassemble spare MTX to replace power end at 80-8. (Power end is the shaft to the other side of the pump)
 - Mathew Anders and Chris 80-8 Cargo Pump. Called out to change power frame with bad bearings.
 Finished building spare pump in shop. Removed pump from manifold and brought to shop. Installed spare pump, set mechanical seal, pressure tested, coupled up, filled seal pot up, got off of LOTO.
 Complete.
 - John Ball Bearings are worn out on the pump. Removed and replaced power end. Changed the bearing housing and seal, filled with glycol and pressure checked.
- 51. December 16, 2018, 80-08 pump won't come on.
 - GR Pulled cutouts reset breaker, verified voltage, had the pumper start the pump.
 - Jimmy Pulled cutouts. Went up and reset breaker. Dialed up both settings to max on breaker. Stabbed cutouts back in.
- 52. February 26, 2019, 80-8 Cargo Pump: relocate start
 - WE&JR Installed new conduit & pulled new wire, relocated start stop to zone B.
- 53. March 6, 2019, Relocate push button station.
 - Gabe and Bill Relocate start stop at 80-8, run new conduit, pulled wires and terminate wires.

SURVEILLANCE VIDEO:

54. Surveillance video was provided by ITC. The footage provides a time stamp of March 17, 2019 at 10:00:45 hours. It reveals the initial fire growth.



ITC Video Capture

55. Surveillance video was provided by Planned Parenthood. The footage provides a time stamp of March 17, 2019 at 10:01:06 hours. It reveals an instantaneous column of smoke indicating substantial release of product prior to ignition.



Planned Parenthood Video Capture

OTHER RELEVANT DATA:

- 56. Supervisory Control and Data Acquisition (SCADA) is an electronic storage database of all activity occurring at ITC facilities. Butane was being mixed into the Naphtha of tank 80-8 on the weekend that the fire started. Information obtained by the HCFMO reveals numerous fluctuations at tank 80-8 beginning at 0934 hours and occurring up to 1004 hours. This, when coupled with the time stamp provided by video surveillance, leads investigators to conclude an approximately twenty-six minute time frame of Naphtha with Butane release until fire ignition. Fire dynamics supports the SCADA information as the initial fire plume is much taller than the tanks. Yet, alarms were not activated in the control room.
- 57. SCADA reveals that the internal temperature of tank 80-8 held steady at 66.2°F and did not begin to rise until two hours into the event. This information also supports a fire at the manifold rather than in or on the tank.
- 58. The following information was derived from ITC information provided to HCFMO on 04-02-2019; SCADA file ITC_HCFM_00000614_Confidential:

Barrels Prior	Barrels at Time	Barrels Lost	In Gallons	Time to Next Reading
70277.00	70232.84	44.16	1854.72	7 Minutes
70232.84	70188.69	44.15	1854.30	7 Minutes
70188.69	70144.53	44.16	1854.72	8 Minutes
70144.53	70100.37	44.16	1854.72	8 Minutes
70110.37	70056.22	44.15	1854.30	
	70277.00 70232.84 70188.69 70144.53	70277.00 70232.84 70232.84 70188.69 70188.69 70144.53 70144.53 70100.37	70277.00 70232.84 44.16 70232.84 70188.69 44.15 70188.69 70144.53 44.16 70144.53 70100.37 44.16	70277.00 70232.84 44.16 1854.72 70232.84 70188.69 44.15 1854.30 70188.69 70144.53 44.16 1854.72 70144.53 70100.37 44.16 1854.72

- 59. In the span of thirty minutes, 220.78 barrels of Naphtha mixed with Butane was released from the pump section of the power frame at the manifold of tank 80-08. There are 42 US gallons in a barrel. 220.78 barrels X 42 gallons = 9272.76 gallons of product release.
- 60. The following information was derived from ITC information provided to HCFMO on 04-01-2019; SCADA file ITC_HCFM_00000481_Confidential:
- 61. At 10:01:03, T080-08, pump-cargo_ A stopped, uncommanded stop.

MANUFACTURER MATERIAL SAFTEY DATA SHEETS:

62. The following information was obtained by HCFMO from ITC. Relevant data was extracted from the sheets for inclusion in the report. The actual MSDS are included as attachments to the report.

63. Midcoast Energy, NAPHTHA

ITC_HCFM_00000906

HAZZARD SUMMARY: Extremely Flammable

HAZARD STATEMENTS: Extremely flammable liquid and vapor

FLASH POINT – TYPICAL: -21.7°C (-7.1°F)

AUTOIGNITION TEMPERATURE: 530°F (277°C)

LOWER EXPLOSIVE LIMIT: 1.2 % (V) UPPER EXPLOSIVE LIMIT: 6.9 % (V)

SPECIFIC GRAVITY: 0.77 (H20=1)

INITIAL BOILING POINT: 90°F (32°C)

BOILING RANGE: 90° to 400°F (32° to 204°C)

VAPOR PRESSURE: Approximately 5 to 15 psi at 100°F (38°C) (Reid Vapor Pressure)

VAPOR DENSITY (Air = 1): 3.5

PERCENT VOLATILES: 100%

CONDITIONS TO AVOID: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

HAZARDOUS REACATIONS: Vapors may form explosive mixture with air.

64. Enbridge™, BUTANE

ITC_HCFM_00000741

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Extremely flammable gas. The vapor/gas is heavier than air and will spread along the ground. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flashback, causing fire or explosion.

BOILING/CONDENSATION POINY: -138°C (-216.4°F)

CRITICAL TEMPERATURE: 151.85°C (305.3°F)

FLASH POINT: Closed cup: -60°C (-76°F)

FLAMABILITY: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.

UPPER EXPLOSIVE/FLAMABILE LIMITS: Upper 8.4% LOWER EXPLOSIVE/FLAMMABLE LIMITS: Lower: 1.8%

VAPOR PRESSURE: 16.3 (psig)

VAPOR DENSITY: 2.1 (air = 1)

AUTO IGNITION TEMPERATURE: 365°C (689°F)

EXHIBITS:

- 65. The Harris County Fire Marshal's Office took digital photographs.
- 66. The Harris County Precinct #1 Constable's Office, Deputy Nick Radack, took aerial videos from a drone platform.

ADDITIONAL INFORMATION:

- 67. Harris County Fire Marshal's Incident #1903-00046.
- 68. BATS #1,001,212.
- 69. A decontamination line was not utilized on this scene. The nature of the industry and the scene precluded any investigative need or value of a decontamination line upon entry into the scene. However, a decontamination line was in place upon exiting the hazardous materials scene.
- 70. No accelerant detecting canine team was utilized. The nature of the industry and the scene precluded any investigative need or value of a canine team.
- 71. Twenty four hour security was provided by the Harris County Sheriff's Office during the extended duration of the fire suppression efforts and hazardous materials remediation efforts.
- 72. During the course of the origin and cause investigation; the manifold and power frame of tank 80-8 were enclosed within a temporary barrier to prevent unauthorized access to the area of origin and minimize potential spoliation issues.



Title of Investigation: Investigation Number: 782035-19-0029	Report Number:

FIRE PROGRESSION TO OTHER STRUCTURES:

74. There were a total of fifteen tanks in the 80's aligned in three rows of five. This fire originated at the manifold of tank 80-8 which was the center most tank, second row, third in from either end. All fifteen tanks suffered some degree of thermal damage. Only two upon visual inspection appear to be minimally damaged and remain useable. Twelve of the tanks suffered catastrophic damage that will result in their eventual razing if not all fifteen. The fire did not extend from the original field of origin into adjacent tank farms.

CONCLUSION:

- 75. Based upon the information available at this time and after conducting a systematic fire scene examination, inspecting the physical evidence, viewing fire scene video, viewing photographs, considering employee statements, considering maintenance records, and employing the scientific method by means of formulating and discarding hypotheses; it is the opinion of investigators that the area of origin is the power frame of the manifold for tank 80-8. The first fuel ignited were the vapors from the leaking liquid Naphtha which was enriched with Butane.
- 76. A failure occurred within the manifold power frame, somewhere between the electric motor and the impeller of the pump. This failure resulted in the release of Naphtha. Because of the civil liabilities, subrogation aspects, and spoliation issues, nothing related to the power frame was moved, touched or manipulated by investigators other than a coupling cover which could not be moved. The debris field below the power frame was not touched or moved in any way. The exact cause of failure will require forensic testing by parties other than law enforcement. Therefore, the specific or exact failure mode is currently not known. There are absolutely no indicators of an intentional criminal act for the purpose of setting a fire. Any criminal or civil penalties associated with this incident must fall under the jurisdiction of entities other than traditional fire investigation organizations. However, because all mechanisms of failure within the power plant were accidental in nature, the incident classification is *ACCIDENTAL* as per NFPA 921.

HYPOTHESES CONSIDERED AND DISCARDED:

77. In adherence to the Scientific Method, after collection of data, various hypotheses in reference to heat producing or ignition scenarios were considered as plausible causes for the fire at the Intercontinental Terminals Corporation LLC. Some of these ignition scenarios were ruled out based upon interviews. Others required fire scene processing, while others required post fire research. Discarded hypotheses of ignition scenarios include:

Smoking Materials

78. Smoking is not permitted on property. The hazardous and volatile nature of the chemicals and their vapors would result in dangerous situations when exposed to the act of an open flame applied to tobacco products. While on scene and ITC property in general, no discarded cigarette butts were observed. There were clearly marked and designated smoking areas with cigarette disposal units. These were away from the tank farms and pumping stations. The fire was not caused by carelessly disposed of smoking materials.

Title	of Inve	stigatio	n:
ITC	Tank	Farm	Fire

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Maintenance

79. Consideration was given to maintenance having been conducted at the time of the event. Witness statements indicate that there were no scheduled maintenance requests submitted for anything related to tank 80-8 as well as there were no scheduled activities being conducted in the 80's over the weekend shift. There were some early rumors as to a welding machine in the general area of where the fire started but nothing of the sort was observed during the fire scene examination. The fire was not caused by either scheduled or unscheduled maintenance activities directly related to the weekend of the event.

Lightning Strike

80. A CoreLogic STRIKEnet® Report was obtained. There were no lightning strikes within a five mile radius of the structure on the day of the fire. This fire was not caused by lightning.

Pipeline Intervention Gadgets

81. Pipeline Intervention Gadgets, often referred to as PIGs, are utilized in the petro-chemical industry as a means of maintaining, inspecting and cleaning pipelines. Based upon several interviews, PIGs were not in use the day of the fire nor were they in use on the days leading up to the fire. The fire was not caused by a PIG or malfunction of a similar device.

Minor Leak at a Flange or Connection

82. Investigators considered the possibility of a relatively small leak at a pipeline connection point igniting and then growing in size to impact the tank, subsequently spreading to any vapors emanating from the ventilation points. However, a smaller leak would lend itself to easier suppression. Interviews indicate a more catastrophic event occurring based upon one witness in the vicinity hearing a loud mechanical noise followed shortly thereafter by a significant fire. SCADA data combined with the time stamp from surveillance video also do not support the growth of a smaller fire impinging upon other infrastructure and spreading the fire. The fire was not caused by a small leak that was ignited and then spreading by means of slow growth.

Failure of Security Lighting

83. Light fixtures in a hazardous vapors environment are required to be vapor and explosion proof. Vapors within flammable range may be ignited by the parting arc of electrical fixtures and switches when turned off. There were no light fixtures affixed to the exterior of the various tanks in the 80's. There were lights affixed to standards at various points in the 80's that were positioned between tanks. When facing the manifold of tank 80-8, there was a light standard to the left or west of that tank. Naphtha has a vapor density of 3.5 and Butane has a vapor density of 2.1, meaning the vapors are heavier than air and would follow the ground similar to a liquid. There are no indications that there were either issues with the lights or an observed failure. Had there been an issue, the naphtha vapors were well below the elevated fixtures even when accounting for diffusion in air. Also, the initial fire event was observed at the manifold which was remote from any light fixtures. The fire was not caused by a failure of the lighting fixtures in the tank farm.

Incompatible Chemical Reaction

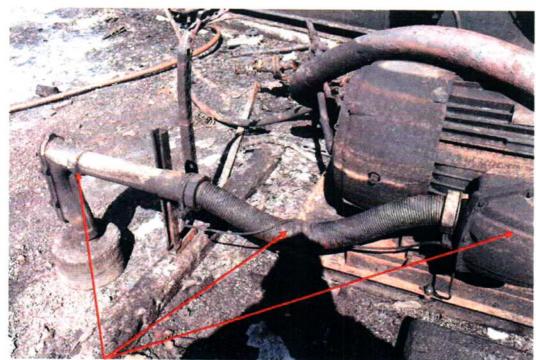
84. A chemical reaction was considered as a cause for this fire. The 80's contained fifteen tanks which were identified as containing Pyrolysis Gasoline, Toluene, Base Oil, Naphtha, Xylene, and Gasoline Blend. Butane was being mixed into the Naphtha the weekend that the fire started. None of these chemicals are considered incompatible with others in the 80's and are often mixed with one another for various uses. The fire was not caused by an inadvertent chemical reaction.

Intentionally Set Fire

85. An intentionally set fire was considered as a potential ignition scenario. Based upon interviews, all gates were closed and locked to the 80's tank farm. There were no individuals observed by employees in or around the 80's that should not have been there. Nothing was noted on or around the manifold of tank 80-8 that would indicate criminal intent. This fire was not intentionally set.

Electrical Distribution System

86. The electrical distribution entrance to the 80's was at the south side near the truck manifold. Branch circuits were routed through underground conduit. All electrical service was contained in explosion/vapor proof housings. The only electrical connection at any given manifold was at the electric motor of the power frame. The large conduit and covering for the electric motor of 80-8 remained intact and with only minor thermal damage. The fire was not caused by a failure of the electrical distribution system up to the electric motor of the power frame.



Electrical Connection from Underground to Power Frame 80-8 Remains Intact Post-Fire

HYPOTHESES THAT COULD NOT BE DISCARDED:

- 87. Based upon witness statements and observations of the damage to the power frame, the motor was running just prior to the ignition of the fire. Further forensic testing by interested parties is necessary to determine if any of the following potential failure modes are relevant. Because future testing relates to civil and potential subrogation claims, it is out of the scope of public sector fire investigation.
- 88. The seal pot and coolant system connections were within inches of the pump housing. When an unidentified aspect within the power frame failed, it pulled the seal pot assembly away from the pump housing permitting a rapid release of product directly onto the ground and the power frame. It is not known if the flow of Naphtha with Butane was from tank 80-8; or residual product within the supply pipeline routed back to the ship channel.
- 89. Failure of the seal pot assembly could be related to improper or previously used parts utilized in the last maintenance processes. The observed pump was stamped "Gould XLT-X Pump 68146" whereas an MTX was mentioned as part of the rebuild as per work orders dated December 4, 2018. Investigators observed old parts on shelves mixed with new parts, with the old parts not necessarily labeled in any manner. If old or improper parts were utilized, it is not known if they were properly rated for the chemical exposure. The observed seal pot and bearing cover at power frame 80-8 obviously came loose, as did the mounting studs and nuts. It is not known if the nuts were under torqued and came off or if the mounting studs came free or even sheared.
- 90. The electric motor had thick cracks in the housing. A work order from December 16, 2018, states that the electrical breakers were "Dialed up to max both settings on breaker". The increased ampacity to the motor could result in over amperage so that the breakers would not trip upon a mechanical failure. This could manifest itself by allowing the motor to continue operating over increased friction generated at potentially failing seals and bearings. Or, after the seal pot came free shearing the coolant lines and subsequently pulling the shaft free from the pump housing, the motor continued to run. This could generate friction, static or sparking at the failure point.
- 91. Potential ignition scenarios of the free flowing Naphtha enriched with Butane include frictional heat combined with the low auto ignition temperatures of the two fuels; spark from breakage of the power frame; arc from the electrical aspect of the power frame; as well as a static electrical discharge arc resulting from the free flowing and non-grounded liquid product.

FIRE DYNAMICS:

92. Based upon SCADA data and a near instantaneous plume captured on video, a twenty-six minute time frame allowed Naphtha with Butane to free flow from the manifold of tank 80-8 into the 80-s tank yard. The initial plume is substantially higher than the tanks around it. This would be a result of a large quantity of product being released into the environment within the twenty-six minutes. The quantity of release is calculated at approximately 220.78 barrels or 9272.76 gallons. A smaller leak and release within that time frame would not have resulted in such a prominent fire plume and would have been a much more controllable fire.

NUMBER OF FATALITIES AND/OR INJURIES:

93. There were neither injuries nor any fatalities associated with this incident.

WEATHER:

94. Weather information for March 17, 2019, at approximately 0953 hours, was obtained via www.wunderground.com.

		Pt	Humidity		-	Dir	Spd			
9:53 AM	62 F	27 F	26 %	NNE	9 mph	0 mph	30.2 in	0.0 in	0.0 in	Mostly Cloudy

95. A lightning strike analysis was conducted through CoreLogic / STRIKEnet®. The report reveals that there were no lightning strikes occurring on March 17, 2019 within five miles of the ITC 80's tank farm. This query is included as an attachment to this report.

DOLLAR LOSS:

96. There was a significant monetary loss associated with this fire. No estimate of monetary loss was determined as part of the origin and cause investigation. Those figures have no direct relevance to the determination of origin and cause. Loss figures can be obtained from sources such as ITC, insurance adjusters, tax assessors, contractors and planning officials.

INSURANCE:

97. Insurance information is available from Baker Botts, LLC which is the law firm representing ITC.

SOURCES CONSULTED:

- 98. Vytenis Babrauskas, Ph.D., <u>Ignition Handbook</u> (Fire Science Publishers A Division of Fire Science and Technology Inc., 2003)
- 99. National Fire Protection Association®, Technical Committee on Fire Investigation, NFPA 921 Guide for Fire & Explosion Investigations, 2017 Edition (National Fire Protection Association, Quincy Massachusetts, 2017).

NFPA 921 CONSIDERATIONS:

- 100. 4.1 Nature of Fire Investigations. ... The compilation of factual data, as well as an analysis of those facts... should rely on the systematic approach and attention to all relevant details.
- 101. Every effort was made to diligently compile data as it related to the area of origin and the cause of the fire. The consensus of all investigators working at the fire scene was that the fire started at the manifold to tank 80-8.

102. 4.3 Relating Fire Investigation to the Scientific Method. The scientific method is a principle of inquiry that forms a basis for legitimate scientific and engineering processes, including fire incident investigation. It is applied using the following steps *as* outlined.

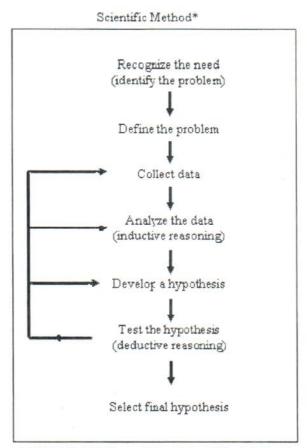


FIGURE 4.3 Use of the Scientific Method.

- 103. The scientific method was followed during the course of this fire investigation. After collecting and analyzing data, several hypotheses were developed, considered and discarded. A final hypothesis could never be fully developed or tested by traditional law enforcement entities although the event is classified as Accidental. The unusually large dollar loss and community impact requires that the interested parties undertake any additional and relevant testing deemed necessary as it relates to the civil impacts of the fire.
- 104. 4.6.2 Technical Review. ... A technical review can serve as an additional test of the various aspects of the investigator's work product.
- 105. It is ATF policy that a technical review be conducted of all Certified Fire Investigator Origin and Cause reports.
- 106. 5.7.2.2 ...a flammable gas-air mixture can auto-ignite...Open clouds of flammable gas-air mixtures can ignite on hot surfaces, with ignition occurring at lower temperatures for larger hot surface areas.

And

107. 5.7.3.3 Atomized liquids or mists ... can be more easily ignited.

estigation:		
Farm Fire		
	stigation: Farm Fire	

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- 108. The Auto Ignition Temperature (AIT) for NAPHTHA is 530°F and BUTANE is 689°F. Both AIT's are relatively low should friction from a faulty power frame drive up the surface temperature of the components.
- 109. 9.12.1.2 Common sources of static electricity include the following:(5) Nonconductive liquids flowing through pipes or splashing, pouring or falling
- 110. SCADA data reveals that there was a significant free flow or loss of product prior to the fire. As the product was not contained within the designed liquid distribution system, static was likely generated from the ungrounded flow.
- 111. 9.12.5.1.1 With low relative humidities of approximately 30 percent or less...static accumulations are more likely.
- 112. As per a weather check for the time of the incident, relative humidity was below 30%, specifically at 26%.
- 113. 9.12.7 Investigating Static Electric Ignitions. Often the investigation of possible static electric ignitions depends on the discovery and analysis of circumstantial evidence and the elimination of other ignition sources, rather than on physical evidence of arcing.

And

- 114. 9.12.7.5 ...seldom any physical evidence of the actual discharge arc...
- 115. One of the potential ignition scenarios is an accumulation of static electricity from the free flow of ungrounded flammable liquid. Should a discharge arc have occurred in an area within the flammable range, there will be no evidence to support the hypothesis.
- 116. 16.2.1 Physical evidence defined generally, is any physical or tangible item that tends to prove or disprove a particular fact or issue. Physical evidence at the fire scene may be relevant to the issues of origin, cause, spread, or the responsibility of the fire.
- 117. The condition of the power frame at tank 80-8 provided relevant evidence of a failure to include cracking of the electric motor and separation of the seal pot from the pump housing
- 118. 17.1.2 Determination of the origin of the fire involves the coordination of information derived from one or more of the following:
 - (1) Witness Information.
 - (2) Fire Patterns.
 - (3) Arc Mapping.
 - (4) Fire Dynamics. The analysis of the fire dynamics, that is, the physics and chemistry of fire initiation and growth, and the interaction between the fire and the building's systems.
- 119. The above criteria were used except for arc mapping. Witness statements and early photographs place the fire originating at the manifold of tank 80-8. Fire patterns at this same manifold are markedly different than the thermal damage of other manifolds in the tank farm. Fire dynamics as well as SCADA data reveal a large loss of product just prior to the incident

- Information should be sought from persons having knowledge about recent activities in the 120. 18.3.1.6 area of origin and what fuels should or should not have been present.
- Interviews yielded information of prior problems associated with the power frame of manifold 80-8. Information was also obtained about maintenance practices that potentially lacked sufficient quality control measures.
- 122. 19.3.2 Identify Source and Form of Heat of Ignition. ...document all heat producing items in the area of origin.
- 123. As mentioned above, the heat of ignition producing aspects of this fire that were identified in the area of origin include frictional heat combined with product having a low AIT; spark from power frame breakage; arc from electrical aspect of the power frame, and/or a static arc discharge from flowing liquids.
- 20.1.1 Accidental Fire Cause Classification. Accidental fires involve all those for which the proven cause does not involve an intentional human act to ignite or spread fire into an area where the fire should not be.
- There was no data, facts, interviews, fire scene patterns, or video evidence to support an intentional criminal act of setting a fire, thus the accidental classification.

DISPOSITION:

126. This fire investigation will be closed as a technical assist to the Harris County Fire Marshal's Office.

ATTACHMENTS: Copy of CoreLogic / STRIKEnet® report

Copy of Midcoast Energy MSDS for Naphtha

Copy of EnbridgeTM MSDS for Butane



Weather Verification Services

STRIKEnet® Report

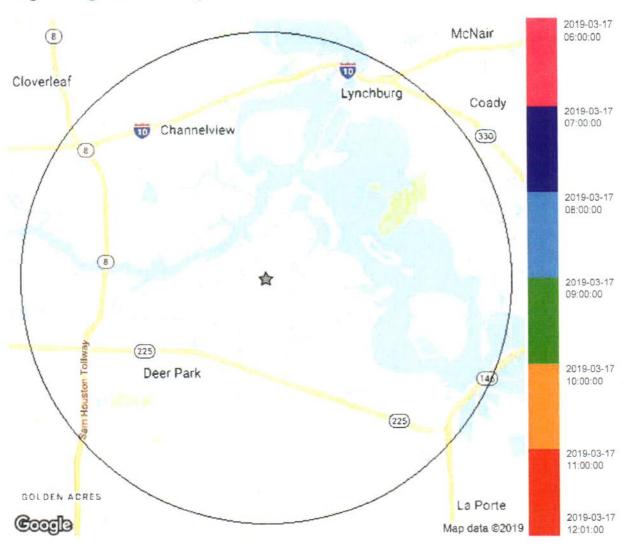
Claim or Reference #	782035-19-0029, ITC Tank Farm Fire			
Insured/Property Owner				
STRIKEnet Report # 6363391				
Coordinates	Latitude 29.7324495, Longitude -95.0914927			
Search Period	Sun, Mar 17, 2019 06:00 US CDT to Sun, Mar 17, 2019 12:01 US CDT			
Search Radius 5 mi (8 km)				
Report Generated Apr 26, 2019 at 15:12:00 GMT				

Summary

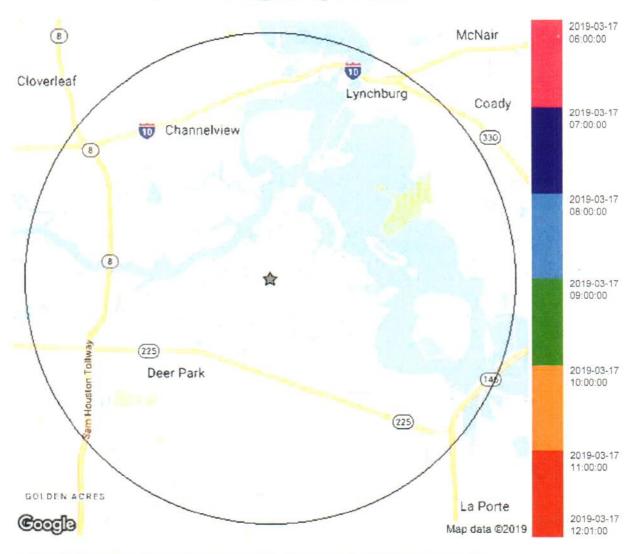
STRIKEnet verified there were ZERO cloud-to-ground lightning strokes detected within 5 miles of the property for the dates inquired.

Thank you for using STRIKEnet to validate lightning. Your report was generated by CoreLogic using data from Vaisala's National Lightning Detection Network® (NLDN), the most comprehensive lightning strike archive database in North America.

Lightning Stroke Map



Confidence Ellipses For Lightning Strokes



Lightning Confidence Ellipse Map indicates with 99% certainty that the recorded lightning event contacted the ground within the bounds of the ellipse.

Key Results

Lightning Strokes Detected within Fami (Oliver)		
Lightning Strokes Detected within 5 mi (8 km)	0	

Number of Strokes Detected by Time Period

Period	# of Strokes
Sun, Mar 17, 2019 06:00 US CDT to Sun, Mar 17, 2019 07:00 US CDT	0
Sun, Mar 17, 2019 07:00 US CDT to Sun, Mar 17, 2019 08:00 US CDT	0
Sun, Mar 17, 2019 08:00 US CDT to Sun, Mar 17, 2019 09:00 US CDT	0
Sun, Mar 17, 2019 09:00 US CDT to Sun, Mar 17, 2019 10:00 US CDT	0
Sun, Mar 17, 2019 10:00 US CDT to Sun, Mar 17, 2019 11:00 US CDT	0
Sun, Mar 17, 2019 11:00 US CDT to Sun, Mar 17, 2019 12:01 US CDT	0

Lightning Strokes

Date	Time (CDT)	Peak Current (N/A)	Distance from Center (mi/km)	Latitude	Longitude
No lightning of	detected within requester	d parameters.			

About STRIKEnet®

Unlike other lightning verification methodologies, The STRIKEnet Report uses 25-plus years of lightning data acquired from the U.S. National Lightning Detection Network® (NLDN) and the Canadian Lightning Detection Network (CLDN). First introduced by Vaisala, Inc. in 1989 and later enhanced by the 2014 CoreLogic acquisition of Weather Fusion—a value-added reseller of Vaisala's STRIKEnet® Report—the lightning verification data that powers the STRIKEnet Reports is industry-recognized as the standard for accuracy based on thousands of peer-reviewed citations.

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SAFETY DATA SHEET

24-HOUR EMERGENCY A	SSISTANCE	GENERA	AL ASSISTANCE	MEDA DIAMOND B
Gas Control CHEMTREC Assistance	(888) 650-8099 (800) 424-9300	Phone Fax	(888) 650-8099 (713) 353-1754	NFPA DIAMOND * 4 - Extreme 3 - High 2 - Moderate 3 Health Reactivity 1
MSDS NUMBER 1004				Special Delivery 1 - Slight 0 - Insignificant - See text

MANUFACTURER/SUPPLIER:

MLTM, L.P.

1501 McKinney, Suite 600

Houston, TX 77010

P.O. Box 128

Houston, Texas 77001

1. PRODUCT IDENTIFICATION

Name:

NAPHTHA

CAS NUMBER:

8030-30-6 (as a mixture)

Synonym/Product Name:

Naphtha, Light Straight Run Naphtha, Isomerate, Gasoline, Refromate,

Gasoline blend stock, Pretreated Naphtha

Chemical Family:

Petroleum Naphtha

Molecular Formula:

C8H18

Molecular Weight:

157.5

Product Use:

Product is a complex mixture of petroleum hydrocarbons that contain hydrocarbons in the C4-C10 range. This product is used as a feedstock or

blend stock for production of gasoline.

2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

Regulatory status This material is considered hazardous by the Occupational Safety and

Health Administration (OSHA) Hazard Communication Standard (29 CFR

1910.1200).

Signal Word DANGER

Hazard Summary Extremely flammable. Irritating to eyes and respiratory system. Affects

central nervous system. Harmful or fatal if swallowed. Aspiration hazard.

POTENTIAL HEALTH EFFECTS

Eyes High vapor concentration or contact may cause irritation and discomfort.

Skin Brief contact may cause slight irritation. Skin irritation leading to dermatitis

may occur upon prolonged or repeated contact. Can be absorbed through

skin.

Ingestion Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting

after ingestion. Aspiration may result in chemical pneumonia, severe lung

damage, respiratory failure and even death.

Inhalation Vapors or mists from this material can irritate the nose, throat, and lungs,

and can cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no

long-term effects.

Chronic Exposure Long-term exposure may cause effects to specific organs, such as to the

liver, kidneys, blood, nervous system, and skin. Contains benzene, which

can cause blood disease, including anemia and leukemia.

Target Organs Skin, Central nervous system, Liver, Kidney, Blood

Flammability Danger!

Extremely Flammable

HMIS Classification for Flammability: 3

Reactivity Stable

HMIS Classification for Reactivity: 0

HAZARD STATEMENTS

- Extremely flammable liquid and vapor
- Causes skin irritation
- May cause genetic defects
- May cause cancer
- Suspected of damaging fertility or the unborn child
- May cause drowsiness or dizziness
- Causes damage to organs through prolonged or repeated exposure
- May be fatal if swallowed and enters airways

PRECAUTIONARY STATEMENTS

- Prevention: Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical, ventilating, and lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe mist, vapors, or spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves, protective clothing and eye protection.

3. COMPOSITION OF INGREDIENTS

Component	CAS-No	Weight
Naphtha; Low boiling point naphtha	8030-30-6	100%
N-hexane 25 - 35%	110-54-3	25 - 35%
Xylene	1330-20-7	25 - 35%
Toluene	108-88-3	15 - 20%
Cyclohexane	110-82-7	15 - 20%
Pentane	109-66-0	15 - 20%
Heptane [and isomers]	142-82-5	12.5 – 15%
Ethylbenzene	100-41-4	5 – 7%
Benzene	71-43-2	3 - 5%
1,2,4-Trimethylbenzene	95-63-6	2 - 3%
Sulfur	7704-34-9	0 - 1.5%

4. FIRST AID MEASURES

GENERAL ADVICE

Remove from exposure, lie down. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). When symptoms persist or in all cases of doubt, seek medical advice. Never give anything by mouth to an unconscious person. Take off all contaminated clothing immediately and thoroughly wash material from skin.

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.

SKIN CONTACT

In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contaminated leather, particularly footwear, must be discarded. Note that contaminated clothing may be a fire hazard. Seek medical advice if symptoms persist or develop.

EYE CONTACT

Remove contact lenses. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

INGESTION

If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

NOTES TO PHYSICIAN: Symptoms: Dizziness, Discomfort, Headache, Nausea, Kidney disorders, Liver disorders.

5. FIRE-FIGHTING MEASURES

Form: Liquid

Flash point-typical: -21.7 °C (-7.1 °F)

Auto Ignition temperature: 225 °C (437 °F)

Lower explosive limit: 1.2 %(V)

Upper explosive limit: 6.9 % (V)

SUITABLE EXTINGUISHING MEDIA

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Does not use a solid water stream as it may scatter and spread fire.

SPECIFIC HAZARDS DURING FIREFIGHTING

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, firefighting foam, or Halon.

LARGE FIRES: Water spray, fog or firefighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Firefighters' protective clothing will provide limited protection.

FURTHER INFORMATION

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.



6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Evacuate personnel to safe areas. Ventilate the area. Remove all

sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions Should not be released into the environment. Avoid subsoil

penetration. If the product contaminates rivers and lakes or drains,

inform respective authorities.

Methods for Cleaning Up Contain and collect spillage with non-combustible absorbent material,

(e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

7. HANDLING AND STORAGE

ADVICE ON SAFE HANDLING

Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

ADVICE ON PROTECTION AGAINST FIRE AND EXPLOSION

Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples: (1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators. (2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha). (3) Storage tank level floats must be effectively bonded. For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

REQUIREMENTS FOR STORAGE AREAS AND CONTAINERS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended

Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

ADVICE ON COMMON STORAGE

Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

OTHER DATA

No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

List	Components	CAS- no	Type	Value
OSHA	Benzene - 29 CFR 1910.1028	71-43-2	TWA	1 ppm
		71-43-2	STEL	5 ppm
		71-43-2	OSHA_AL	0.5 ppm
OSHA Z1	Naphtha; Low boiling point naphtha	8030-30-6	PEL	100 ppm 400 mg/m3
	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	N-hexane	110-54-3	PEL	500 ppm 1,800 mg/m3
	Cyclohexane	110-82-7	PEL	300 ppm 1,050 mg/m3
	Heptane [and isomers]	142-82-5	PEL	500 ppm 2,000 mg/m3
	Ethylbenzene	100-41-4	PEL	100 ppm 435 mg/m3
ACGIH	Naphtha; Low boiling point naphtha	8030-30-6	TWA	400 ppm
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	N-hexane	110-54-3	TWA	50 ppm
	Cyclohexane	110-82-7	TWA	100PPM
	Heptane [and isomers]	142-82-5	TWA	400PPM
		142-82-5	STEL	500PPM
	Ethylbenzene	100-41-4	TWA	100 ppm
		100-41-4-	STEL	125 PPM
	Benzene	71-43-2	TWA	0.5 PPM
		71-43-2	STEL	2.5 PPM

Engineering Measures: Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.

Eye Protection: Safety glasses or goggles are recommended where there is a possibility of splashing or spraying. Ensure that eyewash stations and safety showers are close to the workstation location.

Hand Protection: Gloves constructed of nitrile or neoprene are recommended. Consult manufacturer specifications for further information.

Skin and Body Protection: If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. The resistance of specific material may vary from product to product as well as with degree of exposure.

Respiratory Protection: A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Work / Hygiene Practices: Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Liquid

Appearance

Colorless to light yellow

Odor

Characteristic hydrocarbon-like

Flash Point - Typical

-21.7 °C (-7.1 °F)

Auto Ignition Temperature

530° F (277° C)

Thermal Decomposition

Heating can release hazardous gases, No decomposition if stored and

applied as directed.

Lower Explosive Limit

1.2 % (V)

Upper Explosive Limit

6.9 % (V)

pH

Not applicable

Specific Gravity

0.77 (H20=1)

Initial Boiling Point

90° F (32° C)

Boiling Range

90° to 400° F (32° to 204° C)

Vapor Pressure

Approximately 5 to 15 psi at 100° F (38° C) (Reid Vapor Pressure)

Vapor Density (Air = 1)

3.5

Water Solubility

Negligible

Viscosity, kinematic

Not determined

Percent Volatiles

100 %

10. STABILITY AND REACTIVITY DATA

Conditions to Avoid: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Materials to Avoid: Strong acids and strong bases. Oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Thermal Decomposition: Heating can release hazardous gases. No decomposition if stored and applied as directed.

Hazardous Reactions: Vapors may form explosive mixture with air. Hazardous polymerization does not occur. Note: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

NTP: Benzene (CAS-No.: 71-43-2)

IARC: Ethylbenzene (CAS-No.: 100-41-4)

Benzene (CAS-No.: 71-43-2)

OSHA: Benzene (CAS-No.: 71-43-2)

CA Prop 65: WARNING! This product contains a chemical known to the State of California to cause

cancer.

Ethylbenzene (CAS-No.: 100-41-4)

Benzene (CAS-No.: 71-43-2)

WARNING! This product contains a chemical known to the State of California to cause birth defects or

other reproductive harm. Toluene (CAS-No.: 108-88-3) Benzene (CAS-No.: 71-43-2)

SYMPTOMS (including delayed and immediate effects)

Inhalation: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness. High vapor concentrations of Xylene are anesthetic and central nervous system depressants. Inhalation of Toluene may result in peculiar skin sensations (e. g. pins and needles) or numbness. Very high concentrations may cause unconsciousness and death.

Skin irritation: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Eye irritation: Causes eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion: May cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death may occur.

Further information: This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH. Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, or excitation. Exposure to very high levels can

result in unconsciousness and death. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Bone marrow. Liver. Kidneys. Reproductive system. Central nervous system (CNS). Peripheral nervous system.

Chronic Effects: Hazardous by OSHA/WHMIS criteria. May cause chronic effects. Prolonged or repeated contact may dry skin and cause irritation. High vapor concentrations, generally greater than 10% by volume, may sensitize the heart and lead to lethal cardiac arrhythmias.

Repeated dermal application of crude oils in rats produced systemic toxicity in blood, liver, thymus and bone marrow. Reports of chronic poisoning with Benzene, Toluene, Ethylbenzene or Xylene describe anemia, decreased blood cell count and bone marrow hypoplasia. Liver and kidney damage may occur. Repeated exposure of the eyes to high concentrations of Xylenes vapor may cause irreversible eye damage. Chronic inhalation exposure to xylene causes mid-frequency hearing loss in laboratory animals. Xylene reacts synergistically with n-hexane to enhance hearing loss. Immuno-depressive effects have also been reported for Benzene. Chronic inhalation of n-Hexane may cause peripheral nerve disorders and central nervous system effects. 1,2,4-Trimethylbenzene may cause CNS changes, asthmatic bronchitis, and changes in the blood such as anemia or thrombocytopenia (i.e., low thrombocyte count that may affect the blood's ability to clot).

This material contains Cyclohexane which is known to cause liver and kidney damage.

Carcinogenicity: May cause cancer. Lifetime skin painting studies in animals with whole crude oils and crude oil fractions have produced tumors in animals following prolonged and repeated skin contact. Chronic exposure to benzene has been associated with an increased incidence of leukemia and multiple myeloma (tumor composed of cells of the type normally found in the bone marrow).

12. ECOLOGICAL INFORMATION

Ecotoxicity: This product is potentially toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

Persistence / Degradability: Primary components of this product are considered biodegradable in aerobic conditions.

Bioaccumulation / Accumulation: On release to the environment the lighter, product components will readily evaporate, but the remainder may become dispersed in the water column or adsorbed to soil or sediment.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

13. DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

14. TRANSPORTATION INFORMATION

REGULATORY INFORMATION	ID NUMBER	EMERGENCY RESPONSE	PROPER SHIPPING	CLASS	PACKING GROUP	PLACARD
		GUIDEBOOK	NAME			
DOT Classification	UN1268	Guide 128	PETROLEUM DISTILLATES	3	1	FLAMMABLE 3
TDG Classification	UN1268	Guide 128	PETROLEUM DISTILLATES	3	1	FLAMMABLE
IATA/ICAO	UN1268	Guide 128	PETROLEUM DISTILLATES	3	1	PLAMMABLE 3

15. REGULATORY INFORMATION

OSHA Standards

- Flammable Liquid
- Moderate skin irritant
- Severe eye irritant
- Carcinogen
- Teratogen

TSCA Status

On TSCA Inventory

SARA 311/312 Hazards

- Fire Hazard
- Acute Health Hazard
- Chronic Health Hazard

16. OTHER INFORMATION

REVISION DATE: 11/05/2018

REPLACES SHEET DATED: 10/01/2018

COMPLETED BY: MLTM, L.P., EHS Department

NOTE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS). However, SDS's may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.



Safety Data Sheet

1. PRODUCT IDENTIFICATION

24-HOUR EMERGENCY ASSISTANCE		GENERAL ASSISTANCE		NFPA DIAMOND *
Gas Control CHEMTREC Assistance	(888) 650-8099 (800) 424-9300	Phone Fax	(713) 650-8900 (713) 821-2080	4 - Extreme 3 - High 2 - Moderate 4 - Extreme 3 - High 2 - Moderate 4
MSDS NUMBER : 1018				Delivery 1 - Slight 0 - Ineignificant - See text

MANUFACTURER/SUPPLIER:

ELTM

P.O. Box 1184 Petal, MS 39465

Name:

N-Butane

CAS NUMBER:

000-106-978

Synonym/Product Name:

Aliphatic Hydrocarbon

Chemical Family:

Hydrocarbons

Molecular Formula:

nC4H10

Molecular Weight:

N/A

Product Use:

Synthetic /analytical chemistry

2. HAZARD IDENTIFICATION

GHS label elements





Signal Word: Danger

Hazard statements:

Extremely flammable gas.

May form explosive mixtures with air.

Contains gas under pressure; may explode if heated.

May cause frostbite.

May displace oxygen and cause rapid suffocation.

Precautionary statements:

Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution. General

Prevention:

Never put cylinders into unventilated areas of passenger vehicles. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use and store only outdoors in a well ventilated place.

Response: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

3. COMPOSITION OF INGREDIENTS

Substance /mixture: Substance

Chemical name: Butane

Other means of identification: n-Butane; Diethyl; Freon 600; Liquefied petroleum gas; LPG; n-C4H10; Butanen; Butani; Methylethylmethane; UN 1011; UN 1075; A-17; Bu-Gas.

CAS numbers/other identifiers

CAS number: 106-97-8 Product code: 001007

Ingredient name	%	CAS number
Butane	100	106-97-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. FIRST AID MEASURES

Emergency and First Aid Procedures

Inhalation: Immediately move personnel to fresh air. For respiratory distress, give air, oxygen, or administer CPR (cardiopulmonary resuscitation), if necessary. Obtain medical attention if breathing difficulties continue.

Eye Contact: Vapors are not expected to present an eye irritation hazard. If contacted by liquid/solid, immediately flush the eye(s) gently with warm water for at least 15 minutes. Seek medical attention if pain or redness persists.

Skin Contact: Frozen tissues should be flooded or soaked with warm water (105° - 115°F). DO NOT use hot water. Cryogenic burns which result in blistering or deeper tissue freezing should be promptly seen by a physician.

Ingestion: Practically impossible, but should it occur, get medical assistance immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. As this product rapidly becomes a gas when released, refer to the inhalation section.

Potential acute health effects

Eye contact: Liquid can cause burns similar to frostbite

Inhalation: Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite

Frostbite: Try to warm up the frozen tissue and seek medical attention

Ingestion: Ingestion of liquid can cause burns similar to frostbite

Indication of immediate medical attention and special treatment if necessary

Note to Physician: Treat systematically. Contact poison treatment specialist immediately if large quantities have been ingested

Specific treatments: No specific treatment

Protection of first aiders: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon dioxide carbon monoxide.

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion proof electrical (ventilating, lighting and material handling) equipment. Use only nonspeaking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

8. EXSPOSURES CONTROLS/ PERSONAL PROTECTION

Ingredient name	Exposure limit
Butane	ACGIH TLV (United States, 3/2012). TWA: 1000 ppm 8 hours. NIOSH REL (United States, 1/2013). TWA: 1900 mg/m³ 10 hours. TWA: 800 ppm 10 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 1900 mg/m³ 8 hours. TWA: 800 ppm 8 hours.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eye protection: Use chemical-type goggles and face shield when handling liquefied gases. Safety glasses and/or a face shield are recommended when handling high-pressure cylinders and piping systems and whenever vapors are discharged.

Skin protection: Prevent potential skin contact with cold liquid/solid/vapors. Use insulated, impervious plastic, or neoprene-coated canvas gloves and protective gear (apron, face shield, etc.) to protect hands and other skin areas.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear antistatic protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Engineering Controls: Local exhaust and general room ventilation may both be essential in work areas to prevent accumulation of explosive mixtures. If mechanical ventilation is used, electrical equipment must meet NEC requirements.

Work/Hygienic Practices

Emergency eye wash fountains and safety showers for first-aid treatment of potential freeze burns should be available in the vicinity of any significant exposure from compressed gas release. Personnel should not enter areas where the atmosphere is below 19.5Vol % oxygen without special procedures/equipment. Respirator use should comply with OSHA 29CFR 1910.134 or equivalent.

9. PHYSICAL AND CHEMICAL HAZARDS

Appearance

Physical state: Gas liquid

Color: Colorless

Molecular weight: 58.14 g/mole

Molecular formula: C4-H10

Boiling/ condensation point: -138°C (-216.4 °F)

Melting /freezing point: -138°C (-216.4°F) Critical temperature: 151.85°C (305.3°F)

Odor: Odorless.

Odor threshold: Not available.

pH: Not available.

Flash point: Closed cup: -60°C (-76°F)

Burning time: Not applicable.

Burning rate: Not applicable.

Evaporation rate: Not available

Flammability (solid, gas): Extremely flammable in the presence of the following materials or

conditions: open

flames, sparks and static discharge and oxidizing materials.

Upper explosive (flammable) limits: Upper: 8.4% Lower explosive (flammable) limits: Lower: 1.8%

Vapor pressure: 16.3 (psig) Vapor density: 2.1 (Air = 1)

Specific Volume (ft 3/lb): 6.435 Gas Density (lb/ft 3): 0.1554

Relative density: Not applicable

Solubility: Not available
Solubility in water: 0.061 g/l

Partition coefficient: noctanol/water: 2.89

Auto-ignition temperature: 365°C (689°F)

Decomposition temperature: Not available

SADT: Not available.

Viscosity: Not applicable.

10. STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.

Incompatibility with various substances: Extremely reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.

11. TOXICOLOGY INFORMATION

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Inhalation, skin and/or eye contact (liquid)

Potential acute health effects

Eye contact: Liquid can cause burns similar to frostbite.

Inhalation: No known significant effects or critical hazards.

Skin contact: Dermal contact with rapidly evaporating liquid could result in freezing of the tissues

or frostbite.

Ingestion: Ingestion of liquid can cause burns similar to frostbit

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following: frostbite

Inhalation No specific data.

Skin contact: Adverse symptoms may include the following: frostbite

Ingestion: Adverse symptoms may include the following: frostbite

12. ECOLOICAL INFORMATION

Toxicity

Not available.

Persistence and degradability

Not available

Bioaccumulative potential

Not available

13. DISPOSAL CONCIDERATIONS

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

14. TRANSPORTATION INFORMATION

	DOT	TDG	Mexico	IMG	IATA
UN number	UN1011	UN1011	UN1011	UN1011	UN1011
UN proper				5141011	0141011
shipping name	BUTANE	BUTANE	BUTANE	BUTANE	BUTANE
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.
	PLANNAR F GAS	PLANMABLE GAS	PLANGAGE GAS	PLANNAME DAS	PLASMANIA GAS
Packing group	-	-	-	-	-
Environment	No	No	No	No	No
Additional information	Limited quantity Yes. Packaging Instruction Passenger aircraft Quantity limitation: Forbidden. Cargo aircraft Quantity limitation: 150	Explosive Limit and Limited Quantity Index 0.125 ERAP Index 3000 Passenger Carrying Ship Index	-	-	Passenger and Cargo AircraftQuantity limitation: 0 Forbidden Cargo Aircraft Only Quantity limitation 150 kg

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. REGULATORY INFORMATION

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States Inventory (TSCA 8b): This material is listed or exempted. Clean Air Act (CAA) 112 regulated flammable substances: Butane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) Not listed

Clean Air Act Section 602 Class I Substances

Not listed

Clean Air Act Section 602 Class II Substances

Not listed

DEA List I Chemicals (Precursor Chemicals) Not listed

DEA List II Chemicals (Essential Chemicals) Not listed

SARA 302/304

Composition/information on ingredients SARA 304 RQ:

Not applicable. No products were found.

SARA 311/312 Classification

Fire hazard Sudden release of pressure

State regulations

Massachusetts: This material is not listed.
New York: This material is not listed.
New Jersey: This material is listed.
Pennsylvania: This material is listed

Canada: This material is listed or exempted

16. OTHER INFORMATION

The information contained herein is based on the data available to ELTM and is believed to be correct. However, ELTM makes no warranty, expressed or implied, regarding the accuracy of these data or the results to be obtained from the use thereof. ELTM assumes no responsibility for injury from the use of the product described herein.

Revision Date: 9/9/2015

The information contained in this case file is a working copy and summary of the documentation compiled during the investigative process. The original and complete investigation file is located in a master file storage at the HCFMO offices. Should you require additional information on this case file please contact me.

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