FIFTH FIVE-YEAR REVIEW REPORT FOR HIGHLANDS ACID PIT SUPERFUND SITE HARRIS COUNTY, TEXAS



May 2018



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2016

Prepared by

U.S. Environmental Protection Agency Region 6 Dallas, Texas

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FIFTH FIVE-YEAR REVIEW REPORT HIGHLANDS ACID PIT SUPERFUND SITE EPA ID#: TXD980514996 HARRIS COUNTY, TEXAS

This memorandum documents the U.S. Environmental Protection Agency's performance, determinations and approval of the Highlands Acid Pit Superfund site (Site) Fifth Five-Year Review (FYR) under Section 121 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S. Code Section 9621 (c), as provided in the attached Fifth FYR Report.

Summary of the Fifth Five-Year Review Report

The Site's remedy consisted of excavation of waste and contaminated soil to the approximate groundwater level with off-site disposal and backfilling excavated areas with clean fill. The long-term remedy for groundwater included installation of groundwater monitoring wells and a 30-year monitoring program for groundwater, surface water and sediments. Monitoring is ongoing. EPA drafted a deed notice for the Site in 2007, but the notice was not located on file with Harris County. The Site is not currently in use.

Environmental Indicators

Human Exposure Status: Under Control Contaminated Groundwater Status: Under Control Sitewide Ready for Anticipated Use: No

Actions Needed

The following actions must be taken for the remedy to be protective over the long term:

- Collect additional surface water and sediment samples in the former sand pit adjunct to the site to determine if the contaminated upper aquifer is impacting areas beyond the Site. Take appropriate measures to ensure protectiveness.
- Revisit and update the draft institutional control instrument to ensure long-term protectiveness (e.g., make sure the institutional control runs with the land, prevents exposure to contaminated groundwater).
- Continue to monitor and evaluate contaminants of concern being detected more frequently in the middle and deep aquifers and determine impacts to long term protectiveness.
- Compare surface water and sediment sample data to ecological benchmarks and to appropriate human health screening values to determine if further study is needed.

Determination

I have determined that the status of the remedy for the Highlands Acid Pit Superfund site is short-term protective. This FYR Report specifies the actions that need to be taken for the remedy to be protective over the long term.

Carl E. Edlund, P.E. Director, Superfund Division U.S. Environmental Protection Agency Region 6

05/24/18

Date

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CONCURRENCES

FIFTH FIVE-YEAR REVIEW REPORT HIGHLANDS ACID PIT SUPERFUND SITE EPA ID#: TXD980514996 HARRIS COUNTY, TEXAS

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ISSUES/RECOMMENDATIONS

FIFTH FIVE-YEAR REVIEW REPORT HIGHLANDS ACID PIT SUPERFUND SITE EPA ID#: TXD980514996 HARRIS COUNTY, TEXAS

Issues and Recommendations Identified in the Five-Year Review Report:

OU(s): 2	Issue Category: Remedy Performance Issue: Data on the current extent of contaminated groundwater in the upper aquifer is not available.					
Affect Current Protectiveness						
	Recommendation: Because of the high benzene concentrations in well UA-12 at the eastern boundary of the Site, collect additional surface water and sediment samples in the former sand pit adjunct to the site to determine if the contaminated upper aquifer is impacting areas beyond the Site. Take appropriate measures to ensure protectiveness.					
	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date		
No	Yes	EPA/TCEQ	EPA/TCEQ	9/27/2020		

OU(s): 1, 2 Affect Current Protectiveness	Issue Category: Institutional Controls Issue: No deed notice was recorded on file with Harris County. The draft deed notice contains limited information, which may not provide sufficient protection from source material left in place during excavation and contaminated groundwater.							
						Recommendation: Revisit and update the draft institutional control instrument to ensure long-term protectiveness (e.g., make sure the institutional control runs with the land, prevents exposure to contaminated groundwater).		
	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date				
	No	Yes						

OU(s): 2	Issue Category: Remedy Performance
	Issue: Arsenic and benzene have been persistently detected in the middle aquifer and periodically detected in the deep aquifer since the previous FYR.
	Recommendation: Continue to monitor and evaluate contaminants of concern (COCs) being detected more frequently in the middle and deep aquifers and determine impacts to long term protectiveness.

Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	EPA/TCEQ	EPA/TCEQ	9/27/2019

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OU(s): 2 Affect Current Protectiveness	Issue Category: Remedy Performance						
	 Issue: Perform regular sediment and surface water sampling as part of the Operations and Monitoring (O&M) activities. Surface water and sediment data have not been compared to ecological benchmarks. Local residents are presumed to use the adjacent sand pit area for recreational purposes (swimming and fishing). Recommendation: Compare surface water and sediment sample data to ecological benchmarks, or equivalent, and to appropriate human health screening values to determine if further study is needed. 						
						Affect Future Protectiveness	Party Responsible
	No	Yes EPA/TCEQ EPA/TCEQ 9/27/2020					

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Table of Contents

LIST OF ABBREVIATIONS & ACRONYMS	
I. INTRODUCTION	
Site Background	
FIVE-YEAR REVIEW SUMMARY FORM	
II. RESPONSE ACTION SUMMARY	
Basis for Taking Action	6
Response Actions	6
Status of Implementation	7
Institutional Control (IC) Review.	
Systems Operations/Operation & Maintenance (O&M)	
III. PROGRESS SINCE THE LAST REVIEW	
IV. FIVE-YEAR REVIEW PROCESS	
Community Notification, Involvement & Site Interviews	
Data Review	
Site Inspection	
V. TECHNICAL ASSESSMENT	
QUESTION A: Is the remedy functioning as intended by the decision documents?	
QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the	
remedy selection still valid?	
QUESTION C: Has any other information come to light that could call into question the protectiv	
remedy?	
VI. ISSUES/RECOMMENDATIONS	
OTHER FINDINGS	
VII. PROTECTIVENESS STATEMENT	
VIII. NEXT REVIEW	
APPENDIX A – REFERENCE LIST	
APPENDIX B - SITE CHRONOLOGY	
APPENDIX C – SITE BACKGROUND	
APPENDIX D – SITE MAPŞ	D
APPENDIX E - SITE INSPECTION CHECKLIST	
APPENDIX F – PRESS NOTICE	F
APPENDIX G - SITE INSPECTION PHOTOS	
APPENDIX H – DATA TABLES	
APPENDIX I – INTERVIEW FORMS	
APPENDIX J – INSTITUTIONAL CONTROLS	

Tables

Table 1: COCs, by Media	6
Table 2: Summary of Planned and/or Implemented Institutional Controls (ICs)	8
Table 3: Annual O&M Costs	. 10
Table 4: Protectiveness Determinations/Statements from the 2012 FYR	. 11
Table 5: Status of Recommendations from the 2012 FYR	. 11
Table B-1: Site Chronology	В

Figures

Figure 1: Institutional Control Map	9
Figure 2: Site Details Map	15
Figure 3: Benzene Concentrations in the Upper Aquifer	16
Figure 4: Arsenic Concentrations in the Upper Aquifer	
Figure 5: Arsenic Concentrations in the Middle Aquifer	18
Figure D-1: Site Vicinity Map	D

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LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminant of Concern
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
FS	Feasibility Study
FYR	Five-Year Review
HAP	Highlands Acid Pit
IC	Institutional Control
IDW	Investigation-derived Waste
MCL	Maximum Contaminant Level
mg/L	Milligram per Liter
NČP	National Contingency Plan
NPL	National Priorities List
OU	Operable Unit
O&M	Operation and Maintenance
P&A	Plugged and Abandoned
PCL	Protective Concentration Level
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI/FS	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SDWA	Safe Drinking Water Act
TCEQ	Texas Commission on Environmental Quality
TDWR	Texas Department of Water Resource
TRRP	Texas Risk Reduction Program
μg/L	Microgram per Liter
URS	URS Corporation
UU/UE	Unlimited Use/Unrestricted Exposure
VOC	Volatile Organic Compound
yd ³	Cubic Yards

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I. INTRODUCTION

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP) (40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the Fifth FYR for the Highlands Acid Pit Superfund site (the Site). The triggering action for this review was the completion of the fourth five-year review on September 27, 2012. The FYR has been prepared due to the fact that hazardous substances, pollutants or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of two operable units (OUs) that will be addressed in this FYR. OU1 addresses source control of waste and contaminated soil. OU2 addresses contaminated groundwater at the Site and monitoring of surface water and sediment.

The FYR was led by Stephen Pereira, EPA Remedial Project Manager (RPM). Participants included Sherell Heidt from the Texas Commission on Environmental Quality (TCEQ) and Eric Marsh and Ian Penn of Skeo, an EPA contractor. The review began on September 28, 2016.

Documents reviewed as part of this FYR are listed in Appendix A. The site chronology is provided in Appendix B.

Site Background

The 3.3-acre Site is located at the end of Clear Lake Road, north of Interstate Highway 10, in Highlands, Harris County, Texas (Figure D-1, Appendix D). Early in the 1950s, the Site is assumed to have received an unknown quantity of industrial waste sludge, believed to be spent sulfuric acid from oil and gas refining processes. The sludge may have been transported to the Site by barge. Waste sludges were then placed in an excavated sand pit (or pits) at the Site. After disposal, the sludge was reportedly covered with sand. The waste disposal activities contaminated soil and the shallow groundwater aquifer with hazardous chemicals.

The Site is located on a peninsula within the San Jacinto River's 10-year floodplain. The current average elevation of the Site is 5 to 10 feet above mean sea level. There is historical subsidence at the Site. Nearly 5 feet of subsidence was recorded at the Site between 1890 and 1973. Since 1964, the Site has subsided at least 2.4 feet. The Site is vacant. Only monitoring wells and fencing are currently located on site. Future development is not foreseen at the Site due to its location within the 10-year floodplain. The Site is bordered by two adjacent active oil/gas production wells and a petroleum distribution center, the Baytown Boat Club to the north, flooded former sand pits to the east, Clear Lake to the south, and the Grennel Slough to the west. Based on Texas Water Development Board data, there are no groundwater wells within a mile of the Site. Nearly 1,500 people live within 1 mile of the Site. The nearest permanent residence is approximately 1,000 feet from the Site. Recreational vehicles are located 275 feet north of the Site entrance gate. It is unknown if these are occupied year-round.

Groundwater occurs in three zones at the Site – the upper aquifer and the middle and deep aquifers. Groundwater in the upper aquifer flows radially from the Site and discharges to Grennel Slough, Clear Lake and the adjacent former sand pits. The predominant groundwater flow direction for the upper aquifer in December 2015 was to the east. Appendix C contains additional background information about the Site, including geology and hydrogeology.

FIVE-YEAR REVIEW SUMMARY FORM

	S	ITE IDENTIFICATION				
Site Name: Highlands A	Site Name: Highlands Acid Pit					
EPA ID: TXD98051499	6					
Region: 6	State: Texas City/County: Highlands/Harris					
		SITE STATUS				
NPL Status: Final						
Multiple OUs? Yes	,	Ias the site achieved construction completion? Yes				
		REVIEW STATUS				
Lead agency: EPA						
Author name: Stephen F	ereira, with a	dditional support provided by Skeo				
Author affiliation: EPA	Region 6					
Review period: 9/28/201	6 - 9/27/2017					
Date of site inspection:	Date of site inspection: 12/6/2016					
Type of review: Statutory						
Review number: 5						
Triggering action date: 9/27/2012						
Due date (five years after	Due date (five years after triggering action date): 9/27/2017					

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II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In 1978, the Texas Department of Water Resources (TDWR) received a complaint concerning the Site (known locally as the Acid Pit). TDWR collected waste sludge, sediment, stormwater and groundwater samples and found waste materials at the Site characterized by low pH, and elevated total organic carbon, sulfate, heavy metals and organics including benzene, toluene, xylene and phenols. Based on these results, EPA proposed the Site for listing on the Superfund National Priorities List (NPL) in 1982. EPA finalized the Site's listing on the NPL in September 1983.

State-led site investigation work finished in July 1983 and the Site's feasibility study was completed in December 1983. Exposure pathways of greatest concern identified during these investigations were inhalation, ingestion and absorption of contaminants in site soils; migration of contaminants to surrounding surface waters; and downward migration of contaminants in the shallow aquifer toward the middle aquifer. Human contact with existing contamination was likely, as evidenced by records of trespassing, garbage disposal activities and recreational uses of adjacent properties and water bodies. Soil contaminants would have continued to migrate off site through wind and surface water erosion. Table 1 summarizes the contaminants of concern (COCs) identified at the Site.

Table 1: COCs, by Media

COC	Media	
Metals (arsenic, barium, cadmium, manganese, chromium, lead)	Soil	
Volatile organic compounds (VOCs) (benzene, toluene, xylene)	Soil	
Semi-VOCs (phenol, pyridine)	Soil	
Metals (arsenic, beryllium, cadmium, manganese, chromium, lead)	Groundwater	
VOCs (benzene, toluene, xylene)	Groundwater	
Semi-VOCs (phenol, pyridine)	Groundwater	

Response Actions

The OU1 remedy, selected in the Site's 1984 Record of Decision (ROD), included excavation of contaminated soils and waste material to an approximate depth of 8 feet below ground surface (the approximate groundwater level), transportation of waste to a permitted Class I hazardous waste disposal facility, backfilling the excavated area with clean fill, construction of a temporary site perimeter fence with warning signs, installation of a groundwater monitoring system, and monitoring groundwater for at least 30 years after cleanup. EPA estimated that excavation would remove about 19,000 cubic yards of material located above the water table. During excavation, if contaminated soil and material was visually observed (e.g., presence of black soil) beyond the defined lateral limit of excavation, it would also be removed during cleanup. An estimated 58,000 cubic yards of wastes and contaminated sand and soil located beneath the water table were not excavated during cleanup.

The OU1 ROD identified the following remedial action objectives (RAOs) for the Site:

- Control off-site migration of wastes by surface and subsurface pathways to mitigate future environmental impacts on surface waters and groundwater.
- Minimize potential for human contact with waste materials.

The OU2 groundwater remedy, selected in the 1987 ROD, was a "no action" remedy with long-term monitoring of surface water and groundwater to track attenuation. The OU2 ROD selected no further action because OU1 cleanup would eliminate the potential for surface water contamination and EPA sampling at the time did not detect COCs in the middle or deep aquifers. The OU2 ROD stated that "upon completion of the Source Control

Remedial Action, surface water contamination from runoff will be eliminated; natural flow of ground water will cleanse the pore spaces within the shallow aquifer over time; ground water flow to surface water bodies will continue to carry some contaminants to the surface environment, but the heavy metals are not mobile at the pH of the transition region for ground water flow to surface water bodies, the organics are volatile upon contact with the atmosphere, and in view of the dynamics of the river and properties of the contaminants, the San Jacinto River should not be affected." It also stated that "[t]he natural flow of groundwater cleanses the pore spaces within the shallow aquifer over time. Attenuation of contaminants down to nondetectable levels within the upper aquifer should take about 350 years."

The RAOs for OU2 were to:

- Characterize contaminant migration to surface waters, area environment and deeper groundwater.
- Determine potential impacts to potential receptors.
- Evaluate the need for groundwater corrective action at the Site.

No numeric cleanup goals were established for the upper aquifer in either ROD for the Site. The 1987 ROD states that, based on the 1987 Groundwater Contamination Evaluation, a well survey of the area had determined that the shallow aquifer was not considered a source of potable water. The 1984 OU1 ROD identified Clean Water Act water quality criteria as applicable or relevant and appropriate requirements (ARARs) for potential surface water impacts from site soils or lateral movement of shallow groundwater. The 1987 groundwater ROD identified Safe Drinking Water Act maximum contaminant levels (MCLs) as ARARs for the middle and deep aquifers. Texas Risk Reduction Program (TRRP) Tier 1 Industrial Groundwater Protective Concentration Levels (PCLs) and MCL action levels are currently equivalent for groundwater COCs at the Site. TCEQ uses PCLs to report monitoring data collected as part of the operations and maintenance activities.

Status of Implementation

Construction activities for the OU1 remedy began in February 1987 and finished in July 1987. EPA selected contractor Chemical Waste Management to conduct remedial activities. Cleanup included excavating contaminated soil to an approximate depth of 8 feet and conveying the material to the Chemical Waste Management disposal site in Louisiana. Excavated areas were backfilled with clean soil, including 6 inches of top soil that was seeded, mulched and fertilized. Excavated areas were also contoured to mitigate on-site flooding.

During OU1 cleanup activities and subsequently during the operational and functional period, additional monitoring wells were installed to assess whether groundwater was moving laterally. The OU2 ROD called for no action and long-term monitoring of groundwater. TCEQ currently undertakes groundwater sampling of the shallow, middle and deep aquifers, adjacent surface water, and sediment on a semi-annual basis.

In 2001, the groundwater monitoring network at the Site consisted of 21 wells. In 2002, one middle aquifer monitoring well (MA-08) and one deep aquifer monitoring well (DA-08) were plugged and abandoned due to suspected cross contamination between the upper and the middle and deep aquifers. Replacement wells were installed (MA-08A and DA-08A). In addition, three wells (UA-03, UA-13 and MA-04), which were considered redundant by the state, were plugged and abandoned in 2002. The monitoring network currently includes seven wells in the upper aquifer, six wells in the middle aquifer and five wells in the deep aquifer.

Institutional Control (IC) Review

No ICs were called for in the RODs for OU1 or OU2. However, in 2007, EPA prepared a draft IC for the Site in the form of a deed notice to address future protectiveness. The draft deed notice states that "[a]ny reuse or redevelopment involving subsurface utilities, excavation, fence removal, trenching, or well installation requires prior approval by TCEQ, USEPA, and the four property owners." The Site is part of a larger 100-acre parcel and is located within the 10-year floodplain of the San Jacinto River. The deed notice only applies to the 3.3 acres that make up the Site (See Figure 1) There are no site-related ICs associated with any adjacent parcels. Development of the site would be subject to the Harris County Floodplain Management Regulations. A copy of the draft deed notice is included in Appendix J.

Table 2: Summary of Planned and/or Implemented Institutional Controls (ICs)

Media, Engineered Controls and Areas that Do Not Support UU/UE Based on Current Conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Groundwater	Yes	No	Only the Site, which is a subset of a parcel with four parcel numbers: 0410390000204, 0401390000205, 0401390000206 and 0401390000207.	Restrict reuse or redevelopment involving subsurface utilities, excavation, fence removal, trenching or well installation without prior approval.	None
Soil	Yes	No	Only the Site, which is a subset of a parcel with four parcel numbers: 0410390000204, 0401390000205, 0401390000206 and 0401390000207.	Restrict reuse or redevelopment involving subsurface utilities, excavation, fence removal, trenching or well installation without prior approval.	None

Figure 1: Institutional Control Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Systems Operations/Operation & Maintenance (O&M)

In 2011, TCEQ selected URS Corporation (URS) as the O&M contractor to conduct semi-annual groundwater monitoring and maintenance activities. URS (since purchased by AECOM) revised the O&M Plan in 2011. O&M, which is ongoing, includes the following requirements:

- Sampling 18 on-site wells on a semi-annual basis, evaluating groundwater data and submitting reports to EPA and TCEQ.
- Inspecting site security and replacing and/or repairing security features as approved by TCEQ (i.e., signage, fencing, gates and locks, road access).
- Inspecting the Site to determine whether subsidence has occurred or if site benchmarks have been removed or damaged.
- Inspecting the Site for the effectiveness and extent of vegetative cover, erosion, cap and benchmark settling, heaving, and site run-on/runoff.
- Conducting grass mowing, vegetation clearing, and debris removal, including inspecting the Site for conditions that may indicate that soil erosion has occurred.
- Managing investigation-derived waste (IDW) generated during O&M activities.
- Performing regular sediment and surface water sampling as part of O&M activities.

O&M Costs

The 1984 ROD estimated annual monitoring and maintenance costs of \$14,100 for OU1. The OU2 ROD estimated additional annual monitoring costs of \$4,700, for a combined site total of \$18,800. The 2011 O&M Plan did not include estimated costs for semi-annual monitoring and inspection. Since the previous FYR, annual O&M costs have averaged just over \$85,000.¹ There have been no significant additional O&M expenses since the previous FYR. Table 3 summarizes annual O&M costs since 2012.

Year	Annual Cost (rounded to the nearest \$1,000)
2012	\$88,000
2013	\$91,000
2014	\$90,000
2015	\$77,000
2016	\$80,000

Table 3: Annual O&M Costs

¹ Adjusted for inflation, \$18,800 for annual monitoring costs in 1987 is approximately \$40,000 in current dollars (2017). If that adjusted figure is doubled to account for two sampling events per year instead of one, annual monitoring costs remain comparable to estimated costs.

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations.

Table 4: Protectiveness	Determinations/Statements	from	the 2012	! FYR

OU #	Protectiveness Determination	Protectiveness Statement
Sitewide	Protective	Based on the information available during the fourth five-year review, the selected remedy for the HAP site is performing as intended. The remedy will be protective of human health and the environment in the long term provided repairs are made to the monitoring wells and fencing, warning signs are placed within the cluster fencing, and O&M activities continue or are resumed.

Table 5: Status of Recommendations from the 2012 FYR

- O U #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
2	Site sampling	Continue semi-annual groundwater sampling of the upper, middle, and deep aquifer monitoring wells within the site.	Completed	Sampling of groundwater, surface water and sediments is ongoing on an approximately six- month basis.	9/23/2011*
2	Exceedance of action levels	The groundwater criteria set in the 1987 Record of Decision have not been met in the upper and middle aquifer. Although, for the middle aquifer, only arsenic was detected above MCLs during the August and November 2011 sampling events, this is problematic. Given the relevant decision document and the current data, EPA and the TCEQ should evaluate/consider whether more action is or is not necessary and document that an evaluation was conducted. In addition, an evaluation of the change in the arsenic MCL (from 50 µg/L to 10 µg/L in 2006) should be conducted to determine the impact to the site.	Under Discussion	Benzene and arsenic continue to be detected at concentrations above TRRP Tier 1 Protective Concentration Levels (PCL) in the middle aquifer. An evaluation of the change in the arsenic MCL has not yet been undertaken. Arsenic concentrations in groundwater are being compared to TRRP Tier 1 PCLs, which are $10 \mu g/L$.	Ongoing
2	Surface water and sediment sampling	Resume/re-implement surface water and sediment sampling at least on a biannual basis. Compare surface water and sediment sample data to ecological benchmarks (TCEQ 2006), or equivalent, that have been established for surface water and soil in order to	Ongoing	Surface water and sediment sampling was reinstituted in 2012 and is ongoing. Comparison to TCEQ ecological benchmarks has not occurred.	Ongoing

		determine if further studies are warranted.			
1, 2	Operations and maintenance	Replace compression caps that are either missing or in poor condition, repair hinges to monitoring wells as needed (including UA-10 and UA-11), replace missing well cap locking pins and pad locks as needed, repair/extend the riser pipe within MA-02, install warning signs within the cluster fencing of the monitoring wells, and confirm well identification numbers and legibly repaint each monitoring well number.	Completed	O&M of the wells and well fencing is ongoing as needed and as issues arise. For example, in August 2015, ongoing well maintenance included replacing the well pad for DA-02, UA-10 and UA-11, installing protection posts for MA-03, and installing new compression well caps where required.	8/15/2015
1, 2	Surveying activities	Resume site surveying activities, including surveying the repaired riser pipe in MA- 02 and the site's benchmarks.	Completed	Updated site survey completed in 2013.	8/28/2013
2	Disposal activities	Investigation-derived waste (i.e., purge water) should be labeled, characterized, and properly disposed of and not stored onsite.	Completed	IDW is now appropriately labeled and disposed of offsite after each sampling event.	9/23/2011*

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by press release in the *Highlands Star-Crosby Courier* on November 24, 2016, stating that there was a FYR and inviting the public to submit any comments to EPA (Appendix F). The results of the review and the report will be made available at the Site's information repository, Highlands Public Library – Stratford Branch, located at 509 Stratford Street in Highlands.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy. Interviewees included TCEQ staff, representatives from the O&M contractor for the Site (AECOM), representatives from Harris County's Pollution Control Services Department and nearby residents. Interviews took place in person and via email. Results of the interviews are summarized below. Appendix I provides completed interview forms.

Nearby residents interviewed were generally aware of the Site but were less familiar with the Site's history or ongoing monitoring activities. Some residents associated the Site with the nearby San Jacinto Superfund site during interviews. Overall, nearby residents felt EPA could do a more effective job of keeping them up to date regarding ongoing activities at the Site. No nearby residents interviewed had private wells. Some residents said that the adjacent former sand pit east of the Site is used sometimes for swimming and fishing. Residents also said that trespassing and trash dumping was an occasional problem on or near the Site.

The EPA interviewed local citizens that live in close proximity to the Highlands Acid Pits Superfund Site. After interviewing the local residents, EPA provided the citizens with the EPA webpage for additional information on the Highlands Acid Pits Superfund Site & contact information. EPA plans to send an annual facts sheet or host a community meeting for the local residents that live near the site. The EPA will work with Harris County regarding the trash dumping in the area.

Representatives from Harris County's Pollution Control Services Department were aware of the Site. They stated that the public often associates the Site with the San Jacinto Waste Pits Superfund site. They did not necessarily feel well informed about the Site's current status. Department representatives recommended updating groundwater flow maps of the groundwater bearing units and sampling residential wells to determine if there are nearby wells being impacted from exceedances detected in the middle aquifer (see the Data Review section of this report for further information on groundwater sampling data).

Site sampling and data do not indicate that contaminated groundwater in the middle and deep aquifer are moving in the direction of the private wells. Private wells are located over 1/2 mile from the site.

Sherell Heidt of TCEQ indicated that the state considers the Site's remedy to be protective of human health and the environment due to ongoing semi-annual monitoring and maintenance activities and the Site's vacant status. Ms. Heidt felt that all recommendations from the 2012 FYR had been sufficiently addressed. She indicated that TCEQ was satisfied with the status of ICs. Ms. Heidt expressed concern that benzene and arsenic concentrations have consistently exceeded MCLs and PCLs in the upper aquifer and that there have been more frequent detections of benzene and arsenic in the middle and deep aquifers during sampling events, including benzene exceeding PCLs in deep aquifer well DA-08 during the most recent sampling event in December 2016. She noted that the OU2 ROD states that if contamination broke through the clay aquitard separating the shallow and middle aquifers, corrective action could be initiated. Ms. Heidt recommended that EPA assess potential tidal influences on the upper aquifer, the movement of site-related contaminants to the middle and deep aquifers, and the potential impact to adjacent surface water and sediment to determine a need for further action.

There is no data or information to support TCEQ's statement that contamination broke through the clay aquitard separating the shallow and middle aquifers. Concerns were expressed during the first O&M sampling in 1988 and 1989 and in Section II, Response Action Summary of this report, that well installations may have cross contaminated the middle and deep aquifers. Some wells were plugged and new wells have been installed for the middle and deep aquifer since O&M activities started at the site in 1988/1989 and in 2002. Since then, contaminated levels in the middle and deep aquifers have fluctuated and currently do not exceed action levels. There are no indications, based on contaminant levels, that the middle or deep aquifers have been significantly impacted.

The site O&M contractor had a generally favorable impression of ongoing monitoring and maintenance activities at the Site. AECOM felt recommendations from the 2012 FYR had been addressed, including reinstituting semiannual surface water and sediment sampling and proper management and disposal of groundwater samplingderived waste. There have not been significant changes to O&M requirements or sampling routines since the previous FYR. Annual O&M costs have averaged \$85,000 since 2012, with only minor additional expenses in 2015 due to weather-related damage to well fencing. Regarding remedy performance, AECOM noted that organics (benzene) have not declined significantly in the upper aquifer and have been detected along with some inorganics (arsenic) intermittently in the middle aquifer, suggesting that additional investigation might help assess the potential for ongoing impacts to the deeper aquifers. The AECOM representative noted that the current sampling frequency for surface water and sediment may not be adequate to assess potential shallow aquifer impacts to those media.

Data Review

As required by the 1987 ROD, the collection of groundwater, surface water and sediment data is required to evaluate remedy performance.

Groundwater

The groundwater monitoring network currently includes seven wells in the upper aquifer, six wells in the middle aquifer and five wells in the deep aquifer. These 18 wells are the focus of this data review. Figure 2 shows current monitoring well locations. All active groundwater monitoring wells are located within the site boundary. There

are no off-site groundwater monitoring wells and no groundwater maps showing contamination for the Site. All groundwater analytical results were compared to the March 2016 PCLs. While the OU1 ROD lists SDWA MCLs as an ARAR for groundwater, groundwater results have been compared to TRRP Tier 1 PCLs since the 2007 FYR. PCL and MCL action levels are the same for COCs at the Site. TCEQ is conducting operations and maintenance activities for the site and they report the data as PCLs.

Figure 2: Site Details Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Upper Aquifer

Appendix H includes groundwater data collected through December 2016. Analytical results from groundwater sampling indicated many constituents are still present at concentrations above their respective PCLs. During the most recent sampling event in December 2016, COCs were at concentrations exceeding their PCLs including: benzene (wells UA-06, UA-10, UA-11, UA-12, UA-14, UA-16), pyridine (wells UA-10, UA-11, UA-12, UA-14), arsenic (wells UA-11, UA-12, UA-14, UA-15), cadmium (well UA-14), chromium (well UA-14) and lead (wells UA-11, UA-14) Benzene and arsenic have been persistently detected above PCLs in the upper aquifer since the previous FYR.

Benzene concentrations have fluctuated over time, but have regularly exceeded the PCL (0.005 mg/L) in six of seven upper-aquifer wells since the previous FYR. The highest average concentrations have been found in well UA-12, which is located along the eastern site boundary, suggesting that the full extent of groundwater contamination may not be known. Benzene concentrations have been detected above the PCL for every sampling event since 2011 for wells UA-11, UA-12 and UA-14 (see Figure 2). The pH environment in the upper aquifer continues to be low, which may be limiting benzene biodegradation. Figure 3 summarizes benzene concentrations in the upper aquifer since 2011.



Figure 3: Benzene Concentrations in the Upper Aquifer

Arsenic concentrations in the upper aquifer have fluctuated over time, but have persistently exceeded the PCL (0.010 mg/L) since the previous FYR in six of seven upper-aquifer wells. Arsenic concentrations have been above PCLs for every sampling event since 2011 for wells UA-11 and UA-12. Figure 4 shows arsenic concentrations in the upper aquifer for sampling events since 2011.



Figure 4: Arsenic Concentrations in the Upper Aquifer

Sampling results for benzene and arsenic suggest that material not removed during OU1 source removal (i.e., material below the water table) continues to impact the upper aquifer. Based on sampling results since O&M activities started in 1988/1989, contaminant levels have fluctuated consistent with the levels in Figures 3 and 4. Fluctuations in the upper aquifer will continue due to tidal influence at the site.

Middle Aquifer

Appendix H includes groundwater data collected through December 2016. Based on analytical results provided in semi-annual monitoring reports, both organic contaminants (benzene, toluene, xylenes, phenol, pyridine) and inorganic contaminants (arsenic, barium, chromium, lead, selenium) have been detected in the middle-aquifer wells since the previous FYR. Of those constituents, arsenic and benzene have been detected above PCLs in several wells.

Since 2012, benzene has been detected in several middle-aquifer wells (MA-03, MA-05, MA-06, MA-07). It was above the PCL in MA-06 during the November 2014 and December 2015 sampling events. Benzene was below the PCL in MA-03 during the December 2016 sampling event.

Since 2012, arsenic has been detected in all six middle aquifer wells (MA-02, MA-03, MA-05, MA-06, MA-07, MA-08A). It has been persistently detected above PCLs in wells MA-03, MA-05 and MA-06 at concentrations ranging from 0.0104 milligrams per liter (mg/L) to 0.028 mg/L. Figure 5 shows arsenic concentrations in the middle aquifer for sampling events since 2011.

Contaminants were detected in the middle aquifers during the initial O&M sampling in 1988/1989. Subsequent sampling events indicate that the levels in the middle aquifer are fluctuating and continue to fluctuate.



Figure 5: Arsenic Concentrations in the Middle Aquifer

Deep Aquifer

Appendix H includes groundwater data collected through December 2016. Based on analytical results in the semiannual monitoring reports, arsenic and barium have been consistently detected in all five deep-aquifer wells since the most recent FYR, but at concentrations below PCLs. Concentrations of organic contaminants (toluene, xylene, phenol, pyridine) and inorganic contaminants (cadmium, chromium, lead, mercury and selenium) have been intermittently detected in the deep aquifer since 2012, but at concentrations below PCLs. In June 2016, benzene was detected in deep well DA-08, but at a concentration below the PCL. In December 2016, benzene was detected in four of the five deep-aquifer wells and for the first time exceeded the PCL in well DA-06 (0.012 mg/L). The other three detections were below the PCL. Benzene was detected during the initial O&M sampling in 1988/1989, but generally have been non-detect or at levels below PCL concentrations. Arsenic was detected in the deep aquifer during sampling conducted in 1997/1998.

Surface Water

Surface water sampling locations are shown in Figure 2. Surface water data were compared to the March 2016 TRRP Tier 1 PCLs for residential groundwater by ingestion of COCs in class 1 or 2 groundwater resources. Appendix H includes surface water data collected through December 2016. Since the most recent FYR, benzene has been detected in surface water several times. Benzene concentrations at SW-03, on the eastern boundary of the Site, exceeded the PCL of 0.005 mg/L twice since the November 2014 sampling event, ranging from 0.0051 mg/L to 0.02 mg/L. Benzene was not detected during the June or December 2016 surface water sampling events.

Arsenic and barium have been consistently detected at all three surface water sampling locations since the most recent FYR, but at concentrations below PCLs. Other inorganic constituents (cadmium, chromium, lead, mercury and selenium) have been intermittently detected in surface water since 2012, but at concentrations below PCLs. While lead concentrations have been below the TRRP Tier 1 PCL (0.015 mg/L) since the most recent FYR,

concentrations have occasionally exceeded Texas Surface Water Quality Standards (0.00115 mg/L) at all three surface water sampling locations, with detected exceedances ranging from 0.00145 mg/L to 0.024 mg/L.

Sediment

Sediment sampling locations are shown in Figure 2. Sediment data were compared to the March 2016 TRRP Tier 1 PCLs for Residential Total Soil Combined exposure pathways for COCs in soil. Appendix I includes sediment data collected through December 2016. Since the most recent FYR, concentrations of organic contaminants (phenol) and inorganic contaminants (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) have been detected in sediment samples, but at concentrations below TRRP residential soil PCLs. Arsenic, barium, chromium and lead have been detected most persistently in sediment samples since the previous FYR.

Site Inspection

The site inspection took place on 12/5/2016. Site inspection participants included Stephen Pereira (EPA Region 6), Sherell Heidt (TCEQ), and Eric Marsh and Ian Penn (Skeo). The purpose of the inspection was to assess site status and the protectiveness of the remedy. It began at the entrance, located at the end of Clear Lake Road in Highlands, Texas. Participants examined all monitoring wells, the three surface water and sediment sampling locations, the site perimeter, and fencing at the site boundary and around on-site monitoring wells. (See the site inspection checklist in Appendix E and inspection photos in Appendix G).

The main entrance gate in the northern part of the Site was closed and locked, preventing unauthorized vehicle access. Warning signs in English and Spanish were posted on the main fence. Signs on the main gate were in good condition. The adjacent parcel, located north and northeast of the Site, is also fenced and locked, so vehicles would need to get through two locked gates to access the Site. Because of heavy rains, there was some standing water seen on site, but no areas were inaccessible or flooded during the inspection. Perimeter fencing is in place around about half of the Site (along the eastern boundary, beginning at the entrance gate and extending around the Site to near SW-02). Perimeter fencing was in average condition; some sections have fallen over or been pushed over. Barbed wire on top of perimeter fencing was also missing in places.

All on-site wells are surrounded by locked fencing, which generally appeared to be in good condition. A few well fence areas (e.g., wells UA-10 and MA-02) were missing some of the barbed wire across the top of the fence. Each well fence has warning signs posted, but some signs had been blown off fencing. Vegetation across the Site appeared to be well established. Due to recent rains, there were a few small areas of erosion an inch or two deep. Overall, monitoring wells appeared to be in good condition. However, soil erosion was observed beneath the concrete pad for well MA-06.² Participants unlocked several wells to inspect well caps. All caps inspected were in place and locked however a few well casings were missing locks. While all on-site wells were labeled, some labels have faded and were difficult to read. Monitoring wells could benefit from new, more visible labeling.

There were no signs of vandalism on site during the inspection. However, there were signs of trespassing along the perimeter of the Site, and in particular along its southern and western borders. Glass bottles and other litter were found along the shoreline near SW-01. Tires, coolers and other litter were also found along the shoreline and in the woods near SW-02.

After the site inspection, the FYR team interviewed five residents living near the Site. The FYR team then met with and interviewed officials from Harris County. Completed interview forms are provided in Appendix I.

On the morning of Tuesday, December 6, 2016, the FYR team conducted research at the Site's two information repositories – the Houston Central Library and the Highlands Community Center. No site-related documents were found at the Highlands Community Center. One document, the 1987 Groundwater Contamination Evaluation, was found at the Houston Public Library via the online card catalogue. The FYR team also conducted research at Highlands Public Library. Two site-related documents were found at the library – the 1983 Field Investigation

² TCEQ repaired the concrete well pad for MA-06 in April 2017. See Appendix G.

and the 1983 Feasibility Study. EPA decided to establish a permanent information repository for the Site at Highlands Public Library. Skeo staff reviewed property records online using the Harris County property records website. No deed notice was found on file for the large parcel that contains the Site.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

The OU1 source control remedy has been implemented and is functioning largely as intended to minimize human contact with waste material and reduce contaminated surface water runoff into adjacent surface waters. Excavated material was disposed of off-site and excavated areas backfilled with clean fill. However, nearly 75 percent of the estimated volume of waste and contaminated sands and soils was below the water table and left in place after excavation. It continues to impact groundwater, as well as surface water and sediment. Site vegetation is well established and maintained through ongoing O&M activities at the Site. The entrance to the Site is gated and locked. Warning signs are posted.

The OU2 remedy included long-term monitoring of the surface environment (i.e., surface water and sediment) and groundwater. The state O&M contractor has conducted water and sediment sampling semi-annually since 2011. Arsenic has been persistently detected in the middle aquifer since 2012, with TRRP PCLs exceeded in three of six middle-aquifer wells since 2012 and in one deep aquifer well in 2016. Based on the OU2 ROD stating for the middle aquifer that "if contamination does break through the clay aquitard, corrective action can be initiated before levels of concern are reached," EPA should evaluate whether the OU2 remedy should be revisited and document the evaluation. Due to the presence of contaminants above the PCLs in upper and middle aquifer monitoring wells located at the site boundary, the extent of the contaminated groundwater is not fully defined. Currently, there are no monitoring wells located off-site; these may be needed to determine the extent of the groundwater contamination.

Based on interviews, the adjacent flooded sand pit east of the Site is presumed to be used for recreational purposes (swimming, fishing). However, sampling frequency may be insufficient to evaluate potential impacts of upper aquifer groundwater to adjacent surface water and sediment. The highest concentrations of benzene have been detected in well UA-12 adjacent to the flooded sand pit.

Groundwater analytical data should also be collected to determine the current extent of the groundwater contamination in the upper aquifer and the magnitude of contaminants relative to background.

Analytic results for surface water and sediment since the previous FYR indicate that upper-aquifer groundwater is reaching surface water and adjacent sediments. However, additional study is needed to determine the potential impact of these detections to human health and the environment.

EPA drafted a deed notice in 2007. EPA should revisit the deed notice and consider updating and strengthening it to ensure long-term protectiveness, including provisions to run with the land and to address potential off-site groundwater and surface water impacts. The institutional control should also be properly filed with Harris County to ensure it is located during property record searches.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and RAOs used at the time of the remedy selection still valid?

Question B Summary:

Neither the OU1 or the OU2 ROD identified cleanup goals for soil, shallow groundwater, or sediment.

The OU2 ROD identified MCLs as ARARs for the middle and deep aquifers. However, recent monitoring reports have compared groundwater sampling results to TRRP Tier 1 PCLs. PCL and MCL action levels are currently the same levels for COCs at the Site. Clean Water Act Water Quality Criteria were identified as surface water ARARs in the 1984 and 1987 RODs and is considered the cleanup level. However surface water is currently compared to TRRP Tier 1 groundwater PCLs. Except for lead, where the WQS is more stringent than the PCL, PCLs and Texas Surface Water Quality Standards are currently the same for Site COCs. Sampling and monitoring plans should be updated to clarify appropriate site action levels, as identified in the RODs, to evaluate groundwater, surface water and sediment analytical results.

Vapor intrusion to indoor air was not considered as a potential exposure pathway in either ROD for the Site. Current groundwater contamination data is not available to evaluate potential off-site vapor intrusion impacts. Evaluating the current extent of the groundwater contamination in the upper aquifer and updating groundwater maps will help in determining whether vapor intrusion could be a concern for nearby properties.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

Question C Summary:

There is no additional information about the Site at this time that would call into question the protectiveness of the Site's remedy.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations

OU(s) without Issues/Recommendations Identified in the FYR:

None.

Issues and Recommendations Identified in the FYR:

OU(s): 2	Issue Category: Remedy Performance Issue: Data on the current extent of the groundwater contamination in the upper aquifer is not available.				
	Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	EPA/TCEQ	EPA/TCEQ	9/27/2020	

OU(s): 1, 2	Issue Category: Institutional ControlsIssue: No deed notice was recorded on file with Harris County. The draft deed notice contains limited information, which may not provide sufficient protection from source material left in place during excavation and contaminated groundwater.Recommendation: Revisit and update the institutional control instrument to strengthen language and ensure long-term protectiveness (e.g., make sure the institutional control runs with the land, prevents exposure to contaminated groundwater).				
Affect Current Protectiveness	Affect Future ProtectivenessParty ResponsibleOversight Party/Support 				
No	Yes	EPA/TCEQ	EPA/TCEQ	9/27/2019	

OU(s): 2	Issue Category: Remedy Performance		
3	Issue: Arsenic and benzene have been persistently detected in the middle aquifer and periodically detected in the deep aquifer since the previous FYR.		

	Recommendation: Continue to monitor and evaluate contaminants of concern (COCs) being detected more frequently in the middle and deep aquifers and determine impacts to long term protectiveness.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	EPA/TCEQ	EPA/TCEQ	9/27/2019

OU(s): 2	Issue Category: Re	Issue Category: Remedy Performance			
	Issue: Perform regular sediment and surface water sampling as part of the Operations and Monitoring (O&M) activities. Surface water and sediment data have not been compared to ecological benchmarks. Local residents are presumed to use the adjacent sand pit area for recreational purposes (swimming and fishing).				
	Recommendation: Compare surface water and sediment sample data to ecological benchmarks, or equivalent, and to appropriate human health screening values to determine if further study is needed.				
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date	
No	Yes	EPA/TCEQ	EPA/TCEQ	9/27/2020	

OTHER FINDINGS

- The OU2 ROD identified MCLs as ARARs for the middle and deep aquifers. Recent monitoring reports have compared groundwater sampling results to TRRP Tier 1 PCLs. The TRRP Tier PCLs are the same as MCLs.
- Use the most recent TRRP Tier 1 PCLs to compare groundwater sampling analytic results in the O&M Plan. The August 2016 Annual Groundwater Monitoring Report used the May 2011 TRRP Tier 1 PCLs for residential groundwater to evaluate analytic results. TCEQ issued updated PCLs in March 2016, however there were no changes to PCLs in 2016 that impacted the most recent sampling analytic results.
- Based on semi-annual monitoring data, some upper aquifer wells (e.g., UA-16) appear to be influenced by seasonal variations or tidal changes. Additional study would help to identify potential tidal or seasonal influences on upper aquifer groundwater.
- Ensure all monitoring well covers are locked, make repairs as necessary to barbed wire along the top of fencing surrounding wells and repost warning signs on monitoring well fences. While the main entrance gate is locked, fencing surrounds about 50 percent of the Site. Consider fencing the entire site perimeter, including the shoreline along Grennel Slough, to discourage trespassers entering the Site from adjacent water bodies.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)

Operable Unit: • OU1 Protectiveness Determination: Short-term Protective

Protectiveness Statement: The remedy for OU1 is currently protective of human health and the environment. The OU1 remedy included excavation of waste material and contaminated soil to a depth of 8 feet below ground surface and disposal at an off-site hazardous waste facility, backfilling of the excavated area with clean soil, establishing vegetation, and installation of a security fence. EPA completed source removal of site soils in 1987. For the OU1 remedy to be protective over the long term, revisit the draft institutional control instrument to ensure long-term protectiveness.

Protectiveness Statement(s)

Operable Unit: OU2

Protectiveness Determination: Short-term Protective

• Protectiveness Statement: The remedy for OU2 is currently protective of human health and the environment. The OU2 remedy was a "no further action" remedy with long-term monitoring of surface water and groundwater. For the remedy to be protective over the long term: 1) collect additional surface water and sediment samples in the former sand pit adjunct to the site to determine if the contaminated upper aquifer is impacting areas beyond the Site and take appropriate measures to ensure protectiveness; 2) revisit the draft institutional control instrument to ensure long-term protectiveness; 3) continue to monitor and evaluate contaminants of concern (COCs) being detected more frequently in the middle and deep aquifers and determine impacts to long term protectiveness; 4) compare surface water and sediment sample data to ecological benchmarks and to appropriate human health screening values to determine if further study is needed.

Sitewide Protectiveness Statement

Protectiveness Determination: Short-term Protective

• *Protectiveness Statement:* The Site remedy is currently protective of human health and the environment. For the remedy to be protective over the long term: collect additional surface water and sediment samples in the former sand pit adjunct to the site to determine if the contaminated upper aquifer is impacting areas beyond the Site and take appropriate measures to ensure protectiveness; revisit the draft institutional control instrument to ensure long-term protectiveness; continue to monitor and evaluate contaminants of concern (COCs) being detected more frequently in the middle and deep aquifers and determine impacts to long term protectiveness; compare surface water and sediment sample data to ecological benchmarks and to appropriate human health screening values to determine if further study is needed.

VIII. NEXT REVIEW

The next FYR Report for the Highlands Acid Pit Superfund site is required no later than five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

Annual Groundwater Monitoring Report December 2015 and May 2016 Sampling Events. Highlands Acid Pit Federal Superfund Site. Texas Commission on Environmental Quality. August 2016.

Water and Sediment Monitoring Data spreadsheet from November-December 2016 sampling event. Highlands Acid Pit Federal Superfund Site. Texas Commission on Environmental Quality. December 2016.

Final Report for Highlands Acid Pit, Highlands, Texas - Groundwater Contamination Evaluation. United States Environmental Protection Agency Region 6. April 1987.

First Five-Year Review, Highlands Acid Pit Superfund Site. United States Environmental Protection Agency Region 6. November 1995.

Fourth Five-Year Review Report for the Highlands Acid Pit Superfund site. United States Environmental Protection Agency Region 6. September 27, 2012.

Health Assessment, Highland Acid Pit (NPL) Site. Highlands, Harris County, Texas. Agency for Toxic Substances and Disease Registry. December 7, 1988.

Institutional Controls: A Site Manager's Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups. United States Environmental Protection Agency. 540-F-00-005. September 2000.

National Primary Drinking Water Regulations. Maximum Contaminant Levels Table. United States Environmental Protection Agency. 2009. <u>https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulation-table</u>. Accessed January 10, 2017.

Operations and Maintenance Plan, September 2011, Highlands Acid Pit, State Superfund Site, Contract No. 582-10-91049, Work Order No. 246-0023. URS. September 23, 2011.

Record of Decision, Highlands Acid Pit, OU1. United States Environmental Protection Agency Region 6. June 25, 1984.

Record of Decision, Highlands Acid Pit, Groundwater Operable Unit. United States Environmental Protection Agency Region 6. June 26, 1987.

Remedial Action Feasibility Study, Highlands Acid Pit, Highlands, Texas. Texas Commission on Environmental Quality. December 1983.

Second Five-Year Review Report for the Highlands Acid Pit. United States Environmental Protection Agency Region 6. September 27, 2002.

Texas Risk Reduction Program, Protective Concentration Levels. Texas Commission on Environmental Quality. March 2016.

Third Five-Year Review Report, Highlands Acid Pit Superfund Site. United States Environmental Protection Agency Region 6. September 28, 2007.

APPENDIX B – SITE CHRONOLOGY

Table B-1: Site Chronology

Event	Date
Texas Commission on Environmental Quality (formally known as TDWR)	May 1978
received a telephone	
complaint concerning the Site.	
TDWR analysis of sludge, sediment, and stormwater samples found low pH,	September 1978
concentrations of metals, high chemical oxygen demand and high total	
organic carbon.	
TDWR analysis of groundwater samples found VOCs and heavy metals.	October 1981
EPA proposed adding the Site to the NPL	June 1982
EPA and TCEQ entered into a Cooperative Agreement for a state-led RI/FS.	September 1982
EPA added the Site to the NPL.	September 1983
State-led Site Investigation Report is completed and indicates extensive	December 1983
contamination of site media with heavy metals and VOCs.	
State completed the Site's RI/FS Report.	December 1983
EPA finalized the ROD for OU1.	June 1984
The Site's remedial action design and site-safety plan was completed.	January 1985
EPA finalized the ROD for OU2.	June 1987
TCEQ conducted O&M activities at the Site.	July 1988 to July 1996
TCEQ collected groundwater samples from the private well of	August 1994
the Baytown Boat Club north of the Site and concluded that the water	-
quality was not impacted based on analyzed constituents.	
TCEQ assumed responsibility for 30 years of O&M activities at the Site.	June 1993
EPA and TCEQ agreed on a revised well development plan, which proposed	May 1996
10 additional monitoring wells with a revised monitoring strategy and an	
expansion of the sampling analysis program.	
EPA completed the Site's first Five-Year Review (FYR) Report.	June 1996
EPA contractor conducted additional groundwater sampling activities at the	April 1997 to December 1999
Site.	-
TNRCC completed the Site's revised O&M Plan.	September 2001
EPA completed the Site's second FYR Report.	September 2002
EPA drafted the site deed notice, which was recorded by a public notary.	July 18, 2007
EPA completed the Site's third FYR Report.	September 2007
TCEQ selected URS as the Site's O&M contractor.	2011
URS completed the Site's O&M Plan.	September 2011
EPA completed the Site's fourth FYR Report.	September 2012

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APPENDIX C – SITE BACKGROUND

Geology

The Site is located on the banks of the San Jacinto River and is geologically situated within recent meanderbelt alluvial sediments (upper sand). This alluvial material ranges in thickness from 18.5 feet to 26.0 feet, with an average thickness of 22.5 feet.

The recent alluvium overlies the Beaumont Clay, and the sharp contact between the two formations is evident. This clay deposit is about 30 feet thick across the entire site area. Samples of the upper 1 to 6 feet of the clay were typically stiff, very slightly silty. Below this clay interval lies a 23-foot to 26-foot thick sand interval (middle sand). Below this sand interval another clay deposit was encountered with a thickness of about 25 feet. Underlying this clay interval, a sand deposit (lower sand) was encountered with an average thickness of 16 feet.

Hydrogeology

The permeability of the upper alluvial sand ranges from 4.0 to 8.0 feet/day. Groundwater elevations in the upper sand are strongly correlated with the level of the San Jacinto River, indicating that the river and the upper aquifer are hydraulically connected. Due to this connection, groundwater flow varies with the level of the river. At high tide, the primary flow directions are east toward the sand pits and south toward Clear Lake. The groundwater flow to the west, toward the San Jacinto River, is small. About 45 percent of the groundwater leaving the Site discharges into the sandpits. The remaining 55 percent discharges to Clear Lake and Grennel Slough with most flowing toward Clear Lake. At low tide, similar flow patterns are evident. However, the groundwater elevations and gradients are lower and there is some inland flow to the southern portion of the Site. Groundwater elevations for wells completed in the upper sand range from 1.64 to 2.25 above mean sea level.

The groundwater for the region is provided by two aquifers, the Chicot and the Evangeline. The Chicot Aquifer is a drinking water aquifer and is made up of the four Pleistocene age formations (Beaumont, Montgomery, Bently and Willis). At the Site, the Chicot extends to a depth of about 700 feet. The identified aquifers underlying the site are termed the upper, middle and lower. The middle and lower aquifer/sands at the Site are in the Chicot aquifer; the upper aquifer/sands consist of alluvium associated with the San Jacinto River. The Evangeline Aquifer is below the Chicot.

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APPENDIX D – SITE MAPS

Figure D-1: Site Vicinity Map



Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

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APPENDIX E – SITE INSPECTION CHECKLIST

		IECKLIST
BODMUTTO		
EPA ID: T	XD980514996	
Weather/T	'emperature: <u>H</u>	Rainy, 50°F
Ground Vertical	water containm	
Site	map attached	
S (check all tha	t apply)	
Title Phone:		Date
Title Phone:		Date
blic health or e ces). Fill in all	environmental l that apply.	l offices, emergency health, zoning office,
<u>irector</u> itle	<u>t</u> <u>12/05/2016</u> Date	Phone No.
<u>roject</u> lanager itle	<u>11/18/2016</u> Date	Phone No.
tle	Date	Phone No.
	Date	Phone No.
	Date of Ins EPA ID: T Weather/T Monitor Ground Vertical ing Site S (check all tha Title Phone: Title Phone: Agencies (i.e., iblic health or of ces). Fill in all	Site map attached S (check all that apply) Title Phone: Title Phone: Title Agencies (i.e., state and triba ablic health or environmental ices Department irector 12/05/2016 itle Date Quality 0ject itle Date itle Date itle Date

	Contact	Title	Date	Phone No.	
	Name Problems/suggestions 🗌 Repo		Date		
4.	Other Interviews (optional)	Report attached: _			
Local re	esidents, Site O&M contractor				
	······································				
	III. ON-SITE DOCUM	IENTS AND RECO	RDS VERIFIED (check	c all that apply)	
1.	O&M Documents				
	O&M manual	Readily available	Up to date	1 🛛	J/A
	As-built drawings	Readily available	Up to date	M	J∕A
	Maintenance logs] Readily available	Up to date	۲ 🛛	√A
	Remarks:				
2.	Site-Specific Health and Sa	fety Plan	Readily available	Up to date	🛛 N/A
	Contingency plan/emerger	ncy response plan	🗌 Readily available	Up to date	🛛 N/A
	-				
_	Remarks:				
3.	O&M and OSHA Training		Readily available	Up to date	🛛 N/A
	Remarks:				
4.	Permits and Service Agreer	ments			
	Air discharge permit		Readily available	Up to date	\square N/A
	Effluent discharge		Readily available	Up to date	\square N/A
	Waste disposal, POTW		Readily available	Up to date	\square N/A
	Other permits:		Readily available	Up to date	🛛 N/A
	Remarks:				
5.	Gas Generation Records		Readily available	Up to date	🛛 N/A
	Remarks:				N / ·
6.	Settlement Monument Reco	ords	Readily available	Up to date	🛛 N/A
	Remarks:				
7.	Groundwater Monitoring I	Records	Readily available	Up to date	🗌 N/A
	Remarks:				
8.	Leachate Extraction Recor	ds	Readily available	Up to date	🛛 N/A
	Remarks:				
9.	Discharge Compliance Rec				
	Air [Readily available			N/A
	Water (effluent)	Readily available	Up to date	\boxtimes	N/A
	Remarks:				
10.	Daily Access/Security Logs	;	Readily available	Up to date	🛛 N/A

	Remarks:			<u></u>				
		IV. C	&M COSTS					
1.	O&M Organization	1						
	State in-house		Contractor fo	Contractor for state				
-	PRP in-house		Contractor fo	r PRP				
	Federal facility in	1-house	Contractor fo	r Federal facility				
2.	O&M Cost Record	S						
	🛛 Readily available		Up to date					
	Funding mechani	sm/agreement in place	🗌 Unavailable					
	Original O&M cost estimate: Breakdown attached							
		Total annual cost by	year for review perio	d if available				
	From: <u>09/2011</u>	To: <u>08/2012</u>	<u>\$88,000</u>	Breakdown attached				
	Date	Date	Total cost					
	From: <u>09/2012</u>	To: <u>08/2013</u>	<u>\$91,000</u>	Breakdown attached				
	Date	Date	Total cost					
	From: <u>09/2013</u> To: <u>08/2014</u>		\$90,000	Breakdown attached				
	Date	Date	Total cost					
	From: <u>09/2014</u>	To: <u>08/2015</u>	<u>\$77,000</u>	Breakdown attached				
	Date	Date	Total cost					
	From: <u>09/2015</u>	To: <u>08/2016</u>	<u>\$80,000</u>	Breakdown attached				
	Date	Date	Total cost					
3.	-	usually High O&M C	costs during Review I	Period				
	Describe costs and rea	AND INSTITUTION						
			ALCONTROLS [2	Applicable N/A				
A. Fe								
1.	Fencing Damaged	Location shov		Gates secured N/A maged. Some fencing around wells				
	showing signs of wear		o permiteter renoming that	maged. Some renong around wens				
B. Ot	her Access Restrictions							
1.	Signs and Other Sec	urity Measures	Location	shown on site map N/A				
				ance and on fencing surrounding site				
	wells. Some well fence		een removed or been t	<u>plown ott.</u>				
C. Ins	stitutional Controls (IC	s)						

1.	Implementation and Enforcement							
	Site conditions imply ICs not properly implemented	🗌 Yes	🛛 No 🗌 N/A					
	Site conditions imply ICs not being fully enforced	🗌 Yes	🗌 No 🛛 N/A					
	Type of monitoring (e.g., self-reporting, drive by): self report							
	Frequency: <u>as needed</u>							
	Responsible party/agency: <u>TCEQ, EPA, site owners</u>							
	Contact							
	. Name Title	Date	Phone no.					
	Reporting is up to date	🛛 Yes	🗌 No 🗌 N/A					
8	Reports are verified by the lead agency	🛛 Yes	🗌 No 🗌 N/A					
	Specific requirements in deed or decision documents have been me	t 🗌 Yes	No N/A					
	Violations have been reported	Yes	🗌 No 🛛 N/A					
	Other problems or suggestions: Report attached							
	Copy of deed notice was not found in search of Harris County onli	ne property rec	ords.					
2.	Adequacy 🔲 ICs are adequate 🛛 ICs are	inadequate						
	Remarks: <u>A copy of the deed notice is included in the 2012 FYR. However, the deed notice was not found</u> during research using the Harris County online property records. The deed notice states it was recorded with Harris County on March 6, 2006, but no record was found on file under the deed file number, TCEQ, EPA or site owners may not have recorded the deed with the county.							
D. G	eneral							
1.	Vandalism/Trespassing Location shown on site map	No vandalisn	n evident					
	Remarks: Fence bent/damaged both by SW-02 and east of UA10, i There was also refuse located by SW-02.	n the south/sou	atheast part of the Site.					
2.	Land Use Changes On Site 🛛 N/A	<u></u>	<u></u>					
	Remarks: Site is not in use except for sampling and monitoring act	ivities.						
3.	Land Use Changes Off Site 🛛 N/A							
	Remarks: <u>The adjacent northern parcel is still used for oil and gas poperating north of the Site.</u>	production. Th	e boat club is still					
	VI. GENERAL SITE CONDITION	NS						
A. R	oads 🗌 Applicable 🖂 N/A							
1.	Roads Damaged Location shown on site map Remarks: No roads are located on site.	Roads adequa	ite 🗌 N/A					
B. O	ther Site Conditions							
	Remarks:	<u> </u>						
	VII. LANDFILL COVERS Applica	ible 🛛 N/A						
A. L	andfill Surface							
1.	Settlement (low spots) Location shown on site map	Settlen	nent not evident					
	Area extent:	Depth:						
I	Remarks:	ę ·						

2.	Cracks	Location shown on site map	Cracking not evident
	Lengths:	Widths:	Depths:
	Remarks:		
3.	Erosion	Location shown on site map	Erosion not evident
	Area extent:		Depth:
	Remarks:		
4.	Holes	Location shown on site map	Holes not evident
	Area extent:		Depth:
	Remarks:		
5.	Vegetative Cover	Grass	Cover properly established
	No signs of stress	Trees/shrubs (indicate size and lo	ocations on a diagram)
	Remarks:		
6.	Alternative Cover (e.g.,	armored rock, concrete)	<u>N/A</u>
	Remarks:		
7.	Bulges	Location shown on site map	Bulges not evident
	Area extent:		Height:
	Remarks:		
8.	Wet Areas/Water Dama	ge 🗌 Wet areas/water damage not e	evident
	Wet areas	Location shown on site map	Area extent:
	Ponding	Location shown on site map	Area extent:
	Seeps	Location shown on site map	Area extent:
	Soft subgrade	Location shown on site map	Area extent:
	Remarks:		
9.	Slope Instability	Slides	Location shown on site map
	🗌 No evidence of slope i	nstability	·
	Area extent:		
	Remarks:		
B. Be	nches 🗌 Appli	cable 🛛 N/A	
		ounds of earth placed across a steep land city of surface runoff and intercept and c	
1.	Flows Bypass Bench	Location shown on site map	N/A or okay
	Remarks:		
2.	Bench Breached	Location shown on site map	□ N/A or okay
	Remarks:		
3.	Bench Overtopped	Location shown on site map	N/A or okay
	Remarks:		

C. Le	tdown Channels [Applicable 🛛	N/A		
	(Channel lined with erosion of slope of the cover and will al cover without creating erosion	low the runoff water			
1.	Settlement (Low spots)	Location shown	n on site map	🗌 No	evidence of settlement
	Area extent:			Depth:	
	Remarks:				
2.	- Material Degradation	Location show	n on site map	🗌 No	evidence of degradation
	Material type:			Area e	xtent:
	Remarks:				
3.	Erosion	Location shown	n on site map	🗌 No	evidence of erosion
	Area extent:			Depth:	
	Remarks:				
4.	Undercutting	Location show	n on site map	🗌 No	evidence of undercutting
	Area extent:			Depth:	
	Remarks:				
5.	Obstructions	Туре:		🗌 No	obstructions
	Location shown on site	map A	rea extent:		
	Size:				
	Remarks:				
6.	Excessive Vegetative Gro	wth T	ype:		
	No evidence of excession	e growth			
	Vegetation in channels	does not obstruct flov	v		
	Location shown on site	map A	rea extent:		
	Remarks:				
D. Co	over Penetrations [Applicable 🛛 1	N/A		
1.	Gas Vents	Active		Pass	ive
	Properly secured/locke	I 🔲 Functioning	Routinely sa	impled	Good condition
	Evidence of leakage at	penetration	Needs main	tenance	[] N/A
	Remarks:				
2.	Gas Monitoring Probes				· مەسىم ئىلىسى، ئىلىپى ئىلىپ ئىلىپى
	Properly secured/locked	I 🔲 Functioning	Routinely sa	mpled	Good condition
	Evidence of leakage at	penetration	Needs main	tenance	[] N/A
	Remarks:				
3.	Monitoring Wells (within	surface area of landfil	1)		
	Properly secured/locke	I 🗌 Functioning	Routinely sa	ampled	Good condition
	Evidence of leakage at	penetration	Needs main	tenance	🗌 N/A

	Remarks:			
4.	Extraction Wells Leachate			
	Properly secured/locked	E Functioning	Routinely sampled	Good condition
	Evidence of leakage at pe	netration	Needs maintenance	□ N/A
	Remarks:			
5.	Settlement Monuments	Located	Routinely surveyed	N/A
	Remarks:			
E. Ga	s Collection and Treatment	Applicable	🖾 N/A	
1.	Gas Treatment Facilities			
	Flaring	🔲 Thermal destru	iction	Collection for reuse
	Good condition	🗌 Needs mainten	ance	
	Remarks:			
2.	Gas Collection Wells, Manif	olds and Piping	······································	
	Good condition	Needs mainten	ance	
	Remarks:			
3.	Gas Monitoring Facilities (e			ngs)
	Good condition	🗌 Needs mainten	ance 🗌 N/A	
	Remarks:			
F. Cov	ver Drainage Layer			
1.	Outlet Pipes Inspected	Functioning	□ N/A	
l	Remarks:			
2.	Outlet Rock Inspected	Functioning	🗌 N/A	
	Remarks:			
G. De			e 🛛 N/A	
1.	Siltation Area exte	ent:]	Depth:	□ N/A
	Siltation not evident			
	Remarks:			
2.	Erosion Area exte		Depth:	
	Erosion not evident			
	Remarks:			
3.	Outlet Works	ioning		□ N/A
	Remarks:			
4.	Dam Funct	ioning		N/A
	Remarks:			
H. Re	taining Walls	Applicable 🛛 N	I/A	
1.	Deformations [Location shown	on site map 🗌 Defo	rmation not evident

	Horizontal displacement:	Vortical d	isplacement:
	-		
	Rotational displacement:		
	Remarks:		
2.	Degradation	Location shown on site map	Degradation not evident
	Remarks:		
I. Pe	erimeter Ditches/Off-Site Disc	charge	⊠ N/A
1,	Siltation	Location shown on site map	Siltation not evident
	Area extent:		Depth:
	Remarks:		مىلىكەر بىرىنىغۇر مىلىغۇر بىرىغىر بىرىغۇر مىلىكى بىرىمىرى بىرىغۇر بىرىغۇر بىرىغۇر بىر
2.	Vegetative Growth	Location shown on site map	□ N/A
	Uegetation does not imp	ede flow	
	Area extent:		Туре:
	Remarks:		
3.	Erosion	Location shown on site map	Erosion not evident
	Area extent:		Depth:
	Remarks:		
4.		Functioning	□ N/A
	Remarks:		
VIII.	VERTICAL BARRIER WA	ALLS Applicable	X N/A
1.	Settlement	Location shown on site map	Settlement not evident
	Area extent:	-	Depth:
	Remarks:		-
2.	Performance Monitoring	Type of monitoring:	
	Performance not monitor		
	Frequency:		Evidence of breaching
	Head differential:		
	Remarks:		
IX. (GROUNDWATER/SURFAC	E WATER REMEDIES 🛛 App	plicable 🗌 N/A
	Froundwater Extraction Well		Applicable N/A
1.	Pumps, Wellhead Plumbin		Children K2
1.		All required wells properly operating	g 🔲 Needs maintenance 🗌 N/A
	Remarks:	an required wens property operating	
2.		es, Valves, Valve Boxes and Other	r Appurtenances
		Needs maintenance	
ļ	Remarks:		
3.	Spare Parts and Equipme	nt	

	Readily available Good condition Requires upgrade Needs to be provided
	Remarks:
B. Su	urface Water Collection Structures, Pumps and Pipelines 🗌 Applicable 🖾 N/A
1.	Collection Structures, Pumps and Electrical
	Good condition Needs maintenance
	Remarks:
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes and Other Appurtenances
	Good condition Needs maintenance
ļ	Remarks:
3.	Spare Parts and Equipment
	Readily available Good condition Requires upgrade Needs to be provided
	Remarks:
C. Tr	reatment System
1.	Treatment Train (check components that apply)
	Metals removal Oil/water separation Bioremediation
	Air stripping
	Filters:
	Additive (e.g., chelation agent, flocculent):
	Others:
	Good condition
	Sampling ports properly marked and functional
	Sampling/maintenance log displayed and up to date
	Equipment properly identified
	Quantity of groundwater treated annually:
	Quantity of surface water treated annually:
	Remarks:
2.	Electrical Enclosures and Panels (properly rated and functional)
	N/A Good condition Needs maintenance
	Remarks
3.	Remarks: Tanks, Vaults, Storage Vessels
5.	N/A Good condition Proper secondary containment Needs maintenance
	Remarks:
4.	Discharge Structure and Appurtenances
	N/A Good condition Needs maintenance

r										
	Remarks:									
5.	Treatment Building(s)									
	N/A Good condition (esp. roof and doorways) Needs repair									
	Chemicals and equipment properly stored									
	Remarks:									
6.	Monitoring Wells (pump and treatment remedy)									
	Properly secured/locked Functioning Routinely sampled Good condition									
	All required wells located Needs maintenance N/A									
	Remarks:									
D. M	onitoring Data									
1.	Monitoring Data									
1.										
	Is routinely submitted on time Is of acceptable quality									
2.	Monitoring Data Suggests:									
	Groundwater plume is effectively contained Contaminant concentrations are declining									
E. M	onitored Natural Attenuation									
1.	Monitoring Wells (natural attenuation remedy)									
	\boxtimes Properly secured/locked \boxtimes Functioning \boxtimes Routinely sampled \boxtimes Good condition									
	All required wells located Needs maintenance N/A									
	Remarks: Wells appear to be in good condition. All wells were surrounded by locked fences. Most well									
	caps were also locked, but a few wells (MA-02, DA-02, DA-05, DA-06) did not have locks at the time									
	of the inspection. Most wells were labeled, but many labels were weathered and difficult to read and could be replaced to be more easily identified, particularly in areas where wells are clustered. The well									
	pad for MA-06 is being undercut by erosion.									
	X. OTHER REMEDIES									
	e are remedies applied at the site and not covered above, attach an inspection sheet describing the physical									
nature	and condition of any facility associated with the remedy. An example would be soil vapor extraction.									
A.	XI. OVERALL OBSERVATIONS Implementation of the Remedy									
	Describe issues and observations relating to whether the remedy is effective and functioning as designed.									
	Begin with a brief statement of what the remedy is designed to accomplish (e.g., to contain contaminant									
	plume, minimize infiltration and gas emissions). <u>Cleanup included excavation of contaminated soil above the water table (8 feet below ground surface) and</u>									
	disposal at an off-site hazardous waste facility, backfilling of the excavated area with clean soil,									
	establishment of vegetation, and installation of a security fence. The remedy also included monitored									
	natural attenuation, long-term maintenance and groundwater monitoring. Institutional controls were not called for in either ROD, but a deed notice was drafted in 2007. While a copy of the notarized institutional									
	control was included in the 2012 FYR, the deed notice for the Site was not found during online research									
	of Harris County property records. The rest of the remedy appeared to be functioning as designed.									
<u>B.</u>	Adequacy of O&M									
	Describe issues and observations related to the implementation and scope of O&M procedures. In									
	particular, discuss their relationship to the current and long-term protectiveness of the remedy. <u>O&M activities at the Site include semi-annual sampling of groundwater, surface water and sediment;</u>									
ļ	maintaining site security, including replacing or repairing signs, gates, fencing and locks; managing the									
Į	vegetative cover, including mowing, debris removal and addressing any soil erosion; and managing IDW									
	yegetative cover, including mowing, debris removal and addressing any soil erosion; and managing IDW generated during sampling. Fencing around wells was generally in good condition and locked. A few well									

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	covers were missing locks, but should not impact short-term protectiveness. The concrete pad for one well, MA-06 (see photo), was showing significant signs of erosion around and under the pad. All site wells were located, but labeling could be updated. No IDW waste was found on site, which was an issue during the 2012 FYR inspection. Vegetation appeared to be in good condition and was well established across most of the Site. Due to heavy recent rains, there were some small areas of erosion seen that should be addressed during the next O&M event, but the erosion channels were not deep enough to impact current protectiveness. Trash and other debris were found along the perimeter of the Site, both along the shoreline and in the woods along the shore, suggesting potential trespassing on site. The site perimeter
	fence, which extends along the eastern boundary from the entrance gate down to SW-2, needs repair in
	places, and could potentially be extended along the western boundary to dissuade trespassing on site from neighboring water bodies.
C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.
	Outside of the soil erosion seen around and under the concrete pad for well MA-06, there were no other current indicators of potential remedy problems identified during the inspection.
D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

APPENDIX F – PRESS NOTICE



APPENDIX G – SITE INSPECTION PHOTOS

After Cleanup



Gated entrance to the Site, circa 2001

Site Inspection Photos: December 2016



Gated entrance to the Site



View south, looking across the Site



Wells DA-05 and UA-06 (from left to right)



Well UA-15



Well DA-06



Well UA-16



Well MA-03, located near SW-1



Sign for location of surface/sediment sampling area 1 (SW-1)



Well MA-06, with faded label



Soil erosion under concrete pad for MA-06



Pad for MA-06, repaired in April 2017



Well UA-11 in the middle of the Site



Well MA-07, with dead vegetation on the fence



Well DA-01, no lock on the well cover, well secured with locked plug



SW-2, surface water and sediment sampling location, along the southern site boundary



Wells UA-10 (left) and MA-02





Wells MA-08A (left) and DA-08A



Well UA-14



Wells DA-02, MA-05 and UA-12 (from left to right)



Well DA-02, with faded label and missing cover lock, well secured with locked plug



Well MA-05



SW-3, surface water and sediment sampling location, along the eastern site boundary



Warning signs posted on well fences had fallen or been blown down for several well areas



Damage to barbed wire at the top of fence surrounding DA-06



Small area of ponding on site southeast of UA-12 after heavy rains



4

Area of surface erosion due to heavy rains between MA-08A and UA-14



Border fence near UA-10 with damage from a fallen tree



Litter/debris near SW-02



Tire dumped in woods near UA-10



Oil production operation on property east of the Site



Baytown Boat Club, located north of the Site

APPENDIX H – DATA TABLES

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data

Highlands Acid Pit Highlands, Harris County, Texas

	I						VA-06					
ARALYTE	168P Der i Residerbal PCL5 ³ ⁶⁷⁶ GW 1894	UA-96	UA-06 HAPOM-UA-06-0 \$1/17/2031 \$111650-05	UA-06 HAP-UA06-070512-0 07405/2012 1207231-03	UA-05 HAP-UA05-112512-0 11/25/2012 12111017-20	UA-05 HAP-UA05-061913-0 D919/2013 1306861-01	UA-05 HAP-UAD5- KOY2013 82/19/2014 H021612-01	UA-86 HAP-UA05-JUL281H 87/19/2014 14070538-12	UA-DS HAR-UAD6080 11/13/2014 14110545-14	UA-06 HAP-UA06-090 5/14/2015 15050676-14	UA-06 HAP-UA06-100 12/17/2015 HS15/20827-11	UA-06 HAP-UA06-110 6/29/2016 H \$16070019-16
						1.1			. N.S.			
VOLATILE OROANIC CO	MP GUNDS (20 gl.)								10.00		a ser	
Barzenz	0 005	0.5	C#,0	0.11	9	0.0069.0H1	9.00090 J	0.0000	<0.00020	0.0002	0 0016 UH-RB,FB	0.0002 J
Ediyaterzene	0.70	<0 00010	<0.00010	<0.00030	<0 00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030 U	<0 00030 U
Toluene	1.0	0.00013 UJ*	0.00029 J	<0.00030	<0 (00030	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020 U	<0.0002010
Xylenes, total	10	\$.0011 J	0.0022 J	<0.00090	<0.00030	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050 V	<0.00050 U
SEMI-VOLATILE ORGAN	IC COMPOUNDS (mg/L)											
Pitenol	73	600026.0*	°. (100061 J*	0 00011 0*	0.0033 JL*	<8000050	<0.000032	<8.00044UJL*	<0.000026 WL-H 1*	<0.00035	<0.000036 U	<0.000035 U
Pyridine	0.024	<8.00010.007	<0.00010 f)1,	0.00062.7	0.00029 JL*	×0.00010	<0.000018	<0.0024 W.U.	<0.000010 LUL-HT	<0.000030	<0.900030 U	<0.000030 VJL-MS/SD
METALS (ngl)												
Arsevic	0.010	0.00663	0.0136	0.005995	0.0226	0.0247	0.003@2.3	800.0	0.00385 J	0.0024 .1	0.00412 J	0.011313H-RB
Barium	2.0	0.052	6.0453	0.0510	0.0306	Celva.co	0.1040	0,050	0,0778	0.1600	0.140	0,113
Casimism	0 0050	<0.00060	<0.06060	<0.00090	<0.00030	<0.00080	0E000.0>	0.00056 J	0000000 O>	<0.00090	<0.000200 U	0.000202 J
Chromium	0.10	0.00137 J	0.00810	0.00192 J	0.0114	0.00101 J	<0.0010	L.9000.0	<0.00100	<0.0010	8.000767 UH- MB R8 CC8	0.000054 UH ME
Leat	0.815	<0.00070	0 00344 U*	0.00132 J	0.00483 J	0.002 <i>5</i> 7 J	0.00006 J	8.00028 J	<0 000700	0.0014	C.00101 J	0.00136 J
Metury	0.0020	<0.000042	40 600042	<0.000842	<0.800042	<0.000042	<0.000048	6.000016 J	<0.0000400	<0.000040	<0.00000400 V	<0.0000000 V
Sector	0.050	6.0080d	0.00768	L 96000.0	0.0147	0.00214 UH*	0.00112 J	<q.0011< td=""><td><0.00100</td><td>0.0011</td><td><0.00110V</td><td>V01100.0></td></q.0011<>	<0.00100	0.0011	<0.00110V	V01100.0>
3W&	0.12	<00060	<0.00080	<0.00088	<0.09080	<0 20060	<0 00030	«0 800056	< 0 (200600)	<0.00080	<6000206U	48.00026612
OTHER	•											
Sufate	HA	570	1,080	241	1,110	195	73	130	78.8	69.0	18 .0	74.8
Total Dissolved Solids	HA	1,580	2,550	1,540	2,630	1,090	1,140	620	758	1,200	830	758

H-1

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

		· · · · · · · · · · · · · · · · · · ·			4			VA-10							
AVALYTE	188P Her I Reudental PCLs ^a "GW MgA.	UA-10 HAPOM-UA-10 05/05/2011 1108225-05	UA-10 HAPOM-UA-10-0 1 9/17/2011 11:11650-11	UA-10 HAPOM-UA-10-1 11/17/2011 1111656-12	UA-10 HAP-UA10.070512-0 87/05/2012 1207231-11	UA-10 HAP-UA (0- 070512-1 07/05/2012 1207231-12	112812-0 11/25/2012	UA-10 UA-10 HAP-UA10-061913- 0 06/19/2013 1306861-12	UA-10 HAP-0A30- NOV2013 02/13/2014 14021012-02	UA-18 RAP-UA10 JUL2014 07/11/2014 14070538-19	UA-10 HAP-VA10-090 11/14/2014 14110545-15	UA-10 (DUP) HAP-UA 10-051 11/14/2014 14110545-18	UA-10 HAP-UA10-090 05/14/2015 15050676-22	UA-10 HAP-UA10-100 12/17/2015 H515120827- 12	UA-10 HAP-0A10-1 6/30/2016 HS16070019-
VOLATILE GROANIC CO	IMPOUNDS (mg1.)														
Berzene	9.005		125	2.7 5	23	23	8.0	4	0.61	8.1	3.1	23	0.00480	24	870.0
Emylberzene	6.70	<0.50310	<0.00050	<0.0010	<0.0015	«00015	<0.0015	<0.0015	<0.00030	<0.0030	-0.0030	<0.0030	<0.00030	<0.0030 U	<0.00030V
Tolvene	1.0	0,012 J	6.00083 J	L 6700.9	<0.0015	<0.0015	0.0025	0700.0	6.00037 J	0.0095 J	0.012	9,012	<0.00020	0.013	<0.00020 단
Xylenea, liokai	10	L 260,0	0.0051 J	4 110.0	0.0050 J	L 6100.0	0,011	0.012	0,0018	0.016	<0.0050	<0 6050	<0.00050	0.027 J	≺0.00050 U
SENT-YOLATILE ORDAN	AC COMPOUNDS (mg1.)														
Phend	73	6.0026	6.0036 J	0.0074 J	≈. 210.0	0.014 JF	0.0096 JL*	0,0073	0.0043	6.017 JL*	0.0028 .KSUR, PD*	0.0089 .L BUR, FD*	<0.000005111- SUR JAS/SD	0.00028	<0 000036 U
Pyridine	0.024	L 87030.0	4.00000 J*	0.0012 J	0.21 J	0.29 J	0.0042 JL*	0.0074	0.037	0.25 JL*	9.038 JL-LC9, FO ⁻	0.0097 JR. L.C.S., FD*	0.000044.JL- MS/S0	0.020	<0 009030 UJ MŠ/SD
							[
NETALS (09%)	T						 							and the second	0.00941 UI
Arsenic	0 0 10	0.0372 J	0.0142	0.0147	8.0530	6,0129	0.0427	0.0301	0.0208	6.0050	0.0639	0.0524	0.027	8.0338	M9,R8
Barlum	2.0	6 CH40 0	Q.0574	0.0537	0.0558	0.0562	0.0424	\$0 <u>70</u> \$	0.0583	0.030	0.0730	0.0568	0.069	0.0603	0.09839
Cadmium	0.0050	<0.0090	<0.00090	<1 00090	<9.00080	<0.00060	0.00206	0.00177 J	<0.0016	0.00037 J	<0.00600	<0.00000	<0.00080	L 10200,0	0.000342 J
Ctaomium	0.1D	6.180	0.0552	0.0544	0.0450	0.0463	0,180	0.175	0.001	0.106	0.276	0.273	0.921	0.243	0.0195
Lead	0.015	0.0102 J	0.002#3 U*	0.00218.0*	0.00161 J	0.00163 J	0.00346 J	L 14600.0	0.002 UH-MB*	0.0031	<0.0070D	<0 00700	0.061	<0.00609 U	0.0189
Mercury	6 9020	<0.030042	<0.000012	<0.000042	<0.000042	<0.000042	<0.000042	<0.000042	<0.000048	¢.000083.4	< D 0.0000400	<0.0000400	0.00000 J	<0.0000400 U	0.000044 J
Selection	0.050	0.0795	0.0148	0.0187	0.0178	0.0131	0.05%2	0,0231	0.0467	0.0076	0.573	0.164	0.0047 J	0.0535	6.0022 J
Saver .	0.12	<0.0030	<0.00080	<0.00090	<0 00060	< 0.00080	<0.000an	<00016	<0 6016	<0.000056	<0.00000	<0 D0600	08000LB>	<0.00100 U	<0.003200 U
	-														
OTHER.															
Sulfate	RA,	6,500	2,740	314	1,680	-	7,940	6,230	1,920	8,500	12,000	12,600	21	4(40	53.6
Total Dissolved Solids	NA	12,200	7,300	9,280	6,400	-	13,800	13,900	4,940	16,000	15,600	16,400	450	10200	629

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H-2

Table 1									
2015 Semi-Annual Groundwater Monitoring Report									
Groundwater Analytical Data									
Highlands Acid Pit									

-lighlands, Harris County, Te	exas
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	TRRP Tier 1 Residential P CL3 ⁴ ⁹⁴⁶ GW mg1_	UA-31												
ANALYTE		UA-11	UA-11 HAPOM-UA-11-0 11/17/2011 1111650-13	UA-11 HAP-VA11-070612-0 07/06/2012 1207230-07	UA-11 HAP-UA 11-112912-0 11/29/2012 12111017-15	UA-11 (DUP) HAP- UA11-112912-1 11/29/2012 12111017-16	UA-11 KAP-VA11-062013-0 06/20/2013 1306861-23	UA-11 HAP-UA11- NOV2013 02/20/2014 14021012-17	UA-11 HAP-UA11- JUL2014 07/11/2014 14070536-20	UA-11 HAP-UA11- 080 11/14/2014 14110545-17	UA-11 HAP-UAI 1-090 5714/2015 15050676-19	UA-11(DUP) HAP-UA11-091 5/14/2015 15050676-19	UA-11 HAP-UA11-100 12/18/2015 HS15120826- 05	UA-11 HAP-UA13-110 630/2016 HS16070019-22
VOLATILE OXGANIC CO	147 (38105 (mas))	ļ												
Benzene	0.005	100 1 1		44 C		ø	4	50		24		21		41
Ebybenzene	6.70	<0.00010	<0.010	<0.030	<0.030	<0.030	<0015	<0.015	<0 815	<0.015	<0.0030	<0.0030	<0 0030 U	<0.030 U
fotuene	1.0	6.50 J	9.11	0.069 J	L ETO &	0.084 J	0.060	0.000	0.075	0.051	<0.0020	<0.00720	0.082	L 000.0
Kylenes, lotal	10	0.76 J	9.82	6,73	0.30	0.42	0,430	0.470	0.41	<0.025	<0 0050	<0.0050	ç.a	0.22 J
SEME-YOLAT BE ORGAL	COMOUNDS (mad)													
Phenal	7.3	0.027	9.32 J	0.31 J*	0.17 JL*	0.24 JL*	0.39 JL*	<0.000032	0.093 JL'	0.030 JL- ME/SD*	0.0000 JL- SUR,MS/SD/F	0.0031 JL+ SUR,MB/SO,F	8/0.9	Q.18 JL- LCS,MR/SD
Pyridine	0.024	0.047 JP	0.023 J*	r.e.i	0.022 .L."	0.034 JL*	6.50	0,056	1.1 JL*	0,12 JL-LCS, MS/5D*	A018JL- MS/SD,FD	0.34 JL+ M9/80,FD	0,080	0.18 JL+ LCS,ME/30
METALS (mgl)	<u> </u>													
Arsenic	8 D I O	544.0	0.140	0.161	0,168	. 0.217	0.223	0.188	\$L073	0.0546	0.011 JL-FD	0.022 JAFD	0.10z	Q.154
Barium	2.0	e.0723 J	0.0573	9.025T	0.0284	0.0Z71	0.0280 J	0.0230	0.024	0.0902	0.081 .2-FD	0.12 JHPD	6600.0	0.159
Cadmikum	0.0050	r na IQ.0	8.0122	0,0141	0,017 1	0.0184	0.0168 J	0.015	0.0087	<0.000000	<0.000960	L 6100.9	0.0124	0,0189
Chronium	0.10	C?#10	9.71B	0.825	0.772	. 6.003	0.925	0.784	0.427	0.290	0.018 J-FD	0.054 JHFD	2000	0.410
iuna :	0 0 15	0.0711	0.070E	0.0530	0.0799	0.0960	0.0510	0.0437	4.038	L 4C10.0	0.0015	C-74. 35 00.0	0.0318 J	0.0788
Mercury	0.0020	<0.000042	6.0000580 J	L 0440000.0	L 0170003.0	0.0000120 J	L 0420000.9	<0.000040	0.00012J	<0.000040	<0.000040	<0.000040	<0.00004001.U	0.000046J
Selenium	0.050	0.129	0.0360	0.0550	0.0610	0.0684	0.0697	0.1000	0.0054	0.0529	0.0034 .3470	8.0068	0.0456 J	0.0184
Silver	B. 12	<0 0080	<0.00000	<0.0016	<0.00080	<0.000a0	<0.0880	<0.0016	<0.000056	<0.00800	<0.00060	⊲0.00080	<0.00100U	<0.00100.U

OTHER														
Suffate	NA	17,700	25,003	14,700	18,900	19,700	9,660	15,500	14,900	13,600	270	1000	\$740	11900
fotal Dissolved Solds	NA	31,700	39,900	33,500	26,500	35,100	25,700	30,750	29,100	15,100	1800	3900	16800	24800

H-3
Table 1 2015 Semi-Annuai Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

	TRRP Tier I Revised at							UA-12					
ANAL YTE	PCLs" ""GW _{Inc} mgi,	UA-12 HAPOM-UA-12 BE/05/2011 1108225-08	UA-12 HAPOM-UA-12-0 FV17/2011 1111650-10	-04-12 HAP-UA12-070612-0 07/06/2012 1207230-03	UA-12 HAP-VA12-112912-0 11/29/2012 12111617-17	UA-12 HAP-UA12-062013-0 06730/2013 1306661-20	U.A. 12 (EDP) HAP- UA12-062013-1 06/20/2013 1306861-21	UA-12 HAP-3JA12-NOV2013 62/20/2014 14021612-18	UA-12 HAP-UA12JUL2814 0711/2014 14070538-21	UA-12 HAP-UA12-DB0 11/14/2014 14110545-18	UA-12 HAP-UA12-090 \$/14/2015 15050676-18	12/18/2015	UA-12 HAP-UA12-110 6/30/2016 HS16070619-22
VOLATILE ORGANIC CO	1	and a reason											
Berzene	0.005	60	40	57	90		97	79		7	6.7	79	I T
âlhybenzena	0.70	<0.00010	<0.0050	<6.030	<0030	<0 030	<0015	<0.030	<0 015	<0015	<0.6030	< 10030 U	<0.030 U
Totuene	1.0	0.12 J	0.081	0.53	0.082 J	0.150	0,130	0.120	¢.f0	0.83	L 6700.0	0.21	0.0H7 J
Xylenes, lotal	10	6.040	0.43	9.55	0.28	0.720	9.640	0.490	0.42	0.51	0.072	1.1	10.0
SEMI-YOLATILE ORGAN	IC COMPOUNDS [mgf.]									·······			
Phancel	7.3	6.032	0.29 J	0,47.J ^e	0.13 JL*	0.41	0.50	<6.500032	0.13JL*	0.010 JL-M2/50*	0.0000 JL-8UX,MS.8D	0.029	0.025 JL- LC3.M2/50
Рүпкине	0 024	0.03Z	0.023 J	3.1 J	0.041 JL*	0.17 JF	,11° 9€'0	0.082	14.J.*	0.18 JL-LCS, ME/EO'	\$.13 JL-ME/3D	0,042 3.470	0,081 JL- LC9,AB/SD
METAL \$ (mg4.)													
Arsenic	0 010	0.0597	0.0507	0.0393	9.0287	0.0887						- Contractoria	
							6.0777	0.0536	9,018	0.0605	9,045	0.150	0.112
Bixfuni	20	0.0259 J	0.0391	0.0212	0.0396	0.0218	0.0209	6.0234	0,017	0.0210 J	0.065	0.0314	0.0271
Cadrairum	0.0050	<9.0030	0.00019	<1 00030	0.00129 J	0.00347 J	0.00336 J	0.00181 J	0.0022	<0.00800	<0.000280	0.00247 J	0.00776
Chronium	£10	0.264	0.228	0.367	0.164	9.443	0.4KL	6.352	0.312	0.346	0.018	9.450	166.0
Lead	0.015	<0.0070	0.00487 J	0.00277 J	4.00137 J	0.00800 J	0.00737 J	0 00234 UK-H8*	0.00560	<0.00700	0.0037	0.0297 J	0.0306
Marcury	0 0020	<0.000042	<0 000042	0.0000470 J	<0.000042	<0.000612	<0 000042	<0.000040	L 600000.0	0.0000500 J	<0.000640	L 050000.0	<8.0000400 U
Selectum	0.050	0.0642	0,01TJ	0.0234	0,0254	0.0255	0.0291	0.0686	0.0069	6.103	9.0052	0.0538	0.0184
Stver	D.12	<0.0080	<0 00060	<0.00090	<0.00090	<0 0016	<0.0016	<80016	<0.000056	<0.00900	<0.00020	<0.00100 U	<0.000200 V
OTHER													
Sutae	HA	5,300	6,500	6,420	5,190	10,800	10,603	6,930	\$2,306	12,700	420	8580	10200
Total Dissolved Splids	HA.	12,200	13,500	12,000	9,210	19,800	20,000	17,400	19,400	14,900	2200	18900	20700

Table 1
2015 Semi-Annual Groundwater Monitoring Report
Groundwater Analytical Data

Highlands Acid Pit Highlands, Harris County, Texas

									UA	14						
444LYT#	TRRP Tier t Resident a PCLs ⁴ ^{ew} G ₄ y mgt.	UA-14 HAPOM/UA- 14 06/05/2011 1108225-09	UA-14 (DUP) HAPOM-DUP 08/05/2011 1108225-12	0	070612-0	UA-14 HAP-UA14 070512-1 07/06/2012 1207230-06	UA-14 HAP-UA14 112912-0 11/29/2012 12111017-18	UA-14 HAP-UA14- 662013-0 06/20/2013 1306861-19	UA-14 HAP-UA14 NOV2013 02/20/2014 140/21012-19	UA-14 (EUP) HAP-UA14- NOV2013-1 02/20/2014 14021012-20	UA-14 HAP-UA-14- JUL2014 07/11/2014 14070538-22	UA-34 HAP-UA14-080 11/14/2014 14110545-19	UA-14 HAP-UA14-090 SY14/2015 15050576-17	UA-14 HAP-UA 14-100 12/18/2015 HS 15120/026-02	UA-14 HAP-UA14-110 &/30/2016 HS16070019-18	6/30/2016
VOLATILE ORGANIC CO	ATOUNOS (mgL)															
Benzene	0.005	22	71	28	18	5	48	30			7.9	41	25	6.0	Q.15 JI-FD	671 JIF0
Ethyloerzené	6.70	0.00080 J	0.0011	<0.0050	<0.0075	< 0.0075	<0.007\$	<0.015	<0.0030	<0.0930	0 00040 J	<0 0015	<0.0030	<0.0030 U	<0.00030.U	<0.00930 U
Taluene	1.0	0.010	0.011	0.000 5	0.011 J	0.011 J	0.040	0.000	0.0035 J	6.00\$8 J	0.0061	0.0099	4 .0020	0,0008 J	<0.00020 U	<0.00020 U
Kylenes, latal	10	0.013	0.018	L 18.0	0.052 J	L 020.0	0.22	0.220	¢.047	0.035	0,044	0.065	0.0068 J	9,049	<0 00050 V	<0.00050 U
SEM-VOLATELE ORGAN	C COMPOUNDS (mg/L)															
Phenol	7.3	0.015	9,015	°L 680.6	6.057 J	0.074.J*	6.19 JL*	9.11	<0.000032 U.E. SUR	<0 (XD/G3)2	0.049 JL*	0,006 J6UR, MB/90*	0.0092 JL 8UR,M£/\$0	0.013	<0.000035 JI-FD	0.00055 JI F D
Pyrtane	0.024	0.0916 J*	0.0021 J	0 0033 VJ*	1. 66.9	0.55 J	0.012 .8.*	0.0728	0.029 JI-FD	Q.12 JIFD*	0.27 JL*	0.13 .L 1.06,ME/60*	0.0056 JL- MS/SD	0.0015	<0.000030.031,- MS/SD,FD	0.00926 JL- MS/60,F0
						•										
METALS (#g/L)	0 010	0.0006	0.005078	0.00721	0.00518	8.00535	0.0164	0.0118	0.00796 J	0.00418 J	0.0021	0.00278 J	0.016	0.00024J	0,007921 Litt-	0.00006 VH-
Arsenic				0.0004	0.0776	0.0826	0.0000	0.158	0.174	0,171	0.156	9,144	0.19	0214	0,186.JI-FD	0.13 .8 FD
8arlum	20	0.0458	0.0414							40.00080	<0.00009	<0.002800	+0.00030	<0.000200 U	<0.000200 U	<0 600 200 U
Cadalua	\$ 8050	<0.06030	<0.0030	<0.00090	< 0.00050	<0.00080	<0.00080	<0.00060	<0.00080							0.00000 JI-FD
Chronium	0.10	0.0214	0.0204	0.0543	0.0290	0,0347	0.0517	0.314	0.00863	0.00085	0.012	0.00606	0.0057	0.00020	0.0041 JFD	ļ
Lead	0.015	<0.00070	<0.00070	0 000776 U*	<0.00679	<0.00070	<0.02070	<0.00010	<0.00070	<0.00070	<0.00012	<0.000700	¢.002.J	<0.000600 U	0.000852 J	0.000815 J
месиу	8 6020	<0.000042	<0 000042	<0.000042	< 0.0000542	<0000042	<0 D00042	<0.000042	<0.000040	<8 000040	<0.000012	<0.0000400	<0.000040	<0.0000400.0	<0.0000400U	<0.0000400.U
Seferium	0.050	0.00468 J	0.00450 J	0.00511	0.03468V*	0 00325 U*	0,00892	0.00636	0.0015E J	L 25500.0	<00011	0.00141 J	80011	6,0015 J	<0.0011010	<0.00110 U
Siver	0.12	<0.00080	<0.00090	<1 90090	<0.00060	<0.00090	<0.00060	< 0 00080	<0.00000	<0.00068	<0 000056	<8.000800	<9.00068	<000002000 U	<0.000200 ∪	<0.000200 U
		1														
OTHER		1														
Sulfate	NA	636		2,043	677	-	2,560	3,160	354	290	354	419	**	550	157	138
Total Dissolved Solids	NA	2,040	-	4,030	2,010	-	4,900	4,280	2,530	2,380	2,530	2,060	730	2140	1770	1600

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

	TRSP Tier 1 Residential						UA-	18					
ANALYTE	PCLd [®] ^{em} GW _{mb} mgt	UA-15 HAPOH-UA-15 08/05/2011 1108225-10	UA-15 HAPCM-UA-15-0 11/17/2011 1111558-07	UA-15 HAP-UA 15-0705 12-0 07/05/2012 1207231-05	UA-15 HAP-UA15-112812-0 11/28/2012 12111017-19	UA-15 HAP-UA15-061913-0 06/19/2013 1305851-05	UA-15 HAP-UA15-NOV2013 02/19/2014 14021912-03	UA-15 HAP-UA15-JUL2014 07/10/2014 14070538-13	UA-15 (DUP) HAP-UA15-JUL2014-1 07/10/2014 14970538-14	UA-15 HAP-VA16-080 11/13/2014 14110545-21	UA-15 HAP-UA15-090 5/14/2015 15050676-15	UA-15 HAP-UA15100 12/17/2015 HS15120827-08	UA-15 HAP-UA15-110 6/29/2016 H516070019-14
VOLATILE ORGANIC CO	MFOUNDS (#g'L)												
Geraene	0.005	0.54	1,0	0.57	9.41	Q.250	0.022	0.0076	0.0082	<0.00920	0,007	0 001 I UH-RO,FO	<0.00020.U
Ethylbenzena	070	<0.00010	<0.00010	<0.00030	<0 00030	<0.00030	<0.00030	<0.00030	<0.00030	<0 00030	<0.00030	<0.00030 <i>U</i>	<0 00030 U
Tokuene	1.0	0 00010 U.P	<0.00010	<0.00030	<0.00030	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020.U	<0.00020.U
Xylenes, liotat	10	6.00023 J	<0.00030	<0.00090	<0.00030	<0 00050	<0 80050	<0.03050	<0.00050	<0.00050	<0 00050	<0.00050 U	<d 00050="" td="" u<=""></d>
SEM-VOLATILE ORGAN	C COMPOUNDS (mg/L)												
Ptwnol	7.3	<0.0000250 h1+	0.00031 Jr	9.0014 J	0.00071 JL*	0.00012.2	P \$9600.6	<2.00644 W.L*	<0.00044 W/L*	<0 000026 U.IH T	9.00005 JL- SUR,MS/SD	<0 000035 U	<0.000036 U
Pyrkane	0 624	<0.00010U/*	<0.0001010J*	J. 62002.6	<0.0001010JL*	0.0002f J	<0.000948	<0.00034 (UJL*	<0.0024 V.J.L.*	<0 800049 UJL-H Ț*	<0.000030 UJL- MS/SO	<0 900030 V	<0.000038 UJE- MS/SD
METALS (Bg1)													
Arsenic	6.010	0.00143	0.0165	0.00615	0.00891	0.00000	0.0032 J	0,9087	0,0055	0.00965	Q.11	0.0921FJ	0.0687
83រវាយា	20	0.0322	0.0196	0.0451	0.0296	0.0678	0.0827	0.087	0.0e7	0.0721	0.14	0.0915	0.0660
Cadmium	0.0050	<1.00080	<0 00030	<1 00060	<0.03080	<0.00060	<0.00080	<1.00909	<0.00033	<0.0000000	<0.00680	<0 000200 U	<0.000200.U
Chromium	0.10	L MI100.0	Q.00282.J	0.90297 J	<0.0012	<0.0010	<0.0010	<0 00018	<0.00019	<0.00100	6.0019 J	9.800694 VH- MB.RS.CCB	0.00096 UH-ME
Lead	0.615	<0.50070	0.000852 U*	0.000890 J	<0.00070	<0.00070	<0.00070	<0.00012	<0.00612	<6.000700	<0.00070	<0.0000000 U	<0.000600 U
Mercury	9.0929	<0.000042	<0 506042	<0.000042	<0.000042	<0.006042	<0.000046	L \$20000.0	⊲1 000012	<0.0000490	<0 000040	<0.0000400 U	<0 8020400 U
Sector	0.850	0.0120	0.00002	0.004213	0.00750	0 00192 UH*	<0.0016	<0.0011	<0.0011	<0.00100	0 0026 DH-CC8	<0.00110 U	0.00122 J
Sever	0.12	<0.0008D	09060.5×	<0 00000	<0.00080	<0.00080	<0.00080	<0 000056	<0.000056	<0.000800	<0.00020	<0.000200 U	<0.0002200 U
OT KER													
9ulae	NA	1,470	(7,700	835	1,270	222	899	99.0	98	101	41	40.9	67. 1
Total Dissolved Schola	NA	3,170	3,380	3,140	2,740	1,080	760	1,010	926	602	800	476	364

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

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		·····					UA-16					
ANALYTE	TRRP The 1 Residential PCLs ⁴ ^{eve} GW ₈₀ mg/L	UA-18 HAP GM-UA-16 0805/3011 1108225-11	UA-18 HAP OM-UA-18-0 11/17/2011 1111650-09	VA-16 HAP-VA16400512-0 074052012 1207231-04	UA-16 HAP-UA16-112012-0 1 1/28/2012 1 21 11017-20	UA-15 HAP-VA16-061913-0 06/19/2013 1306861-87	UA-16 HAP-UA16-NOV2013 02/19/2014 14021012-04	UA-16 HAP-UA16JUL2014 07/102014 14070538-15	UA-15 HAP-UA16-089 11/14/2014 14110543-22	UA-16 HAP-UA15-093 B/14/2015 15053675-16	UA-16 HAP-UA16-100 12/17/2015 HS15120827-09	UA-16 HAP-UA-16-110 6/29/2016 HIS16870019-15
YOLATILE ORGANIC COT	MPOUNDS (mg/L)	- Masteria -	and the first start of			annaichtean an	Automatika natesi e	with the initial weather the first			- the second	
Benzene	0.005	26.0	7.2	0.10	1977 - 1 979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979 - 1979	0,450	23	0603.0	63	0.0015	24	L 96000-0
Ethybertene	0.70	0.00085 J	L 0200.0	<0 00838	L 19000.9	<0.00030	<0.0030	<0.0039	<0.0830	<8.00008	<02030U	<0.00330 U
Totuene	1.0	0 00050 UJ*	0.0013 J	<0.00830	L 80000.0	<0.00020	<0.0020	<0.0020	0.00062 J	<0.00020	<0.0020U	<0.0020 U
xysenen, total	10	0.018	¢.014 J	BC00.0	0.00055	0.0047	<0.0050	<0.0650	9.011	9.00082 J	0.01d J	<0 00050 U
SEM-VOLATILE ORGAN	C COMPOUNDS (mg/L)											
Phenol	7.3	0 00065 V*	0.0041 J"	0 00322 V*	0,040 JL*	0.00091	0.00021	<0.00043 U.L.	9.018.2.4VR*	40 000035 UJL- SUR,MS/SD	0.0012	<0.000035 U
Pyridine	0.024	<0 000 j0 W*	<0.00010 UJ*	0.00012 J	<9 00010 WL*	<0.00010	<0 002048	<0.0034 U.J.*	<0.000040 \$UL-LCS*	<0 BOD030 UUL-MS/SD	0.000999 UH-R8	<0.000030.UJL-MS/SD
METAL8 (mg/L)								<0.00042	<0.00100	<0.6010	<8 000400 U	0.00318 UH MB.CCB.RB
Arsenic	0.510	<0.0013	0.00170 J	0.00161 J	<00013	<0.0010	<0.0010	¢().81.042				
8arium	2.0	0.190	0,167	0,110	0.169	0.131	0,539	0.106	0.136	0.1#	0.128	0,0770
Casimium	0.6050	<0.000B0	<0.00080	<0.00080	<0.00060	0B030.0>	<0.00060	<0 00009	<0.000200	<0.00080	<10000000	<0.000200 U
Chromium	Q 10	<0.0012	<0.0012	0.08173 J	<0.0012	<0.0010	0.00141 J	0.0012	<0.00100	<0.0010	0 00095 UH- M8,98,CCB	0.000633 UH-MB
Lead	0015	< 0 00070	0.000726 U*	<0.00070	< 8 00070	<0.60070	<0.00070	<0.60012	<0.000700	<0.00970	<0 000660 V	<0.000600 U
Μετευγ	6.0023	<0 000042	<0.000042	<0 000042	<0.000042	<0.000042	<0.000040	<0.000012	<0.0000100	<0.000840	<0.00000000	<0.00100000
Selentum	Ø 950	<0:0010	0.00106 J	0.00233 J	<0.0016	0.00132.03*	<0.0010	<0.0011	<0.00100	<0.0010	<0.00110 V	<0.00118U
Silver	0.12	< 0.00060	<0.00080	<0.00000	<0.00380	<0.00380	<0.00080	<0.000056	<0.000600	<0.00080	<0 000200 U	`×0.000200 U
OTHER												
Sufate	NA	655	803	400	618	279	208	269	355	260	165	124
Table Dissolved Solids	HA	3,430	3,660	2,230	2,390	· 1,230	\$,110	1,120	1,210	1,100	\$30	612

Highlands Acid Pit Highlands, Harris County, Texas

	- uguiais		o on reg i			
			M	42		
MA-62 P-MA02-070512-0 07/05/2012	MA-02 HAP-MAD2-112812-0 11/202012	KA-02 HAP-MA02-051913-3 06/19/2013	MA-02 HAP-KA02- NOV2013 02/19/2014	MA-02 HAP-NA02- JUL2014 07/11/2014	MA-02 HAP-MA02-080 11/14/2014	+

							M	4 42				
AHALYTE	TRRP The I Residential PCLA ⁴ ^{cm} GW mgA.	NA-02 HAPON-MA-07 B904/2011 3106166-01	NA-02 HAP 0%-MA-02-0 1 V17/2011 1111650-04	MA-02 HAP-MA02-070512-0 07/05/2012 1207231-09	MA-02 HAP-MAD2-112812-0 10/28/2012 12111017-07	KA-02 HAP-MA02-051913-3 06/19/2013 1306961-10	MA-02 HAP-KA02- NOV2013 02/19/2014 14021012-05	MA-02 HAP-MA02- JUL2014 07/11/2014 14070538-10	MA-02 HAP-MA02-030 11/14/2014 14110545-06	MA-02 HAP-MA02-090 5/14/2015 15050575-06	HA-02 HAP-66422-100 12/17/2015 HS15120827-07	MA-02 HAP-MA02-110 6/29/2016 H\$160/9019-13
YOLATILE ORGANIC C	OMPOUNDS (mg/L)							Margarana and				
Bergene	0.005	<6.00030	<0.00030	<0 00020	<0.00020	<0.00020	<10 000720	0014UH*	<0.00020	<0.00026	<0.00020 U	<0.00020 U
Ethylbenzene	0.70	<0.00018	<0.00010	<6.0030	<0.00030	<0.00030	<0.00030	<0.00030	49.00030	<0.00030	<0.80030 U	<0.00030U
Toluene	1.0	<0.00010	<0.00010	<0.60030	<0.00030	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0074	<0.00920U
Nylenes, tetal	10	<0.00030	<0.90039	<0 80098	<0 80038	<0.00050	<0.00050	40 500 50	<0 90058	<0.60050	<0.00050 U	<1 00050 U
	NIC COMPOUNDS (mg/L)			· ·								
Phenol	7.5	09091617 1 .	6.0000044.J	<0.000050.03*	<0 800050 U.U.Y	<0.000050	<0.000332	<0.00047 U.H.*	0.000082 UIHRB, SVR, MS-SO*	<0.000035 WL-SVR	<0.0000035U	⊲0 000035 V
Pyridine	0 024	<000010UJ*	<0.00010.UJF	<0 00010 R*	<0.00010 WL*	<0.00010	< 0.000048	<0.0036.Bhr.	<0.000040 WE-MS/SD*	<0.000436	<0.000038 U	<0 000030 UJL-MS/S0
METALE (mg/L)				ļ								
Arseniç	- 0.01Ú	0.00448 J	0,00561	0.00655	0.00562	L ##100.0	0.00749	0.0047	0.000694	8,0069	0.00591	0,00156 UH-MB,CC8,R
สิมามา	20	0.0612	6,0481	5.0208	0.0699	0,0993	0.031	0.080	8670.9	0.042	0.0728	0.0051
Cadmiura	0.0050	ംസരം	<0.00080	<9.90030	<0.00086	<0 00080	<0.90080	<0 00009	<0.000400	<0.90080	<0.000200U	<0.000230 U
Chromium	0.10	<0.0012	<0.6612	<0.0012	<0.0012	<0.0010	<0.0010	9.00032 J	<0.00100	<0.0010	8 000425 VH-MB 76,0CB	0.00492 J
Lead	0 615	<0.00070	0.00076917	<0.00070	<0.00070	<0.00070	<0.00070	<8.00012	<0.000700	<0.00070	<8.000600 V	L 85200.0
Mercury	0.0020	<0.000342	<0.000042	<0.500042	<0.000042	<8.000042	<0.0000340	<0.000012	<0.000040	40.000040	<0.0090408 U	<8.0000400 V
Selecture	0 050	<0.0010	<0.0010	L #\$600.0	<0.0010	×0.0010	<0.001D	<0.0011	<0.00100	<0.0010	<0.00110 V	<0.00118.U
SAVE.	0,12	<0.00080	<0.0020	<0.00080	<0.99089	<0.00060	<0.00080	<0.000056	<0.0000000	40.00080	<0.000200 V	<0.002200 V
OTHER		1		1								
Suffate	NA	68.5	61.1	19.9	46.4	59.1	7.61	53	52.5	5.7	81	3.82
Total Dissolved Streds	NA.	1,210	740	420	856	920	336	822	829	580	742	130

Table 1
2015 Semi-Annual Groundwater Monitoring Report
Groundwater Analytical Data
Highlands Acid Pit

Highlands Acid Pit Highlands, Harris County, Texas

							MA-4	3			****	
AKALYTE	TRRP Tier 1 Residential PCLs ⁴ **Gw mg4_	MA-03	MA-03 HAPOM-MA-03-0 1/16/2011 1311596-06	MA-03 HAP-MA03-070512-0 07405/2012 1207231-06	MA-03 HAP-MAD3-112812-0 11/29/2012 12111017-08	MA-03 HAP-MA03-051913-0 06/19/2013 1306861-06	MA-03 HAP-MA03- NGV2013-3 02/19/2014 14021012-06	MA-03 HAP-MA03-JUC2014 07/10/2014 14070539-07	MW-03 KAP-MA(3-080 13/14/2014 14110545-07	MAV-63 HAP AMA03-090 5/14/2015 15060676-10	KOV-63 HAP-KA03-103 12/17/2015 HS15120927-06	6/29/2016
	l											
VOLATILE ORGANIC CO	HPOUNDS (#6/L)											
Berzene	0.005	<0.00030	<0.00030	<0.00020	<0.00020	<0.00020	0.00006 J	< 0.000220	<0.00020	<0.00020	<0.00020 U	L 960004
Ethyberzene	0.70	<0.00610	<0.00010	<0.40030	<0.00030	<0.00030	<0.00030	<0.00030	<6 00030	<0.00030	<0.00030 V	<0.00030 U
Totuene	1.0	<0.00010	<0.00010	<0.00030	<0.00000	<0.00020	<0.00020	<0.00020	<0 00020	<0.00020	<0.00020 V	<0.00020 U
Xytenes, lotal	10	<0.00030	<0.0030	<6.00090	<0.00030	<0.00050	<6.00056	<0.00050	<0.00050	<0.00050	<0.00050 U	<0 00050 V
SEM-VOLATILE ORGAN	CONTOUNDS (mg1.)											
Phanal	7.3	0 00044 V*	<0.000050	<0.000050 UJ+	<0.0000580.JL*	<0.2000.50	<0 000032	<0 03045 U.L.*	<8000026 UUL-SUR,MS/SO*	<0.000035.0.1L-SUR	<9 000005 U	<0:000036 U
Pyritsine	0.024	<0.00010.0.1°	<0 000 (B UJ*	<0.00010 R*	<0.000 (0.1%)*	<0 00010	<1.000048	<0.0025 U.I.*	<0.00004010JL-MS/SD*	<0.000030	<0.000036 U	<0 000000 WLMS/SD
METALS (mgl)												
Arseric	9.010	0.00501	0.00348	0.5108	0.0111	0.0119	0.0127	8,011	0.0117	0.011	0.0114	0.0143 UH AB
Batum	2.0	0.154	0,156	0.145	0.184	9.200	0.146	Q.169	0.178	0.150	0.106	0.174
Cadinkan	0 0050	<0.00000	<0.00080	<0.90080	<0.00000	<0 00080	<0.00080	<0.08009	<0.000600	<0.00080	<0.000200.U	<0.000200 U
Chronium	0.10	40 6012	<0.0012	<0.0012	<0.0012	40.00†0	<0.0010	0.00029 J	<0.00100.0>	<c 0010<="" td=""><td><0.0004000 U</td><td>0.000457 VH-848</td></c>	<0.0004000 U	0.000457 VH-848
Lead	0.015	<8.00070	<0.00070	6.000712 J	<0.00070	<0.00070	0 000854 UH-ME	0.00022 J	<0.000700	<0.00070	<0.000600U	<0.000660 U
Marcury	6.0020	<0.000042	<0.000042	<0.000042	<0.000042	<0.000042	<0.000040	<0.000012	< 0.00033400	×0.000040	<0.000400 U	<0.0000400 U
ริธังกับส	0 050	<0.0010	<0.0010	0.00438 J	<0.0010	8:00 (02 VH*	<0.0010	<00011	<0.00100	<0.0010	<0.0011010	<0.00110.0
Saver	0.12	< 8.00000	<0.00080	<0.00030	<0.00000	<0.000a)	<0 00080	<0.930056	<0.003806	<0.00080	<0.000200 U	<6.090200 U
OT HER												
Sulate	KA	6 94	24.3	14.9	15.7	18.3	11.4	11.8	149	10	19.8	9,45
Total Distolved Solids	RA	1,140	614	600	436	448	368	366	358	340	944	342

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

							MA	66				
ANALYTE	TRRP Ter I Residential PCLI [®] ***OW rsg1,	MA-05 HAPOM-MA-05 05/05/2011 1108225-04	MA-05 HAPON-MA-05-0 11/15/2011 1111590-01	MA-05 HAP-MA05-070612- 8 07/06/2012 1207230-04	MA-05 HAP-MA03- 112712-0 15/27/2012 12111017-05	MA-05 HAP-MA05-062013- 8 06/20/2013 1306861-16	MA-05 HAP-MAD5- NOV2013 92/19/2014 14021012-07	MA-05 HAP-MA05- JUL2014 67/10/2014 14070539-08	MA-05 HAP-MA05-080 11/14/2014 14110545-08	KA-05 HAP-MADS-090 SV14/2015 (5050676-01	MA-65 HAP-40A05-100 12/37/2015 HS15120827-05	KA-05 HAP-NA05-11 6/29/2018 H\$16070819-
				,								
VOLATILE ORGANIC CO	MPOUNDS (mgl)											
Benzané	0.005	<0.00030	<0.00030	<0 00020	L 66000.6	<0.00030	<0.00020	<0.00020	<0.00020	0.00037 J	<0 00020 ∪	0.0004 J
Emptoenzone	0.70	<0.00010	<0.00010	<0.00030	<0.00030	<0.00030	<0.00030	<0.03030	<0.00030	<0.00030	< 0.90030 V	< 0.00030 U
Taluena	3.Q	<0.00010	<0.00010	<0.00039	<0.00030	<0 00820	<8.00020	<1.03020	<0.00020	<0.00029	<0.00020 U	<0.00020 U
xylenes, total	10	9.00931 J	<0.00030	<0.00099	<0.00030	<0,00050	<0.00050	<6 600650	<0.00050	<8 80058	<0.00030 U	v 63000.0>
SEM-YOLATILE ORGAN	C COMPOUNDS (mol)											-
Phenol	73	0 0001917*	<1000051 U.T	0.000060 U'	<0000050 WE*	<0.080058	<0 000032	<0 00345 WL*	0.00019 JJ-GUR,ME/SD*	<0.000006 (Lil8UR,MS/90	<0.000035 WL-SUR	⊲9 00000S U
Pyridhe	0 024	<8 00010 LU*	<8 00030 UJ*	<0 00010 01.	<0.00018331C	<0.00010	<0.000048	<0.0025 U.L.*	<0.000040 U.IL-MS/SO*	< 0.000030 UJL-MS/SD	<0.000330 U	0.000054 UK RB,M5/30
METALO (mg/L)										5.0290	6,0280	0.027 8
Arsenic	0.010	0.0231	0.0224	0.0249	0,0252	0.0230	¢.0230	0.027	0.0259			49966946
8arkum	20	0.504	0.117	0,125	0.131	0.122	0.134	0.145	0.130	0.14	0.128	0.120
Cadmium	0.0050	<0.00680	<0.00060	<1.00690	<0.00080	<0 00030	<0-00060	<0.00009	<0.900500	<0.0000	<0.600209.U	<9 000200 U
Chromium	£.10	<0.0012	<0.0512	0.001 6 0 J	<0.0012	<0,0010	<0.0018	<9.00010	<0.06100	<0 0010	8 00057 UH- MBJRB CC8	<0.0004001
Lead	0.015	<0.00070	<0.00070	<0.000.00	<0.90070	<0 00070	6.000719UK-k65*	0.00013 J	<0.000700	<0.00070	< 0.000602 U	<6.000600.0
viercury	6 0020	<0 000042	< 0.000342	< 8.500042	<0.000642	<0.000342	<0.000040	<0 000012	<0.0003496	<0.000040	<0.0000400 U	<0.0003400 (
Seienium	0.050	<0.0610	<0.0010	0.90170.0*	<0.0010	<0.0010	<0.0018	₹8.0011	< 0.00100	<0.0010	<0.00110.0	<0.00110.0
Siver	Q.12	40.00000	<0.00088	<0.00080	<0 60090	CE0000.0>	<0.00086	<0 000056	0.0000000	<0.00080	<0.000200 V	<8 000200 V
OTHER						•						
9ul ale	NA	14.2	3.34	6.51	2.68	7.02	11.7	15	10.9	19	8.54	10.9
Total Dissolved Solids	NA	348	342	552	342	350	386	358	330	360	316	342

Highlands Acid Pit Highlands, Harris County, Texas

		1			<u> </u>	-,	MA-0						
ANLYTE	TRRP Tier 1 Residentia PCLs ^a ^{rw} GW mg1.	MA-06	NA-06 HAPOM-MA-06-0 11/16/2011 1111590-06	MA-06 HAP-MA06-070512-0 07/05/2012 1207231-02	МА+06 НАР-маоб-112812-0 13/28/2812 12111017-09	MA-06 HAP-MA06-061913-0 0671972013 1306861-08	RA-06 HAF-MA06- NOV2013 02/19/2014 14021012-06	MA-06 HAP-MA06-JUL2014- 3-07/10/2014	MA-06 HAP-MA06-060 11/13/2014 14110545-09	MA-06 (DUP) HAP-MA05-081 11/13/2014 14110545-10	MA-06 HAP-MA06-051 \$/12/2015 15050676-09	MA-06 HAP-MA06-100 12/16/2015 HS15120827-04	6/29/2016
VOLAT E R ORGANIC CO	HPOUNDE (ngl)					·····							
Şerizene	0.005	<0.00030	<0.60030	<0.00020	<0 00020	<0.05020	0.00041 J	<0.00020	0,010	0.010	<0.00020	0.0078	0.002
Ethysberzene	0.70	<0.00010	<0.00010	<0.09030	<0.90030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030.V	<0.00030 U
Tokuene	1.0	<0 00010	<0.00010	<0.03030	<0.00030	<0.00920	<0.00020	<0.09020	<0.00020	<0.00020	<0.00020	<0.00020.U	<0.00920 U
Xyteneo, total	10	9.0027 J	¢.0021 J	0.0013.2	6.90087	<d 00050<="" td=""><td><0.000,50</td><td>6.0008T J</td><td><0.00050</td><td><0.00050</td><td>0.0012J</td><td>0.0056 J</td><td>0.0041</td></d>	<0.000,50	6.0008T J	<0.00050	<0.00050	0.0012J	0.0056 J	0.0041
SENS VOLATILE ORDAN	IIC COMPOUNDS (mg/L)												
Phenol	7.3	0 00034 U.J.	<0.0000569J*	0 000076 U*	<9.000050 U.H.*	<0.000660 WE.*	0.00013.J	<0.000431UL*	0.00000 JL-SUR ME/SD, FD*	0.00040 JL-SUR, M9/SD, FD*	<0.000003 U.S 100,500/80	<0 000035	L \$20000.0
Pyfidne	0.024	<0.00010103	<0.00010'UJ*	<0.00010 R*	<0.00010.UJL*	<0 00010	<0.000048	<0.0024 U.J.*	<0.00004010,K,- MS/SO*	<0.000040 UJL- MS/SO*	<0.000030 UJL- MS/SD	0.000073	0.00011 UH- RB,M5/SD
METALS (mg%)	I												
Arsenic	0.010	0.00035	\$.00912	0.0110	0.0104	0.00828	0.0107	0.0098	0.0103	0.00960	0.00830.0	0.0101	0.0116 UNI-R.B
8anium	20	Q.181	0.160	0.160	0.151	0.147	0.130	0.145	0.140	0.178	0.120	0.0849	0.0826
Cadmitum	0.0050	<0 00060	<0.00090	<0.00080	<0.00080	<0.00060	<0.000680	<0.00009	<0.900600	<1 000006	<0.000BC	<0.000300 U	< 0 000200 U
Chromium	0.10	<0.0012	0.00128 J	<0.0012	×0.0012	<0.0010	-00010	<0.00018	40.00100	<0.00100	<0.0010	0 000589 UH- MB,RB,CC8	<9 0099400 U
Lézi	0615	<0.0001/0	0.000744 J	<0 00070	<0.00070	40.00070	<0.00070	<0.00012	<0.000700	<0 000700	<0.00070	<0 000600 U	<0.000600 U
Meaury	0 0020	<0 000042	<0.000042	<0.000042	<0.000012	<0.000042	<0.000048	×6.000012	<0.0005400	<0.0000100	<0.050340	<0.0000400 U	<0 0000400 U
Selenkura	8 650	<0.0010	<0 0010	L 48600.0	<0.0010	0 001 10 UH*	<0.0010	<0.0011	<0.00100	<0.00100	<0.0010	<0.06110 U	<0.00110.U
Silver	ū.t2	< 8 00050	<0 00060	<0 00080	09000.0>	<0.00060	<0 00060	<0.000056	<0.000800	<8.000300	<0.00080	<0.000300U	<0000220D U
OTHER													
Sulfate	KA	7 61	11.D	IÓD	5 56	210	4 52	18	113	11.1	19.0	129	114
Tolaf Dissolved Solids	КА	378	416	760	338	454	339	322	329	338	350	\$29	379

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

							×	A 67		•			
ANALYTE	TRRP Ter I Residenda PCL3 **GHmo mg/L	MA-07 HAPOM-KA-07 08/04/2011 1108189-05	MA-07 (CUP) HAPCM-DUP 08/04/2011 1108168-06	MA-07 HAPOXEMA-07-0 11/16/2011 11/1590-09	MA-07 HAP-MA07-076512-0 07/05/2012 1207231-08	MA-07 HAP-MA07-F12812-0 11/28/2012 12111017-10	MA-07 HAP-KA07-051913-0 06/19/2013 1306851-11	MA-07 HAP-MA07-NOV2013 02/19/2014 14021012-09	MA-07 HAP-MA07-JUL2014 07/10/2014 14070539-10	KA-07 HAP-MA07-063 11/14/2014 14110545-12	MA-07 HAP-MA07-050 \$/14/2015 15950676-08	12/16/2015	MA-07 HAP-34407-110 8/29/2016 HS16070019-08
VOLATILE ORGANIC CO													
derrene	0.005	< 0 00030	<0.00330	<0.00030	<0 00020	<0.00020	<0.00020	6,00037 J	< 0.00020	<0.00020	<0.00020	<0.00020.0	<0 00020 간
Ellythenzene	070	<0.60010	<0.00810	<0.00010	<8 00030	<0.05030	<0.00030	<0.00030	×0 00030	<0.00030	<0.00030	<0 00030 V	<0 00030 U
Toluene	10	<0.90010	<0.00010	<0 00010	<0.00030	<0.00030	<0.000.20	<0.00020	<0.00020	<0.00020	<0.00020	<8 00020 U	<0.00020.U
Kylenes, total	IŬ	L 6700.0	0.0014 J	0.0012 J	<0.00070	<0.00030	0,001	<0.00050	¢,0022	<b 00650<="" td=""><td>0.0012 J</td><td>0.0007t J</td><td>0.00065 J</td>	0.0012 J	0.0007t J	0.00065 J
SEM1-YOLATILE ORGAN	C COMPOUNOS (mg/L)												
Phenol	7.3	<0.00005 UU*	ർന്നാരുന്നം	<0.000050.UJ*	<0.600050.01.	< 13 CADACEÓ LUIL.*	<0 600050	0.00092 J	<8 00044 UJL*	<8.000026.UUL-SUR, MS/SD*	<0.000035 VJL- SVR,MS/SD	<0.0000035 U	<0.000035 U
Pyridine	0.024	<0.00010VJ*	<0 05010 UJ*	<0.00010 UJ*	*0 000 D*	<0 040313 UVL*	< 0.06010	<0.000049	<0.0054101F.	<0.000040 WL- M\$/SD*	<8.000030 VJL- MS/SD	<0.000030 U	<0 200620 U.L. MS/50
METALS (mgl)		0.00494 J	0.00569	0.00554	0.00624	0,00576	0,90530	0,00530	0.0062	8,00600	0.0050	0.00736	0.00663 UH-ME
Arsenic	6.610												o.ເສ
ðarkum	2.0	0.161	0,179	0.171	0.176	0,189	0.206	0.157	0.186	0.176	0.18	0.172	
Cadmium	0.0350	<0.00090	<0.06060	<0 60080	<0.00980	< 0.00390	<8 00030	<0.00060	<0.06009	<0.000803	<0.00000	0 DOCTION D>	<0.0902200 U
Charam kum	010	<5.0312	¢0.0012	<0.0012	<0.0012	<0.0012	<0.0010	<9.0010	0.00024 J	<0.00100	<0.0018	0 000662 UH- MB RB CC8	0.000429 UH-MB
ലങ	0.015	<0.00070	<0 00070	<0.00070	<6.00070	<0.00070	<0.66070	<0.000370	0.00012 J	<0.0007040	<0.00070	<0.000900.0	<0.000608.U
stercury	0.0020	<0 000012	<9.600042	<0 000042	<0.000342	<0.000042	<0.000042	<0.0900-40	<0.000012	<8 8000400	<0.000049	<0.0000490 U	<0.0000100 U
Sefentum	0.050	<0.0018	<0.001D	<0.0010	0,00238 J	<0.0010	<0.0010	<0.0010	<0.0011	<0.06100	<0 0010	<0001110 U	<0:061101U
Saver	0 12	<0.00088	<0.000300	<0.00030	<0.00060	<0.00030	<0.00088	<0.00060	×0.000056	<0.000900	<0 00030	<0.000200.U	<0.600200 U
OTHER					•				•				ļ
Suffate	RA	9 53	-	0 895	10 3	4.47	13 8	3.39	11	634	9.3	ззин-ссв	9.37
Fotal Clasofved Bolids	NA	276		314	320	276	352	342	324	316	300	318	364

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Highlands Acid Pit Highlands, Harris County, Texas

	[MA-08						
ARALYTE	TRRP Tier 1 Residential PCL3 ³ ^{PW} GW mgL	MA-08 HAP OM-MA-08 08/04/2011 1108188-07	MA-06 HAP OM-MA-68-0 11/17/2011 1111650-02	MA-08 HAP-MA09-070613-0 07/05/2012 1207230-01	MA-08 HAP-MA08- 112612-0 11/26/2012 12111017-11	MA-08 (DUP) HAP- MA08-112012-1 17202012 12111017-12	MA-08 HAP-MA09-062013-0 06/26/2013 1305661-18	354-08 HAP-MAG9/NCV2013 62/26/2014 14021012-21	NA-08 HAP-MA08-JUL2013 07/102014 14070538-11	MA-D8 HAP-MAD8-050 1 972014 14110545-13	MA-08 HAP-MA08-090 05/12/2015 15050676-03	MA-08 (00P) HAP-WA08-020 05/12/2015 15056676-03	12/16/2015	MA-08 HAP-MA08-110 6/28/2016 HS16070019-07
YOLATILE ORGANIC CO	MPOUNDS (most)													
Benzene	0.005	<0 00030	<0.00030	<0.00030	<0.000.000	<0.00020	<0 00020	<0.00020	<0.00020	<0.000020	<0.000.20	<0.000720	<0.00020U	<d 03020="" td="" u<=""></d>
Ethylbenzene	0 70	<0.000.10	<0.000010	40,00030	<0.02020	<0.00030	<0.00030	-0.00030	<0.000.30	<0.00000	<0.00030	<0.00030	<0.00030 U	<0.00030.U
Tickene	10	<0.00010	<0.00010	<0.00030	<0.00030	<0.00030	<0.00020	<0.00020	<0.000220	<0.000720	<0.00020	<0.00020	<0.00020U	<0.00020U
Kytenes, lotar	10	0,011	0.0068	0.0033	0.0038	6.0038	0.0051	6.0099	0.014	0.0054	0.012	0.013	0.0065	0,015
SEM-YOLATILE ORGAN	IC COMPOUNDS (mg1)													
Phanal	73	0 00922 V*	<0-060060 VJ*	<0.000050.03*	<0 000050 WL*	< 0.000020 MIL.	<0 000050	<0 (20003)	<8.00044 U.J.*	<0.000026.0JL- SUR*	<0.000035 WL- SUR,MS/SD	<0.000035 UJL- SUR,MS/SD	<0.000035 U	< 9 0000035 U
Pyndine	0 924	<0.00010.01	<0.00010 LU*	<0.00010 R*	<0.00018 W.L.*	<0.0010 VJL*	<0.00010	<0 000048	<0.0024 U.A.*	<0.000040.03L- LCS*	<0 000030 UJL- MS/SD	<0000030 UJL- MS/SO	<0.00030 V	<0.0000300.01L- M\$/\$0
METALS (MOL)	I													
Arsenic	0.010	6.00639	0.0195											
				0.0112	0.0167	0.0105	0.0110	\$,0089B	0.0098	0.00581	0.0093	0,0089	0.00907	0.00929 UH-MB
Batum	2.0	0.142	0.124	0.136	0.182	0.166	6.180	0.210	0.207	0.234	024	¢.22;	0.153	0.156
Cadmiusn	0 6050	<0 00080	<0.00080	<0 00200	<0.00080	<0.00099	<0 60080	<0.00060	<0.00009	<0.000000	<0.000.00	<0.00080	<0 000200 U	<0.000209 U
Chromburn	0.10	<0.0012	<0.0012	<0.0012	<0.0012	<b 0012<="" td=""><td><0 0010</td><td><0.0100 (V</td><td>0.00082 J</td><td>0.002203.5</td><td>L 1000.0</td><td>0.0020</td><td>0 000582 UH- RB</td><td>0.00109 U)+-Mer</td>	<0 0010	<0.0100 (V	0.00082 J	0.002203.5	L 1000.0	0.0020	0 000582 UH- RB	0.00109 U)+-Mer
LE3d	0.015	<0.00070	<0.00070	<0.00070	<0 00070	<0.00070	<0 00070	<8 £0070	<0.00012	<0.000700	< 0 000 70	<0.00070	<0 000500 U	<8.000560 U
Mentury	0 0020	<0.000042	<0.000042	<0.000042	<0 000042	<0.000012	<6 666642	<0.000040	<0.000012	<0 0000400	<0.060040	<0.000040	40 00400 UJ- 833	<8 6000409 U
Sələnlum	0.050	<0.0010	<00010	0.00117 U*	<0 0010	<0.0010	<0 0010	<0.0010	<0.0611	<0.00100	<0.0010	<0.0010	<8.00110.0	<0 001 10 U
ร้างส	0.12	< 0-000/60	<0 60080	<0.000.60	<0 000:80	<0.00080	<0 00080	<0.00080	<0.009056	<0.000900	<0.00000	<0.00980	⊲0 0000209 U	<0.0000201 U
OTHER														
Suize	NA	99.7	75.1	107	69.4	84 5	558	46.2	55	93.9	58	89	38.0	53.3
Total Dissolved Schols	NA	1,220	t,190	1,220	1,140	1,130	1,270	1,130	1,120	1,030	1100	1190	3 22	1130

Highlands Acid Pit Highlands, Harris County, Texas

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ANALYTE	TRRP Ter t Residential PCLs ³ ^{ow} GW mgL	0A-01 HAP 0M-DA-01 0805/2011 1109225-002	0A-01 HAP OM-DA-01-0 11/17/2011 11/1650-03	CA-01 HAP-DA01-070512:0 07A052012 1207231-10	DA-01 HAF-DA01-112872-0 11/28/2012 12111017-01	DA-01 HAP-DAD1-061913-0 09/192013 1306861-09	DA-01 HAP-DA01- NOV2013 02/19/2014 14021012-10	DA-01 HAP-0A01- JUL2044 07/10/2014 14970538-01	DA-01 (00P) HAP-DA01-JUL2014-1 07/10/2014 14970538-02	DA-01 HAP-DA01-080 11/14/2014 14/10545-01	DA-81 HAP-DA91-090 5/12/2015 15050676-07	EA-01 HAP-DA01-100 10/15/2015 HS 15120788-02	6/27/2016
VOLATILE ORGANIC CO	POINTS (mails												
dergene	0.005	<0.00630	<0.00039	<0.00020	<0.00020	<0.90020	<0.00020	<0.00030	<0.00020	<0.00020	<0.00020	<9.66020.0	<0 00020 U
Ethylbenzene	0.70	<0.06010	<0 00010	<0.00030	<0.60030	<0.00030	<0.00030	×0 00030	<0.00930	<0.00030	<0.00020	<0.00030 V	<0 00030 U
Taluene	1.0	0.000f J	<0.00010	<0.00030	<0.00030	<0.80520	<0.00020	<0 00020	<0.00030	(0.00920	<0.00020	<0.05020.U	<0.00020 U
	ļ						·						
Nylenes, tital	10	0.00032 J	<0.00030	~0 D0090	<0.00030	<0.00050	<0.00060	<0.00050	<0 00050	<0.00050	<0.09050	<0 00050 U	<0.00050.Ft
SEM-VOLATILE ORGAN	IC COMPOUNDS (mg/L)												<u> </u>
Phenof	73	<0.00005010.P*	<0.000060144*	0.000792.0*	<0 00005 WL*	<0.000020 U.I.*	0,000085 JL-6UR.	<d 00045="" td="" vjl<=""><td><0.00045 UJL*</td><td><0.00002610JL SUR, M\$/\$0*</td><td>< 0 000036 U.U. SVR MS/SD</td><td><0.000035 VJL- SVR</td><td><0 000035 U</td></d>	<0.00045 UJL*	<0.00002610JL SUR, M\$/\$0*	< 0 000036 U.U. SVR MS/SD	<0.000035 VJL- SVR	<0 000035 U
Pyrldne	0.024	<0 000 i0 W*	<0 660 10 UP	<0.00%010 W."	<0 00010 WL*	<000010UJL*	<0.000043 VJL- SUR*	<0 6025 VIL	<0.0525 V JL*	40 000040 V.JL- SUR, M3/SD*	<0.000030.03L- MS/SD	<0.000030 V	<0 000030 U.IL-MS/SO
METALS (mg1)	L												
Arsents	0.010	<0.0013	<0.0013	<0.0013	×0.0813	<0.0010	0.0012 J	L 86000.0	0,0011	<0.00100	<0.0010	0.000716 J	0.00322 UH-MB.CCB
Barkm	2.0	0.0858	0.0851	0.109	0.116	0,122	0.517	0.130	0,132	0,136	0.53	9,197	0.113
Cadmium	£ 0650	<0.00080	< 0.000600	<0.00000	<0.000000	<0.00060	<0.00060	<d-00009< td=""><td><0 60609</td><td><0 000600</td><td><8 60060</td><td><9 000200 V</td><td><0 000200 U</td></d-00009<>	<0 60609	<0 000600	<8 60060	<9 000200 V	<0 000200 U
Chromkan	0.10	<0.0012	<0.0012	0,00220 J	<0.0012	<0.0010	<9.0010	<0 00016	<0.00018	<0.00100	<0.0010	<0.000-400.0	0.00109 UKEMB
Lead	0015	<0.00070	0.566819.0*	<0.00070	<0.00070	<0.00870	<0.00070	9.00020 J	\$100015 J	<0.000700	<0.00070	<0 000 600 U	0 000967 J
Mercey	0 0020	<0.000042	<0.003042	<0.600042	<0.000042	<0.000042	<0.000040	<0.000612	<0.000017	<0.0000400	<0.000048	< 8 0600-460 UJ-	<0.0000400.0
Selenum	0059	<9.0010	<0.0010	0.06360 J	<0.0010	0.09157.0H*	<0.0010	0.0013 J	40.0011	-0.01100	<0.0010	CCB <0.00110 V	<0.00110.0
Silver	0.12	<0.06060	<0.00080	<8 00030	<0.00060	<0.00060	<0.00009	< 0 060 056	<0.000056	<0.000000	68008.0>	<0.000200.U	<0.000.000 V
	L												
OTHER													ļ
Sustate	NA	5.40	3.61	2.70	253	3 84	3 27	3 43	3 56	149	3.1	3.13	9,76
Total Dissolved Solids	NA	316	316	308	362	316	340	316	316	298	300	322	339

Highlands Acid Pit

Highlands, Harris County, Texa

	TRRP Tier 1 Residential							ÐA-62						
AVALYTE	PCLS CMGW mgL	DA-02 HAPONI-DA-02 08/04/2011 11/06168-06	DA-02 HAPOM-DA-02-0 11/16/2011 11/1590-7	DA-02 HAP-DA02-070612- D 07/05/2012 1207230-02	DA-62 HAP-DA02- 112712-0 11/27/2012 12111017-02	DA-02 HAP-DA02- 062013-0 G6/20/2013 1306861-17	EA-02 HAP-DAD2- NOV2013 02/19/2014 H021012-12	1 02/19/2014	DA-02 HAP-DA02-JUL2014 07/10/2014 14970538-03	DA-02 HAP-DA02-060 11/13/2014 14110545-02	0A-02 HAP-0A02-090 5/12/2015 15050676-07	DA-02 HAF-DA02-100 12/16/2015 HS15120788-07	DA-02 HAP-DA02-161 12/16/2015 HS151/20788- DB	DA-02 HAP-DA02-110 6/29/2016 HS1607D/019- 05
VOLATILE ORGANIC CO						1							1	
					ļ									
Benzenze	0.005	<0.00030	<6 00930	<0.000,50	<0.00020	<0.00020	<0.00020	<0.09320	<0.00920	<6 00020	<0.00020	<0.00020 U	<0.000220.U	<0.00020 U
£V1,4benzena	670	<0.00010	01000 0>	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00000	<0.00030.0	<0.00030.0	< 0:00060-U
Toluene	10	0.000 \$2.3	<0.00010	<0.00030	<0.00030	<0.00030	<9 000:20	< 0 00020	<0 00020	<0.07020	<0.00020	<0.00028 U	<0.00020.0	<0.00020 V
vylenes, total	10	<0.0408389	<0.00030	<0.00090	<0.00030	<0.00030	<0.00050	<0.00050	<0.00050	r3 00050	<0.00060	<0 00050 U	v0 02000 0 v	0.0012 J
SEME-YOLATILE ORGAN	C COMEOUNOS (mat)													
Phenal	73	<0.00005 U.T	<0 060059 VJ*	«0 600050 U.I*	0.000076 JL*	<0600058	<0.600032	<0 000092 WIL-SUR*	<0.0004713JL*	0.000063 JL-SUR, MS/SD*	<0.000835.0JL- SVR,M5/SD	40 020035 UJL- SUR	=0 000035 WL- SVR	<8000030U
Pyridine	0.024	<0.00010.071	<0.00010.0J*	< 0 00010 V.J*	<0.00010.VJL*	<8 60018	<0.0000048	<8 000018 UJL-SVR*	< 0.0026 U.J.	<0.000040.0/L- SUR, MS/SO*	<0.0000000 UUL- SUR,MS/SD	<0.000030.0	<0.000000 UUL+ SUR	<0.000030 UJL- MS/SD
METALS (mg·L)	L													
Arsenic	6010	0.00335 J	L 20603.0	0.0036t J	0.00344 J	0.00244 J	0.00307 J	0.00323 J	Q.0032	0.00259 J	0.9023	0.00232 J	0.90236 J	0,00487 UH- MB,00B
ð≆1un	28	\$.32B	0.279	0.225	0.205	0.152	0.151	0,146	0.152	0.148	0.13	0.162	0.154	0,0893
Çadınıkızın	0:0050	<0.000.80	<0.00060	<0.000000	<0.050260	<0.000.000	<0 00090	<0.00030	<0.00008	×0 050600	<0.00080	< 0.0002200 U	<0.000200 U	< D 000200 V
Chramium	0.19	<0:0012	L. (18600.0	<0.0012	<0.0012	< 0 00 10	<0.0010	<0 6610	0.00021 J	<0.00100	<0.0010	< 0 000400 U	<0.0003400.0	9.000642 UH- M9
Lead	0015	<0.000.70	<0 00070	<0 00070	<0.00070	<0.00070	<0.00070	<0.00070	<0.00012	<0.000700	<0.00070	<0.060£00 V	<0.000603.0	<0.000600 U
Vertury	0 0920	<0.000042	<0 000842	<0.000042	<0.000042	<0000012	< 8 0003540	<8 000610	<0.000012	C 00000400	40 000040	-UU 0000000 UJ- CCB	-U 0010000 D>	<0 00:00400 V
Selenium	0650	<0.0010	<0.0016	B 60125 U*	<0.0010	<0 00 10	0100.0>	<0.0010	<0.0011	<0.00100	<0.0010	<0.00110.0	<0.08110 U	<0001100
Siver	0.12	<0.00030	<0.000.00	<0.00080	<0.00060	<0.00090	<0 00080	<0.00060	<0.000055	<0.0204000	<0 00080	<0.000200 U	<0.0002020	<0.000200.0
			1											
OT HER '			m,											
Sulfate	NA	9 85	10.2	10 1	11.7	13.5	9.95	10.7	990	11.5	a 7	5,43	ē.48	12.4
Fotal Dissolved Sell ds	NA	550	470	455	424	3B4	976	362	340	\$40	340	324 JI-FD	1050 JHFD	396

Highlands Acid Pit Highlands, Harris County, Texas

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	7						DA-05							
ANALYTE	TRRP Iter 1 Pesklenba PCL3 °#GW mg%	0A-05 HAPOM-0A-05 08/04/2011 1109168-02	0A-05 HAPOX-0A-05-0 19/16/2011 111(590-02	DA-Ω5 HAP-DA05-070512-0 07/05/2012 1207231-01	DA-05 HAP-DA05-112712-0 11/22/2012 12111017-03	DA-05 HAP-DA05-06(913-0 05/19/2013 1306861-03	DA-05 (DVP) HAP- OA05 061913-1 06/19/2013 1386861-04	EA-03 HAP-0A05- NCV2013 02/19/2014 140/21012-14	DA-05 HAP-DA05- J0L2014 07/10/2014 14070538-04	0A-05 HAP-DA05-080 11/13/2014 14115045-03	DA-05 HAP-DA05-090 \$/12/2015 15050076-13	DA-05 HAP-DA05-100 12/16/2015 HS15120788-06	6/28/3016	6/28/2016
VOLATILE ORGANIC CO	MPOUNDS (mg1)													
Bertrene	0 005	<0.00030	<0.00030	×0 00020	<0 60820	<0.00050	<0.00020	<0.00020	<0.00020	< 0.000126	<d 06020<="" td=""><td><0.00020 U</td><td><0.00020 U</td><td><1 00020 U</td></d>	<0.00020 U	<0.00020 U	<1 00020 U
Employeere	0.70	<0.0001D	<0 00810	<0.00030	<0.00030	<0.02030	< 9 00030	<0.00030	<0.00030	<0.00030	<0.03030	<0.0000000	<0 00030 U	<0 00030 U
føletne	10	0.00010 J	<17 000 t0	<d 00030<="" td=""><td><0.00030</td><td><0.00920</td><td><0.00020</td><td><0 00020</td><td><0.000.20</td><td>62090 0×</td><td><0.00030</td><td><0 D0020 V</td><td><0.00020 U</td><td><0 00B20 U</td></d>	<0.00030	<0.00920	<0.00020	<0 00020	<0.000.20	62090 0×	<0.00030	<0 D0020 V	<0.00020 U	<0 00B20 U
vylenes, lotal	10	<0.06030	<0 00030	<0 00000	<0 00030	<0.000:50	<0.00050	<0 00850	<0.60050	< 0 00090	L 18000.0	<0.000201J	<0.00050.U	<0 00059 V
SEMI-VOLATILE ORGAN	lic coMPOUNDA (mgL)													
Phenot	73	<0.0005UJ+	<0 000090 U1*	0 000074 U*	<0.600050 U.J.	-4 DD0050	<0 000069 U.L.	<0.000032	<0 00049 WIL'	0.000056 JL- SUR, MS/SD*	40 000035 UUL- SUR,MS/SO	<0 000005 UJL- SV R	<0.000035V	< B 0,000,35 (j
Philaine	0 024	<0.00010.011	<800010UF	<0.00010 R*	<0.00010.011	<0.0001D	< 61.000 fg tuit."	<0.000918	<0.0024 U.L.*	40.000040.UIL- SUR M5/5D'	40 000030 UJL- MS/SD	<8 000030 V	<0 000030 U.H MS/SD	<0 000030 (J) MS/SD
METALS (mg/L)	l			L										
Arsenic	0.010	6.00063.3	<0.0013	0,00565	L \$28400.0	<0.0310	<0.0010	0.00505	0.0011	<b-00100< td=""><td><0.0010</td><td>0.00466 J</td><td>0.0045UH- MB.CCB</td><td>9.0043 UK- M8,009</td></b-00100<>	<0.0010	0.00466 J	0.0045UH- MB.CCB	9.0043 UK- M8,009
Barium	20	0.125	0.131	0,173	0.161	0.15 7	0.155	0.144	0.14B	0.149	0.14	0,133	0.07/8	0.0868
Cadmium	0 6050	<0 00086	<100060	< 8 600 360	<0.000.00	<0.00980	<0.00080	<0 00060	<0.00009	<0.000300	· «D 00080	<0 000200 U	×0 008200 U	<0.000200.0
Creanium	0.10	<0.0612	9.00167 J	<0.00.12	<0.0012	<0.00t0	<0.0010	<0.0010	0.00026 J	<0.00100	<0.0010	40 000400 U	0.00481 J-FD	0.0007 J.FC
Lead	0.015	01000 D>	<0.00070	<0.00010	<0.000,70	<0.00070	<0.00070	<0.00070	0.60023.4	<0.000700a	<0.00070	<0.0009000 N	0.00354 J	0,00373 3
мексину	0 0020	<0.000042	<0 000642	<0.030042	<0.000042	40.000042	<0.000342	<0 003040	<0 000012	<0.0000409	<0.000010	-U 0000190 UJ- CCB	< B 0000400 U	<0.00004001
Seleulum	0 050	<0.0010	<0 8010	0.00368 J	0,0011B J	0 20195 UH*	800116UH*	<0.0010	<0.6011	<0.00160	<0 0010	<0.00110.0	<0.00110.U	<0.00110.0
Sever	0 12	<0.00080	<0 (00.680	<0 000 00	<0.00030	<0.00030	<0.00080	<0.00093	<0.000056	<0 008/000 0>	<0.00080	<0.000000 U	<0.000200 U	<0.0002001
	<u> </u>													
OTHER							··							
Sulfate	NA NA	434	4,920	0.836	0 6 26	39.2	40.1	245	387	37.9	37	0.91J	6.0Z	5.16
Total Dissolved Solida	NA	348	318	643	296	314	328	160	329	318	350	314	152	176

Table 1 2015 Semi-Annual Groundwater Monitoring Report Groundwater Analytical Data Highlands Acid Pit Highlands, Harris County, Texas

	<u></u>	[DA-O	1					
ANAL YTE	IRRP Tier 1 Residences PCL5 ""GW _{NO} Mg1	DA-06 HAPOM-DA-06 05/04/2011 11081/88-04	DA-06 HAFOM-DA-06-0 11/16/2011 1111590-03	0A-05 HAPOM-0A-06-1 11/16/2011 1111596-04	EA-05 HAP-DA05-070512-3 07/05/2012 1207231-07	DA-06 HAP-DA06-112712-3 11/27/2012 12111017-04	04-85 HAP-0406-061913-0 05/19/2013 1306661-02	DA-05 HAP-Q405-NOV2013 D2/19/2014 14021012-15	DA-06 HAP 40A06-JUL2014 07/10/2014 14070338-05	DA-06 HAP-DA06-080 11/13/2014 14110545-04	DA-06 HAP-DAD6 090 5/14/2015 15050576-12	04-06 HAP-0A06-100 12/15/2015 #S15120788-04	DA-06 HAP-DA06-110 6/28/2016 HS160/0019-03
VOLATILE ORGANIC CO	MPONNES (meilt	ļ			<u> </u>		[L	
Bergene	0.005	<0.00030	<0.00030	×0.00330	<0.00020	(0 000 JD	<0.00020	<0.00020	-1 00023	<0.03070	<0.00020	<0.000320.0	<0.060720.U
Ethilaenzene	070	<0.00010	<0.00010	<0.00010	<0 68030	<8 00030	<0.00030	<8 00000	<0 06030	<0.00030	<0.06030	< 1 ເມີດ ເຊິ່ງ ເ	<d 00030="" td="" u<=""></d>
Towere	10	0.00010.0.0	01000 6>	<0.00010	<0.00030	<0.00030	<0.00020	<0.00020	<0.00020	<0.00020	<8.00928	<6 0002a ∪	<0.00020 V
xyrenes, total	10	<0.00030	<0.00030	<0.00030	<0.000.00	<0 00030	<0.00050	<0.00050	<0.00030	<0.00050	<0.00050	<0.00050 V	<0 0005a U
•													
SEM-VOLATILE ORGAN	IC COMPOUNDS (mpl.)	ļ		·	 							İ	ļ
Phéndi	73	<0.00005VJ*	<0.000000 U.F.	<0.000020.011+	<0.000050 UJ*	<0.000660 (UL*	<0.000650	0.090062 J	40 00046 UUL	<0000026 UJL- SUR, MS/50*	<0.600035 U.I. SURMS/SD	<0.000035.U	<0.000035.0
Pytlöne	0.024	<0.03010.001	<000010101	<d 00010="" td="" uj*<=""><td><0 00010 R*</td><td><0.00010.UJL*</td><td>«U DODIO</td><td><0.000914</td><td><0.0025 VJL*</td><td>1000040 U.J. SUR ,MS/S0*</td><td><0.000030.0.JL- MS/SD</td><td><0.000030 V</td><td><0 0000301010- MS/SD</td></d>	<0 00010 R*	<0.00010.UJL*	«U DODIO	<0.000914	<0.0025 VJL*	1000040 U.J. SUR ,MS/S0*	<0.000030.0.JL- MS/SD	<0.000030 V	<0 0000301010- MS/SD
METALS (mgl)												}	0.00329 1/1-
Artenç	0100	<0.0013	£100.6>	<0.0013	<0.0013	<0.0013	<0.0910	<p 0310<="" td=""><td><0.60042</td><td><0.00100</td><td><0.0010</td><td><0.000400 U</td><td>Ma,cca</td></p>	<0.60042	<0.00100	<0.0010	<0.000400 U	Ma,cca
Bafium	20	4.117	0.110	0.107	0.125	0_528	0,139	0,129	0.101	0.130	0.12	9,121	0.108
Cadmium	0 0050	<0.00090	<0.000.000	<0.00090	<0 000B0	<0 000000	<0.00080	<0.00020	<0.00003	<0.000800	<0.00080	<0.800200 V	<0.000200-U
Chromiunt	D.10	<0.0012	<0.0012	0,00527 J	<0.0012	<0.0012	6.00102 J	<0 0010	<0 600 f8	<0.00100	<0.0010	<0.0004001V	0.000922 UH-ME
153Q	0.015	<8 000 70	<0 000000	<0.00070	×0.0-0070	L CC100.0	<0.00070	<0 00076	<0.00015	<0 000700	<0.00070	<0.0000000U	<0 600600 V
Wencury	9 6020	<0.000042	<0.000012	<0.000042	<0.000012	<0 000042	<0.000042	<0.000040	<0.000012	<0000400	<0.000040	<0.0000308 V.I- CCB	<0 0000400 V
Setenium	0.050	<0.0010	6100 C>	<00010	0.00250 J	<0 0010	00011608*	<0.0010	<0.0011	<0.00100	<0.0010	<0-00110-U	<0.00118.U
Siver	0 12	<0.00080	<0.000.00	<0 00189	«D DOD\$D	0.0000 O>	<0.00080	<0.00960	<0.000056	<0.000600	<0.000060	<0.607209.↓	<1 600207 U
					··				. <u> </u>				
CTRER	L				[
Sufate	NA	36	230	2.26	249	2 39	3 60	2.82	3 26	4 96	3.8	3.16	4.29
Total Exasolved Sovid a	NA	316	322	312	760	360	338	304	318	300	940	016	348
	L												

Highlands Acid Pit Highlands, Harris County, Texas

		[DA-09					
ARALYT E	TRAP Ter T Residental PCLs ⁴ ^{CW} GW mg/L	DA-03	0A-08 IKAPOM-DA-09-0 11/17/2011 1111650-01	DA-04 HAP-DA08-070612-0 07/05/2012 12/07/230-06	DA-08 HAP-DA98-112712-0 11/27/2012 12111017-05	DA-08 HAP-DA09-062013-0 06/39/2013 1306861-15	DA-08 HAP-0A98- NOV3313 82/20/2014 14021012-23	DA-68 HAP-0A08-JUL2014 07/10/2014 14070538-06	DA-08 HAP-DA08-080 11/13/2014 14110545-05	(DA-08) NAP-DA03-060 IEV/14/2015 15050676-05	DA-03 HAP-DA08-100 12/15/2015 HS16120768-03	DA-05 HAP-DADB-110 6/27/2016 HS16070019-02
	l			·								ļ
YOLATILE ORGANIC CO	T											
Berzenz	0 005	<6 00030	<0.00030	<0.05020	<0.00020	<0 00920	<0 00020	<0 000 20	<9 0.0020	<0.00020	<0.00020 U	0,00025.J
Ethylbereena	6 70	<0.00010	<0 00010	<0 00030	<0.00030	<8 00030	<0.00030	<0 (00)30	<0 00030	<0.00030	<0 66630 V	<0.00030U
Toluene	\$ D	0.0001403*	<0.00010	<0 00030	<0 00030	<0 00020	<0.00038	<0 00023	<0 00820	<0.00020	<8 00020 U	<0.00020 U
Ayrenes local	10	<0 00030	0.00032 J	<0.00030	<0 00030	<0 00850	<0.00050	<0 00090	<0 00050	<0 D8059	<0 60050 U	<0.00050U
SENT-VOLATELE ORGAN	(c nows clasp \$ (mail)											
Phend	73	<0.000050.03*	<1 030650	<0.000090 m.	<0 000850 UJL*	< B.000050	<0 000032	<0 00044 WL*	<0.000026 WL-SUR, MS/SD*	<0.060035 UJL- SUR,MS/SO	<0.000035 UJL-SVR	<0.000035 U
Pyridine	0 024	<0.00010UJ*	<0.00010	<0.00010.M1.	<0.00010133L*	<0.00010	<0 000348	<0.0624 V.S."	<0.000040.UULAIS/SD*	<0.000030 VJL- MS/SC	<0.000030 VJL-SUR	0.00009 JL- M9/50
												
METALS (mg·L)	F						 					0.00403 (3)4-
Arsenc	B 610	0.00179.3	0.00153 J	6.00208 J	0.00183 J	L C2100.0	0.00147 J	0.0014	L 85100,0	0.0019 J	0.0015 J	MÐ,CCB
Barlum	20	0.0904	0.0846	0.0828	0.301	0.103	0.0501	0.124	0.165	0.12	0.0651	0.117
Cademikumi	0 0050	<0.00030	<0.00080	<0.00080	<0.00080	<0.00030	<0 00080	<0 600.09	<0.000600	<0.06030	<0.00070B10	<0.000200 U
Chramium	D.10	<0 0012	×0 0012	<0.0012	<0.0012	0.00347 J	<0.0010	0.0021	0.00014 J	<0 0010	O DO TO4 UN-FB	0.00167 UH-MB
Lead	0.015	<0.00050	0 0:00724 6*	<0 00070	<0.00010	<0.00070	<0 06070	×0 00012	<0.0007(0)	<0.00070	<0.0006000 U	0.00054 J
Vertury	0.0029	<0.000042	<0.000042	<0.006042	<0.000642	<0.000042	<0.000040 VJL-M5*	<0.000012	<0.0000400		<0.0003400.03+CCB	<0.0000400U
Şelerium	0 050	<0.0010	<0.0010	0 00205 V*	<0.0010	<0.00910	<0.0010	<0:001t	<0 D0100	<0 0010	<0.001.10 U	<0.60110.0
Silver	0.12	<0.00090	<0.00060	<0.000-30	<0.00068	<0.00080	<0.00080	< 0 000056	< 0 900500	<0.00060	<0.0002041 U	< 6 00K7200 U
OTHER	J.,											
Sulfate	NA	578	5 6 2	4 87	3 24	7.76	4.62	542	- 119	44	4.45	5.24
Total Dissolved Solids	NA	396	386	626	458	420	772	434	443	400	524	420

H-18

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Table 2 2015 Semī-Annual Groundwater Monitoring Report Surface Water Analytical Data

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	JRRP Tor 1 Resident H					594-01					1	1	r .
NKALYTE	PCL=* * GM mpl	5W-01 1029-5W01-0712-3 07/092012 12/07234/05	\$W-01 HAP-SW81.112312.0 11/25/2012 12311076-05	SW-84 (DUP)144P- SW01-112912-1 57/282012 128101615	\$W-01 HAP-5W01-062113-3 06/21/2013 1/20628-00	5W-01 HAP-5W01-N0/2013 3 0372W2014 14021014-02	\$\\\-01 HAP-5\\07.7AL2514 07/1V2014 14070603-01	574-81 2549-57401-020 81/16/2014 14116541-05	5-V-81 (DLP) HAP-SX(01-83) 05/15/2015 14110541-05	SW-81 (DCP) 394P-51991-093 857592016 14110541-06	\$W-01 HAP-SW01-040 12/16/2015 HS15120925-10	5%-81 +449-5%01-110 6/39/2018 H5/60/76/19-28	SW-01 HAP-SW01-111 6/30/2016 HS16070019-29
VOLATELE ORGANIC CO	NFOUNDS (mgl)									ļ			
Sereone	0.045	+0 \$0020	•0.00920	<0.00018	<0.00020	0.0013	+9 63920	<0 00020	+9.04020	-0 00320	<0/2020 U	19,00825 U	-0.49920 1/
EPyterzara	0 70	+0.00030	+0.00030	-0 66030	40.00030	40.00030	•0 D0830	40 00030	+602030	+9 000310	<0.00000 U	+00000 V	10000300
lotene	10	+0.00030	<0.00030	+11 GC500	+0.00320	+0.00020	+0 06010	+0.00020	+9 00029	+0.000220	40 00 020 U	-0.00020 U	+0 80020 U
¢≱eneo, totel	19	+0 0009g	<0.000330	15.00330	+0.98050	CEC/20 0+	<0.06819	40.03060	+8.20050	+0 08850	40.00050 V	<0.65550 U	4000560 U
	1												
SEMI-VOLATILE ORGAN	C COMPOUNDS (mg L)					Í			1				
Phenot	7.3	41.82.0050 U/r	-\$000590 U.R.*	4000-3358 (J.H.*	<0 020950	<0.0008932	<000005 UJL*	-0 000026 LUL SUR 95/90*	HAMMES WALSUR, MS/SOF	<0000025 UUUSUR, NS/SD*	-SECON ULSUR	<0.000035 LUL- LCS,SUR,MS/SD	40000005 118. LCS, SUR, MS/SO
Pyridine	0 974	~0.000X10 U.J.*	4) <i>1</i> 5319 LUC"	+0.00010 LUX.*	100010	-0.000115	4000040 U.S.*	40603043 6AL-LCS, M5/5D*	-BIDHDHD LUR-SUR, LCS, MEVED*	<0000049 U.ASUR, LCS, MS/SD*	າຫາສະຫ	+9603330 LULLCS/MS/50	-01000730 LCS,MS/5D
										1			
NETALS (mol)												1	
direntic	010.0	6.94625 J	10 505 5	LICHAL	LINH H J	+9 0050	*0.0000 J.*	+0 80500	-0.0050-0	+0.0050B	8.84224 J	AAAAAA UISARI,CCB	FREE IN MOLCON
Berlin	20	0.533	D HG	£.159	8-9744	0.0801	0.070	1.105 ·	6,107	B. 107	0.04 %	0.0619	0.0512
Cadmium	0 005	+0 00080	-06340	+0.00060	10 0016	+5 00080	40.00000	+0.00403	-0 00400	=0 \$0 \$G\$	-> 009260 U	<0.000300 V	10 408200 U
Electrium	0.10	+00012	+9 6060	LIMITS J	+8 6029	+B 6650	KINAK J	< D &Q\$0\$	<0 89500	+0.80508	\$ BOD 57 UNLOCE	BA-HU 19544.9	1.14213 (31,349
Lead	0.815	+9 \$3070	+0.0015	848251 3	0 001 4	+0 0035	57803.0	+0 CO360	=0.64350	1060368	0.341562 J	LING) J	14H72 J
νατωγ	0.0920	+5 (00004 2	B 009242	+0.000042	40.550042	+0.000240 LUE_MS*	-0.000012	+0.0000409	0 0100400	40 0000400	+0 522010013	+0.0009400 U	+1.0060400 U
Selenaum	0 8 50	10 (RON)	8.99521 J	609114 J	-0.0020	=0.0059	-0 0011	L teess	R44561 J	0.65561 J	40 601141 12	AMMIN DH-COS	LHIM UNCON
Sher	012	+9 00020	-0 0040	-9 66-55-5	-0.0916	+0.00081	+0.0000266	<0.09.030	-0.05403	+5 09 62	-4000000 U	-1 000200 U	1 00020 U

Highlands Acid Pit Highlands, Harris County, Texas

Highlands Acid Pit Highlands, Harris County, Texas

	1	r					594-02							
UNALYTE	TKRP 1 or 1 Responsed PCLs ⁴ ""GW Https:	5W-82 HAP-51V02-0712-0 07/06/2012 1207234-05	SW02 (DLP) HAP. SW02-0712-1 07/09/2012 1207234-06	577-02 HAP-SW02.112812-0 11/25/2012 12111016-03	574-02 Hafi 57793/052113-0 692712313 1.04568.05	547-02 (DLP) HAP- 54002-062113-1 6422/22113 1301858-95	5W-02 Ha P-5W02 NOV2113 8328/2014 14021014-05	\$44.02 (50.47) HAP-SW02 NOV 2013-1 82/202314 14021014.05	5W-02 HAP-5W02-JUL2014) 07/11/2014 14070403-02	514-02 Huil-Str03-030 14142011 14110541-07	\$VF-02 Hap-SW02030 657552015 1\$08657628	SW 62 (DUP) HAP-SW92091 95497015 1505067623	547-02 HAP-5W07-100 12H 07015 H515120025-11	5/4-02 HUA-5/02-110 6/10/2016 H516070019-30
	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,											-		
VOLATER DAGANC CO	HPOUNDS (mg L)													
@mite?e	0.005	+0.00223	144479 J	+0.00/324	+0 60020	-s 00020	6-6041	azosa	-2 (0) (2)	10 00 020	+0 00030	+\$ 0.0020	-103020 U	-10 (1002Q) U
Employees	070	+1 06533	• 0. BO030	-0.00339	+9.00030	<0.00030	-0.00930	<6 00030	+1 000 39	49 62 9 87	+0.00030	+0.00030	4.00000-0	-0.00333 U
Tolure	1.6	+0 0(930	+9 00/030	+0.02/236	+0 50020	49.00020	•0.00920	×8 00020	49 000030	+0.0000	×0.00220	+8 0/0920	<0.0020 U	-0.00020 U
Xylenes, latal	10	+0 00090	+0.050F0	-4 07/233	+0.00050	+0.00650	-0 009-90	+\$ 00050	12,03059	1200650	<0.00550	+8 00050	-0.00050 U	- 3 59657 U
														1
SEM-VOLATEL ORGAN	C COMPOUNDS (mpl)													l
Phenal	7.3	BANO16 J	400000 U.*	40.00050 U.R.*	<1 009940	-0 000093	+0.000036	+D 0000355	+0600076 CUL*	400026 ULSUR 93/30*	4002035 U.L. SUR, MS/SD	10 (00035 U.K. SUR 45/50	49400036 U.L.SUR	40.004635 U.S LC3,W5/30
P)r.ána	0.024	-6.00010 UJ7	-0.00016 UUP	40.00010 U.L.*	-9 00010	+9.60010	+000053 U/LFD	100022-3470°	4900040 U.L.	4000543 WULLES, #9950*	LINGS J SURMESD	40000030 U.R. SUR M S/SD	-10 (00 (00 (0) (0)	40.009030 U.A LCS,MS/SD
														1
METALS (mgl.)														
11 <i>1</i> /	<u>ù eio</u>	L RHEAD	L 157781.1	+0.0065	844455 J	L 19971 J	+0.0050	8.66562 J	C.N. I LAR	+0.00500	1.3032 J	5.0032	L 10544.8	LINSS UNMO,COL
8 milum	20	£122	6.20	Q. 145	0.0033	9.6534	érasaó	8.0528	1,072	0.108	D.091	4063	0.0005	0.0587
Sedmin	6.055	+0.00060	(0.00063	+8.004B	9.00050	-80/2020	-0600b0	+0.00030	0.000	+0.00420	+9 00000	+6 G0086	-9000200 V	-0 602200 U
avantm	010	40 691 2	+0.0012	+5.0068	+0.0010	REAL PROPERTY	10 8050	0203.0+	0.0011	-0 00930	0.0056	E.0054	0.00275 UH4CCB	847261 (121-648)
Lend	0815	+0.00027a	×0.00070	LKO J	1. 62 6960.4	644112 J	NNIN J	RADIE J	LINH J	+1 00 353	0.0564	0.0079	L HINKIN J	KM145 J
Vercury	8 6920	+9.000042	+0 000042	40.00042	+6 000342	+0 000042	-00000-0UL-US	4) 0000040 114, 145*	<0.00012	48 00000100	+0.D000440	+0.000540	×0.6353400.0	10 CC00402 U
Selentum	0 669 0	020155 U*	0.02201 UP	LH31 J	0.04254 J	L 64(31)4	40.0050	<0.005Q	+0.4311	+0 00500	0001 LIN-COM	0.0011 LAFECCB	4003110 U	AREAS UN-COR
Skar	0.12	<0.00990	-0.00120	-96240	+0 005 1 20	(0,0525)	×0.6040	<0 00083	-9 000055	-000100	+6 00 20	4950030	-00006200 U	~0.0002200 U

H-20

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Highlands Acid Pit	
Highlands, Harris County, Texas	

	TRAP THE S PARAMETER						5W	40				
MALVIE	PCL* "favr, mgl.	\$147-03 HUP-57403-0712-0 87709-2212 1207234-03	597-03 HAP-59053-112512-3 11/23/2012 12111018-02	5W-03 HRP-5W03-062113-0 06/21/2013 1306888-02	SW-03 HAP-SW03 NOV2013 02/2078016 14021014-03	547-03 HUF-SW03-JJL 2014 07711/2014 1407/0603-03	\$29-03 (DUP) (H4P-59903-882014-1 97711(2014 16070603-06	SW-D3 HAP-SW03.083 51/14/2014 14110545-08	\$W-00 H4-F-\$W03-080 \$1 \$2015 1 \$55674 36	597-03 HAP-5/403-103 12/10/2015 HS15120126-12	5W-03 KAP-5W03-161 12/18/2015 HS15120026-13	5W-03 HAP-SW02-113 M3072316 HS16070319-31
										anna i		
VOLATEL ORGANIC CO	(Jam) 20HLOG											ł
54/28%a	0 605	L 20000	<8 00058	A MANUEL J	-8.00025	+1.00039	40.00020	6000 CC	+9.0020		LINIS ALD	-0.00000 U
Ety2erzara	074	18 600 30	<9.60039	<0.00430	<\$ 60033	<102030	-0.60330	<9 06038	<2 60030	400000 U	<0.00034 br	0(02001)
Teluene	5.0	+0.6003/2	-0.00030	40.00020	+0.00020	-9.00329	<005720	+0 00030	-6.00036	-0.00020 U	<0.00030 U	-000000 U
tylenes, Lalaf	19	10 60350	49 60800	*9.05055	-6.00040	<0.00020	*8 G0250	<0.00050	+0.0005Q	≪20050 U	-0.00050 1/	+0.00053 U
STANVOLATALÉ ORGANIX												
SZ MEYOCATALE ORGANIA	COMPOUNDSOMELL											
ohenol	2.3	<0.000050 UP	46.000050 LUR.*	+0 000050	40 0000007 (LUL- SUR+	-0.050028 108.7	40 000026 LUL*	LANNIZ L.SLIP,MS.50*	-0 000035 CULSURINSISD	-0 000035 U	<0.000005 U	4000036 LUL LCS,93/50
Pyrtine	0.024	+0.00010 tim	-0.00010 LUR.*	L 1991	-0.004045	40 80 80 40 LUL.*	-0.000040 U.H.*	1000040 UJULOS,MS/SO*	-0 0000000 (UK-5UM(WS-5D	-0-000030 U	<0.000000 U	+0.00030 U.L. LCS,WS/SD
	l											
METALS (Jung-L.)												
krante	6 610	L BICHLO	-1 0065	LINEONS J	×0.0550	4.0036 .3.4	MB1 L'	+0.03500	LARIS J	L 15588.4	LIN23 J	LINKIN URMB,CCD
m.r48	20	R (1)	4.1G	6015	0.0090	808	4.071	0.110	0.074	8.0640	8.0625	8.068
Cedmium	1.925	19 00050	-0 50 46	-\$ 50089	10 006 80	<100309	-0.0009	-00060	48 60060	+0:00200 V	<0.000308 U	+0.090300 V
Chronium	0.10	40.0012	<0.0043	40.0010	+0.0050	L NYML	8.86073 J	+0.00503	8.0010	0.00245 UH-CCB	BATER DISCOR	8.80728 191 841
Lesd	0.615	+980976	6314.3	40.00070	F 156 MAL	FEMB 1.	£.m(\$	+0 D0350	0.0028	L MERICA	L IP ING	L00135 J
Katuj	040940	+9.000043	40.090342	+0.000042	-0.000040 UJL-165*	<0 80001 2	49 603012	-6.000409	<9 600040	+0.9003409 U	-9 0000400 J/	10 0006409
Set and	0 650	4.60112 1/*	6.00683 J	6.04241 J	10.0050	490012	-9 0011	+9.05503	+0.6610	1000110 U	+0.0010 U	BIMZSZ UNICCO
5 km	012	+0.63580	-1.6540	<0 \$6080	<0.01040	+0.05036	+0 000354	=0.02400	-D 0004D	+8.000300 U	40 0002D9 (J	<00000040 U

Table 3 2015 Semi-Annual Groundwater Monitoring Report Sediment Analytical Data

Highlands Acid Pit Highlands, Harris County, Texas

	<u> </u>	l				50-01							
ANALYTE	TRAP Tier I Residential' "4501cml mg/kg	\$0-01 HAP-\$001-0712-0 07/08/2012 1207234-07	\$D-01 HAP-SD01-112912-0 11/29/2012 12111016-07	SD-01 (DUP) HAP-SD01- 112912-1 11/29/2012 12111018-08	5D-01 HAP-5D01- 002113-3 06/21/2013 1306888-07	\$D-01 HAP-5001- NOV2013-3 07/20/2014 14021014-01	SD-01 HAP-SD01- JUL2014 07/11/2014 14070603-05	SD-01 HAP-SD01-080 11/14/2014 14110541-01	SD-01 (DUP) HAP-SD01-081 11/14/2014 14110541-02	SD-01 HAP-SD01-093 5/15/2015 141 (0541-01	SD-01 HAP-SE01-100 12/18/2015 HS 15120828-08	SD-01 HAP-SC01-110 6/30/2016 HS16070019-24	SD-01 HAP-SD01-111 B/30/2016 HS16070019-25
VOLATILE ORGANIC	COMPOUNDS (mg/kg)				L								
Benzane	89	<0.00030	<0.00071	<0 00066	<0.05048	<0.00350	<0 00064	<0 00087	<0 00064	<0.00059	<0.00048 U	<0.00046 1)	<0.00048 U
Ethylaenzene	5300	<0.00046	<0.0011	<0.00098	<0.00072	<0.00078	<0.00096	<0.0010	<0.00097	<0.00089	<0 00064 U	<0.00064 U	<0 00088 U
Takiene	5400	<0.00035	<0.00083	<0.00077	<0.00056	<0.00059	<0.00032	<0 00078	<0.00076	<0 00069	<0 000÷5 U	<0.00055 U	<0.00058 U
Xylenes, total	3700 8	<0.0013	<0 0031	<0.0028	<8 0014	<0.0014	<0 8018	<0.0019	<0.0018	<0.6017	<0.0022 U	<0.0022 U	<0 0823 U
SEM-YOLATILE OR	ANIC COMPOUNDS (mg/kg)										···	··· <u> </u>	
Phenal	20000	<0 0326	<0.0025	<0.0324	<0.00081 UJL"	<0.08876	<0.050	0.0026 J	0.0025 J	<0.0013	<0.0018 U	<0 0040 V	<0.0841 U
Pyridene	82	≪9.0028 UJ*	<0 8025 UJL*	40 0024 UJL*	<0.0013.UJL*	<0.00099 UJL- MS/SD*	<0.037	<8 0018 UJL- MS/SD*	<0 0018	<0.0011	<0.0015 UJL- MS/SD	0.0072 J	<0 0034 U
NETALS (mg/kg)	L				<u>-</u>		}						
Arsenc	24	0.270 J	0.202 J	0.221 J	0.167 J	0.147 J	<0 33	0,243 J	0,229 J	0.54 J	0.346 J	0.669 JHFD	1.14 JFD
Barium	9109	2,35	1,33 JI*	2.01 JF	1,55	1.44	3.3 J	1,39	1.45	6.3 JL-DL	4,63	8.46 JH-h15	2M-HL 63.6
Cadmium	52	<0.062	<0.061	<0.051	<0.047	<0 648	<0.08	<0.0575	<0.8697	<8.060	<0.0-050 U	<8.8579 U	0.0729 J
Chromkum	27600	0.584 J	0.259 J	0.297 J	0.293 J	0.275 J	0.76 J	0.476 UH-CCB*	0,438 J	2.5	L 63.0	6,12 UH-MB	4.8 UH-MB
Lead	500	1,58	1.09	0.982	1.05	\$.00	1.60 J	1.28	1,06	C-LE-9	2,03	4.6 JHFD	9.49 .A-FD
Mercury	2.1	0.000828 J	0,00122 J	0.00179 J	<0.00063	<0.00049	0,0021 J	0.00130 J	L 026090.0	0.0040	0,00212 J	0.00347 JI-FD	0.0128 JI-FD
\$elenium	310	0.272 J	<0.22	<0.18	<0.17	<0.17	<0.51	<0 243	<0.247	0.26 J	<0.240 U	0.25 UH-CCB	<0.211 U
Siher	97	<0 099	<0.0698	<0.082	<0.075	<0.078	<0.029	0.170 UH-CCB	<8.0110	<0 095	<0.110 U	<8.8926 U	<1 0938 U

Table 3 2015 Semi-Annual Groundwater Monitoring Report Sediment Analytical Data

Highlands Acid Pit
Highlands, Harris County, Texas

	1					5D-02							
ANALYTE	TERP Tier 1 Residentsi ^r ^{Tel} SDitema लभुपियु	SD-02 HAP-SD02-0712-3 07/08/2012 1207234-04	5D-02 HAP-SD02-112912-0 11/29/2012 12111016-64	5D-02 HAP-SD02 062113-0 06/21/2013 1306688-03	SD-02 (DUP) HAP- SD02-982113-1 08/21/2813 1306988-04	SD-02 HAP-SDI2-N0V2013 62/20/2014 14021014-07	SD-62 (DUP) HAP-SD02- NOV2613-1 92/20/2014 14021014-09	SD-02 HAP-SD02- JUL2014-3 D7/11/2014 14070503-08	SD-02 HAF-SD02-880 11/14/2814 14110541-03	SD-02 HAP-SD02-090 05/15/2015 15050878-23	SD-D2 (DUP) HAP-SD02-091 05/15/2015 15050876-24	5D-02 HAP-SD02-103 12/18/2015 HS15120826-07	SD-02 HAP-SD02-110 6/30/16 HS16070019-26
	L												
VOLATLE ORGANIC	COMPOUNDS (malka)												
Senzene	89	<0 00035	<0.00068	<0 00081	<0.00056	<0.00054	<0.00055	<0.00866	<0.00070	<0.00055	<0 00059	<0.00062 U	<0.60049 U
Elhylbenzene	5300	<0 00053	<0.00089	<0 00092	<0.60084	<0.00001	<0.00082	<0.00038	<0.00T1	<0.00093	<0.00007	<0 80087 U	≺0 00069 U
Toluene	5400	<0 00041	<0 00089	<0.00072	<0 00066	<0.00063	<0.00064	<0.00078	<0.00082	<0.00065	<0.00068	<0.00074 U	<0.00059 U
Xylenes, total	3700 0	40.0015	<0.0028	<0.0017	<1.0B16	<0 0015	<0.0015	<0.0019	<0 8020	<0.0016	<0.0016	<0.0030 U	<0 0074 U
SEM-YOLATILE DRO	JANIC COMPOUNDS (mg/kg)	—		·····									
Phenol	20000	5.8 J	<0.0024 UJL*	<0.00089 UUL*	*00000 U.A.*	41 00070 WL-SUR	0,0021 J	<0 056	0.0041 J	<0.0613	<0.0014	<0 0019 U	<0 8040 U
Pyridine	82	40 0050 U.F	<0 0024 U.L.*	<0.0013.01°,	<0.0013 VJL*	<0.0010 UUL- SURMS/SD	<0 00 10	<0 034	<0.6018	<0.0011	<0.0011	<0.0015 UJL- MS/SD	<0 0033 U
METALS (mg/kg)	<u> </u>												
Arsenic	24	0.964	0.540	C.395 J	0.0403 J	0.340 J	0.362 J	0.36 J	0.651 J	1.1 JI-FD	0,51	2,60	0.552
Banum	8100	8,59	2.09	2.27 JF	4.05 JT	2.18	2.24	6,6 J	3,60	17 JL-01,FD	8.7	15.1	6.55 JHHHS
Cadmium	52	0.115 J	<0.053 ·	<0 ()46	· <0 049	<0 048	0.0622 J	<0.05	<0.0672	<0 060	<0.062	0.0849 J	0,0848 J
Chromium	27030	1.84	83.0	0.422 J	0,555	0,662	0,885	1.1 J	0.616	6.2	3.3	4.56	3.05 UH-ME
Lead	500	19.6	132	3.03	2.52	3.91	3.9	5.10	3.62	12	7.9	71.1	5.68
Mercury	2.1	0.00344 J	0.000426 J	<0 00060	<0.00061	<0.00048	<0 09046	0.0035 J	0.00439 J	0.012	0.026	0.0404	0.00695
Selenium	310	0.278 J	<0.19	0.299 J	0.239 J	<0.17	<0.18	<0.30	<0.242	0.26	0.23	0.411 J	0.263 UH-CCB
Silver	97	<0 092	<0.084	<0.074	<0.078	<0.577	<0.079	<0.017	<0.108	<0.096	<0 899	<0.110 U	<1 8959 U

Table 3 2015 Semi-Annual Groundwater Monitoring Report Sediment Analytical Data

Highlands Acid Pit Highlands, Harris County, Texas

							SÜ-03						
ANALYTE	YRRP Tier 1 Residentiaf ^{fer} Soil mg/kg	SO-03 HAP-SD03-0712-0 07/08/2012 1207234-01	SO-03 (DUP) HAP- SO03-0712-1 07/06/2012 1207234-02	SD-03 HAP-SD03-112912-3 11/29/2012 12111018-01	SD-03 HAP-SD03- 062113-0 06/21/2013 1306888-01	SD-03 HAP-SD03- NOV2013 02/20/2014 14021014-04	SD-03 HAP-SD03- JUL2014 07/11/2014 14070503-07	SD-03 (EUP) HAP-SD03- JUL2014-1 07/11/2014 14070803-08	SD-03 HAP-SD03-093 11/14/2014 14110541-04	SID-03 HAP-5003-090 05/15/2015 15050876-28	SD-03 HAP-SD03-100 12/18/2015 HS15120826-09	SD-03 HAF-SD03-101 12/18/2815 HS15120826-09	SD-03 HAP-SD03-113 8/31/16 HS16070018-27
											N.,		
VOLATILE ORGANIC	COMPOUNDS (mg/kg)			·.							-		
Benzens	69	<0.00029	<0.00039	<0.00065	<0.00088	43.00048	el.00674	<0 60081	<0.00078	<0 80057	<0.00070 U	<0.00056 V	<0.00861 U
Ethylbenzene	5300	<0.80044	<0.00058	<0.00097	<0.0010	<0.00872	<0.0011	<0.0012	<0.0912	<0.00085	<0.00098 U	<0.08079 U	<0 00085 U
Toluene	5400	<0 00034	<0.00045	<0 00075	<0 00079	40.00058	<0.00087	<0 00095	<0.0009.0	<0.00055	<0.00084 U	<0.00087 U	0.0036 J
Xylenes, Lotal	3700 0	<0.0013	<0.0017	<0 0028	<0 0019	<0.0014	40 002 }	<0.0023	<0 D022	<0.0016	<0 0033 U	<0.0027 U	.<0 0029 U
SEMI-VOLATILE OR	GANIC COMPOUNDS (mg/kg)										· · ·		
Phenol	20000	<d 0025="" td="" uu*<=""><td><0 0929</td><td><0 0026</td><td>0 0060 JL*</td><td><d:00070< td=""><td><0 069</td><td>-0.078 U.L</td><td><0.0025</td><td><0.0014</td><td><0.0020 U</td><td><0.0019 UJL-SUR</td><td><0 8045 U</td></d:00070<></td></d>	<0 0929	<0 0026	0 0060 JL*	<d:00070< td=""><td><0 069</td><td>-0.078 U.L</td><td><0.0025</td><td><0.0014</td><td><0.0020 U</td><td><0.0019 UJL-SUR</td><td><0 8045 U</td></d:00070<>	<0 069	-0.078 U.L	<0.0025	<0.0014	<0.0020 U	<0.0019 UJL-SUR	<0 8045 U
Pyridine	82	<0.0925 UJ*	<0 0028 UJ*	<0.0026 UJL"	<0 0015 UJL*	<0.0010	<0 042	<0 043 U.L.	<0.0021	<0.0011	0.0041 JL-MS/SD	<0 0018 UJL- MS/SO	0.21
HETALS (mg/kg)													:
Arsenic	24	0,498 3	0.551 J	1.20	0,61	0,858	1.1 J	0.69 J	1.41	0.84	1.62	1.96	1.05
Barium	8100	5.37	3.65	12.4	7.8	6.12	19	18	6,35	6,3 JL DL	7.40	9,11	12,3 JHH5
Cadmium	52	<0.054	<0.050	0.0667 J	<0.058	<0.049	<0.07	<0.0B	<0.0785	<0.063	<0.0739 U	<0 0880 U	<0.6663 U
Chromium	27000	606.0	0.910	221	1.19	1.79	43J	5,1J	1.45	2.0	1.89	1.81	3.99 UH 480
Lead	500	2.00 J ^r	2.24 J*	4,94	3,16	3.47	6.60	7.50	5.87	8.5 J-D	4.55	4.54	6.76
Mercury	2.1	0.00115 J	0.994 J	0.0112	0.00275 J	0.00275 J	0,0112	0.9155	0.00582	0.019	0,00870	0.0116	0.09517
Setenium	310	0,311 J	0.361 J	0.316 J	0,462 J	0.223 J	<0.41	<0.35	0.671 J	0.29 J	0.643 J	0,694 J	0.269 UH-CCB
Silver	97	40.088	<0.089	<0 099	<0 092	<0.079	<0 874	0,022 J	<0.128	<0.10	<0.120 U	<0.t10 U	<0.106 U

Water and Sediment Sampling data from November/December 2016 sampling event

Highlands Acid Pit December 2016 Sampling Data

Semple [D	Sample Type	Date Collected	Units	Analyle	Analytical Method	LORP	Result	Data Qualifier	Sample Detection Limit	Method Quantitation Limit	Olfution Factor	Laboratory ID
HAP-DA91-120	N	11/28/2016	rtng L	Total desolved totals	SM2540C	SS	328	Contra de altrai d	5.00	10.0	SUMMON S	the second se
ILAP-DA01-120	N	11/28/2016	BIZ L	Arseniu	SW-846 6020A	0.010	0.000520	. 1	0.000100	0.00560		11514111331-01
HAP-DA01-120	N	11/28/2016	mg L	Dariunt	SW-846 6020A	2.0	0.114		0.00190	0.03500	1	HS16111331-01
HAP-DA01-120	N	11/28/2016	πε1.	Coduation	5W-\$46 6020A	0.0050	<0.080200	E I	0.000200	0.00200	<u></u>	11516111311-01
HAP-DA01-120	S	11/28/2016	ng L	Chrynnians (texal)	SW-846 6020A	9.10	<0.000100	U	0.000400	0,60500		HSI6111331-01
HAP-DA01-120	N	11/28/2016	ma t.	Lead	SW-846 6050A	0.015	<0.000400	U U	0.000600	0,00,000 6 00500	1	11516111331-01
RAP-DA01-120	N	11/23/2016	nw.1.	Selenaum	SW-\$46 6020A	0.050	0.00111	GLCCB	0.00110	0.00500		HS[6111331-9]
RAP-DA91-120	N	11/28/2016	ng L	Silver	5W-846 6020A	0,12	-0.660200	U	0.00110	0.00500		11516111331-01
HAP-DA91-120	N	11/28/2016	nue t.	Metony	SW-846 7470A	0.0026	<0.0006300		0.0000300	0.00307	1	H51611131-01
HAP-DA91-126	N	11/28/2016	mg L	Mercury	5W-846 7470A	0.0020	<0.0008306	1) 11	9 0000 100	8.000200		H\$16111331-01
HAP-DA01-120	N	11/28/2016	พยุป	licizene	SW-846 8260C	0.0050	0.00036		0.60030	0.0010	1	H\$16111331-01
HAP-DA01-120	×	11/28/2016	ing;1,	Ethylbenzerse	SW-846 8260C	0,70	0.060.0	. U	0.000.34	0.0010	-	HS16111331-01
HAP-DA01-120	N	11/28/2016	nw.1.	Tohane	SW-816 \$260C	1.0	<0.00020		0.00030	0100.0	<u> </u>	HS16111331-01
HAP-DA01-120	8	11/28/2016	ng.L	Nytene (total)	SW-816 \$260C	10	<8.00038	11	0.00030	0.6010		HS[6111331-01
HAP-DA01-120	N	11/28/2016	#21.	m & p-Xyletz	5W-816 8260C	10	<0.00050	U	0.00050		!	HS16111331-01
IAP-DA01-120	N	11/28/2016	rtig. 1,	u-Xylane	SW-816 82600	10	<0.00030	U U	0.00030	0.0020	1	11516111331-01
ITAP-DA01-126	N	11/28/2016	ng/L	Phenoi	SW-\$16 8270D	73	-8.000035	4) 1	0.000035	0.0010	1	HS1611 (331-01
IAP-DAUL-120	8	11/28/2016	mg.t.	Prtidine	SW-816 8270D	0.034	<0.000030	,, U	0.000030	0.00020	1	H\$16[11331-01
IAP-DA01-120	8	11/28/2016	πε:1.	Sulfare	SW-846 9036A	NS	3.51			0.0010		H\$1611131-01
HAP-DA02-120	8	11/29/2016	ngol.	Total dessolved solids	SM2548C	NS	402		0 200	0.500	<u> </u>	11516111301-01
HAP-DA02-120	 N	11/29/2016	mg. 1.	Arsenic	SW-816 6020Å	0.918	402 8.00247		3.00	10.0	1	HS16111331-06
HAP-DA02-120	×	11/29/2016	गडू. 1. साह, 1.	Banugi	5W-846 6020A	2.0	0.0412		0.000100	0.09500		HS16111331-66
HAP-DA02-120	N	11/29/2016	ng.L	Cubrem	SW-846 6030A	0.0056			0.00190	0 (R) 509	1	HSIGH1334-06
HAP-DA02-120	N	11/29/2016	ng.L	Chronnian (intal)	SW-846 6029A		-0.901200	U	0.000200	0.09200	1	11516111241-06
LAP-DA92-120	8	11/29/2016	11021	(read		0.16	-0.000400	<u>t</u>	0.000100	0.00500	1	HS16111331-06
HAP-DA02-120	8	11/29/2016		Selenium	SW-\$46 6020A	0615	<0.000609	U	0.0000600	0.00500	1	H51611131-06
IAP-DA92-120	<u></u>	11/29/2016	ng L mg L	Silver	SW-846 6020A	0.050	<0.09110	U	0.00110	0.64550		HS16111331-06
IAP-DA02-120	8	11/29/2016	गढ्ना. मध्य १		SW-846 6030A	0.12	<0.000200	ti	0.000.00	0.00500	1	HS16111331-66
HAP-DA02-120	8	11/29/2016	ng. 1. ng. 1.	Meterary	SW-846 7470A	0.0020	<0.0000300	U	0.0630300	0.000300	t	11516111331-06
HAP-DA02-120	<u> </u>	11/29/2016		Mitteury	SW-846 7470A	0,0020	<0.00000300	IJ	0.0006360	0.099260	1	H516111331-96
HAP-DA02-120	<u></u>	11/29/2016	गपूर L. 1112, L.	Веплене	SW-846 8260C	0.0050	<0.00020	Ľ	0.00020	0.0010	1	H516111301-06
IAP-DA02-120	N	11/29/2016		Ethylbenzme	SW-846 8,600	0.20	<0.00030	Li.	0.00030	0(0)] ()	1	HS16111331-06
AP-DA02-120	<u>N</u>	11/29/2016	ng, i.	Tobiene	SW-816 8269C	1.0	<0.00020	U	0.000000	0.0010	1	H\$1611 [331-06
IAP-DA02-120	<u>N</u>	11/29/2016	1 <u>x</u> sa	Nylene (total)	SW-\$16 \$260C	l0	0.00065	1	0.00030	0.0010		BS16111331-96
TAP-DA02-120			ng t	m & p-Xyfene	SW-\$16 82696	19	0.00065	1	0.00050	0.0026	1	HS1611131-06
TAP-DA02-120	<u>8</u>	11:29:3916	mg/1.	u-Xylene	SW-846 8260C	10	<0.00030	ti	0.09030	0.0010	1.	HS16111331-66
TAP-DA02-120		11/29:2016	me L	Phenel	SW-816 8276D	7.)	0.0000-0	1	0.000035	0.09000	1	HS1611101-06
		11/29/2016	ng L	Pyridine	SW-816 8270D	0.024	0.000068	1	0.000036	0.01[0	. 1	HSIGHTULOG
IAP-DA02-120	N	11/29/3916	ny, L	Suitair	SW-846 9056A	NS	103		0 200	ð,500	1	H514111331-06
1AP-DA05-120 1AP-DA05-120	8	11/29/2016	112 L.	Total descrived soluda	SM2540C	NS	212		5.00	10.0	1	HS16111331-04
	N	14/29/2016	ng L	Anomic	SW-\$1660.20A	0010	0.0012*	1	8.000100	0.00509	1	HS16111301-04
IAP-DA05-120	<u>N</u>	11/29/2016	ngz/t.	Ratituty	SW-816 6033A	2.0	8,0834		0.00190	0,00500	1	11516111331-04
(AP-DA05-120)	<u>. N</u>	11/09/0916	ing L	Cadmium	SW-846 6020A	0.0050	-0.000200	U.	0.000200	0.66500	1	HS16111331-01
IAP-DA05-120	N	11(29/3916	ne: I.	Clavitaian (total)	SW-846 (4939A	9.10	0.00123	*	0.000100	0,00300	1	H516111331-01
TAP-DA05-120	N	11/29/2016	Πας L	Lead	SW-846 6830A	0.015	0.00102	,	0.0003600	0.00300		HS16111331-01

	Semple	Date			Analytical				Sample Detection	Rethod		
Sample ID	Type	Collected	Unite	Analyte	Method	LORP	Result	Data Qualifier	Limit	Quantitation Limit	Odution	
HAP-DA05-120	N	11:29/2016	л <u>ж</u> 1.	Scietatati	5W-\$16 (020A	0.050	<0.00110	U	0.00110		Factor	Laboratory ID
HAP-DA05-120	N	11/29/2016	mg/1.	Silver	SW-846 6020A	012	+0.800200	1) 1)	0.00110	0.00509	1	11516111331-04
HAP-DA#5-120	N	11/29/2016	ma L	Metcury	SW-846 7470A	0.0020	<0.0000300	L.	0.0000300	0.000200		HS16111331-04
HAP-DA05-120		11/29/2916	mg.1.	Mercury	5W-846 7470A	6.0020	<0.0000300	U U	0.0000300	0.000200	1	HS16111331-04
HAP-DA05-120	N	11/29/2016	rag. L	Benzene	SW-846 8260C	0.0056	0.00033	Ĵ	0.0000300	0.00010		HS16111331-04
RAP-DA05-120	×	11/29/2016	mg/L	EttoRenzene	5W-846 82604	0.70	<0.00030	ů	0.00030	0.0010		H516111331-04
HAP-DA03-120	N	11/29/2016	mg. L.	Toluene	5W-346 8 564	1.0	<0.000000	U U U	0.00030	0.0010		HS16111331-01
HAP-DA95-120	N	11/29/2016	me/L	Sylene (lotal)	SW-846 8200C	10	<0.00030		0.09030	0.0010	1	HS16111001-04
1AP-DA05-120	N	11/29/2016	tria 1.	m A p-XMeter	SW-\$16 8 260C	10	<0.00050	<u>и</u>	0.00050	0.0020	1	HS16111331-04
HAP-DA05-120	Ň	11/29/2016	ang 1.	o-Xylene	SW-846 8360C	10	-0.00030	U U	0.00030	0.0010		11516111331-04
HAP-DA05-120	N	11/29/2016	arc 1.	Phenel	5W-816 8270D	73	<0.000016	U	0.000030	0.00920		11516111331-04
HAP-DA05-120	N	11/29/2016	ma l.	Pyridine	SW-816 8276D	0.024	<0.000031	U	0.600031	0.0010	<u></u>	HS16111331-04
HAP-DA05-120	×	11/29/2916	ng L	Sulfate	SW-816 9056A	SS	18.	1)	0.000031			HS1611131-01
HAP-DA96-120	N	11/29/2016	ing/1.	Tutal theolyrol solida	5M2540C	85	112		560	0.500	1	HS16111331-04 HS16111331-03
RAP-DA06-120	N	11/25/2016	Ing L	Arsenic	SW-\$16 6030A	0.010	0.00943		0.000400	0.03500	1	
ILAP-DA06-120	N	11/29/2016	itez/l.	flanum	SW-346 6020A	2.0	0.0790		0.00190	0.00500	1	HS16111331-03
HAP-DA06-120	S	11/29/2016	ing/L	Cedmans	SW-840 6020A	0.0016	~0 690200	U	0.000260	0.00200		
IAP-DA06-120	N	11/29/2016	mg/1.	Chromaun (total)	SW-846 6020A	0,10	<9.000100		0.600400	0.00.500		HS1611131-03 HS16111331-03
LAP-DA06-120	N	11/29/2016	fil2.1.	Lead	SW-846 6020A	0.015	10.000600	U U	0.000400	0.90500		
1AP-DA96-120	N	11/29/2016	mg/L	Selerateri	SW-346 6020A	0.050	<0.09110	<u>u</u>	0.00110	0.00500		115(6111331-03
IAP-DA06-120	N	11/29/2016	mg.1.	Sdyrt	SW-846 6020A	0.12	<0.060260	U U	0.660200	0.00500		10516111331-03
HAP-DA06-120	8	11/29/2016	BS2 L	Menuty	SW-346 7470A	0.0020	<0.000100		0.0000300	0.00300		HS16111331-03
HAP-DA96-120	N	11(29/2016	ng/L	Atenciny	SW-816 7170A	0.0020	<0.0000300	U U	19 00000 Veli	0.000200		11S16111331-03 HS16111331-03
IAP-DA06-129	N	11/29/2016	mg/1.	llauzone	SW-846 82690	0.0050	0.012		0.00020	0.0610		HS16111331-03
IAP-DA06-128	Ň	11/29/2016	ing L	Ethylbenzena	SW-846 8260C	0,78	<0.00030	U	0.00030	6 (010	1	
1AP-DA06-120	N	11/29/2016	ntz,1.	Tolazae	SW-846 8260C	1.0	<0.00020	<u> </u>	0.00020	0 0010		HS16111331-03 HS16111331-03
LAP-DA06-120	N	11/29/2016	ing/L	Nylene (total)	SW-846 8260C	10	6.0021	62	0.00030	0.0010		
TAP-DA06-120	N	11:29/3016	me L	m & p-Xykne	SW-846 8260C	10	0.0021	· · · · · ·	0.00030	0.0029	1	H346111331-03 H316111331-03
LAP-DA96-120	N	11/29.2016	mg L	o-Xylene	5W-846 8260C	10	100000	1/	0.00030	0.0010		
[AP-DA06-120	N	11/29/2016	ma L	Phenad	SW-816 8270D	7.3	-0.000035		0.000035	0.00020		HS16111331-03
TAP-DA06-120	N	11/29/2016	Ing. L	Pyticine	5W-816 8270D	6.024	0.000030	Ŭ	0.000030	0 6010		1151611131-03
IAP-DA06-120	N	11/29/2016	mg/L	Sulfate	SW-846 9056A	N5	179		0.200	0.500	· · · ·	HS16111331-03
IAP-DA08-120	N	11/28/2016	m2.1.	Total dissolved solids	SM2540C	NS	552		5.00	10.00		H516111331-02
1AP-DA08-120	N	11/28/2016	ne L	Arsenic	SW-846 6020A	0100	0.00107		0.000100	0.00560	<u> </u>	H\$16111331-02
1AP-DA08-120	N	11/28/2016	n192/L	Baritum	SW-846 60 30A	2.0	0.0678		0.06190	0.005/80	,	HS1411101-02
IAP-DA08-120	N	11/28/2016	mg/L	Calman	SW-846 6020A	0.0050	-0.000200	U	0.000200	0.00200		HS16111331-02
IAP-DAUS-120	N	11/28/2016	mg L	Chromatan (total)	SW-846 6020A	0.10	0.000784		0.000100	0.00500		11516111331-02
AP-DA08-120	N	11/28/2016	ng L	Lead	SW-846 6020A	0.015	-0.0004(0)	- U	0.000600	0.00500		11516111331-02
tAP-DA08-120	N	11/28/2916	mr.L	Seletaum	SW-9466020A	0.050	-0.00110	1/	0.00110	0.00500		HS16111331-02
(AP-DA08-120	8	11 28/2016	RC.L	Silver	SW-846 6020A	0.12	<0.000200	11	0.000200	0.00500		RS1611131-02
TAP-DA08-120	N	11/28/2016	f an	Mercuay	SW-8467470A	0.0029	<0.0(×k)108		0.0000160	0.000200		HS16111331-02
IAP-DA08-120	N	11/28/2016	me:L	Mercury	SW-846 74 79A	0.0020	<0.0000000	U U	0.0000300	0.000200		HS16111331-02
IAP-DA08-128	N	11/28/2016	πe î.	Henzene	SW-846 83////C	0.0050	0.00639		0.000020	0.0010		H516111331-02
1AP-DA08-120	N	11/28/2016	##.L	Ethyltenzeur	5W-\$16 8260C	8 71	<9 00030	t:	0.00020	3.0010		H516111331-02

	Sample	Date			Analytical				Sample Detection		Dilution	1.4
Sample ID	Туре	Collected	Units	Analyte	Method	LORP	Result	Data Qualifier	Link	Linit	Factor	Laboratory ID
HAP-DA08-120	N	11/28/2016	mg.1,	Tohiene	SW-346 8260C	10	<0.00020	Ľ	6.00630	0.0010	1	11516111331-02
HAP-DA98-120	S	11/28/2016	DK.L	Xylene (tetal)	SW-846 8260C	10	<0.00030	t)	0,00030	0.0019		H516111331-02
HAP-DA08-120	ĸ	11/28/2016	mg/L	m & p-Xyletw	SW-846 8260C	10	<0.00040	U.	0,000,50	0.0020		HS16111331-02
HAP-DA08-120	N	11/28/2016	मन्द्री.	o-Xylene	SW-846 8260C	19	<0.00030	U	0.00030	0.0010	L	H516111331-02
HAP-DA08-120	N	11/28/2016	ny, 1.	Phenot	SW-816 8270D	73	-0.000035	LU .	0.000035	0,00020	1	H516111331-02
HAP-DA98-170	8	11/28/2016	π <u>z</u> l,	Pytidate	SW-816 8270D	0.034	<0.0000.10	U	0.00030	a 0010		HSI6111331-02
11AP-DA08-120	N	11/28/2016	mg, L	Salfate	SW-846 9056A	N5	<u>5</u> ,14		0 200	0.500	1	11516111331-02
HAP-MA02-150	N	11/30/2016	ng/1.	Tetal descript solids	SM2540C	N5	90		5,00	10.0	1	HS16126073-06
HAP-MA02-130	N	11/30/2016	ma L	Arsenic	SW-846 6039A	0.010	6.00193	J .	0.000100	0.00200	1	H\$16120073-06
HAP-MA02-120	N	11/30/3016	mg.L.	Danusi	5W-846 (0) NA	2.0	0.0511		0.00190	0.00500)	H\$16120073-06
HAP-MA02-120	N	11/30/2016	pr. 1.	Cabaian	SW-846 6033A	0,0056	<0.000200	U.	0.600260	6.00200	1	11516120073-06
HAP-MA02-120	N	11/30/2016	tra L	Chrominer (total)	SW-846 6030A	0.10	0.00160	1	0.660100	0.00500	3	H\$16120073-66
HAP-MA02-120	N	11-70/2016	m. 1.	Lead	SW-846 6020A	0.015	0.000902	ţ	0.000600	0.00560	1	HS14120073-06
11AP-MA02-120	N	11/30/2016	ny L	Seleraiati	SW-\$16.6030A	0,050	<0.00110	li li	0.00110	0,00500	1	H\$16120073-06
HAP-MA02-120	N	11/30/2016	mr.L	Sulvet	5W-846 6020A	0.12	-0.000260	Ľ	0.000200	0.00500	1	H\$16120073-06
HAP-MA02-120	N	11/30/2016	1121	Mercisy	SW-846 7470A	0.0020	<0.0000300	U	0.0000300	0.060200	1	HS16120073-06
HAP-MA02-129	×	11/39/2016	ny/L	Menusy	SW-8467470A	0.0420	-0.0000300	U	0.0000300	0,000200	1	H\$16120073-06
HAP-MA02-120	N	11/30/2016	mz L	Baizas	SW-846 8360C	0.0050	+.0.00020	L	0.00030	0.0010	1	HS16120073-06
HAP-MA92-129	N	11/30/2016	me L	Ethylkenzere	SW-846 8260C	0,0	~0.00030	ប	0.00030	0.6010	1	HS16120073-06
HAP-51A02-120	8	11/30/2016	ng L	Totuene	SW-846 8260C	10	0.00026	U	6,00030	0.0010	1	11516120073-06
HAP-MA02-120	N	11/30/2016	nx 1.	Xviene (total)	SW-846 8260C	10	<0.00036	U	0.00030	0.0010	1	HS16120073-06
HAP-MA02-120	N	11/30/2016	tre 1.	in & p-Nytene	SW-846 8360C	10	<0.00050	U	0.00050	0.0026	1	HSIG120973-06
HAP-MA92-1D	8	11/39/2016	ng/L	p-Xvlene	SW-846 8360C	10	0 D0030	U	0.00930	0.0018	1	HS[6120073-06
HAP-MA62-120	N	11/30/2016	ng L	Phone	SW-816 8270D	2.3	+0.800035	UJL-MS-SD	0.000035	0.00020	1	HS16120073-06
HAP-MA02-120	- S	11/39/2016	ne L	Pyridane	SW-\$16 8270D	0.024	~0.000030	UIL-MS SD	8.000030	0.0010	1	115161200.3-06
HAP-MA02-130	8	11/30/2016	ng L	Solfar	SW-846 9056A	NS	4 39	UH-RB	0.00	0.500	. 1	HS16120073-06
HAP-MA03-123	N	11/36/2016	ing L	Total threadyed radials	5125400	NS	276		5.00	10.0	1	H\$16120073-05
HAP-MA03-123	N	11/30/2016	ng L	Arsenic	SW-346 6020A	0.010	0.0104		8.000160	0.00500	1	11516120073-05
HAP-MA03-123	N	11/30/2016	mgiL	Barnum	SW-846 6020A	2.0	0.0864		0.00190	0.00500	1 1	H\$16129073-05
HAP-MA03-123	8	11/30/2016	nz L	Catraiun	SW-\$16 6039A	0.0050	0.000200	U	0.600200	0.00200	<u>t</u>	11516120073-05
HAP-MA03-123	<u>8</u>	11/30/2016	mg 1.	Chromann (scual)	SW-346 6020A	0.10	<0.000100	v	0.000100	0.00500	- i	HSI6120073-03
HAP-MA03-123	N	11/30/2016	116/1. 116/1	Lead	SW-846 6020A	0.015	0.000609	- Ĩ	0.00%00	0.00500	ti	HS16120073-05
HAP-MA03-123	N	11/30/2016	ng L	Selergiun	SW-\$16 6020A	0.010	-2) 00110	U U	0.00110	0.09500	<u> </u>	HS16120073-05
	N	11/30/2016		Silvet	SW-846 6020A	0.12	<0.0001200	U U	0.000200	0.00500	l i	H\$16120073-05
HAP-MA03-123		11/20/2016	ngi. ngi.	Mercury	SW-\$46 7170A	0.0320	-0.0000300		0.6000340	0.060200		H\$16120073-05
HAP-MA03-123				Mercury	SW-816 7470A	0.0020	<0.0000300	U U	0.0000300	0.000200		H\$16120073-05
HAP-MA03-123	8	11/30/2016	mu L			0.0028	1.0079	D	0.00029	0.00010		HS16120073-03
HAP-MA93-123	8	11/30/2016	RK L	Benzene	SW-946 8299C	0.70	<0.0039	U	0.00019	0.0010		HS16120073-05
HAP-MA83-123	N	11/30/2016	ng L	Ethyltenzeiz	5W-346 8360C SW-346 8260C	0.70	<0.00039	U	0.00030	0.0010		HSI6120073-05
HAP-MA03-123	N	11/30/2018	ng/L	Totnene			<0.00030	U U	6.00030	0.0010	1	11516120073-65
HAP-MA03-123	N	11/30/2016	1.5m	Xylene (tetal)	SW-946 8260C	10	0.00030	1:	6.03950	0.0010	 	11516120073-05
HAP-MAD3-123	N	11/30/2016	ng L	m & p-Xylrue	SW-846 8 200C	10			6.00030			11516120073-05
HAP-MA03-123	N	11/30/2016	nw.L	o-Xylana	SW-316 \$300C	10	× 0,00030	U	0.00033	0.0010		HS16120073-05
HAP-MA03-123	N	11/30/2016	ng L	Phenal	SW-316 8270D	?3	-0.0035	UL-MS/SD				
HAP-MA03-123	N	11/39/2016	ng L	Pyridase	5W-\$16.8270D	9031	0.0013	IL-SUR MS SD	0.000039	0.0010	1	HS16120073-05

	Sample	Date			Analytical				Sample Detection	Quantitation	Ollution	
Sample ID	Туре	Collected	Units	Analyte	Method	LORP	Result	Data Qualifier	Limit	Lint	Factor	Laboratory ID
HAP-MA03-123	N	11/30/2016	mg.1.	Sulfate	SW-846 9056A	85	12.5		0 200	0.500	1	HSIG1.0073-05
HAP-MA05-129	N	11/30/2016	Rc.1.	Total absorbed soluts	\$M2540C	NS	318		5.00	160	t i -	HS16120073-02
HAP-MA05-120	N -	11/30/2016	ma/l.	Ασκευίς	SW-846 6030A	0.010	0,0210	JI-FD	0.000400	0.00500		H516120073-02
HAP-MA05-120	N	11/30/2016	true L	Banuan	SW-846 6020A	2.0	0.130		0.03190	0.00508	- i	11516120073-02
HAP-MA05-120	N	11/30/2016	ttoz/L	Calusium	SW-846 6020A	0.0058	*0.000260	, U	0.000260	0.00200	in for	11516120073-02
HAP-MA95-150	N	11/3//3016	img. 1.	Chromenen (Ioral)	SW-846 6020A	0,10	<0.000190	Ų	0.000100	0 00 500	1	H\$16120073-02
HAP-MA05-130	N	11/30/2016	11 gr 1.	Lest	SW-846 6020A	0.015	-0.090600	U	0.600600	0.00500	1	HS161:0073-02
HAP-MA05-120	N	11/30/2016	ท⊯,1.	Selenniam	SW-846 6020A	0.0.50	<0.63110	U	0.00110	0.00500	1	HS16120073-02
BAP-MA95-129	N	11:30/2916	ma I.	Silver	SW-816 6020A	0.12	10.000200	Ų	0.003200	0.00500	1	HS16120073-02
HAP-MA05-120	N	11/30/2016	ngl	Metcury	SW-8167479A	0.0020	<0.0990386	L!	9.0000300	0.000260	1	JISI6120073-02
HAP-MA05-139	N	11/30/2016	mg L	Mercury	SW-8467170A	9,8020	<0.0010388	-17	0.0000300	0.000200		H516120073-02
HAP-\$(A05-12)	N	11/30/2016	true I.	Benzetie	SW-846 8260C	0.0050	<0.00020	U	0.00020	0.0010	1	H\$16120073-02
HAP-MA05-120	N	11/36/2016	mz I.	Ethylbenzene	SW-846 8260C	0.70	<0.00030	U	0.00030	6,0010	1	11516120973-02
HAP-MA95-120	N	11/30/2016	ne L	Toluene	SW-846 8260C	1.0	<0.00920	L.	0.00030	0.0010	1	H\$16120973-02
HAP-\$1A05-120	х	11/30/2016	mg L	Nylene (total)	SW-846 8260C	10	<0.00030	U	0.00030	0.0010	1	HS16120073-02
HAP-MA05-120	N	11:30/2016	ung L	m & p-Xylene	SW-846 8260C	10	<0.00050	Lí	0.00050	0.0020	1	HS16120073-02
HAP-MA05-120	×	11/30/2016	mg. 1.	o-Xyiene	SW-846 \$ 2660	10	<0.00030	U	0.00030	0.0010	1	11516120073-02
HAP-MA05-150	N	11/30/2016	mg 1.	Phenel	SW-\$46 8270D	7.3	-0.000035	UJL-SUR, MS/SD	0.000035	0.00820	1	HS16120073-02
RAP-MA05-120	N	11:30/3016	ing L	Pynikno	5W-\$16 8270D	0.021	0.000030	UIL-MS/SD	6 0000,30	0.0010	1	HS16120073-02
HAP-MA05-120	N	11/30/2016	ny 1,	Sellife	SW-846 9056A	88	8.59		0.200	0,500	1	H\$16120073-02
HAP-MA05-121	at at	11/30/2016	ng l.	Total deserved solids	5M2340C	NS	308		5,00	10.0	1	HS16120073-03
HAP-MA05-121	fD	41/36/2016	π¢:Ì.	Anemic	SW-846 6030A	0010	0.0219	11 HD	0.000400	0.02500	1	HS16120073-03
11AP-MA05-121	FD	11/30/2016	ny L	Barium	SW-846 6020A	2.0	0,131		0.00190	0.00500	1	11516120073-03
HAP-MA05-121	Ð	11/30/2016	πgi.	Cadmium	SW-346 6020A	0.0030	-0.060,00	U	0.000200	00200	1	H\$16120073-83
HAP-MA05-121	FD	11/39/2016	શાફ દ	Chromann (total)	SW-\$46 6020A	0.10	0 000400	U U	0.9430100	0.00500	1	HS16120073-03
HAP-MA05-121	FD I	11/30/2016	ng L	Lead	SW-846 6030A	0.015	0,000816)	0.000600	ij (xe500	1	HSI612(073-01
HAP-MA05-121	۲D.	11/30/2016	mg 1.	Scientum	SW-846 6020A	0.050	<0.03110	. U	0.00110	0.00500	1	R516120073-03
HAP-MA05-121	F 11	11/30/2016	mg I.	Silver	SW-\$16 6030A	61	-0.099200	U .	0.900200	0.00500	1	HS16120073-03
HAP-MA05-121	F1)	11/30/3916	mg L	Mercury	SW-\$167170A	0.0020	-0.0090380	Ľ	0.0000300	0.080200	1	11516120073-03
BAP-MA05-121	FD (F	11/30/2016	ng L	Mercury	SW-816 7470A	0.6020	<0.0000300	U	0.0080300	0.000260	1	H516120073-03
HAP-MA05-121	- FÐ	11/30/2016	me 1	Bartene	SW-846 \$268	0.00150	<0.000.0F	(I	0.03920	0.00[0	1	H\$16120973-01
HAP-MA05-121	FD .	11/30/2016	mg/L	EllyRenzae	SW-846 8260C	0 TÙ	<0.04030	U	0.00030	0.0010	1	H\$16120073-03
HAP-MA03-121	ાગ	11/34/2016	mg L	Tolacne	SW-816 S260C	10	+0.00020	U	0.00020	0.0018	1	H\$16120073-03
HAP-MA05-121	FD	11/30/2016	my i	Xylene (100al)	SW-846 82600	10	<0.66630	U	0.00038	0.0010	1	HS16120073-03
HAP-MA05-121	ND I	11/30/2016	nye L	tn & p-Xylenr	SW-846 8260C	10	<0.80050	b	0.00056	0.0020	1	HS16120073-03
HAP-MA05-12F	TD-	11/30/2016	mg 1.	e-Xylene	SW-346 \$360C	10	<9.00030	ប	0.00030	0.0020	1	HSI6120073-03
HAP-MA05-121	rp 🛛	11/30/2016	ngl	Pheno	5W-816 8270D	13	~0.000035	UIL-MS/SD	0.000035	\$ 00X(2 D	1	HS16120073-03
HAP-MA95-121	E (F	11:30/2016	ng.1.	Pytidate	SW-816 82701)	0.024	0.000030	UIL-MS SD	0.000030	6.6010	1	HSI6120073-03
HAP-MA05-121	10	11:00/2016	HK.L	Sulfair	SW-816 90.56A	NS	K.68		0.200	0.500	i	11516120073-03
HAP-MA06-120	N	11-29-2016	в <u></u> е I.	Total dissolved solids	5M2500C	85	366		3.00	10.0	1	HS16120073-01
HAP-MA06-129	8	11/29/2016	ti 😰 L	Arsenic	SW-846 6020A	0.010	0.00983		0.000400	0.00500	1	H516120073-01
HAP-MA06-120	N	11/29/2016	πε/L	Barium .	SW-846 6020A	2.0	0.0804		0.00190	0.00500	1	H\$16120073-01
HAP-MA96-129	N	11/29/2016	pres L	Catmum	SW-846 6020A	9 (00.59	~0.000200	t)	0.000260	0.00200	1	[1516120073-0]
HAP-MIN06-129	8	11/29/2016	sng/L	Chryniaen (ictal)	SW-846 6020A	6.10	·U.003109	ti	0.660460	0.00500	1	HS16120073-01

	Sample	Date			Analytical				Sample Detection	Quantitation	Dilution	
Sample ID	Туре	Collected	Units	Analyte	Method	LORP	Result	Data Qualifior	Limit	Lint	Factor	Laboratory ID
HAP-MA06-120	N N	11/29/3016	MIC 1.	Lead	SW-846 (020A	0.015	0.000600	Lf	0.000600	0.00500	1	11516120073-01
HAP-MA06-120	8	11/29/2016		Sclerituru	SW-816 6030A	0.0.50	-0.00110	11	0.66110	0.09500		HSt6120073-01
		11/29/2016	πης/1. πης/1.	Silver	SW-846 6020A	0.12	<0.000200	Ű	0.600200	0.00500		HS16120073-01
HAP-MA06-120	N			Mercury	SW-816 7470A	0.0020	<0.000100	U	0.0030300	0.000200		11516120073-01
HAP-MA06-120	<u> </u>	11/29/2016	ing i.	Mercury	SW-816 7470A	0.0020	<0.0000300	ň	8,0006300	0.060200	\vdash	HS16120073-01
HAP-MA06-120		11/29/2016	RIZ L	Benzene	SW-846 8260C	0.0050	8.0034	1º	0.00020	0.000400		HS16120073-01
HAP-MA96-120	N	11/29/2016	ting/1.		SW-346 8200C	0.70	0 00036	۱.	0.03030	0.0010	l i	11516120073-01
HAP-MA06-120	N	11/29/2016	ng L	Ethylheizene Tehnen	SW-316 8260C	1.0	<0.00039	41	0.03030	0.0010		HSI6120073-01
HAP-MA96-15)	N	11/29/2016	πıg/L		SW-846 82604	1.9	0.0024	v.	0.00030	0.0010		HS16120073-01
HAP-MA06-120	N	11/29/2016	mail.	Xylens (lotal)			8.0024		0.06050	0.8620	<u> </u>	HSt6120073-01
HAP-MA96-120	N	11/29/2016	m21.	m&p-Xykaa	5W-846 8260C	10	9,0024 (9,0003)	:U · ·	0.09630	0.6020		1(5)6120073-01
HAP-MA06-120	N	11/29/2016	ng.1.	e-Xyiene	SW-846 8260C				9.00036			11516120073-01
HAP-MA06-120	N	11/29/2016	15g/1,	Phenol	SW-816 8270D	7.3	-0.000036	UIL-MS-SD		0.00020	<u> </u>	
HAP-MA96-120	Ň	11/29/2016	my, 1.	Fyrnase	SW-316 8270D	0.021	0.0617	JL-MS-SD	0.00034	0.6010	1	11516120073-01
HAP-MA96-129	N	11/29/2016	ng L	Solfate	SW-\$46 9056A	NS	15.7		002.00	0.500		11816120073-01
HAP-MA07-123	Я	11/29/2016	mg.1.	Total dassolved solids	SM2546C	NS	144		5.00	lao	<u> </u>	HS16111331-08
RAP-MA07-123	N	11/29/2016	n w 1.	Arsenuc	SW-846 6630A	0.010	0,00.%57		0.000100	0.09500	1	11816111331-68
HAP-MA07-123	N	11/29/2016	ngl	Harrinn	SW-346 6920A	2,0	0.149		0.00190	0.00500	1	11516111331-08
HAP-MA07-123	8	11/29/2016	ng.1.	Casmian	SW-846 6020A	0.0350	×0.060200	ţi.	0.000200	0.00200	1	11516111331-08
HAP-MA07-123	N	11/29/20116	mg.1.	Chromatus (cotal)	SW-846 6020A	0.10	-0.600100	Į!	0.004100	0.00300	1	11516111201-08
HAP-MA07-123	N	11/29/2016	nig/L	i.cal	SW-\$46 6020A	0.015	10.900600	υ	0.0006600	0,00500	1	11816111331-08
HAP-MA07-123	×	11/29/2016	mg 1,	Sclernin	SW-846 6620A	0.050	<0.00110	U	01100.0	0.00500		H\$16111331-08
RAP-MA07-123	N	11/29/2016	mg. 1,	Silver	SW-846 6020A	0 12	10.000200	U	0.900200	0.09500	Ι.	HS16111331-68
RAP-MA97-123	N	11/29/2016	ng/L	Mentary	SW-846 7470A	0.0029	<0,0000300	Li I	0,0000300	0.000200	1	11516111331-08
HAP-MA07-123	N .	11/29/2016	mz/1.	Merciny	SW-346 7470A	0.0020	<0.0000300	. U	0.0000300	0.000200	-	11816111331-08
HAP-MA07-121	N	11/29/2016	มณู่ไ.	Benzene	SW-\$46 8260C	0.0020	<0.00020	U	0.00020	0.0010	1	HS16111331-68
HAP-MA07-123	N	11/29/2016	mg L	Ethiloutor	SW-846 8260C	- i) 70	<0.00830	11	0.00030	0.0010	1	HS16111331-08
HAP-MA07-123	N	11/29/2016	mg/L	Tolaene	SW-846 \$260C	1.0	-0.00020	U	0.00020	0.0018	1	H\$16111331-08
HAP-MA9-424	8	11/29/2016	nge L	Xstene (total)	SW-846 8260C	10	-0.69930	U	0.00030	() (ji (ji (ji	1	HS16111.VI-08
HAP-MA07-123	N	11/29/2016	mg/L	m & p-Xylene	SW 816 8260C	10	-9,00850	U	0.00059	0.0020	1	H516111311-08
HAP-MA07-123	N	11/29/2016	mg-L	o-Xvlene	SW-\$46 \$260C	10	<0.00030	U	0.00030	0.0010		11516111331-08
HAP-MA97-121	8	11/29/3916	ng L	Phend	SW-\$16 8270D	73	0.000033	U	0.000035	0,09020	1	11516111301-08
HAP-MA07-123	N	11/29/2016	nig L	Pytidase	SW-816 8270D	0.024	0.000030	U	0.00010	0,0010	1	11516111311-08
HAP-MA07-123	N	11/29/2016	mail	Sulfait	SW-846 9056A	NS	8.49		0.200	0.500		HSI6111331-08
HAP-MA08-120	8	11/39/2016	mg L	Total desivited solids	\$5125195	NS	1050		5.00	10.0	i	HS1611131-07
RAP-MA08-120	N	11/29/2016	ng.l.	Aryenic	5W-846 6020A	0.010	0,00619		0.000400	0.00500	1	11516111331-07
HAP-MA08-120	N	11/29/2016	ma:L	Barium	SW-\$46 6020A	2.6	0.065	· · · ·	8.00190	0.00500	<u> </u>	HS16111331-07
HAP-MA08-120	N	11/29/2016	ng/L	Cadnessn	SW-846 6020A	0.0030	<0.000200	U	0.000200	0.00209	1	H516111331-07
HAP-MA08-120		11/29/2016	πι <u>κ</u> /L	Chroninga ((etal)	5W-816 6020A	0,10	0,000779		0.000400	0.00500	1	HS16111331-07
HAP-MA08-120	<u> </u>	11/29/2016	102/L	Leat	SW-846 6030A	0.015	0.0600600	U U	0.000600	0.00500		H516111331-07
HAP-MA08-120		11/29/2016	ng L	Seletsion	SW-846 6030A	0.050	10.00110	υ	0.09110	0.00500	1 1	11516111331-07
HAP-MA08-120 HAP-MA08-120	N	11/29/2016	821.	Silver	SW-346 6030A	012	0.000200	U U	0.000200	0.00500	<u>+</u>	H5(6111331-07
	<u>N</u>	11/29/2016	ng/L	Mercury	SW-846 7470A	0.0020	< 0.0000300	Ū	0.0000300	0.000200		HSI6111331-07
HAP-MA08-120		11/29/2016		Mercury	SW-846 7470A	0.0020	- h conú 300	Ŭ	6.0096300	0.000200	t	HS16111341-07
HAP-MA98-129	<u>N</u>		N#1.			0.0029	<9.0000380	U U	0.0040300	0.6910	<u>├</u>	11516111331-07
HAP-MA98-120	N	11/09/2016	Reg./L	Dentette	SW-846 8500C	0.00.99	<0.00020	1 1/	0.00670	F mosto	<u>i '</u>	1 11010111391-07

	Sample	Date			Analytical	10010347			Sample Detection	Nethod Quantitation	Ditution	
Sample ID	Type	Collected	Units	Analyte	Method	LORP	Result	Data Qualifier	Link	Limit	Factor	Laboratory ID
HAP-MA08-120	Sector Sector	11/20/2016	HR.L	Etlatteration	SW-\$16 8260C	6.76	0.000010	U	0.00030	0.0010	-	HS[6111331-07
HAP-MA08-120	N	11/29/2016	ng.t. ng/L	Telucas	SW-846 8260C	1.0	0 00020	Ū.	D.00029	0.0010		HS16111331-07
HAP-MA08-120	N	11/29/2016	mg/L mg/L	Xylene (total)	SW-846 8260C	10	0.014		0.00030	0 6010	1	HSt6111331-07
HAP-MA08-129	N	11/29/2016		m & p-Xylene	SW-346 8260C	10	0.024		0.00050	0.0020	- í	11514111331-07
	<u>N</u>	11/29/2016	ոպ Ն ոպ Ն	e-Xylene	SW-846 8260C	10	<0.00038	Ú.	0.00030	0100.0		11516111331-07
HAP-MA08-129				Phenol	SW-816 8270D	7.3	~0.000035	ů.	0.000035	0.000.0	1	HS16111331-07
HAP-MA08-120	<u>N</u>	11/29/2016	ma/1.	Pyrukae	SW-846 8270D	6024	<0.800030	v V	0.000000	0.0010		HS16111331-07
HAP-MA08-120		11/29/2016	11 pc].	Sulfate	SW-846 9036A	NS	17.2		1.00	2.50		11516111331-07
HAP-MA08-120	N	11/29/2016	яα/1.			NS	13.9	· · · · ·	0.0100	0.0100		HS14120124-05
HAP-SD01-123	N	12/2/2016	WT%	Petrent measure	ASTM D2216	24			0110	0.531		11516120124-03
HAP-SD01-123	N	12/2/2916	mg.kg	Arsenic	SW-846 6020A		2.25		0.0350	0.531		11516120124-05
HAP-SD01-120	К	12/2/2016	meke	Barrum	5W-846 6020A	8105	45.4		0.0550	0.531	· · · · · ·	11516120124-05
HAP-SD01-123	N	12/2/2016	me ke	Cathminan	SW-846-6920A	51	<0.053	U U				11516120124-03
HAP-SD01-123	N	12/2/2016	mgitg	Chaceranna (total)	SW-846 6620A	27000	5.96		9,0%0	0.531		
HAP-SD01-121	N	12/2/2016	me ke	[.rad	SW-846-6020A	500	7.07		0.0530	0.531	<u> </u>	11516120124-05
HAP-SD01-123	N	12/2/2016	mgikg	Seletânni	SW-846 6020A	310	0.388		0.190	0.531	1	H\$16120124-05
HAP-SD01-123	N	12/2/2016	mg.kg	Silver	SW-846 6020A	97	<0.085	U	0,0850	0.531	1	11516120124-05
HAP-SD01-123	N	12/2/2016	ing la	Merciay	SW-\$16 7471A	21	0.6112	<u> </u>	0.000590	0.09416	L	H516120121-05
HAP-SD01-123	X	12/2/2016	102.12	Bentene	SW-816 8269C	69	<0.00046	U	P.06046	0 0046		11516120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	Ethylbenzene	SW-816 8260C	5300	<0,00964	U	9.00061	0.0046	1	115[6120]24-05
HAP-SD11-121	N	12/2/2016	nigikg	Tolucne	5W-816 8260C	\$10)	0.00055	U U	0.03855	0.0014	1	11516120124-05
HAP-SD01-123	N	12/2/2016	mgitz	Xylete (total)	SW-846 \$260C	3700	0.00092	្រប	0.00092	0.0046		H\$16120124-03
BAP-SD01-123	N	12/2/2016	mete	in & p-Xylene	SW-316 8260C	4700	0.0015	IJ	0.0015	0.0092	1	HS16120124-05
HAP-SD01-123	N	12/2/2016	mgitz	o-Xylene	SW-846 \$260C	29008	< 0.04092	Ð	0.03892	0.0646	1	11516120121-05
HAP-SD01-123	N	12/2/2016	mu/kg	Plank	SW-\$16 \$270D	950	-6.0013	L) :	0.0013	0.0077		1(516120124-05
HAP-SD01-123	8	12/2/2016	mete	Pyridae	SW-516 82708)	82	:0 00 kB	ţ1	0.0010	0.0077	1	11516120124-05
HAP-5D02-120	N	12/2/2016	WT%	Percent periode	ASTM D2216	NS	18.6	1.1	0.0160	0.0100	1	11516120124-06
HAP-SD02-120	N	12/2/2016	m±/kr	Arsenuc	SW-846 6020A	24	1.98	JI-FD	0 130	0.587	1	H516120124-06
HAP-5D02-120	N	12/2/2016	meike	Darium	SW-846 6020A	8100	124	11-17)	0.0940	0 587	1	11SE6120124-06
HAP-5D02-120	N	12/2/2016	marka	Catrican	SW-846 6020A	51	-0.059	11	0.0590	0.587	1	11St6120121-06
HAP-5D02-120	N	12/2/2016	meke	Chronium (tetal)	SW-846 6020A	27000	6.22		0.110	6.587	1	HS16120124-06
HAP-SD02-120	N	12/2/2016	meke	Leal	SW-846 60 20 A	506	6.33		0.0590	0.587	1	11SE6120121-04
[LAP-5D02-120]		12/2/2016	nu ke	Scleritan	5W-816 6920A	310	0.493	1	0 210	0.557	1	11516129121-06
HAP-SD02-120	8	12/2/2016	meke	Sulvei	SW-846 6020A	97	<0.094	U	0.0940	0.587		HSI6120124-06
HAP-SD02-120	Ň	12/2/2016	make	Merciary	SW-846 7471A	21	0.00432	JI-FI)	0.000630	0.00111	1	11516120124-06
HAP-SD02-120	8	12/2/2016	make	Benzenz	SW-846 8260C	69	1 0.00050	u	0.00034	0.0050	1	11516120124-06
HAP-SD02-120	N	12/2/2016	mg lig	Etholicezene	SW-816 8260C	5300	<0.000"0	Ŭ	0.00070	0.0050	1	11514120124-06
HAP-SD02-120	N N	12/2/2916	maka	Toluzae	SW-816 8260C	5160	<0.00060	Ũ	0.00000	0.0050	1	11516120124-06
HAP-SD02-120	X	12 2/2016	mg kg	Xylene (total)	SW-846 8260C	3700	+0.0010	1	0100 0	0.0050	1 1	11516120124-06
HAP-SD02-120	8	12/2/2016	mg/kg	m & p-Xylene	5W-846 8260C	1700	6100.0	u u	o coté	0.010	 ```	HS16120124-66
	<u>×</u>	12/2/2016	mekz	o-Xviene	SW-816 8260C	29000	0100.0	15	01010	0.0050	1	11514120124-66
HAP-SD02-129	N N	12/2/2016	nig kg	Phenot	SW-816 8270D	9.50	0.0011	Ü	0.0011	0.0031	t	115/6120121-06
HAP-SD02-120					SW-846 8270D	82	<0.0011	<u>в</u>	0.0011	0.0031		H\$16120124-06
HAP-5D02-120	<u>N</u>	12/2/2016	nu ke	Pyridiae	ASTM D2216	84 NS	19.4	¹	0.01001	0.0100	<u> </u>	11516120124-07
HAP-SD02-121	FD	12/2/2016	₩T*÷ mz/kg	Percest moisture Arxenic	SW-816-6020A	21	1.28	JI-FD	0.0100	0.590	<u> </u>	11516120124-07

-	Sample	Date			Analytical				Sample Detection	Method Quantitation	Dilution	
Sample ID	Түрө	Collected	Unite	Analylo	Method	LORP	Reput	Data Qualifier	Limit	Lint	Factor	Laboratory ID
HAP-SD02-121	+D	12/2/2016	m, kg	ljøunur	SW-846 6030A	81(1)	36.5	i ji fd	0.0940	n.390		HS16120124-07
HAP-5D02-121	D	12/2/2016	ing kg	Cadmium	SW-846 6020A	- 51	0.0550	U	0.0590	0.590	1	H\$14120124-07
HAP-SD02-121	FU.	12/2/2016	mp/tg	Chronium (total)	SW-846-6020A	27008	413		0.110	1) \$99	1	H\$16120124-07
11AP-5D02-121	rib –	12/2/2016	ingig	l,ead	5W-346 6020A	500	5.49		0.0599	0.350	1	HS16120124-07
HAP-5D92-121	(I)	12/2/2016	mete	Selentum	SW-846 6920A	310	0.108	1	0.210	0.590	1	HS16120124-67
HAP-SD02-121	FD	12/2/2016	m <u>e</u> kg	Silver	SW-845 6020A	97	+ 0 09 10	U	0.0910	0,590	1	11516120124-07
HAP-SD02-121	11)	12/2/2016	Dig kg	Mercury	SW-846 7473A	2.1	0.00889	31-57)	0.000620	0.00132	ŀ	IIS16120121-07
HAP-5D02-121	TD	12/2/2016	mg kg	ມີຕາກະຕາຍ	SW-846 8260C	69	<0.69648	U	0.00048	0.0048	I	11516120124-07
HAP-SEX02-121	FD .	12/2/2016	rog ke	Ethylbentene	SW-846 8260C	5300	*0.0065	U	0.0006?	0.0018	1	H\$16120124-07
HAP-SD02-121	, PD	12/2/2016	mg, Lg	Teleene	SW-846 8260C	5400	<0.00057	U I	0.000\$7	0 8318	1	HS16120124-07
HAP-SD02-121	រាប	12/2/2016	mg ke	Nylene (foral)	SW-846 8260C	3700	(1) 50096	10	0.00096	0.0013	1	HS16120124-07
HAP-SD02-121	TD .	12/2/2014	mg kg	m & p-Aylene	SW-846 8260C	4700	0 6015	U	0.0015	0.0096	1	HS16120124-07
HAP-SD02-121	FD	12/02016	ms ta	o-Xylene	SW-846 8260C	29600	<0.00096	្រះរ	0.069096	0.0648	1	HS16129121-07
11AP-SD02-121	- PD	12/2/2016	mgring	Phenel	SW-846 8270D	550	-0.0014	t.	0.0014	0.063	1	HS16120121-07
HAP-SD02-121	FD	12/2/2016	TIQ: Kg	Pyrickne	SW-846 8270D	82	+.0.0011	b	6.0011	0.0082	1 -	11516120124-47
HAP-SD03-129	N	12/2/2016	¥1%	Percent monture	ASTMD2216	88	17.7		0010,9	0 0100	t	it516120124-08
HAP-5003-120	N	12/2/2016	mg kg	Atsenic	SW-846 6020A	24	1.02		0110	.0.571	1	H516120124-08
HAP-SD03-129	N	12/2/2016	mg kg	រី ស្រុក ស្រុក 🖉	3W-846 6020A	8100	17,4		0.0910	0.571	1	HS16120124-08
RAP-SD03-120	N	12/2/2016	ing tg	Ciedminian	SW-8466030A	51	<0.057	[/ ·	0.0576	0.571	1	HS16120124-08
HAP-SD03-150	N	12/2/2016	mg/kg	Chrymnian (total)	5W-816 5030A	27068	2.92		0.100	0.57	1	H\$16120124-08
HAP-SD03-120	x	12/2/2016	mg ig	Lead	SW-8466020A	5(1)	4.53		0.0576	0.571	1	11516120124-08
HAP-SD03-120	N	12/2/2016	mg kg	Selenium	SW-846 4029A	310	<0.21	U	0 210	0.571		H\$16120124-68
HAP-\$D03-120	N	12/2/2016	nte ka	Sdver	SW-815 (030A	47	×0.091	И.,	0.0916	0.571		11516120124-08
HAP-SD03-150	N	13/2/2016	mg/kg	Mercury	SW-816 7471A	2.1	0.00815		0.000616	0.00128	1	HS16120124-08
HAP-SD63-120	N	12/2/2016	The La	Benzene	SW-816 8260C	69	<0.00011	Lí	0.00641	0.0041	1	HS16120121-08
HAP-5D03-129	N	12/2/2016	marke	Ethylbenzew	SW-\$16 8260C	5300	<0.00057	. U	0.0005	0.0011		11516120124-68
HAP-SD03-129	x	12/2/2016	mz/kg	Tolocne	SW-\$16 8260C	5100	10 00019		0.00019	0.0011		HS16120124-08
HAP-5D(0-120	N	12/2/2016	me ke	Xylene (total)	SW-846 8260C	3700	<0.00681	U	0.00081	0.0041	1	H516120124-68
HAP-5D03-120	N	12/2/2016	mg kg	nt & p-Xyleng	SW-\$16 82606	4700	*0.0013	ŭ	0 pata	0.0081	1	11516120121-08
HAP-5D03-120	N	13/2/2016	me/ke	o-Xviene	SW-846 \$260C	29008	<0.00051	U	0.00081	0.0011		11516120124-08
HAP-SD03-120	N	12/2/2016	mete	Paenol	SW-\$16 \$270E)	950	+0.9013	t U	0.0013	0.0080		11516120124-08
HAP-\$D03-120	N	12/2/2016	tog ke	Pytidine	SW-\$16 8276D	82	-0.0011	. 1	0.0011	0.0680		11516120121-08
HAP-SW01-120	N	12/2/2016	tre L	Arsenic	SW-\$46 6020A	0.010	0.00296	1	0.000400	0.00500		HS16120124-01
HAP-5W01-120	N	12/2/2016	THE L	Banuer	SW-\$16 6020A	2.6	0.123		0.00150	0.00560		11516120124-01
HAP-5W01-120	N	12/2/2016	mg L	Cashnign	SW-846 6030A	0.0050	10.000200	Li	0.600200	0.00260		HS[6120124-01
HAP-SW01-120	8	12/2/2016	mg L	Chromson (lotal)	SW-846 6030A	0.10	-9.000100		0.000400	0.00500		11516120124-01
HAP-SW01-120	N	1222016	ing 1.	Les	5W-846 6020A	0.015	-0.000606	<u> </u>	0.0000000	0.00300		HS16120124-01
HAP-5W01-120	8	12/2/2016	112.1	Schraum	SW-846 6020A	0.0.59	0.001*1		0.000100	0.00500		1516120124-01
HAP-SW01-130	N	13/2/2016	mg. 1.	Silver	SW-\$46 60 20A	0.12	<0.000200	Ú Ú	0.000260	0.00500		HS16120124-01 HS16120124-01
HAP-SWOI-120	N	12/2/2016	mg 1.	Mercury	SW-816 7170A	0.0020	-0.000106	<u>v</u>	0.0000300	0.009260		
HAP-5W01-120		1322016	tig/L	Bentere	SW-816 8 2000	0.0050	<8.000 gills	1	0.0000000	0.00200	,	11516120124-01
HAP-SW01-120	8	12/2/2014	m2/L	Ethylbenzerse	SW-816 \$260C	0.70	<0.00010	U	0.00030		1	11516129124-91
HAP-5W01-120		12/2/2916	R#1.	Tobera	SW-816 \$260C	1.0	<0.00030			0.0010	_ <u> </u>	HS16120124-01
HAP-5W01-120	N	12/2/2016							0.00920	0.0010	_!	HS16120124-01
0.1-10.01-1-0		1	FFZ/L	Nylene (total)	SW-846 8260C	10	<9.00038	1) 1	0.00039	0 .0010	I I	JIS16120124-01

	Semple	Dale			Analytical				Sample Detection	Method Quantitation	Dilution	
Sample ID	Type	Collected	Units	Analyte	Method	LORP	Result	Data Qualifier	Limit 🖉	Limit	Factor	Laboratory ID
HAP-5W01-120	N	12/2/2016	mg. L	ta & p-Xylene	SW-846 8260C	10	<0.00050	ti -	0.00050	0.0020	1	115[6]20124-01
HAP-SW01-120	N	12/2/2016	11g/1	e Xylene	SW-816 8260C	10	<0.00038	U	0.00020	0.0010		HS16120124-01
HAP-5W01-129	N	12/2/2016	me/t.	Plated	SW-\$16 8270D	73	-0.000035	UIL-MS/SD	0.000036	0.00020	1	HS16120124-01
HAP-SW01-120	N	15/2/2016	ing. L	Pyradane	SW-846 82 00	0.924	-0,000331	01.550	0.0000.11	0,0010	1	HS16129124-01
HAP-5W92-120	N	12/2/2016	rsz/1.	Arsmit	SW-846 6020A	6010	0.00313)	0.003460	0,005(%)		11516129124-02
HAP-SW02-120	N	12/2/2016	mg I.	Batium	SW-\$166029A	20	0.125		0.00190	0.00500	1	HS16120124-02
HAP-SW02-120	N	12/2/2014	ng. 1.	ตัวเรื่ามายาเ	5W-846 6020A	0.6050	-\$,000200	U	0.000200	6.00200	1	11516120124-02
HAP-SW02-120	N	12/2/2016	ng/1.	Chronisten (Iotal)	SW-846 6030A	0.10	-0.900400	ţ,	0.0003000	0.00500		HS16120124-02
HAP-5W02-129	N	12/2/2016	mat/1,	Lead	SW-846 6020A	0.015	-0.000600	U	D.000600	0.00500	1	11516120121-02
HAP-5W02-120	N	12/2/2016	nge L	5eletgium	SW-\$46 60,0A	0.050	0,00136	3	8.00110	0.00500	1	HS16120124-02
HAP-5W02-120	N	12/2/2016	ng l.	Subject	SW-846 6028A	0,12	0,000260	U	8.006200	0.00500	1	11516120124-02
HAP-5W02-120	N	12/2/2016	eng 1.	Merrury	SW-846 74 70A	0.0020	0 00 000 000	U.	0.0000300	0.000.000	1	H\$16120124-02
HAP-5W02-120	N	12/2/2014	ятад 1 .	Bauene	SW-816 8260C	0.0050	<0.00020	U	0.00020	0 (0)10	1	11516120124-02
HAP-5W02-129	N	12/2/2016	me/L	Eibiltenzenz	SW-816 8200C	070	<0,00030	IJ	0.00030	0.0010	-	115[6120]24-02
HAP-SW02-120	N	12/2/2016	mg L	Tolgene	SW-846 82:0C	1.0	0.000000	U	0.00000	0.0010	1	HSt6120124-02
11AP-5W02-120	N	12/2/2016	mg/1.	Nylene (total)	SW-846 8260C	10	<8 00930	Ū	0.00036	0.0010		11516120124-02
HAP-5W02-120	N	12/2/2016	me.l.	m & p-Xylene	SW-846 8200C	10	<0.00350	1	0 00050	0,0020		HS16120124-02
HAP-5W02-120	N	12/2/2016	n ₂₂ /1.	o-Xylene	SW-846 8369C	10	-0.00030	Ū.	0.00030	0.0010		11516120124-02
HAP-5W02-120	N	12-2/2014	ma 1.	Pletad	5W-316 8270D	7.3	<0.000035	UL-MS/SD	0.000035	0.00020	1	115[6120121-02
HAP-5302-129		12/2/2016	eng/1.	Pything	SW-\$16 8270D	0.024	0.00032	IL MS SD	0.000030	0.0010		HS[6120]24-02
HAP-SW02-121	ED.	12/2/2016	ng/L	Arsenic	SW-\$16 6020A	0.010	8,00330	1	0.000400	0.00500	1	11516120124-03
HAP-5W02-121	ri)	12/2/2016	mar/l.	Banum	SW-546 6020A	2.0	0,126	<u> </u>	0.00190	0.09500		HSt6129124-03
HAP-5W02-121	ED.	12/2/2016	mg.L	Castraises	SW-816 6020A	0.0050	<0.000200	U	6 600200	0.60209		11516120124-03
HAP-SW02-121	- FD	12/3/2016	mg/1	Chromines (total)	SW-846 6020A	0.10	-9 000400	ŭ	0.600400	0.00500		HS16120124-03
HAP-SW02-121	TD I	12/2/2016	inge 1.	Leal	SW-846 6020A	0.015	0.000614	j j	0.900600	0.00500		11516120124-03
BAD-SW92-121	HÚ HÚ	12/2/2016	mg L	Seletation	SW-816 6020A	0.650	0.001.44	1	6.09110	0.00500		HS16120124-03
HAP-SW02-121	TP I	13/2/2016	ng, L	Silves	SW-846 60 30 A	0.12	-0.060200	ů.	0.000200	0.00500		11516120124-03
HAP-5W02-121	m	12/2/2016	ng 1,	Metcury	SW-846 7470A	0.0020	0.0008300	u v	6.0000.00	0.000200		H\$16120124-03
HAP-SW02-121	FD II	12/2/2016	mg-t.	Benzene	SW-346 8269C	0.0050	<0.000X0	tr	0.00020	0.99[0		11516129124-03
HAP-5W02-121	10	12/2/2016	ang.1.	Elivitoraz	SW-846 \$260C	0.70	<0,00030	Ŭ	0.00030	0.5010		11516120124-03
HAP-5W02-121	10	12/2/2016	mg.L	Tohene	5W-816 8260C	1.9	<0.00020	Ű	0.00020	0.0010		HS16120124-03
HAP-SW02-121	- 10	12/2/2016	mg L	Xi lone (total)	SW-816 8260C	1.0	<0.06030	v	0.00030	0.6010		11516120124-03
HAP-5W02-121	TD TD	12/2/2016	me 1.	m & p-Xylene	SW-846 8260C	to	+9.09850	U T	0.00050	0.0020		11516120124-03
HAP-5W02-121	<u>a</u>	13/2/2016	mg L	o-Xylma	SW-816 82490	10	<0.00030	U U	0.00030	0.0020		11516120124-03
HAP-5W02-121	HD I	12/2/2016	11£1	Pherasi	SW-516 8276D	73	-0.000036	UL-MS-SD	0.000036	0.69020		HS16120124-03
HAP-SW02-121	- FD FD	13/2/2016	11 <u>12</u> 1. 11121.	Pytiding	SW-816 8270D	0.024	0.00017	JL-MS-SD	0.600931	0.000.0		HS[6120124-03
HAP-SW02-121	N N	12/2/016	ng L	Arsenic	SW-816 6030A	0.024	0.00334	1	0.000100	0.0010		HS16120124-04
HAP-SW03-120		12/2/2016	ng. L	Batiga	SW-846 6621A	20	0.130		0.00190	0.00500	L	11516120124-04
HAP-SW03-120 HAP-SW03-120	N	12/2/2016	ma:L	Customen	SW-846 6020A	0.0050	0.000207	υ	8.000200	0.00500		
						0.0050	0.000509		0.000200	0.00.00		HS16120124-04
RAP-5W03-120	N	12/2/2016	ng L	Chromaum (tetal)	SW-846 6020A	0.19	0.000509	1		0.00500		11516120124-04
HAP-5W03-120	<u>N</u>	12/2/2016	ng L	l.ca.l	SW-846-6030A			U U	0.090600			11516120124-04
HAP-5W03-139	N	13 3 2016	mg/L	Seletium	SW-846 6020A	0.059	0.00197	1	0.00110	0.00500	1	#IS16120124-04
HAP-5W03-120	×	12/2/2016	me L	Silver	SW-846 6020A	0.12	0.000200	11	0.000200	0 00500		11516120124-01
HAP-SW07-120	N	12/2/2016	ng L	Mercury	SW-846 7470A	9.0020	0.6000300	15	(F.000010)D	\$ 000 7 00	L I	HS16129124-04

									Sanpie	Weikod		
	Sample	Dale			Analytical	1 000		Date Qualifier	Detection Limit	Quantitation Limit	Dilution	a sectores
Semple ID	Тура	Collected	Units	Analyte	Method	LORP	Result		Pare the	the second se	Factor	Laboratory ID
HAP-SW03-120	N	12/2/2016	ng i.	Benzene	SW-\$46 8260C	0.0050	<0.00020	<u> </u>	0.00020	0.0010	.1	11516120124-04
HAP-SW01-120	N	12/2/2016	शष्ट्री.	Ellylbenruse	SW-846 8260C	6.70	<9.00030	1	0 (8)030	0.0010	1	H\$16120124-04
HAP-SW03-120	N	12/2/2016	eng/1	Telame	SW-846 8260C	10	<0.00020	U	0.06020	0106.0		BS16120124-04
HAP-5W03-120	N	12/2/2016	mg.1.	Xylene ((ctal)	SW-346 8260C	10	<0.00030	U	0.00030	0.0010		HS16120124-04
HAP-SW02-120	8	12/3/2016	Hug, L	m & p-Xylesr	SW-846 8260C	10	<0.(x)(50)	U	0.00050	0.0020		11516120124-04
HAP-SW03-120	N	12/2/2016	मळ. १.	o Xylene	SW-816 8 20C	10	<0.00030	Ľ	0.00030	0.0010	1	11516120124-01
HAP-SW03-120	N	12/2-2016	ពដុស្តា.	Phenal	SW-\$46 8270D	7.3	~D.000036	UL-MS/SD	0.0000016	0.00021		HS16120124-04
HAP-SW02-120	8	12/2/2016	កម្ម 1.	Pyndae	5W-846 82791)	0.024	0.00055	11MS/SD	0.000031	0.00 0		HS16120124-04
HAP-UA96-120	N	11/30/2016	mg/L	Total dissolved solida	SM2540C	NS	536		5.00	10.0	1	H\$16120073-10
HAP-UA06-120	N	11-30/2016	ng L	Atsentc	SW-846 60 20A	0.010	0.00081	1	0.000400	0.00500	1	11516120073-10
HAP-17 A06-120	N	11/30/2016	sny/L	Dariunt	5W-846 60 30A	20	11.07.41	· · .	0.09199	0,00500	. 1	HS16120073-10
HAP-UA06-120	N	11/30/2016	ing 1.	Castrains	SW-846 6020A	0.0050	0.000200	U	0.000200	0 00200		11516120073-10
HAP-U A95-120	N	11/30/2016	INZ L	Chromann (total)	SW-846 (4)20A	0.10	-0.000400	. V	0.000400	0.00500	1	H\$16120073-10
HAP-UA06-120	N	11/30/2016	πez/L	Leal	SW-816 6030A	0.015	0.000600	U	0.0096699	0.00500		H\$16120073-10
HAP-UA06-120	N	11/30/2016	ing L	Scienium	SW-\$16 6020A	0.050	<0.00118	Ľ	0.00110	0.00500		11516120073-10
HAP-U A06-120	N	11-30/2016	ng l	Silver	SW-846 6029A	0.12	<0.000200	U	0.000200	0 00500		11516120073-10
RAP-0:A06-120	N	11/31/2016	TTE L	Mercury	SW-8467170A	0.0020	0.0009,000	U	6.0000308	8,060200		11516120073-10
HAP-UA06-120	×	11/30/2016	mg.I.	Mercury	SW-\$46 7470A	0.0028	0.0060306	U	0.0000300	0.000.00		H\$16120073-10
HAP-U A06-120	N	11/30/2016	गा <u>द्र</u> ा. प्राह्ली.	Benzene	SW-846 8260C	0.0050	0.0050	····	0.00020	0 00 00		11516120073-10
HAP-UA06-120	N	11/30/2016	महत. महत.	Ethyltentein	SW-846 8260C	0.000	-:0.000010	<u> </u>	6.00030	6.0110		HS16120073-10
					SW-816 8264C	10	<0.00920	0	0.00020	0.0010		11516120073-10
11AP-UA06-120	<u>N</u>	11/30/2016	mg/1.	Talueno	SW-846 \$260C	10	<0.00030	U V	6 00030	0.0010		
HAP-UA06-120	ĸ	11/10/2016	met.l.	Xytene (retal)						0.0010		11516120073-10
HAP-UA06-120	×	11/30/2016	. ກະ ໂ	m & p-Xylene	SW-8468.000	.10	<9.00050	U	0,00050			11516120073-10
HAP-UA06-120	N	11/30/2016	ng/1.	o-Xylene	SW-816 \$260C	10	<0.00030	U	0.00030	0.0010		11516120073-10
HAP-UA06-120	×	11/30/2016	trat L	Plance	5W-\$16 8276D	73	<0.000035	UIL-MS/SD	6,000,15	0,00020	1	11516120073-10
HAP4/A66-120	X	11/30/2016	πε.Ι.	Fyridae	SW-\$16 \$270D	0.024	0.0042	RMS/SD	0.0090.90	0.0010	1	HS16120073-10
HAP-UA06-120	N	11/30/2516	ing L	Sulfar	SW-316 90.%A	NS	82.1		00	2.59	5	H\$16120973-10
HAP-UATO-120	N.	11-30/2016	n⊵1.	Teral dissolved souds	SM2310C	N5	2490		5.00	10.0		11S16120073-11
HAP-UA10-120	N	11/39/2016	ng L	Arsenic	SW-846 6020A	0.010	0.00734		0.000400	0,00500	- E	H516120073-11
HAP-UA10-120	N	11/30/2016	mg L	Валирі	SW-346 6030A	- 2.0	0.0908		0.00190	0,00500	.1	11316120073-11
HAP-UA16-120	N	11-30-2916	mę, i,	('क्र्युसर्क्षण	SW-3466030A	0.0050	<0.050200	U	0.000.00	0 00 200	1	11516120073-11
HAP-UA16-120	N	11-30/2016	mg L	Chronium (letal)	SW-346 60 30A	.0.10	0.0161		0.000400	0,00500	-	HS16120073-11
HAP-UA10-120	N	11/30/2016	ng L	Lead	SW-\$16 6026A	0.015	0.00785		0.000600	0,00500		HS16120073-11
HAP-UA10-120	ĸ	11/30/2016	mg, L	Sciensum	SW-846 6020A	0.050	0.00662	UHCCB	0.00110	10 00 500		H\$16120073-11
HAP-CA10-120	8	11-30/2916	mgz/L	<u>รีสรร</u>	SW-846 6030A	8.12	<0.090200	1/	0.000200	0.00500	1	H\$16129073-11
HAP-UAPS-120	N	11/30/2016	me L	Mercury	SW-846 7470A	0.0020	<0.0000300	U.	0.0000,000	0.000200	1	H\$16120073-11
HAP-UAID-120	N	11.39/2016	ing L	Mercury	5W-846 7470A	0.0020	-0.0000300	U	0.0000300	0.000200	1	HS16120073-11
HAP-UA10-120	N	11/30/2016	Rig/L	Benzene	SW-846 8269C	0.0050	0.11		0.00020	0.0010	1	11516120073-11
HAP-UA10-120	N	11:30:2016	TIZ L	Ethylbergene	SW-846 8260C	0,79	<0.00030	U	6,00030	0.0010	1	[1516120073-1]
HAP-UA10-120	N	11/30/2016	Ing L	Tolgene	SW-9168260C	1.0	(0.00020)	U	6,00920	0.0919	1	11516120073-11
HAP-UAIS-120	N	11:30/2016	m21.	Sylene ((ctal)	SW-846 8260C	16	<0.0003a	U	0.00030	0.0016	1	4[S16120073-1]
HAP-UA10-120	N	11/30/2016	ing/L	m & p-Xylein	SW-\$16 \$260C	10	<0.00050	v	0.00050	0.0020	i	11S16120073-11
HAP-UA10-120	N	11/30/2016	net L	e-Xyime	5W-846 82601	10	(0.000)30	17	0.09030	0.9010		11816120073-11
		11/30/2016		Phenet	SW-846 8270D	73	0.000035	ULAIS SD	0.690033	\$ 00020		11516120073-11

	Sample	Dale			Analytical				Sample Detection	Method Quantitation	Dilution	
Semple ID	Туре	Collected	Units	Anatria	Method	LORP	Result	Data Qualifier	Link	Limit	Factor	Laboratory ID
HAP-UA10-120	N	11/30/2016	ma L	Pynane	SW-846 82700	0.024	0.025	IL-MS/SO	0.00915	0.0050	5	HS16120073-11
HAP-0A10-120	- N	11/30/2016	BK/L	Sulfate	SW-846 9056A	NS	1190		19.0.	250	50	HS16120073-11
HAP-UA11-120	<u>N</u>	121/2016	ing L	Treat desolved solids	5M2540C	NS	1590	11-F1)	500	100	1	HS16120073-15
HAP-UAH-120	N	12/1/2016	mg.1.	Arsentic	SW-846 6020A	0.010	0.0104	JLID	0.000400	0.00500		HSt6120077-15
HAP-UA11-120		12/1/2016	ne L	Darium	SW-846 6030A	2.0	0.0399		0.60190	0.00500		11516120073-15
HAP-CALL 170		12/1/2016	me 1.	Cadarasan	SW-816 6020A	6 (0)50	0.000565	JI-11)	0.000200	0 00 200	<u> </u>	H516120973-15
HAP-UAH-120	N	12 1/2014	117.1.	Chromann (tetal)	SW-816 6020A	0 10	0.0112	11-110	0.000100	0.00500		11516120073-15
HAP-UA11-120	N	12 1 2016	Fag./L	Les	SW-846 6920A	0.015	0.002 3	#+FD	9 000600	0.00500		11516120073-15
HAP-UA11-120	- <u>N</u>	12/1/2016	ma 1.	Selemon	SW-846 6020A	0.050	0.00314	CH-CCR.RB	0.00110	0.00500		11516120073-15
HAP-UAH-120		12/1/2016	mg.1.	Salver	SW-816 6020A	0.12	-0.00300	U	0.000200	0.00500		11516120073-15
RAP-UAH-120		12/1/2016	ng. c. nc. l.	Mercury	SW-846 7470A	0.0026	6.0300300	li l	6.000030n	0.000200		H516129073-13
HAP-UA11-120	N	12/1/2016	D# 1.	Metchiny	SW-846 7470A	0.0020	-0.0009300	ů v	0002300	0.000000		11516120073-15
HAP-UATE-120	- <u>N</u>	12 1 2016	mg.1.	Bentene	5W-846 8260C	0.0050	4.4	H-HD	0020	6.10	100	11516120073-15
RAP-UAH-120	N N	12/1-2016	au.	Ethyllenanz	SW-816 82600	0.70	-0.6930	11	6,0036	1010	10	HS16126073-15
HAP-UAI1-120	- <u></u>	12/1/2014	mg 1.	Tolucine	SW-816 8269C	01	0.0064	JI FD	0.0020	0.010	10	11516120073-15
HAP-UA11-120	- <u>N</u>	12/1/2016	BWL	Nylene (total)	SW-816 8260C	10	0.037	840	0.0030	0.010	10	11514120073-15
HAP-UATE-120		12/1/2016	Bre L	m & p-Xylear	SW-846 8260C	10	0.037	9410 HTD	0.0350	0.010	10	11516120073-15
HAP-UATI-120		12/1/2016	mg 1.	o-Xviene	SW-816 82604	to	+0.0030	1	0.0030	0010	10	11516120073-15
HAP-UA11-120	<u></u>	12/2016	ng.t.	Phand	5W-316 8270D	7.3	0.0045	JL-MS SDAD	0.0030	0010	3	11516120073-15
HAP-UATI-120	- <u></u>	12/1/2016	nyci,	Pyridese	SW-846 8270D	0024	0,028	JL-MS/SD	0.80015	0.0052		H\$16120073-15
HAP-UAH-120		12/1/2016	mg.1.	Salfate	SW-346 90 56A	NS	1430	16545 at	100	250	500	11516120073-15
HAP-UA11-121	FD	12/1/2014	Inst.1.	Total dissolved solids	SM2540C	N5	3260	1410	3.00	250 10.0	300	11516120073-16
HAP-UATE DI	- 10	12/1/2016		Arseniu	SW-846 6020A	0010	0.0320		6.003100	0.00500		11516120073-16
	FD	12/1/2016	ngL	Banuni	SW-346 60 20A	20	6.0404	1110	0.60190	0.00,500		11516120073-16
HAP4/AH-121	FD FD	12 1/2016	mat	Cadmini	SW-846 6020A	0 0010	0.00300	11410	0.00190	0.00260	1	11516120073-16
HAP-UA11-121			πæ1.			6 10	0.0371		0.000100	0.69500		H516120073-16
HAP-UA11-121	- HD	12-1-2016	ru, L	Chronium (lotal)	SW-\$16.6020A		0.0186	H-FD H-FD	0.000000	0.00500		11516120073-16
HAP-UA11-121	FD	12/1/2016	my L	Scientin	SW-846 6020A SW-846 6020A	0.015	0.00539	UH-CCB.RB	0.000500	0.00500		11516120073-16
HAP-UATI-121		12/1/2016	n#1.	Silver			<0.000200 <0.000200		0.000200	0.05500		HS16120073-16
	-FD FD		ng L	Metcury	SW-\$46 6020A	0.12	<0.000.00	L 13	0.0000300	0.000200		11516120073-16
HAP-CA11-121		12/1/2016	ng L		SW-346 7470A	6 6020	<0.0000366		0000000	0.000200		115161200/3-16
HAP-UAH-121	(FD)	12-1-2916	ពណ្ដ	Mercury	SW-8467470A			U-HD	0.020			
HAP-UA11-121	ทบ	12/1/2016	ng L	Bentene	SW-346 8 260C	0.0050	11		0.0030	<u>6 10</u>	100 10	11516120073-16
HAP-CA11-121	TD .	12/1/2016	ng L	Ethylkervene	SW-846 8260C	0,70	-0.0036	U 14-11)	0.0020	0,010	10	HSI6120073-16
HAP-UAH-121	n	12/1/2016	ny.L	Foliazae	SW-846 8260C	1.0	0.01		0.0020	0.910		HS16120073-16
HAP-UA11-121	m	12/1/2016	πę.L	Nylene (fotal)	SW-846 8260C	64	0.11	11-FD		0.018	10	11516120073-16
HAP-UA11-121	<u> </u>	12 1/2016	tre 1.	m & p-Xylene	SW-\$16 \$260C	10	0.11	11-810	0.0050	0.00	10	HS16120073-16
HAP-CATE-121	៣	12/1/2016	ng L	o-Xylone	SW-816 8260C	10	-0.0030	11		0.010	10	H\$16120073-16
HAP-UAH-121	80	12/1/2016	n <u>y 1.</u>	Placed	5W-\$46 8270D	73	0.038	JL-MS SD.ID	0.00015	0.00.0	10	11514120073-16
11AP-UA11-121	FD	12/1/2016	ma L	Pyridine	SW-\$16 \$270D	0.034	0.032	IL-MS/SD	0.00030	0.010	10	11516120073-16
HAP-UA 11-121	<u>- FD</u>	12/1/2016	ny L	Solfar	SW-846 9056A	85	2700	16 PD	160	250	\$ 93	11516120073-16
HAP-UA12-120	<u> </u>	12/1/2016	ng L	Total desolved which	SM2540C	NS	2250		5.00	មេខ	1	HS16120073-14
HAP-UA12-120	N	12/1/2016	मध्].	Arszuc	SW-846 6020A	0.910	0.0279		0.000400	0.60500		HS16120073-11
HAP-0A12-120	8	12/1/2016	तक 1	ាររាះព	SW-846 6030A	20	0.0249		0.00190	0.00500	-	HSt6120073-14
HAP-DAI2-120	8	12/1/2016	8 <u>7</u> 1.	Cashnalan	SW-846.6020A	0.690	9,000500)	8 000 50	0.00200		HS14120073-14

Sempis 10	Sampla Type	Date Collected	Unita	Anabria	Analytical Method	LORP	Result	Data Qualifier	Sample Detection Limit	Nothed Quantitation	Ollulon Factor	Laboratory ID
HAP-UA12-120	N N	12/1/2016	ma I.	Chronaum ((ctal)	5W-846 60.20A	0.10	6.0.69	Cota Gustilier	0.000400	0.00500		H516120073-14
HAP-UA12-120	N	12/1-2016	niz L	Leal	5W-846 6020A	0.015	0.00399	<u> </u>	6 000500	0.00500		HS16120073-14
HAP-UA12-120	<u>N</u>	12/1/2016	mg/l.	Selection	SW-846 6020A	0.059	0.00519	Un-cenza	e.ootto	0.00500		HS[6]:0073-14
ITAP-UA12-120	N	12/1/2016	п <u>к</u> 1.	Silver	5W-846 @20A	0.12	0.000200	U	0.009200	0.00500		HS16120073-14
HAP-UA12-120	- <u></u>	12/1/2016	ng/L	Menury	SW-816 7170A	0.0020	0.0000300		0.0020300	6.000300		H51612007.3-14
HAP-UAR-120		12/1/2816	mg.l.	Metchey	SW-846 7470A	D 0020	0.0000100		0.000300	0.000200	1	HS[6]20073-14
[[AP-UA12-120]	N	12/1/2016	ng.1.	Denzena	5W-846 8260C	0.0850	12		0 0 20	0.10	100	HS[6120073-14
HAP-0A12-120	N	12/1-2016	πa/L	Ethyltenrer	SW-846 8260C	6.74	GP.0030	U	0.0030	0.010	10	HS16120073-14
HAP-UA12-120	N	12/1/2016	TIZ L	Toluctic	SW-846 8260C	19	0.016		0.0020	0.010	10	HS[6]20073-14
HAP-UA12-120	N	12/1/2016	ng1.	Nylene (Jotal)	5W-316 8260C	10	8,11		0.0010	0.010	10	H5161209"3-14
HAP-4/A12-120	N	12/1/2016	mg/l.	m & p-Xylene	SW-846 \$260C	10	0.11		a.0050	0.020	10	11516120073-14
HAP-UA12-120	N	12/1/2016	ing 1.	o-Xylme	SW-846 82600	01	-0.0030	U	0.0030	0.010	10	HS16120073-14
HAP-UA12-120	N	12/1/2016	ange L	Pherait	SW-\$46 8270D	7,3	0.019	11-MI5-SD	6.00089	0.0051	25	HS16120073-14
HAP4/A12-120	N	12/1/2016	ng/L	Pyridiae	5W-\$16 8270D	0.024	u1*	JL-MS/SD	0.00077	0.026	25	JIS16120073-14
HAP-UA12-120	N	12/1/2016	mgil.	Selfat	SW-846 9056A	NS	580		10.0	250	50	HSI6120073-14
HAP-UA14-120	N	15/1/2016	ing L	Total dissolved roulds	5M2540C	N5	15 00		5.00	100	1	HS16120073-12
HAP-UA14-129	N	12/1-2016	ાપ્ટ્રો.	Arsenic	SW-840 60.0A	606	6.10)	<u> </u>	0.000400	0,00500	1	HS16120073-12
HAP4/A11-120	N	12/1/2016	ttp://	Denum	SW-846 6029A	2.0	0.766		0.00190	0.00500		JIS16120073-12
HAP-UA14-120	N	12/1/2014	περ. Ι.	Column	SW-846 60 NA	p.005u	6.0197		0.000200	0.09200	1	11516120073-12
HAP-0A14-120	N	2/1-2016	ing/1.	Chromisen (lotal)	SW-\$46 6020A	0.10	0.421		0.0000100	0.00509	1	H\$16120073-12
HAP-UAH-120	8	12/1/2016	79.1	Leal	SW-\$46 6030A	4015	0.0242	, , , , , , , , , , , , , , , , , , , ,	0.00300	0.0250	3	JISI6120073-12
HAP-UA14-120	N	12/1/2016	us.l.	Scientum	SW-846.6030A	0.050	0.0223		0.00110	0.00500	1	11St6120073-12
HAP-UA14-120	N	12/1/2016	ክድ ኪ	Silver	SW-846 60.30A	.0.12	+++++++++++++++++++++++++++++++++++++++	U	0.000200	0.09590		HSI6120073-12
HAP-UAH-129	N	12/1/2016	eng/1	Mercury	SW-846 7470A	0.0620	0.000168	,	0.0000300	0.000200		HS16120073-12
HAP-UA14-120	Ň	12/1/2016	1,281	Mercury	SW-846 7470A	0.0020	0.000168	<u> </u>	0.00003000	0 000200	1	HS16120073-12
HAP-UA14-120	8	12/1/2016	THE L	Banythe	SW-346 \$260C	0.0050	16		0.040	0.20	200	HS16120073-12
HAP-UAH-120	N	12/1/2016	mert.	Ethlatume	SW-816 \$2600	0.70	0.0030	U	0.0030	0.019	10	11516120073-12
HAP-UATI-120	N	121/2016	ng L	Toluette	SW-846 8260C	10	0.032		8 0720	0.010	10	11516120073-12
HAP-UA14-120	N	12/1-2016	BUE L	Nilene (total)	SW-846 8260C	10	0.15		0.0030	0.010	10	HS16120073-12
HAP-UA14-120	N	12/1/2016	π12/1	m & p-Xylene	SW-846 \$260C	10	0.15		0.0050	0.029	tu	113 6120073-12
HAP-UA11-120	N	121/2016	ng. 1.	e-Xylene	5W-846 8260C	10	+4.0030	U	0.0030	0100	10	11516120073-12
HAP4:AH-120	N	12:1/2016	π∉1.	Phenol	SW-846 8270D	73	0.022	JL-MS-SD	0 (0) 655	0.0051	25	#1516120073-12
RAP-UALI-120	N	12/1/2016	tre L	Pypidar	SW-\$16 \$270D	0.021	613	JL-MS-SD	0.02676	0.025	25	HSI6120073-12
HAP-UA11-120	×	12/1/2016	me L	Suffar	SW-\$16 9036A	NS	1.02		2100	5.00	10	HS16120073-12
HAP4:A15-129	N	11-30-2016	ns:'L	Teral disserved scode	SM2540C	NS	320		5.00	100	1	H516120073-08
HAP-UA15-120	N	11/30/2016	mail.	Arsenic	SW-846 6020A	0.010	64114		0.000400	0.00500	1	HS16120973-08
HAP-UA15-120	N	11/30/2016	tng: L	Banum	SW-\$46 6020A	2.0	0.0 13	i	8 00 199	0.00500	1	11516120073-68
HAP-UA15-120	N	11/30/2016	mg-1	Cadmium	SW-846 6020A	0.0010	<0.000200	U	0.000250	0.00209		H51613-073-08
HAP-UA15-120	N	11/36:2016	miz-1.	Chronointh (total)	SW-\$16 6020A	9.10	0.000400	Ŭ	0.000400	0.00500	1	H516120073-08
HAP4/A15-120	N	11/30/2016	IT C. I.	Lead	SW-816 (0) 20A	0.915	<0.000000	U	0.000500	0.00500	1	11516120073-08
HAP-6:A15-120	N	11/30/2016	ng/L	Seleniont	SW-314 6028A	0.050	<0.00110	Ū.	6.00110	9,00500	1	11516120073-08
HAP-UA15-129		11/30/2016	nte/1.	Salver	5W-846 6020A	0.12	<0.000200	U	0.000200	0.00500		HS16120073-08
HAP-UA15-120	N	11/30/3016	Hat 1.	Mercury	SW-846 7470A	0.0920	· 0.0000300	ũ	0.0000300	0.000200		H\$16120073-08
HAP-0-A15-120	N	11/30/2016	.ng L	Mercury	SW-846 7470A	0.0020	-0.5008300		0.0569300	p 069260		11516129073-68

					8				Sample Detection	Method Quanilitation	Ditution	
	Sample	Date Collected	Units	Analyle	Analytical Method	LORP	Result	Data Qualifior	Limb	Limit	Factor	Leboratory ID
Sample ID	Туре			Bentene	SW-846 8260C	0.0059	-9.00020		0.00920	0.0010		11516120073-08
HAP-UA15-120	N	11/10/2016	ng.1.	Ethyliceurer	SW-846 8260C	0.0059	<0.00030	10 10	0.00030	0.0010		11516126073-08
HAP-UA15-120	X	11/30/2016	π <u>φ</u> 1.		SW-846 8260C	10	\$ 00030	v	0.00020	0.0010		1(5)6120) 3-08
HAP-UAIS-178	8	11/30/2016	mg/t.	Tolueux	5W-846 8260C	10	0.00030	U U	0.00030	0.0010	1	HS16129073-08
HAP-UA15-129	N	11/30/2016	ng L	Nyirne (total)	SW-846 8260C	10	<0.00050	10	0.00050	0.0020		11516120073-08
HAP-UA15-120	N	11/30/2016	nr.l.	m & p-Xylene		10	<0.00030		0.00030	0.0010	1	1(5)6120073-08
HAPAJAIS-120	N	11/30/2016	nte:].	0-Xylend	SW-846 8260C	7.3	0.000036	UR-MS SD	0.00036	0.60920		HS16129073-08
HAP-UA15-120	N	11.30/2016	ny.L	Plwnol	SW-846 8270D	9.024	-0.000030	UIL-MS SD	0.000031	0.0010		HS16129073-08
HAP4/A15-120	N	11/30/2016	กน/1.	Pyridine	SW-846 8270D		50.7	010-865-80	1.00	2.50	3	HS16120073-08
HAP-UA15-120	×	11/30/2016	π <u>α</u> .1.	Sulfare	SW-845 9056A	NS	912		5.06	10.0		11516120073-09
HAP-DA16-120	N	11/30/2016	ру.1 .	Tetal dissolved tolids	SM254043	NS 8 010	0.000598	[0000000	0.00500		11516120073-09
HAP-12A16-120	N	11/39/2016	112/L	Aroutite	SW-846 6020A	2.0	0.128	/	0.00190	0.00500		HS16120073-09
HAP-UA16-120	N	11/30/2016	ting/3,	មិណាមារ	SW-846 6020A				0.00190	0.00200		HSIG120073-09
HAP-UA16-120	N	12/30/2016	ngL	Cadmini	SW-846 6020A	8,0050	~0,0002(*)	U		0.00200		HS16120073-09
RAP-UA16-120	N	11:30/2016	11g/L	Chevrianan (tetal)	SW-816 6920A	0,10	0.000100	11 17	0.008400	0.00500		HS16120073-09
HAP4JA16-120	N	11/30/2016	mg.L	[.22]	SW-846 6020A	0.015	0.000600		0.0689600	0.00500		
HAP-UA16-120	N	11/30/2016	1114 1.	Sclennam	SW-846 6020A	0.050	<0.09110	8	0.00110	9,60500		HS16120073-09 HS16120073-09
HAP-UA16-120	N	11/30/2016	nu.L	Silvet	SW-346 6020A	0.12	-0.000200	U	0.009260			
HAP4UA16-120	×	11/38/2016	mg/l.	Mercupy	SW-846 7470A	0.0020	< 0.0000300	1	0.0000300	0.000260		HSI6120073-09 HSI6120073-09
HAP-0A16-120	ž	11-39/2016	11g. l.	Mencuzy	SW-846 7470A	0.6020	<0.0000300	U	0.0000300	0.000200	1	
HAP-0A16-120	N	11/30/2016	ոպե	liautere	SW-846 8269C	0,0050	6.4		0.020	0 10	100	HSI6120073-09
HAP-0A16-120	X	11/36/2016	ng L	Elfsibenzene	SW-\$16 8360C	0.70	<0.6039	U U	0.0030	nate	Į0	H\$16129073-09
11AP-UA16-120	N	11/10/2016	ng L	Toluene	SW-846-8260C	.10	-0.0020	۱ پ	0.0020	0010	m	11516120073-09
HAP-UA16-L20	8.	11/30/2016	ng L	Nylene ((real)	SW-846 8260C	10	0.0030	ប	0.0030	0010	to	H\$16120073-09
HAP-UA16-120	X.	11/00/2016	ng/l.	m & p Nylene	SW-846 \$260C	10	0.0050	1(0.0050	0.030	to	H\$16120073-09
HAP-UA16-120	X	11-30/2016	mg L	o-Xylene	SW-846 8260C	10	0.0030	U	0.0030	0.010	10	HS16120073-09
HAP-UA16-120	N N	11/30/2016	また	Phenol	SW-846 8270D	73	0.0017	IL MS SD	0.000035	#.00020	1	JIS16120073-09
HAP-UA16-120	N	11/30/2016	ng L	Pyridine	SW-\$16 \$270D	0.024	0.0038	JL MS SD	0.000030	0.0010	1	11516120073-09
HAP-UA16-128	N	11/0/2016	are.t.	Sulfate	SW-846 9056A		198	I	2.00	500	10	11516120973-09
		<i>~</i> .							0.0100	0.0100	1 1	HS16120124-05
HAP-SD01-123	N	12/2/2016	WT%	Percent moisture	ASTM D2216	NS	13.9 2.25		0.110	0.531	<u> </u>	HS16120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	Arsenic	SW-846 6020A	24			0.110	0.531	1 1	HS16120124-05
HAP-S001-123	N	12/2/2016	mg/kg	Arsenic	51V-846 6020A	24	2.25	<u> </u>	0.0850	0.531	1	HS16120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	តិតរងរកា	SW-846 6020A	8100	45.A		0.0850	0.531	1 1	HS16120124-05
HAP-S001-123	N	12/2/2016	mg/kg	មិងកេរពា	SW-846 6020A	8100	45.4					
HAP-SD01-123	N	12/2/2016	mg/kg	Cadmium	SW-846 6020A	51	<0.053	U	0.0530	0.531		HS16120124-05 HS16120124-05
HAP-SD01-123	N	12/2/2015	mg/%g	Cadmium	5W-846 6020A	51	<0.053	<u> </u>	0.0530			HS16120124-05
HAP-SD01-123	N	12/2/2016	mg/3g	Chromium (total)	SW-846 6020A	27000	5.96		0.0960	0.531	1	
HAP-5001-123	N	12/2/2016	mg/¥g	Chromium (total)	5W-846 6020A	27000	5.96	L	0.0960	0.531		H\$16120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	Lead	SW-846 6020A	500	7.07		0.0530	0.531	1	H516120124-05
HAP-SD01-123	N	12/2/2016	mg/3g	Lead	SW-846 6020A	500	7.07	ļ	0.0530	0.531	1	H516120124-05
1140 4001 133	N	12/2/2016	ang/kg	Selenium	SW-846 6020A	310	0.388		0.190	0.531	1	H516120124-05
HAP-SD01-123	<u>N</u>	12/2/2016	mg/kg	Selenium	SW-346 6020A	310	0.388		0.190	0.531		H\$16120124-05
HAP-SD01-123 HAP-SD01-123	N N	12/2/2016	mg/kg	Solver	SW-846 6020A	97	<0.085	i i	0.0850	0.531	1 - 1 -	H516120124-05

	Semple	Date	1000.000		Analytical				Detection	Method Quantitation	Dilution	
Sample ID	Туре	Collected	Units	Analyte	Method	LORP	Result	Data Quatifior	Limit	Limit	Factor	Laboratory ID
HAP-SD01-123	N	12/2/2016	me/ke	Silver	SW-846 6020A	97	<0.085	13	0.0850	0.531	1	HS16120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	Mercury	5W-846 7471A	2.1	0.0112		0.000590	0.00416		H516120124-05
HAP-\$001-123	N	12/2/2016	mg/kg	Mercury	SW-846 7471A	2.1	0.0112		0.000590	0.00416	1	H516120124-05
HAP-5001-123	N	12/2/2016	mg/kg	Genzene	5W-846 8260C	69	<0.00046	. U	0.00046	0.0046	1	H\$16120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	Ethylbenzene	SW-846 8260C	5300	<0.00064	Ű	0.00064	0.0046	<u>i</u>	H516120124-05
HAP-SD01-123	N	\$2/2/2016	mg/kg	Toluege	SW-846 8260C	5400	<0.00055	ŭ	0.00055	0.0046	1	H516120124-05
HAP-5001-123	Ň	12/2/2016	me/xe	Xyiene (totai)	SW-846 8260C	3700	<0.00092	u U	0.00092	0.0046	;	H516120124-05
HAP-SD01-123	Ň	12/2/2016	mg/kg	m & p-Xylene	SW-846 8260C	4700	<0.0015	Ű.	0.0015	0.0092		H\$16120124-05
HAP-SD01-123	N	12/2/2016	mg/vg	o-Xyiene	SW-846 8260C	29000	<0.00092	ŭ	0.00092	0.0046	i	HS16120124-05
HAP-SD01-123	N	12/2/2016	mg/kg	Phenol	5W-846 82700	950	<0.0013	Ŭ	0.0013	0.0077		H516120124-05
HAP-SDO1-123	N	12/2/2016	me/ke	Pyridine	SW-846 82700	82	<0.0010	Ū.	0.0010	0.0077	i	H\$16120124-05
HAP-\$D02-120	N	12/2/2016	WT%	Percent moisture	ASTM D2216	NS	18.6		0.6100	0.0100	1	H516120124-06
HAP-\$002-120	N	12/2/2016	me/ke	Arsenic	SW-845 6020A	24	1.98	11-FD	0.120	0.587		H516120124-06
HAP-5002-120	N .	12/2/2016	me/ke	Arsenic	SW-846 6020A	24	1.98	JI-FD	0.120	0.587	1	HS16120124-06
HAP-SD02-120	N	12/2/2016	me/ke	Barkum	SW-846 6020A	8100	124	JI-FD	0.0940	0.587	1	H516120124-06
HAP-SD02-120	N	12/2/2016	melke	Barsum	SW-846 6020A	8100	124	G7-IL	0.0940	0.587		H\$16120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Cadmium	SW-846 6020A	51	<0.059		0.0590	9.587		1/516120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Cadmium	SW-846 6020A	51	<0.059	Ū	0.0590	0.587		HS16120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Chromium (total)	SW-845 6020A	27000	6.22		0.110	0.587	1	H\$16120124-06
HAP-5D02-120	N	12/2/2016	mg/kg	Chromium (total)	SW-846 6020A	27000	6.22		0.110	0.587	1	H516120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Lead	SW-846 6020A	500	6.33		0.0590	0.587	1	HS16120124-06
HAP-5D02-120	N	12/2/2016	mg/kg	Lead	SW-846 6020A	500	6.33		0.0590	0.587	1	H516120124-06
HAP-5002-120	N	12/2/2016	mg/kg	Scienium	SW-846 6020A	310	0.493	,	0,210	0.587	1	HS16120124-06
HAP-5002-120	N	12/2/2016	mg/kg	Selenium	SW-846 6020A	310	0.493	j ·····	0.210	0.587	1	H516120124-06
HAP-SD02-120	Ň	12/2/2016	mg/kg	Silver	5W-846 6020A	97	<0.094	Ū.	0.0940	0.587	1	HS16120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Silver	SW-345 6020A	97	< 0.094	U	0.0940	0.587		H515120124-06
HAP-SD02-120	N	12/2/2016	mg/xg	Mercury	SW-846 7471A	2.1	0.00632	л-FD	0.000630	0.00444	1	HS16120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Mercury	SW-846 7471A	2.1	0.00632	H-FD	0.000630	0.00444	_ <u>_</u>	H516120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Benzene	SW-846 8260C	69	<0.00050	· · · ·	0.00050	0.0050	1	HS16120124-06
HAP-5D02-120	N	12/2/2016	mg/kg	Ethylbenzene	SW-846 8260C	5300	<0.00070	U	0.00070	0.0050	1	H516120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Toluene	5W-846 8260C	5400	<0.00060	Ŭ	0.00060	0.0050	1	HS16120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Xylene (total)	SW-846 8260C	3700	<0.0010	U	0.0010	0.0050	1	HS16120124-06
HAP-5D02-120	N	12/2/2016	mg/kg	m & p-Xylene	SW-846 8260C	4700	6100.0>	U	0.0016	0.010	ī	H516120124-06
HAP-SD02-170	N	12/2/2016	mg/kg	o-Xylene	5W-846 8260C	29000	<0.0010	U	0.0010	0.0050	1	H516120124-06
HAP-SD02-120	N	12/2/2016	mg/kg	Phenol	SW-845 82700	950	< 0.0014	U	0.0014	0.0081	1	H516120124-06
HAP-SD02-120	N I	12/2/2016	mg/kg	Pyridine	SW-846 82700	82	<0.0011	U	0.0011	0.0081	1	HS16120124-06
HAP-SD02-121	fð	12/2/2016	WI%	Percent moisture	ASTM D2216	NS	19,4		0.0100	0.0100	1	HS16120124-07
HAP-5D02-121	Q1	12/2/2016	mg/kg	Arsenic	5W-846 6020A	24	1.28	II-FD	0.120	0.590		H516120124-07
HAP-SD02-121	FD	12/2/2016	mg/kg	Arsenic	SW-845 6020A	24	1.28	JI-FD	0.120	0.590	i	H516120124-07
HAP-5002-121	FD	12/2/2016	mg/kg	មិនអេកា	5W-846 6020A	8100	36.5	G1-H	0.0940	0.590	1	H\$16120124-07
HAP-SD02-121	FD	12/2/2016	mg/kg	Barium	SW-846 6020A	8100	36.5	JI-FD	0.0940	0.590		H516120124-07
HAP-SD02-121	FD	12/2/2016	mg/kg	Cadmaum	SW-846 6020A	51	<0.0590	U	0.0590	0.590	i	HS16120124-07
HAP-SD02-121	FD	12/2/2016	eng/kg	Cadmium	SW-846 6020A	51	<0.0590	Ū	0.0590	0.590	1	H516120124-07
HAP-SD02-121	7D	17/2/2016	mg/kg	Chromium (totat)	SVV-846 6020A	27000	4.13		0.110	0.590	i	HS16120124-07

	Sample Type	Dale Collected	Units	Analyte	Analytical Method	LORP	Result	Data Qualifier	Semple Detection Limit	Melhod Quantitation Limit	Dilution Factor	Laboratory ID
Sample ID HAP-5002-121	FD	12/2/2016	m£/¥£	Chromium (total)	SW-846 6020A	27000	4.13		0.110	0,590	1	H516120124-07
HAP-5002-121	- 04 - 04	12/2/2016	mg/kg	Lead	SW-846 6020A	500	3.49		0.0590	0.590	1	H\$16120124-07
	FD 80	12/2/2016	mg/kg mg/kg	Lead	SW-846 6020A	500	5.49		0.0590	0.590	1	H\$16120124-07
HAP-5D02-121	- FD	12/2/2016	mg/xg mg/xg	Selenium	SW-845 6020A	310	0.408	1	0.210	0.590	1	H\$16120124-07
HAP-SD02-121	- 10	12/2/2016	mg/kg mg/kg	Selenium	SW-846 6020A	310	0,408	1	0.210	0.590	1	H516120124-07
HAP-SD02-121				Silver	SIV-846 6020A	97	<0.0940	<u> </u>	0.0940	0.590	1	H516120124-07
HAP-5D02-121	FD	12/2/2016	mg/kg	Silver	SW-846 6020A	97	<0.0940	<u>u</u>	0.0940	0.590	1	H516120124-07
HAP-SD02-121	FD	12/2/2016	mg/kg	Mercury	SW-846 7471A	2.1	0.00889	04-IL	0.000620	0.00439	- î -	H516120124-07
HAP-SD02-121	FD	12/2/2016	me/ke		SW-846 7471A	2.1	0.00889	JI-FD	0.000620	0.00439	3	H516120124-07
HAP-5002-121	FD	12/7/2016	mg/kg	Mercury	5W-846 8260C	69	<0.00048	U	0.00048	0.0048	1	H516120124-07
HAP-S002-121	FD	12/2/2016	me/ke	Benzene	SW-846 8260C	5300	<0.00067	<u> </u>	0.00067	0.0048	1	HS16120124-07
HAP-5002-121	FD	12/2/2016	me/ke	Ethylbenzene	SW-846 8260C	5400	<0.00057	<u> </u>	0.00057	0.0048		HS16120124-07
HAP-5002-121	FD	12/2/2016	me/ke	Toluena	5W-846 8260C	3700	<0.00096	Ŭ	0.00096	0.0048	1	H516120124-07
HAP-SD02-121	FO	12/2/2016	m#/k#	Xylene (total)		4700	<0.0015	Ŭ	0.00015	0.0096	i	H\$16120124-07
HAP-SD02-121	FD	17/2/2016	mg/kg	m & p Xyiene	SW-846 8260C	29000	<0.00036	Ŭ	0.00096	0.0048		H516120324-07
HAP-SD02-121	01	12/2/2016	mg/xg	0-Xyiene	SW-846 8260C		<0.00034	<u> </u>	0.0014	0.0082	1	H\$16120124-07
HAP-SD02-121	FD	12/2/2016	mg/kg	Phenol	SW-846 8270D	950 82	<0.0014	0	0.0014	0.0082	1	H516120124-07
HAP-5002-121	FD	12/2/2016	mg/¥g	Pyridine	SW-846 82700				0.0100	0.0100		H516120124-08
HAP-5003-120	N	12/2/2016	WT%	Percent moisture	A\$TM D2216	NS	17.7		0.110	0.571		H516120124-08
HAP-SD03-120	N	12/2/2016	ang/kg	Arsenic	SW-846 6020A	24 24	1.02		0.110	0.571	1	HS16120124-08
HAP-SD03-120	N	12/2/2016	tig/kg	Arsenic	5W 846 6020A		1,02		0.0910	0.571	3	HS16120124-08
HAP-S003-120	N	12/2/2016	mg/kg	Baríum	SW-846 6020A	8100	17.4		0.0910	0.571	1	H\$16120124-08
HAP-SD03-120	N	12/2/2016	me/ke	Barrum	5W-846 6020A	8100	17.4			0.571	1	HS16120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Cadmium	SW-846 6020A	51	<0.057	0	0.0570	0.571		HS16120124-08
HAP-5D03-120	N	12/2/2016	mg/¥g	Cadmium	SW-846 6020A	51	<0.057	U	0.0570	0.571		H\$16120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Chromium (total)	SW-846 6020A	27000	2.92					H516120124-08
HAP-SD03-120	Ň	12/2/2015	mg/kg	Chromium (total)	SW-846 6020A	27000	2.92		0.100	0.571	1	H516120124-08
HAP-SD03-120	N	12/2/2016	mg/xg	Lead	SW-846 6020A	500	4.53		0.0570			HS16120124-08
HAP-SD03-120	N .	12/2/2016	mg/kg	Lead	SW-846 6020A	500	4.53		0.0570	0.571	1	
HAP-SD03-120	N	12/2/2016	mg/irg	Selenium	5W-846 6020A	310	<0.21	U	0.210	0.571	<u> </u>	HS16120124-08
HAP-\$003-120	N	12/2/2016	mg/kg	Selealum	SW-846 5020A	310	<0.21	U	0.210	0.573	1	H516120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Salver	SW-845 6020A	97	<0.091	Ų	0.0910	0.571	1	H516120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Silver	SW-846 6020A	97	<0.091	U	0.0910	0.571	1	H516120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Merculy	SW-846 7471A	2.1	0.00815		0.000610	0.00428	1	HS16120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Mercury	SW-846 7471A	2.1	0.00815		0.000610	0.00428	1	HS16120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	Benzene	5W-846 8260C	69	<0.00041	U	0.00041	0.0041	1	H\$16120124-08
HAP-5003-120	N	12/2/2016	mg/kg	Ethylbenzene	SW-846 8260C	5300	<0.00057	U	0.00057	0.0041	1	HS16120124-08
HAP-SD03-120	N	12/2/2016	mg/3g	Toluene	5W-846 8260C	5400	<0.00049	U	0.00049	0.0041	1	H\$16120124-08
HAP-5003-120	N	12/2/2016	mg/Yg	Xylene (total)	SW-846 8260C	3700	<0.00081	Ų	0.00081	0.0041		H\$16120124-08
HAP-SD03-120	N	12/2/2016	mg/kg	m&p-Xylene	5\V-846 8260C	4700	<0.0013	U	0.0013	0.0081	1	H516120124-08
HAP-SD03-120	N	12/2/2016		o-Xylene	SW-846 8260C	29000	<0.00081	U	0.00081	0.0041	1	H516120124-08
HAP-SD03-120	N	12/2/2016	melke	Phenol	SW-846 8270D	950	<0.0013	U U	0.0013	0.0030	1	H\$16120124-GB
HAP-SD03-120	Ň	12/2/2016		Pyridine	SW-846 8270D	82	<0.0011	U U	0.0011	0,0080	1	H\$16120124-08

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Sam Sample ID Tyj		Analyte	Ansiytical Method LORP	Result Data Qualifier	Dilution Factor Laboratory ID
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APPENDIX I – INTERVIEW FORMS

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: <u>Highlands Acid Pit</u>	EPA ID No.: <u>TXD980514996</u>
Interviewer Name: <u>Eric Marsh</u>	Affiliation: <u>Skeo</u>
Subject Name: <u>Stephen Pereira</u>	Affiliation: <u>EPA</u>
Subject Contact Information:	-
Time:	<u>Date: 12/18/2016</u>
Interview Location:	
Interview Format (circle one): In Person	Phone Mail Other: Email

Interview Category: Federal Agency

1. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

My overall impression of the project is that the site has been well maintained and is protective of both human and environmental health. Operations and maintenance activities at the site are continuous. The EPA supports the possibility of the site being used for future reuse as long as it doesn't adversely impact the current remedy.

2. What is your assessment of the current performance of the remedy in place at the Site?

The remedy for this site appears to be effective. This particular remedy was chosen because there were no Contaminants of Concern (COC) that were detected above the Federal Drinking Water Maximum Contaminant Limits (MCL) in any of the surface water or deeper aquifers. Sampling data shows that there have been detections of COC in both the middle and deep aquifers occurring during subsequent sampling events. Therefore, further sampling maybe needed.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

There was an inquiry from Lone Star Legal Aid. I followed up with them with a phone call. Their inquiry was about another Superfund Site in the area.

4. Has your office conducted any site-related activities or communications in the past five years apart from routine activities? If so, please describe the purpose and results of these activities.

The EPA has provided facts sheets, updated the repository, interviewed government officials, and updated the EPA website for Highlands Acid Pits.

5. Are you aware of any changes to state laws in the past five years that might affect the protectiveness of the Site's remedy?

No, the EPA is not aware of any changes in state law that might affect the protectiveness of the remedy.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

Yes, the EPA is comfortable with the institution controls at the site.

7. Do you feel that the recommendations from the 2012 Five-Year Review have been adequately addressed? Please explain.

Yes, the EPA feels that the recommendations from the 2012 Five Year-Review have been adequately addressed.

8. Are you aware of any changes in projected land use(s) at the Site?

No, the EPA is not aware of any changes in projected land use at the site.

9. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

The EPA recommends an investigation to assess the movement of site-related contaminants in both the middle and deep aquifers.

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: Highlands Acid Pit	EPA ID No.: <u>TXD980514996</u>
Interviewer Name: <u>Ian Penn</u>	Affiliation: <u>Skeo</u>
Subject Name: Sherell Heidt	Affiliation: <u>TCEQ</u>
Subject Contact Information:	
Time:	Date: January 17, 2017
Interview Location:	
Interview Format (circle one): In Person	Phone Mail Other Email

Interview Category: State Agency

1. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

My overall impression of the remedy at the site is that it continues to be protective of human health and the environment. Currently, the site is not being reused, and operations and maintenance activities at the site are ongoing. The TCEQ is supportive of the potential future reuse of the site that does not negatively impact the implemented site remedy.

2. What is your assessment of the current performance of the remedy in place at the Site?

Currently, the remedy appears to be functioning as designed. However, the remedy was selected because no contaminants of concern were detected above the Federal Drinking Water Maximum Contaminant Limits (MCL) in any of the surface water bodies or deeper aquifers. Subsequent analysis of the groundwater on-site showed persistent detections of contaminants of concern in the middle and deep aquifers, which may warrant further analysis of remedy performance.

3. Are you aware of any complaints or inquiries regarding site-related environmental issues or remedial activities from residents in the past five years?

Yes. On July 11, 2016, I received a phone call from a representative of a legal organization pertaining to questions in regards to the site. I referred the representative to the EPA and informed the EPA of the referral.

4. Has your office conducted any site-related activities or communications in the past five years apart from routine activities? If so, please describe the purpose and results of these activities.

No.

5. Are you aware of any changes to state laws in the past five years that might affect the protectiveness of the Site's remedy?

No.

6. Are you comfortable with the status of the institutional controls at the Site? If not, what are the associated outstanding issues?

Yes.

7. Do you feel that the recommendations from the 2012 Five-Year Review have been adequately addressed? Please explain.

Yes. The TCEQ has addressed all operations and maintenance issues that were identified during the 2012 Five-Year Review. The TCEQ has regularly conducted O&M activities on a semi-annual basis for groundwater, surface water, and sediment sampling. The TCEQ removed two unlabeled drums, which were identified during the 2012 Five-Year Review from the site. As recommended in the 2012 Five-Year Review, the TCEQ has performed surveying activities at the site.

8. Are you aware of any changes in projected land use(s) at the Site?

No.

9. Do you have any comments, suggestions or recommendations regarding the management or operation of the Site's remedy?

Benzene concentrations have consistently exceeded the Federal Drinking Water MCL and the Texas Protective Concentration Limit (PCL) of 0.005 mg/L in the upper aquifer. However, since the last Five Year, benzene concentrations have been detected above the MCL in middle aquifer well MA-06 at estimated concentrations and below the MCL in other middle aquifer wells. Benzene concentrations have been detected above the MCL in deep aquifer well DA-06 and below the MCL in deep aquifer well DA-08 at an estimated concentration. Arsenic has consistently been detected at concentrations that exceed the MCL and PCL of 0.01 mg/L in the upper and middle aquifers and has been detected at concentrations that do not exceed the MCL and PCL in the deeper aquifer.

Since the most recent Five-Year Review, benzene has been intermittently detected at concentrations that range from 0.00028 to 0.020 mg/L in the adjacent surface water. Arsenic is consistently detected at concentrations that range from 0.00204 mg/L to 0.00535 mg/L and 0.0403 mg/L to 2.80 mg/L in the collected surface water and sediment samples respectively.

As of the date the Record of Decision (ROD) for operable unit 02 was finalized, no contaminants of concern were detected in the middle or deep aquifers. Also, upon the completion of the source removal action, it was expected that the surface water contamination from runoff would be eliminated and the source of the contaminant loading to the upper aquifer would be removed. With the exception of total chromium detected at a concentration of 0.005 mg/L in Grennel Slough, no of contaminants of concern were detected in the surface water (San Jacinto River, Grennel Slough, Clear Lake, or the Sand Pits). Also, it was expected that the middle aquifer would not be affected by contaminants already present in the shallow aquifer and the clay aquitard. The ROD states that if contamination does break through the clay aquitard, corrective action can be initiated before levels of concern are reached. According to the ROD, if an increase in contaminants from the site is detected during a monitoring period, an investigation would be initiated to determine the need for future action.

The ROD states that if monitoring reveals that the site continues to release contamination such that the adjoining surface waters or deeper groundwater is adversely impacted, then further action will be considered. The TCEQ recommends that the EPA perform additional studies to assess the potential impact of the contamination in the middle and deep aquifers, adjacent surface waters, and site sediments.

The TCEQ recommends that the EPA conduct a drinking water survey of the immediate area surrounding the site and sample any nearby private water wells to determine whether drinking water quality has been impacted. The TCEQ recommends an investigation to assess the movement of site-related contaminants in the middle and deep aquifers and an investigation of potential tidal influences.

- 10. Do you give permission for the following to be included in the Five-Year Review Report and appendices, which becomes a public document? Please initial below.
 - a) Your name? Yes X No

b)	Your affiliation?	Yes <u>X</u> No	
c)	Your responses?	Yes <u>X</u> No	_

I-5

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: <u>Highlands Acid Pit</u>	EPA ID No.: <u>TXD980514996</u>
Interviewer Name: Ian Penn	Affiliation: <u>Skeo/</u>
Subject Name: <u>John Hogue</u>	Affiliation: <u>AECOM</u>
Subject Contact Information:	
Time:	<u>Date: 11/30/2016</u>
Interview Location:	
Interview Format (circle one): In Person	Phone Mail Other: Email

Interview Category: O&M Contractor

1. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

The clean-up and maintenance activities conducted at the Highlands Acid Pit site have been adequate and cost effective to maintain the site and integrity of the cap & monitoring well network.

2. What is your assessment of the current performance of the remedy in place at the Site?

Regular monitoring, occurring on a semi-annual basis, is sufficient to assess the continued effectiveness of the on-going natural attenuation processes. However, detections in the middle aquifer are becoming more frequent suggesting additional actions may be needed to assess the potential for further COC migration (i.e., impacts to deeper aquifers and off-site laterally). Also, given development in the area and the potential for associated additional groundwater use, it may be timely to review and evaluate the site area for new potential receptors (i.e., updated water well survey).

3. What are the findings from the monitoring data? What are the key trends in contaminant levels that are being documented over time at the Site?

Organic contaminant (i.e., benzene) concentrations in select shallow zone monitoring wells have not declined significantly and, in many wells, are still well above the maximum concentrations limit (MCL) and Texas protective concentration limit (PCL) of 0.005 mg/L in the shallow aquifer. Intermittent detections have also been observed in select middle aquifer wells which were predicted in the 1987 ROD should COCs migrate to deeper zones from the shallow aquifer.

Inorganic contaminant concentrations continue to vary across the site in all aquifers with observed MCL exceedances occurring in the shallow and middle aquifers. The presence of organic COCs may result in reducing conditions which promote the mobility of select inorganic COCs. Turbidity in collected groundwater samples is often excessive and may also contribute to the variations in detected inorganic concentrations.

There have been no exceedances detected in either the sediment or surface water samples; however, the limited sampling program may not be adequate to assess migration in these media as dilution/diffusion would also make it more difficult to recognize potential off-site migration in a timely manner.

4. Do you feel that the recommendations from the 2012 Five-Year Review have been adequately addressed? Please explain.

Yes, recommendations from the 2012 Five-Year Review are being adequately addressed. Semi-annual groundwater in the upper, middle and deep aquifer continues as recommended. Surface water and surface

- sediment sampling has been conducted semi-annually for the past five years as recommended. Well integrity is routinely inspected and maintenance performed as needed. A significant well maintenance effort was completed in August 2014. As recommended, the site was resurveyed in 2013. Monitoring well tops of casing and significant site benchmarks were re-established and are being used to calculate potentiometric surface elevations in the three site aquifers. Site-derived waste is being properly labelled, profiled, and removed promptly for disposal following each field event.
- 5. Can you describe staff responsibilities and the frequency of site inspections and activities if there is not a continuous on-site O&M presence at the Site?

Field personnel conduct site inspection and maintenance activities during each semi-annual monitoring event. The inspections include an assessment of site security fencing integrity along the perimeter of the site and surrounding the individual well enclosures. Vegetation along the perimeter fence may be treated with a commercial herbicide and subsequently cut/removed and the cap area mowed. The cap is inspected for erosion or thinning during the mowing and sampling events. Periodic fence repair activities, including replacement of internal chain-link fencing and additional barbed wire top fence, are completed as necessary. Signage is checked and/or secured during subsequent inspection/sampling events. The condition and security of the monitoring well network is inspected during each sampling event. The inspections include assessing the well cap, cover, lock, pad integrity and identification markings. Personnel complete the Operation and Maintenance Inspection Checklist at the conclusion of each O&M visit.

6. Have there been any significant changes in site O&M requirements, maintenance schedules or sampling routines in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

There have been no significant changes in site O&M requirements, maintenance schedules or sampling routines in the last five years.

7. Have there been unexpected O&M difficulties or costs at the Site in the last five years? If so, please provide details.

In August 2014, monitoring well maintenance repairs were implemented including the replacement of five (5) surface casings, painting and re-numbering as needed, the replacement of worn compression caps, and installation of several new locks to replace rusty locks securing the wells.

There were minor additional expenses incurred during 2015 to repair sections of internal chain link fencing damage by a tree limb that feel from a tree onto an internal well enclosure.

8. Have there been opportunities to optimize O&M activities or sampling efforts in the last five years? Please describe changes and any resulting or desired cost savings or improved efficiencies.

The sampling and O&M activities continue to be completed by trained AECOM personnel that have direct, past experience working at the Highlands Acid Pit site.

9. Please provide a general summary of O&M costs for the past five years in the table below:

 Annual O&M Costs (based on TCEQ fiscal year work order costs)

 Date Range
 Total Cost (rounded to the nearest \$1,000)

2012	\$88K
2013	\$91K
2014	\$90K
2015	\$77K
2016	\$80K

10. Do you have any comments, suggestions or recommendations regarding O&M activities and schedules at the Site?

None at present. The TCEQ project manager is very attentive to the O&M needs as they arise.

- 11. Do you give permission for the following to be included in the FYR Report and appendices, which becomes a public document? Please initial below.
 - a) Your name? Yes <u>Utb</u>x_No_____
 - b) Your affiliation? Yes _____No ____
 - c) Your responses? Yes _____X_No _____

Highlands Acid H	Pit Superfund Site	Five-Year	Review Interview Form
Site Name: <u>Highla</u>	nds Acid Pit	EPA ID No.:	TXD980514996
Interviewer Name:	<u>Eric Marsh</u>	Affiliation:	<u>Skeo</u>
Subject Name:	Bob Allen /	Affiliation:	Harris County Pollution
	Marisela Lozano		Control Services Dept.
Subject Contact Infor	mation:		
Time: <u>2:30 p.m.</u>		Date: 12/5/2	<u>016</u>
Interview Location:	<u>Office for Harris County F</u>	Pollution Contro	<u>l Services Department</u>
Interview Format (cir	rcle one): In Person	Phone M	ail Other:
Interview Category:	Local Government		

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

We have some understanding of the Site.

2. Do you feel well-informed regarding the Site's activities and remedial progress? If not, how might EPA convey site-related information in the future?

It is a Site that has been associated with the San Jacinto Waste Pits site. The Site has not risen to the level of concern requiring more resources from the County.

No. Pollution Control Services Department files do not show any recent EPA updates regarding the Site. The latest update posted on EPA's website is the FYR Report from 2007. The FYR Report from 2012 is not yet posted. An EPA publication posted online dated March 8, 2013, states that annual site updates would begin. EPA has not been providing annual site updates. EPA can convey site-related information by sending updates via email or mail outs, hosting public meetings, and by posting information on the EPA website and at the local repository.

3. Have there been any problems with unusual or unexpected activities at the Site in the past five years, such as emergency response, vandalism or trespassing?

No complaints. The Site will come up in discussion every once in a while at San Jacinto Waste Pits site meetings. We have not heard anything about unusual activity at the Site that would warrant a response from us.

4. Are you aware of any changes to state laws or local regulations in the past five years that might affect the protectiveness of the Site's remedy?

No.

5. Are you aware of any changes in projected land use(s) at the Site?

No. Only conversation about the Site is at San Jacinto Waste Pits site meetings. People are aware. There are people in Highlands that feel surrounded by high levels of toxicity.

6. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

Unsure about the extent to which EPA has kept involved parties and surrounding neighbors informed of activities at the Site. In terms of how EPA can best provide site-related information in the future: 1) get the

word out that you are doing the FYR – we would rather EPA do this than us. Once the FYR is complete, share the issues and recommendations with the public. It would also be nice if you could put the FYR and groundwater monitoring reports online, once they are complete. Also, recommend putting the 2012 FYR Report online.

7. Do you have any comments, suggestions or recommendations regarding the project?

We would like to get a copy of the FYR Report once complete to include in our files.

Delineate groundwater flow in the groundwater bearing units and conduct residential well sampling to determine if residential wells are being impacted due to concerns about contaminant level exceedances.

Ensure that the Site's Community Involvement Plan is being followed.

- 8. Do you give permission for the following to be included in the FYR Report and appendices, which becomes a public document? Please initial below.
 - a) Your name? Yes X No
 - b) Your affiliation? Yes X No
 - c) Your responses? Yes X No

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: <u>Highlands Acid Pit</u>	EPA ID No.: <u>TXD980514996</u>
Interviewer Name: <u>Eric Marsh</u>	Affiliation: Skeo
Subject Name:	Affiliation: <u>Resident</u>
Subject Contact Information:	
Time: <u>11:00 a.m.</u>	<u>Date: 12/05/2016</u>
Interview Location: <u>Highlands, Texas</u>	
Interview Format (circle one): In Person	Phone Mail Other:

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Grew up in Channelview. Lived here for 15 years.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

Last I read was when they found a hole there and they were going to fix it. This was a few months ago.

3. What have been the effects of the Site on the surrounding community, if any?

Causing skin cancer. My brother had it. Also, flesh-eating disease in water.

4. Have there been any problems with unusual or unexpected activities at the Site in the past five years, such as emergency response, vandalism or trespassing?

No.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

No. The best way to provide site-related information would be through my phone.

6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

No. On city water.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

No.

- 8. Do you give permission for the following to be included in the Five-Year Review Report and appendices, which becomes a public document? Please initial below.
 - a) Your name? Yes X_ No ____
 - b) Your affiliation? Yes No
 - c) Your responses? Yes X No

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: <u>Highlands Acid Pit</u>	EPA ID No.: <u>TXD980514996</u>
Interviewer Name: <u>Eric Marsh</u>	Affiliation: <u>Skeo</u>
Subject Name:	Affiliation: <u>Resident</u>
Subject Contact Information:	
Time: <u>10:30 a.m.</u>	<u>Date: 12/05/2016</u>
Interview Location: <u>Highlands, Texas</u>	
Interview Format (circle one): In Person	Phone Mail Other:

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

I know about it. I go down there when it floods. When it floods, it is all underwater – the signs are all underwater.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

Not aware of the cleanup really. There was an explosion on the water in the 1990s. We received some compensation from this.

3. What have been the effects of this Site on the surrounding community, if any?

None identified.

4. Have there been any problems with unusual or unexpected activities at the Site in the past five years, such as emergency response, vandalism or trespassing?

None identified.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

No information given to us about the Site.

6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

No.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

No.

- 8. Do you give permission for the following to be included in the Five-Year Review Report and appendices, which becomes a public document? Please initial below.
 - a. Your name?Yes _____ No ____b. Your affiliation?Yes _____ No ____
 - c. Your responses? Yes X No

Highlands Acid Pit Superfund Site	Five-Year	Review Interview Form
Site Name: Highlands Acid Pit	EPA ID No.:	TXD980514996
Interviewer Name: <u>Eric Marsh</u>	Affiliation:	Skeo
Subject Name:	Affiliation:	<u>Resident</u>
Subject Contact Information:		
Time: <u>12:00 p.m.</u>	Date: <u>12/05/2</u>	<u>2016</u>
Interview Location: Location Information Here	2	
Interview Format (circle one): In Person	Phone Ma	nil Other:

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Came to Highlands in 1959, moved to this home in 1960. Yes, now it has been cleaned up. My husband has just died from a rare, aggressive form of cancer. There was a boy who developed a brain tumor when he was 3-4 years old, but survived. People nearby have had cancers. When you put them together, you get a big group of people that have died from cancers. I have Parkinson's disease. Not sure if it is related but the San Jacinto Coalition added me to their list because of my disease. I have two daughters – one is deceased.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

We have lived on this property since 1960. When we moved here in 1960 there was a swimming hole, but it was not too many years after that it was closed.

3. What have been the effects of this Site on the surrounding community, if any?

I know lots of people down the road that have died of cancer. I do feel that something needs to be done.

4. Have there been any problems with unusual or unexpected activities at the Site in the past five years, such as emergency response, vandalism or trespassing?

I don't know about this. There is a half-way house down the road.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

No. The San Jacinto River Coalition has provided information.

6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

No.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

The only thing that pops in my head is that we should all work together to clean up the river and clean up the sites. EPA has resources that others do not have to do this.

8. Do you give permission for the following to be included in the Five-Year Review Report and appendices, which becomes a public document? Please initial below.

а.	Your name?	Yes	No <u>X</u>
b.	Your affiliation?	Yes	No
с.	Your responses?	Yes <u>X</u>	No

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: Highlands Acid Pit	EPA ID No.: <u>TXD980514996</u>
Interviewer Name: <u>Ian Penn</u>	Affiliation: <u>Skeo</u>
Subject Name:	Affiliation: Resident
Subject Contact Information:	
Time: <u>11:00 a.m.</u>	<u>Date: 12/05/2016</u>
Interview Location: <u>Highlands, Texas</u>	
Interview Format (circle one): (In Person)	Phone Mail Other:

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Yes, I am aware of the Site. There has been dioxin in people's yards that needs to be cleaned up.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

I do not know much about what went into the cleanup. I know some people on Clearlake Road used to have access to the oil drilling site next door.

3. What have been the effects of this Site on the surrounding community, if any?

Not aware of any effects.

4. Have there been any problems with unusual or unexpected activities at the Site in the past five years, such as emergency response, vandalism or trespassing?

Probably trespassing and trash dumping. People used to have access to the adjoining property. Some swimming and fishing goes on in the ponds to the east of the Site.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

Not really. Periodic updates would be helpful.

6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

No well, on City water.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

Because people do go back there some times to swim or fish or be on site, send out information so people better understand the Site.

- 8. Do you give permission for the following to be included in the Five-Year Review Report and appendices, which becomes a public document? Please initial below.
 - a. Your name?Yes XNob. Your affiliation?Yes NoXc. Your responses?Yes XNo

Highlands Acid Pit Superfund Site	Five-Year Review Interview Form
Site Name: <u>Highlands Acid Pit</u>	EPA ID No.: TXD980514996
Interviewer Name: <u>Eric Marsh</u>	Affiliation: <u>Skeo</u>
Subject Name:	Affiliation: Resident
Subject Contact Information:	
Time: <u>11:30 a.m.</u>	Date: 12/05/2016
Interview Location: <u>Highlands, Texas</u>	
Interview Format (circle one): In Person	Phone Mail Other:

1. Are you aware of the former environmental issues at the Site and the cleanup activities that have taken place to date?

Lived in Highlands for 12 years. Aware of the Site, but less so specific site issues.

2. What is your overall impression of the project, including cleanup, maintenance and reuse activities (as appropriate)?

I have lived here for 12 years and I do not think it has changed. Used to fish off a dock near there.

3. What have been the effects of this Site on the surrounding community, if any?

Some mention of people dying. Problems with fish, crabs in San Jacinto River?

4. Have there been any problems with unusual or unexpected activities at the Site in the past five years, such as emergency response, vandalism or trespassing?

Have heard of people discarding hogs there that have been killed. Trash in the woods.

5. Has EPA kept involved parties and surrounding neighbors informed of activities at the Site? How can EPA best provide site-related information in the future?

No. I hear about people in Baytown having wells regularly tested. My understanding is there is a lawsuit regarding the river bottom. My uncle is involved in that lawsuit.

6. Do you own a private well in addition to or instead of accessing city/municipal water supplies? If so, for what purpose(s) is your private well used?

No.

7. Do you have any comments, suggestions or recommendations regarding any aspects of the project?

My brother has had staph from swimming in river. Keep trying.

- 8. Do you give permission for the following to be included in the Five-Year Review Report and appendices, which becomes a public document? Please initial below.
 - a. Your name? Yes X No
 - b. Your affiliation? Yes X No
 - c. Your responses? Yes X No

APPENDIX J – INSTITUTIONAL CONTROLS





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