

***NYS Dept. Of Public Service  
Office of Electric, Gas & Water Division  
Safety Section  
Incident Investigation Report***

<b>Pipeline System:</b> <u>Williams ABA Windsor Pipeline</u>	<b>Operator:</b> <u>Williams Field Services Company, LLC</u>
<b>Location:</b> <u>Dunbar Compressor Station – Windsor NY</u>	<b>Date of Incident:</b> <u>1/6/2014</u>
<b>Material Released:</b> <u>Natural Gas</u>	<b>Quantity:</b> <u>Approximately 535 MCF</u>
<b>Staff Arrival Time &amp; Date:</b> <u>9:15 1/7/2014</u>	<b>Total Damages \$</b> <u>3,000,000</u>
<b>Report Date (Final):</b> <u>October 23, 2014</u>	<b>Matter Number</b> <u>14-00083</u>

<i>Company Reported Apparent Cause:</i>	<i>Company Reported Sub-Cause (from either telephonic notice or 30-day report<sup>(1)</sup>):</i>
<input type="checkbox"/> Corrosion	
<input type="checkbox"/> Natural Forces	
<input type="checkbox"/> Excavation Damage	
<input type="checkbox"/> Other Outside Force Damage	
<input type="checkbox"/> Material Failure	
<input checked="" type="checkbox"/> Equipment Failure	Station blow-down and fire on number 4 unit
<input type="checkbox"/> Incorrect Operation	
<input type="checkbox"/> Other	

<i>Accident/Incident Resulted in (check all that apply):</i>	<i>Comments:</i>
<input type="checkbox"/> Rupture	
<input type="checkbox"/> Leak	
<input checked="" type="checkbox"/> Fire	
<input type="checkbox"/> Explosion	Engine fire investigation and report
<input type="checkbox"/> Evacuation	Number of Persons: _____ Area: _____

<i>Narrative Summary</i>
<p>Short summary of the Incident/Accident scenario</p> <p>At 20:40 on January 6, 2014, Williams Field Services (Williams) notified DPS Staff (Michael McCutcheon) that there had been a fire on the number four unit at the Dunbar Station in the town of Windsor. DPS Staff (McCutcheon) responded to the site the following morning. The initial investigation indicated that the fire was on the engine and damage to the engine from the fire exacerbated the situation by releasing engine oil and ethylene glycol onto the skid causing a longer lasting fire that required outside resources to extinguish.</p> <p>The fire was extinguished and the investigative process was started before the removal and replacement of the unit commenced. The building received fairly extensive damage to wires and other soft components, the removal of these items had begun while the investigation was started.</p> <p>Williams provided a report entitled Preliminary <u>Root Cause and Corrective Action(s) Report Dated March 7, 2014</u>. This report states that the most plausible explanation of the incident is that the engine fuel supply flex hose failed, which discharged gas toward the turbochargers where it then ignited from the heat of the turbochargers and the exhaust manifold. The resulting flame (which was aimed toward the left turbocharger) melted the brazed oil drain line resulting in oil leaking out of the broken connection and onto the skid below. Consequently, the oil caught fire from the fuel hose flame and spread across the skid igniting other components. Staff concurs that this is the most plausible explanation.</p>

<sup>1</sup> Or from PHMSA Form 7000-1/7100.2 if appropriate

## *Incident Investigation Report*

The Emergency Shut-Down system (ESD) was activated within seconds of the fuel line rupture. Therefore the natural gas fire was short lived, but lasted long enough to cause damage to the engine allowing engine oil to pour into the self-contained skid and ignite.

This fire continued to burn on and in the skid until extinguished by third party/outside fire-fighting personnel. All units were left offline and the station was by-passed until repairs were made. The repairs consisted of minor structural items, complete replacement of the CAT 3616 engine on unit four including design modifications, updating and replacement of fire eye flame detection equipment, gas detectors over the compressor units and throughout the building, visual alarm system both inside and outside the building and telemetering equipment necessary to place this station in contact with Williams pipeline control. (Tulsa)

The fuel line entered the engine area at or near the floor of the skid. Approximately 40 inches of flexible metal braided supply line was used to correct a misalignment of the two pieces of pipe. The failure occurred in the area of a tight bend in the metal braided fuel pipe (see Photo 5). This situation was remedied by utilizing hard pipe, cut and treaded to facilitate a 'straight' pipe alignment that also reduced the 30-40 inch pipe to a 7 to 8 inch piece of flexible pipe with no bending stresses due to poor alignment.

There were four gas and flame detectors operational before the incident. Since the system modifications there are now 42 gas and flame detectors in place at strategic locations so that any event should be detected very early on.

Williams' Root Cause analysis also posited, as another possible root cause, that a 1-inch threaded pipe nipple near the right side of the suction scrubber cracked due to cyclic fatigue caused by vibration and was ignited by an unknown source on that end of the skid. The resulting flame burned through the compressor oil hoses which caused the oil to drain onto the skid and spread across the skid. Staff considers this scenario unlikely because, had this component been a causative factor there would have been fire near this (if the escaping gas caused the fire the fire would have burned back to the source). Staff believes the a nipple on the suction side of the skid likely failed during and as a result of the unit emergency shut down since that was probably a very violent event. This crack in the small diameter piece of pipe far from the damage was not a contributing factor but was discovered and addressed nonetheless. These nipples have been removed from all Williams pipeline skid mounted compressor units thus eliminating any possibility of a reoccurrence with this piece of equipment,

After a station walkthrough with Williams personnel and DPS staff to discuss the repairs and modifications the station was brought back online at the end of March 2014 and is currently in service.

	Name	Title	Signature	Date
Lead Investigator	Michael L. McCutcheon	Utility Specialist	Via DMM	10/23/2014
Contributing Staff	Steven D. Blaney	Utility Engineer 3	Steven D. Blaney	10/21/2014
Contributing Staff				
Local Supervisor	Brett Mahan	Utility Engineer II(Safety)	Via DMM	10/14/2012
Regional Supervisor	William Wade	Regional Supervisor	Via DMM	10/15/2014
Section Chief	Kevin Speicher	Chief, Gas & Petroleum Safety	Via DMM	10/23/2014
Counsel	Robyn Adair	Assistant Counsel	Via DMM	10/7/2014

## Incident Investigation Report

<b>Failure Location &amp; Response</b>		
Location (City, Township, Range, County/Parish): Windsor Township in Broome County NY		(Acquire Map)
Address or M.P. on Pipeline: <sup>(2)</sup> """" 86 Patterson Road Windsor, NY 13685	Type of Area (Rural, City): <sup>(1)</sup> Rural - residential	
Coordinates of failure location: Latitude: N42.11706		Longitude: W-75.71627
Date: 1/6/2014	Time of Failure: 18:55 hrs	
Time Detected: 18:55 hrs	Time Located: 18:55 hrs	
How Located: A technician was onsite when incident occurred.		
NRC Report #: (Attach Report) 1070262	Time Reported to NRC: 19:55	Reported by: Don Fernald
<b>Type of Pipeline:</b>		
<input type="checkbox"/> <b>Gas Distribution</b>	<input type="checkbox"/> <b>Gas Transmission</b>	<input type="checkbox"/> <b>Hazardous Liquid</b>
<input type="checkbox"/> Municipal	<input type="checkbox"/> Interstate Gas	<input type="checkbox"/> Interstate Liquid
<input type="checkbox"/> Public Utility	<input type="checkbox"/> Intrastate Gas	<input type="checkbox"/> Intrastate Liquid
	<input checked="" type="checkbox"/> Gas Gathering	<input type="checkbox"/> LNG
Pipeline Configuration (Regulator Station, Pump Station, Pipeline, etc.): This occurred at a midstream compressor station that takes gas from production fields in Pennsylvania and feeds an interstate transmission system in New York.		

<b>Operator/Owner Information</b>	
Owner: Williams Field Services Company, LLC Address: 51 Warren Street, Tunkhannock PA, 18657	Operator: See "Owner" Address:
Company Official: Michael Dickenson (Manager of Operations) Phone No.: 570-996-4000 Fax No.: 570-996-4009	Company Official: Phone No. Fax No.
<u>Drug and Alcohol Testing Program Contacts</u>	
Drug Program Contact & Phone: Merle Bowler, 713-215-2422	
Alcohol Program Contact & Phone: Merle Bowler, 713-215-2422	
___ N/A	

2 Photo documentation

## Incident Investigation Report

<b>Damages</b>	
Product/Gas Loss or Spill <sup>(3)</sup> 535 MSCF (approx.) Amount Recovered 0 MSCF Estimated Amount \$ 2,420	Estimated Property Damage \$ \$2.5M (Approx.) Associated Damages <sup>(4)</sup> \$500,000 (approx.)
Description of Property Damage:  As a result of the fire, significant portions of compressor unit number 4 sustained damage and were replaced in kind. There was also minor damage to the building. At the time of this report all repairs have been made.	
Customers out of Service:                     ___ Yes                     X No                     Number: <span style="margin-left: 450px;">Number:</span>	
Suppliers out of Service: <sup>1</sup> ___ Yes                     X No	

<b>Fatalities and Injuries</b>					<u>X</u> N/A
Fatalities:	___ Yes	___ No	Company:	Contractor:	Public:
Injuries - Hospitalization:	___ Yes	___ No	Company:	Contractor:	Public:
Injuries - Non-Hospitalization:	___ Yes	___ No	Company:	Contractor:	Public:
Total Injuries (including Non-Hospitalization):			Company:	Contractor:	Public:
Name	Job Function	Yrs. w/ Comp.	Yrs. Exp.	Type of Injury	

<b>Drug/Alcohol Testing</b>					<u>X</u> N/A
Were all employees that could have contributed to the incident, post-accident tested within the 2 hour time frame for alcohol or the 32 hour time frame for all other drugs? ___Yes     ___No					
Job Function	Test Date & Time	Location	Results		Type of Drug
			Pos	Neg	

<sup>3</sup> Initial volume lost or spilled

<sup>4</sup> Including cleanup cost

## Incident Investigation Report

<i>System Description</i>
<p>Describe the Operator's System: This pipeline system is an interstate natural gas gathering system that is supplying pipeline quality natural gas to an interstate transmission system that moves the production gas to the market.</p> <p>In NY the system consists of a transmission 'gathering-line' to a point at the Dunbar Station where the gas pressure is increased for injection into the Millennium Pipeline. The station currently has about 10,000 HP and has a throughput capacity of 225MMSCFD to Millennium.</p>

<i>Pipe Failure Description</i>	
Length of Failure (inches, feet, miles):    Engine Failure on Number four compressor unit <span style="float: right;">(1)</span>	
Position (Top, Bottom, include position on pipe, 6 O'clock): <sup>(1)</sup>	Description of Failure (Corrosion Gouge, Seam Split): <sup>(1)</sup> A flex fuel line was stressed due to pipe configuration ruptured in service with 40 psi natural gas escaping and igniting on the turbo charger manifold.
Laboratory Analysis: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Performed by:    Analyzed by Williams labs to determine likely reason for failure.	
Preservation of Failed Section or Component: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If Yes - Method:	
In Custody of:    Operator	
Develop a sketch of the area including distances from roads, houses, stress inducing factors, pipe configurations, direction of flow, etc. Bar Hole Test Survey Plot, if included, should be outlined with concentrations at test points. The unit was on a skid.	

<i>Component Failure Description</i>	
Component Failed:	There are a number of failed components, including a 1-inch threaded nipple near the right side suction scrubber, engine fuel supply line and a brazed turbo charger oil drain line. <span style="float: right;">(1)</span>
Manufacturer: Caterpillar	Model: 3616
Pressure Rating: N/A	Size: 5,000 HP
Other (Breakout Tank, Underground Storage):	

<i>Pipe Data</i>		<u>X</u> N/A
Material:	Wall Thickness/SDR:	
Diameter (O.D.):	Installation Date:	
SMYS: N/A	Manufacturer:	
Longitudinal Seam:	Type of Coating:	
Pipe Specifications (API 5L, ASTM A53, etc.):		

<i>Joining</i>		<u>X</u> N/A
Type: Welded	Procedure: N/A	
NDT Method: N/A	Inspected: <input type="checkbox"/> Yes <input type="checkbox"/> No	

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<i>Pressure @ Time of Failure @ Failure Site</i>					<u>  X  </u> N/A
Pressure @ Failure Site:			Elevation @ Failure Site:		
Pressure Readings @ Various Locations:				Direction from Failure Site	
Location/M.P./Station #	Pressure (psig)	Elevation (ft msl)	Upstream	Downstream	

<i>Upstream Pump Station Data</i>		<u>  X  </u> N/A
Type of Product:	API Gravity:	
Specific Gravity:	Flow Rate:	
Pressure @ Time of Failure <sup>(5)</sup>	Distance to Failure Site:	
High Pressure Set Point:	Low Pressure Set Point:	

<i>Upstream Compressor Station Data</i>		<u>  X  </u> N/A
Specific Gravity:	Flow Rate:	
Pressure @ Time of Failure <sup>(5)</sup>	Distance to Failure Site:	
High Pressure Set Point:	Low Pressure Set Point:	

<i>Operating Pressure</i>	
Max. Allowable Operating Pressure: 1440 psi	Determination of MAOP: Hydrostatic Test
Actual Operating Pressure: 750/1,200 psi (Suction/Discharge)	
Method of Over Pressure Protection: Pressure Safety Valves (PSV) on both the suction and discharge sides.	
Relief Valve Set Point: 1,440 psi	Capacity Adequate? <u>  X  </u> Yes    ___ No

<i>Integrity Test After Failure</i>		<u>  X  </u> N/A
Pressure test conducted in place? (Conducted on Failed Components or Associated Piping):	___ Yes    __ No	
If No, tested after removal?	__ Yes    ___ No	
Method:		
Describe any failures during the test.		

<i>Soil/water Conditions @ Failure Site</i>		<u>  X  </u> N/A
Condition of and Type of Soil around Failure Site (Color, Wet, Dry, Frost Depth):		
Type of Backfill (Size and Description):		
Type of Water (Salt, Brackish):	Water Analysis <sup>(6)</sup> ___ Yes    ___ No	

5 Obtain event logs and pressure recording charts

6 Attach copy of water analysis report

## Incident Investigation Report

<b>Cathodic Protection</b>		<u>X</u> N/A
P/S (Surface):	P/S (Interface):	
Soil Resistivity:	pH:	Date of Installation:
Method of Protection: Passive		
Did the Operator have knowledge of Corrosion before the Incident?    ___ Yes    ___ No		
How Discovered? (Close Interval Survey, Instrumented Pig, Annual Survey, Rectifier Readings, ECDA, etc):		

<b>External Pipe or Component Examination</b>	
External Corrosion?    ___ Yes <u>X</u> No <sup>(1)</sup>	Coating Condition (Disbonded, Non-existent):    Paint <sup>(1)</sup>
Description of Corrosion: None	
Description of Failure Surface (Gouges, Arc Burns, Wrinkle Bends, Cracks, Stress Cracks, Chevrons, Fracture Mode, Point of Origin): There was a stress crack in a 1 inch nipple that likely resulted from the rapid stop of the engine during the emergency shutdown of the station, the braid-reinforced fuel line ruptured likely as a result of stress to the line in a tight bend and a brazed oil return line failed as a result of a natural gas fire impinging directly onto the joint.	
Above Ground: <u>X</u> Yes    ___ No <sup>(1)</sup>	Buried:    ___ Yes <u>X</u> No <sup>(1)</sup>
Stress Inducing Factors: <sup>(1)</sup> The length and configuration of the fuel supply line experienced undue stress.	Depth of Cover: <sup>(1)</sup> N/A

<b>Internal Pipe or Component Examination</b>		<u>X</u> N/A
Internal Corrosion:    ___ Yes    ___ No <sup>(1)</sup>	Injected Inhibitors:    ___ Yes    ___ No	
Type of Inhibitors:	Testing:    ___ Yes    ___ No	
Results (Coupon Test, Corrosion Resistance Probe):		
Description of Failure Surface (MIC, Pitting, Wall Thinning, Chevrons, Fracture Mode, Point of Origin):		
Cleaning Pig Program:    ___ Yes    ___ No	Gas and/or Liquid Analysis:    ___ Yes    ___ No	
Results of Gas and/or Liquid Analysis <sup>(7)</sup>		
Internal Inspection Survey:    ___ Yes    ___ No	Results <sup>(8)</sup>	
Did the Operator have knowledge of Corrosion before the Incident?    ___ Yes    ___ No		

7 Attach copy of gas and/or liquid analysis report

8 Attach copy of internal inspection survey report

## Incident Investigation Report

<b>Internal Pipe or Component Examination</b>	<u>X</u> N/A
How Discovered? (Instrumented Pig, Coupon Testing, ICDA, etc.):	

<b>Natural Forces</b>	<u>X</u> N/A
Description (Earthquake, Tornado, Flooding, Erosion):	

<b>Outside Force Damage</b>		<u>X</u> N/A
Excavator:	Telephone No.:	
Address:		
Work Being Performed:		
Equipment Involved: <sup>(1)</sup>	Called One Call System? ___ Yes ___ No	
One Call Name:	One Call Report # <sup>(9)</sup>	
Notice Date:	Time:	
Response Date:	Time:	
Details of Response:		
Was Location Marked According to Procedures? ___ Yes ___ No		
Pipeline Marking Type: <sup>(1)</sup>	Location: <sup>(1)</sup>	
State Law Damage Prevention Program Followed? ___ Yes ___ No (If Yes, attach copy of §753 Citation(s))		
Notice Required: ___ Yes ___ No	Response Required: ___ Yes ___ No	
Was Operator Member of State One Call? ___ Yes ___ No	Was Operator on Site? ___ Yes ___ No	
Did a deficiency in the Public Awareness Program contribute to the accident? ___ Yes ___ No		

<b>Failure Isolation</b>	
Squeeze Off/Stopple Location and Method: <sup>(1)</sup> Isolation and depressurization of full compressor station.	
Valve Closed – Upstream: Upstream: Station Suction ESD valve Time: 18:55	I.D.: ESD 00201  M.P.:
Valve Closed - Downstream: Station Discharge ESD Valve Time: 18:55	I.D.: ESD 01405  M.P.:
Pipeline Shutdown Method: ___ Manual ___ Automatic ___ SCADA ___ Controller <u>X</u> ESD	
Failed Section Bypassed or Isolated: First isolated then bypassed.	

9 Attach copy of one-call report



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<b>Failure Isolation</b>	
Performed By: A station technician that was onsite to check on compressor uit number 3.	Valve Spacing: N/A

<b>Odorization</b>		<u>X</u> N/A
Method of Determination:	Concentration of Odorant <sup>(10)</sup> : % LEL: __ % Gas In Air: __ Time Taken:	
Was Odorizer Working Prior to the Incident? __ Yes __ No	Type of Odorizer (Wick, By-Pass):	
Odorant Manufacturer: Model:	Type of Odorant:	
Amount Injected:	Monitoring Interval (Weekly):	
Odorization History (Leaks Complaints, Low Odorant Levels, Monitoring Locations, Distances from Failure Site): There was no gas in the station when the investigation was taking place – this item was not checked.		

<b>Weather Conditions</b>	
Temperature: Approximately 0 degrees Fahrenheit.	Wind (Direction & Speed): None
Climate (Snow, Rain): Winter Conditions	Humidity: N/A
Was Incident preceded by a rapid weather change? <u>X</u> Yes __ No	
Weather Conditions Prior to Incident (Cloud Cover, Ceiling Heights, Snow, Rain, Fog): Cloud cover and rain/snow/sleet earlier in the day.	

<b>Gas Migration Survey</b>		<u>X</u> N/A
Bar Hole Test of Area: __ Yes __ No	Equipment Used:	
Method of Survey (Foundations, Curbs, Manholes, Driveways, Mains, Services) <sup>(11)</sup>		

<b>Environment Sensitivity Impact</b>		<u>X</u> N/A
Location (Nearest Rivers, Body of Water, Marshlands, Wildlife Refuge, City Water Supplies that could be or were affected by the medium loss): <sup>(1)</sup>		
OPA Contingency Plan Available? __ Yes __ No	Followed? __ Yes __ No	

<b>Class Location/High Consequence Area</b>		<u>X</u> N/A
Class Location: 1 __ 2__ 3 __ 4 __ Determination:	HCA Area? __ Yes __ No __ N/A Determination:	

10 Post Incident at Failure Site  
 11 Plot on site description page

## Incident Investigation Report

<b>Maps &amp; Records</b>	
Are Maps and Records Current? <sup>(12)</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Comments: Station diagram is attached to this document.	

<b>Pressure Test History</b>						<input checked="" type="checkbox"/> N/A
<i>(Expand List as Necessary)</i>						
	Req'd <sup>(13)</sup> Assessment Deadline Date	Test Date	Test Medium	Pressure (psig)	Duration (hrs)	% SMYS
Installation						
Next						
Next						
Most Recent						
Describe any problems experienced during the pressure tests.						

<b>Internal Line Inspection/Other Assessment History</b>						<input checked="" type="checkbox"/> N/A
<i>(Expand List as Necessary)</i>						
	Req'd <sup>(13)</sup> Assessment Deadline Date	Assessment Date	Type of ILI Tool <sup>(14)</sup>	Other Assessment Method <sup>(15)</sup>	Indicated Anomaly If yes, describe below	
Initial					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Next					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Next					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Most Recent					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Describe any previously indicated anomalies at the failed pipe, and any subsequent pipe inspections (anomaly digs) and remedial actions.						

<b>Pre-Failure Conditions and Actions</b>
Was there a known pre-failure condition requiring <sup>(13)</sup> the operator to schedule evaluation and remediation? <input type="checkbox"/> Yes (describe below or on attachment) <input checked="" type="checkbox"/> No
If there was such a known pre-failure condition, had the operator established and adhered to a required <sup>(13)</sup> evaluation and remediation schedule? Describe below or on attachment. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Prior to the failure, had the operator performed the required <sup>(13)</sup> actions to address the threats that are now known to be related to the cause of this failure? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
List below or on an attachment such operator-identified threats, and operator actions taken prior to the accident.

12 Obtain copies of maps and records

13 As required of Pipeline Integrity Management regulations in 16 NYCRR Part 255 and 49CFR Parts 192 and 195

14 MFL, TFI, UT, Combination, Geometry, etc.

15 ECDA, ICDA, SCCDA, "other technology," etc.

## Incident Investigation Report

### Pre-Failure Conditions and Actions

Describe any previously indicated anomalies at the failed pipe, and any subsequent pipe inspections (anomaly digs) and remedial actions.

**None**

### Leak Survey History

X N/A

Leak Survey History (Trend Analysis, Leak Plots):

### Pipeline Operation History

X N/A

Description (Repair or Leak Reports, Exposed Pipe Reports):

Did a Safety Related Condition Exist Prior to Failure?    \_\_\_ Yes    \_\_\_ No    Reported?    \_\_\_ Yes    \_\_\_ No

Unaccounted For Gas:

Over & Short/Line Balance (24 hr., Weekly, Monthly/Trend):

### Operator/Contractor Error

X N/A

Name:

Job Function:

Title:

Years of Experience:

Training (Type of Training, Background):

Was the person "Operator Qualified" as applicable to a precursor abnormal operating condition?    \_\_\_ Yes    \_\_\_ No    \_\_\_ N/A

Was qualified individual suspended from performing covered task    \_\_\_ Yes    \_\_\_ No    \_\_\_ N/A

Type of Error (Inadvertent Operation of a Valve):

Procedures that are required:

Actions that were taken:

Pre-Job Meeting (Construction, Maintenance, Blow Down, Purging, Isolation):

Prevention of Accidental Ignition (Tag & Lock Out, Hot Weld Permit):

Procedures conducted for Accidental Ignition:

Was a Company Inspector on the Job?    \_\_\_ Yes    \_\_\_ No

Was an Inspection conducted on this portion of the job?    \_\_\_ Yes    \_\_\_ No

Additional Actions (Contributing factors may include number of hours at work prior to failure or time of day work being conducted):

Training Procedures:

Operation Procedures:

Controller Activities:

## *Incident Investigation Report*

<i>Operator/Contractor Error</i>				<u>X</u> N/A
Name	Title	Years Experience	Hours on Duty Prior to Failure	Shift
Alarm Parameters:				
High/Low Pressure Shutdown:				
Flow Rate:				
Procedures for Clearing Alarms:				
Type of Alarm:				
Company Response Procedures for Abnormal Operations:				
Over/Short Line Balance Procedures:				
Frequency of Over/Short Line Balance:				
Additional Actions:				

## *Incident Investigation Report*

### *Additional Actions Taken by the Operator*

Make notes regarding the emergency and Failure Investigation Procedures (Pressure reduction, Reinforced Squeeze Off, Clean Up, Use of Evacuators, Line Purging, closing Additional Valves, Double Block and Bleed, Continue Operating downstream Pumps):

The station was blocked out and gas moved completely around the station. Shortly after the incident, Williams formed an incident investigation team to determine the cause(s) of the incident and to evaluate the equipment. The investigation found that communications to system control needed to be enhanced, which has been completed. The investigation also noted issues with the location of fire/gas detection equipment and alarms (no audible and location of visual); these items have been addressed.

The investigation noted that the fuel supply system was poorly designed and was redesigned and the new design was implemented.

### *Photo Documentation <sup>(1)</sup>*

Overall Area from best possible view. Pictures from the four points of the compass. Failed Component, Operator Action, Damages in Area, Address Markings, etc.

Photo No.	Description	Photo No.	Description
<a href="#"><u>1</u></a>	North View of Unit 4		
<a href="#"><u>2</u></a>	East View of Unit 4		
<a href="#"><u>3</u></a>	South View of Unit 4		
<a href="#"><u>4</u></a>	Turbo Cooler Line		
<a href="#"><u>5</u></a>	Ruptured Fuel Line		
<a href="#"><u>6</u></a>	Turbo and Failed Component		
	State Issued EOS Rebel T3 (Digital)		

# *Incident Investigation Report*

Photo 1



# *Incident Investigation Report*

Photo 2



# *Incident Investigation Report*

Photo 3



Photo 4





## *Incident Investigation Report*

Photo 5



Photo 6



## *Incident Investigation Report*

<i>Additional Information Sources</i>			
Agency	Name	Title	Phone Number
Police:			
Fire Dept.:			
State Agency:			

<i>Persons Interviewed</i>		
Name: Mike Dickenson	Title: Manager Operations	Phone Number: (570)-996-4002
Interviewed by: McCutcheon	Others present: Various including Floyd Bronson. Mike gave me the tour of the facility; there were anonymous workers in the vicinity while we talked.	
Date Interview: 1/7 & 8		
Name: Floyd Bronson	Title: Operations Tech III	Phone Number: (918) 573-9881
Interviewed by: McCutcheon	Others present: Mike Dickenson and others	
Date Interview: 1/7&8		
Name: Robert Muiter	Title: Operations Tech II	Phone Number: (918) 573-9881
Interviewed by: McCutcheon	Others present: Mike Dickenson	
Date Interview: 1/8		
Interviewed by:	Others present:	
Date Interview:		

<i>Event Log</i>	
Sequence of events prior, during, and after the incident by time. (Consider the events of all parties involved in the incident, Fire Department and Police reports, Operator Logs and other government agencies.)	
Time / Date	Event
17:53 - 1/6/14	Engine 3 shut down
17:53 - 1/6/14	Call out for engine 3 (Robert Muiter)
18:53 - 1/6/14	Arrive at station for engine 3 shut down
18:55 - 1/6/14	Incident occurred/ESD deployed
18:58 - 1/6/14	Emergency Notification activated (receipt of 9-1-1 call)
19:16 - 1/6/14	Arrival of emergency responders
20:07 - 1/6/14	Completion of fire-fighting activities
20:40 - 1/6/14	NYSDPS Staff notified
09:15 - 1/7/14	NYSDPS Staff arrived
09:15 - 1/8/14	Onsite with accident investigation team and fire investigators
08:00 - 1/17/14	Satisfactory response to investigative questions answered and DPS report being competed.
09:00 - 3/26/14	Site visit with William's personnel to review the preliminary root cause report and the remedial actions.

# *Incident Investigation Report*

<i><b>Event Log</b></i>			
Sequence of events prior, during, and after the incident by time. (Consider the events of all parties involved in the incident, Fire Department and Police reports, Operator Logs and other government agencies.)			
Time	Date	Name	Description
20:40	1/6/2014	Jack Walsh	Emergency Notice
9:45	1/7/2014	Michael Dickenson	Onsite visit
10:00	1/7/2014	Floyd Bronson	Station Walkthrough
15:35	1/8/2014	Robert Minter	Interview of accident with eyewitness.
09:30	1/7/2014	Scott Schubring	Investigation Team Leader
09:30	1/7/2014	Nathan Phillips	Engineer I - Investigation Team
09:30	1/7/2014	Johnny Huntly	PL Controller Leader – Investigation Team
09:30	1/7/2014	Kyle Early	Safety and Health - Investigation Team
09:30	1/7/2014	Ryan Stalker	Compliance Specialist - Investigation Team
08:00	3/26/14	Jack Walsh/Mike Dickenson	Site visit and document review before the station was returned to service.

## *Incident Investigation Report*

<i>Failure Investigation Documentation Log</i>		
Appendix Number	Documentation Description	Date Received

# Incident Investigation Report

## Site Description

Provide a sketch of the area including distances from roads, houses, stress inducing factors, pipe configurations, etc. Bar Hole Test Survey Plot should be outlined with concentrations at test points. Photos should be taken from all angles with each photo documented. Additional areas may be needed in any area of this guideline.

