South 4 Group Fire
Port Neches, Texas
Vapor Suppressant Control Plan
Version 1.0

Prepared on behalf of:

TPC Group

Prepared By:

TPC and CTEH, LLC

5120 Northshore Drive

North Little Rock, AR 72118

501-801-8500

[DATE \@ "MMMM d, yyyy"]

	Name/Organization	Signature	Date Signed
Prepared by:	Ebun Broomes, Environmental Engineer, TPC		12/6/19
Reviewed by:	Angela L Perez, PhD; CTEH	Angela L Perez	12/6/19
Approved by:	Rebecca Jaschek, Corporate EHSS Manager, TPC		
Approved by:			
Approved by:			
Approved by:			
Approved by:			

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Vapor Suppression Plan Management of Change

Change 001			
Description of Change (include sections & page numbers):			
	Name/Position	Signature	Date Signed
Prepared By:			
Approved By:			

Change 002			
Description of Change (include sections & page numbers):			
	Name/Position	Signature	Date Signed
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Change 003			
Description of Change (include sections & page numbers):			
	Name/Position	Signature	Date Signed
Prepared By:			
Approved By:			

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INTRODUCTION AND PURPOSE

This vapor suppressant control plan was developed by TPC Group, LLC (TPC), supporting Unified Command (UC) to provide general guidance procedures to be used to ensure that human health and environmental impact from the use of vapor suppressant product is minimized. The primary focus will be to ensure the protection of personnel onsite and to ensure that efforts are made to ensure that potential offsite emissions minimize risk of adverse human health effects or adverse environmental effects.

HEALTH AND SAFETY

Safety is the most important consideration when implementing this plan. All site personnel will review and adhere to TPC's Site Safety and Control Plan and company/contractor-specific Health and Safety Plans (HASP), and ICS-206, as applicable. Daily tailgate safety briefings will be conducted prior to going into the field. The appropriate personal protective equipment (PPE) will be utilized for each task. Any health and safety-related incident will be promptly reported to the Safety Officer (SOFR).

Proposed locations for vapor suppressant use

The TPC site locations referenced in this plan are shown in facility map in [HYPERLINK \l "Appendix_A"] **and**[HYPERLINK \l "Appendix_D"]. The water management procedures employed to-date during the South 4 Group Fire are described below. Stormwater from block 10 is routed to the Joint Waste Water Treatment Plant (JWWTP). The Block 10 stormwater currently bypasses the primary clarifiers in the JWWTP but can be routed to the clarifiers pending approval from Huntsman, who operates the JWWTP. Stormwater from Block 5 is pumped to Block 6 and routed to JWWTP for treatment.

Emergency Response Team (ERT) personnel will apply the vapor suppressant product. The proposed product to be used is Signature Series VSP ([HYPERLINK \l "ANTIFOAMING_AGENT_SDS"] and [HYPERLINK \l "ANTIFOAMING_AGENT_DATASHEET"] attached). Applications will occur in half of Block 5 and all of Block 10 (See attached [HYPERLINK \l "_PNO_SPCC_MAP"] and [HYPERLINK \l "_PNO_BLOCK_MAPS"]). Additional applications of suppressant will be applied to Tank 25, located in block 9, to address a leak with a relief valve on top of the tank. Block 5 is diked but the valve for the dikes are left open. Block 10 has no dikes but the stormwater from Block 10 flows direct to the JWWTP. Water releases from site will be managed according to the Water Management Plan, approved by UC, dated December 1, 2019. Waste releases will be managed according to the Waste Management Plan, dated December 4, 2019.

The volume and time course of suppressant application is to be determined based on the detection of vapors above typical background readings. The current flow to be applied with suppressant product is a maximum of 23,000 gallons per minute, which will be maintained for 30 minutes. After 30 minutes, the flow is reduced to 8,000 gallons per minute. Periodic monitoring will take place during the application period.

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WASTE CHARACTERIZATION

Classification of the wastes/materials will be determined based sampling analytical results, waste characterization and, in some cases, generator knowledge. Currently, the estimated volumes of each waste stream and reclaimable/recyclable materials are unknown due to the nature of the incident. All waste streams will be carefully classified following the rules set forth in 30 TAC 335.501-521 Subchapter R.

Vapor Suppression Methodology

Vapor suppression methodology and best practices are described below.

- Boom is added to ponds in Block 6 to prevent vapor suppressant from flowing to the JWWTP.
- Ensure that the wastewater pumps are operational. There are at least two operational pumps on site as of December 4, 2019.
- Prior to the use of firefighting vapor suppressant, verification will be made that booms are located at [HYPERLINK \l "Outfall_201_Wier"]. There are currently three booms at the outfall 201 weir.

Communicate with Clean Harbors to check condition of the booms prior to activities. If the booms are soiled and need to be replaced, please replace them prior to vapor suppression activities. The Clean Harbors contact is Mr. Cory Blanchard, Emergency Service Project Manager at 337-321-2948.

- Vapor suppressant product is estimated to be applied at a 6% dilution with water.
- During vapor suppression activities, any vapor suppressant that makes it to the weir from the ditches will be collected using dipnets and placed into open top drums.
    - Clean Harbor Environmental has approximately 20 dipnets and people on staff for clean-up efforts at Outfall 201. Seven to ten dipnets and cleanup crews will be needed to help ensure that foam does not bypass the booms that are placed in the weir.
- If discharge is occurring from Outfall 201, make note of discharge start and stop times.
- Have Clean Harbor personnel monitor[HYPERLINK \l "OUTFALL_001_Canal"] for any vapor suppressant that may have escaped Outfall 201 weir.
    - If vapor suppressant is noticed in Outfall 001 canal, notify the Environmental Technical Unit for reevaluation of vapor suppressant activities. Environmental Technical Unit can be reached by contacting Mr. Mike Miller or Ms. Ebun Broomes at [HYPERLINK "mailto:Michael.Miller2@tpcgrp.com"] and [HYPERLINK "mailto:Ebunoluwa.broomes@tpcgrp.com"] respectively. The Environmental Technical Unit will contact Clean Harbors to coordinate mitigation plans as necessary.
- Water from firefighting suppression activities will be routed to JWWTP Blend box which is operated by Huntsman. While water is being pumped from Block 6 to the blend box, antifoaming agent will be injected to the water to prevent foaming due to the vapor suppressant.

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[HYPERLINK \l "Sampling_Plan"]

On November 29, 2019, Raw water sample was collected at the LNVA Canal, sample location - PNTX1129X007, PACE Lab Sample ID No. 21911291607 (**see page 7** of the attached Analytical Results which displays a PFAS concentration of 3.08 nanograms per Liter (ng/L). Raw water samples were collected from Water Sample (WS) location WS007. As of December 4, 2019, raw water samples will be collected from WS014 instead of WS007. WS007 and WS014 should have similar results as they both represent LNVA raw water. [HYPERLINK \l "LAB_SAMPLE_21911291607_RESULT"]

Water Sample Results will be emailed to Mr. Todd McLane Huntsman Environmental Manager, at Todd_A_McLane@huntsman.com.

Water samples will be collected at the following locations and corresponding sampling frequency as described in the sample table below. Sample results will be compared to the aforementioned sample id results to determine Vapor Suppressant impact on JWWTP treatment efficiency.

For viewing sample results with corresponding CTEH Sample Map, please see the Sample Format/ Nomenclature as described below:

Environmental Sample Nomenclature

Format: 1 2 3 4 5 6 7 8 9 10 11 (12 13 Optional Depth). No spaces, lines through zeros, and a line through Z.

Digit	Description
1 2 3	Site/State Prefix
4 5 6 7	Two Digit Month and Two Digit Day
8	Matrix Code
9 10 11	Three Digit Serial # (000 – 999)

Three-digit Serial # will be unique to each sampling location.

Matrix guide:

T – Trip Blank

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V - Duplicate

X – Firewater/Outfall

Y – Background

Z – Product/Foam

See sample table below

SAMPLE TABLE

See Attachments for Map locations. Click links to view maps.

See [HYPERLINK \l "_LAB_SAMPLING_LOCATIONS"].

SAMPLE LOCATION	DETAILS	Frequency	LINK TO MAP
LNVA (WATER SAMPLE (WS) ID NO. 007 AND O14)	TPC RAW FIRE WATER INLET	Daily	[HYPERLINK \l "LNVA_SAMPLE_LOCATION"]
BLENDBOX (WS10)	TPC-LION WATER (POST VAPOR SUPPRESSION USE) TPC OUTLET AND JWWTP INLET	DAILY	[HYPERLINK \l "BLENDBOX_SAMPLE_LOCATION"]
OUTFALL 301 (TBA)	POST JWWTP WATER TREATMENT	DAILY	[HYPERLINK \l "OUTFALL_301_SAMPLE_LOCATION"]
001 CANAL (WS006 AND 003)	Two sample points on the 001 canal	TWICE A DAY	[HYPERLINK \l "OUTFALL_001_Canal"]
LIFTSTATION TO WETLANDS (WS004)	POST JWWTP OUTFALL 301 AND POST TPC OUTFALL 201. These effluents are mixed. It's prior to outfall 001. It's also where the effluent mixture is being pumped to the wetlands.	TWICE A DAY	[HYPERLINK \l "LIFTSTATION_TO_WETLANDS"]
Outfall 004 (WS002)	Effluent past 301, lift station, wetlands and at discharge point to Neches River	TWICE A DAY	[HYPERLINK \l "OUTFALL_004_SAMPLE_LOCATION"]

See [HYPERLINK \l "_LAB_SAMPLING_LOCATIONS"]

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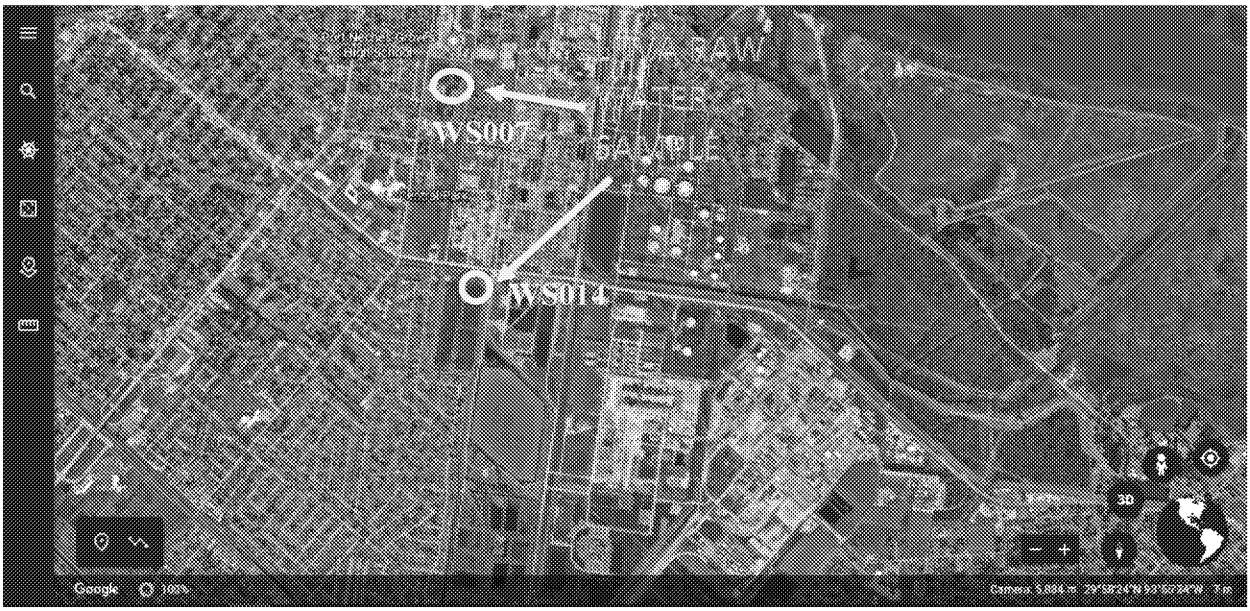
APPENDIX A

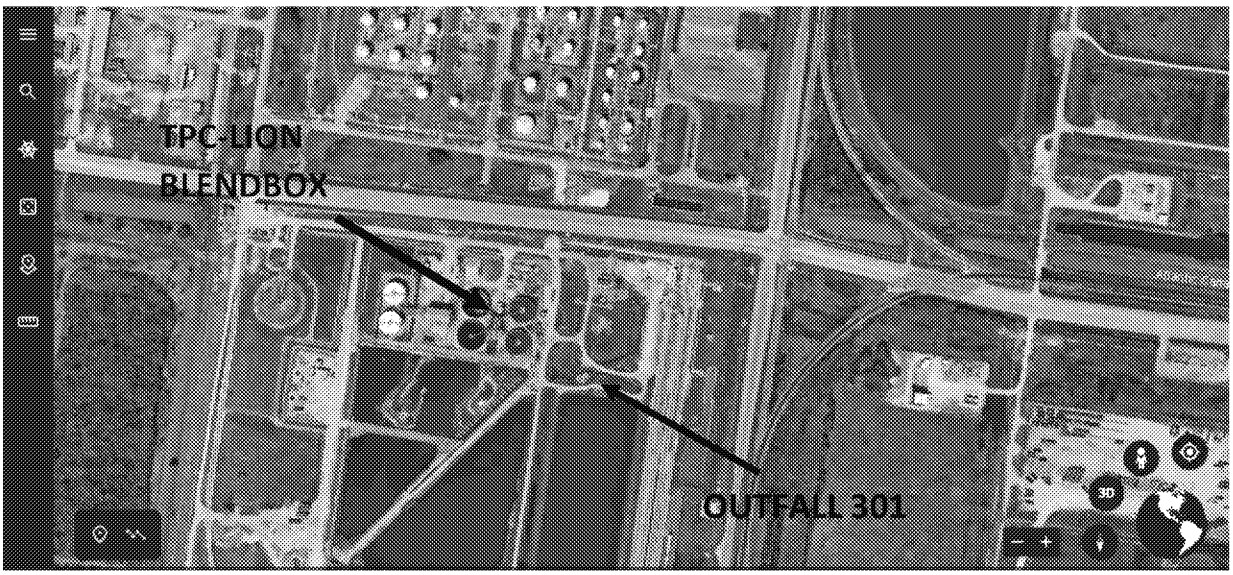
MAPS

LNVA SAMPLE POINT



BACK TO [HYPERLINK \l "SAMPLE_TABLE"]

BLENDBOX and OUTFALL 301



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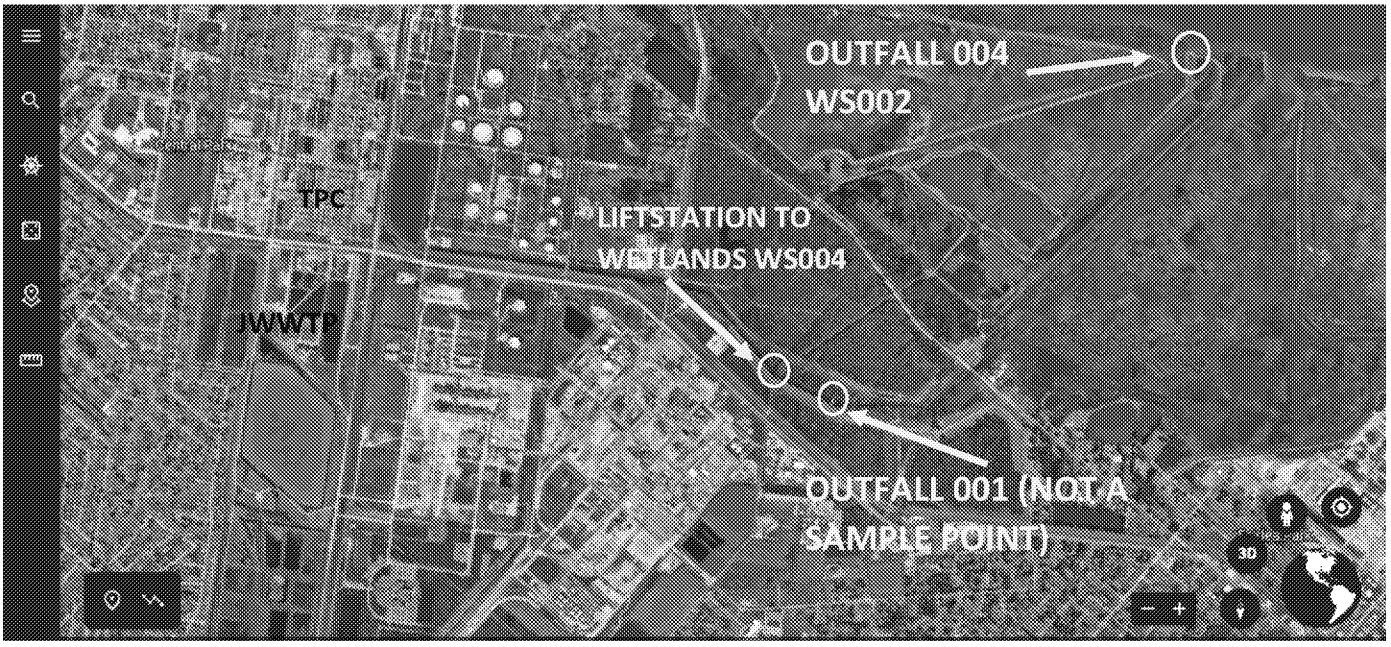
LIFTSTATION TO WETLANDS AND OUTFALL 004



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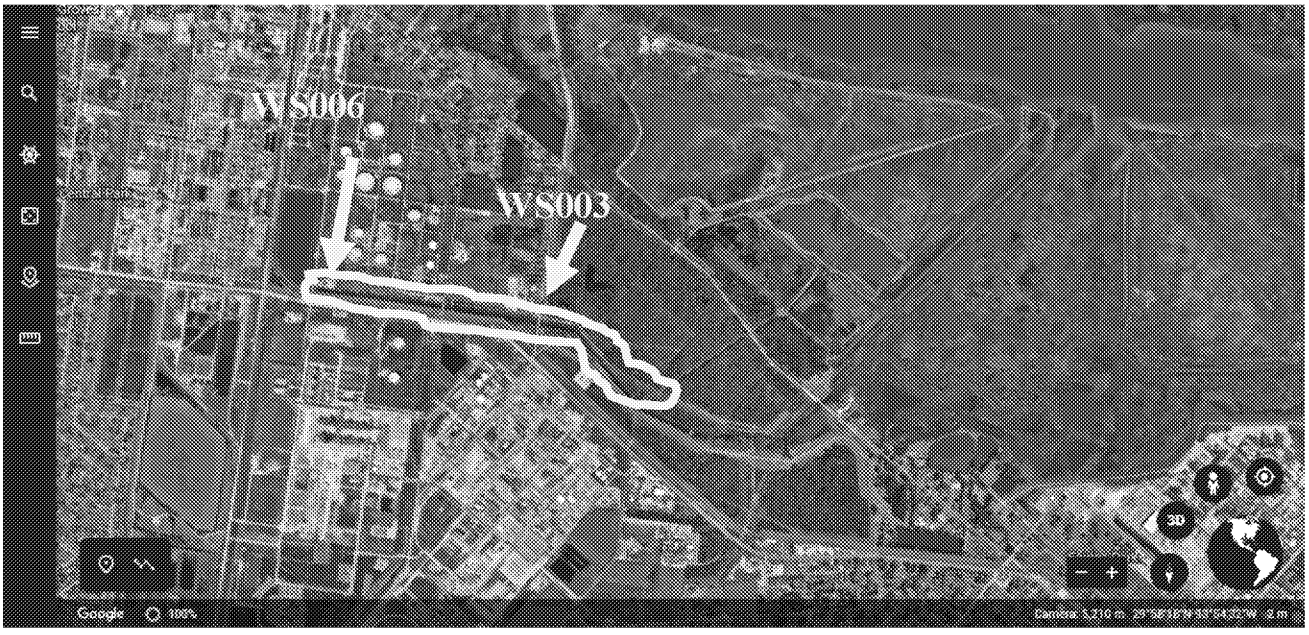
OUTFALL 001 CANAL SAMPLE LOCATIONS



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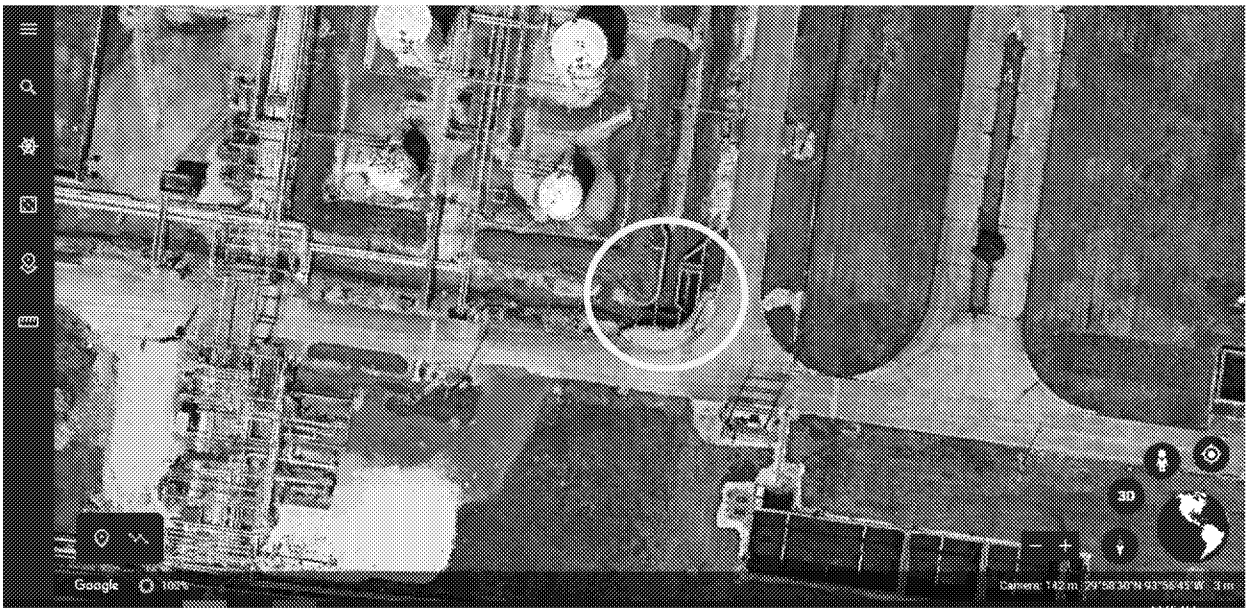
Outfall 201 Weir



APPENDIX B

ANTIFOAMING AGENT SDS

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APPENDIX C

ANTIFOAMING AGENT DATASHEET

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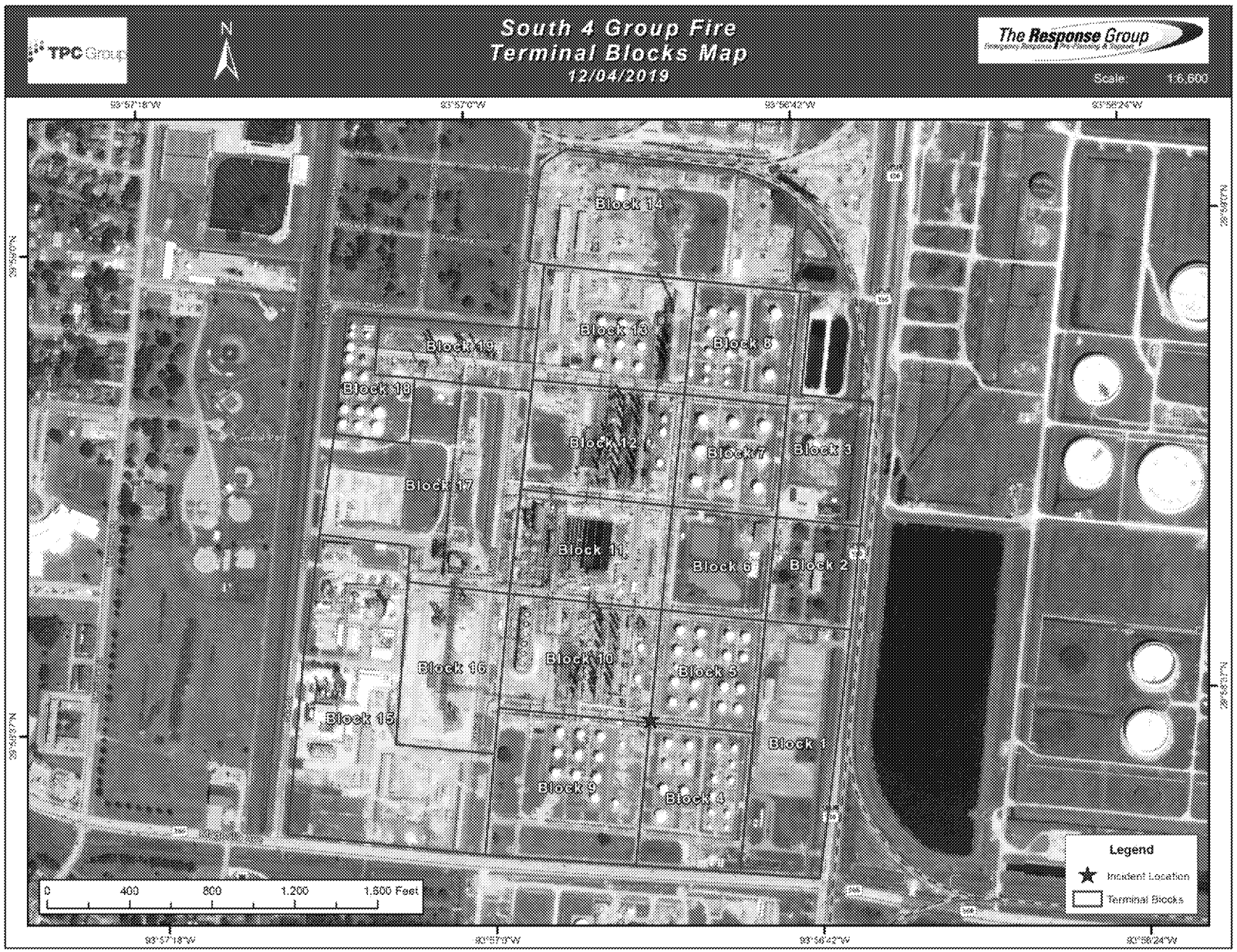
APPENDIX D

PNO BLOCK MAPS AND LOCATIONS



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APPENDIX E

CTEH SAMPLE MAP AND LOCATIONS

CTEH SAMPLE MAP

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APPENDIX F

CTEH LNVA RAW WATER SAMPLE ANALYTICAL RESULTS

Lab Sample ID No. 21911291607

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