Appendix G

No Further Action Letter - Unocal 76 Gas Station

CALIFORNIA
Water Boards

Santa Ana Regional Water Quality Control Board

July 6, 2020

Mr. James Kiernan, Project Manager
Chevron Environmental Management Company
101 Bollinger Canyon Road, C2102
San Ramon, California 94583
jkiernan@chevron.com

SUBJECT: CLOSURE LETTER AND FINAL CASE SUMMARY
UNOCAL 6975 – 10451 MAGNOLIA AVE., RIVERSIDE
GLOBAL ID #T0606500513

Dear Mr. Kiernan,

This letter confirms the completion of site investigation and remediation of the former underground storage tanks (USTs) of the above-referenced site. A copy of the *Case Closure Summary* is enclosed. Thank you for your cooperation throughout this investigation Your willingness and promptness in responding to our inquiries concerning this release are greatly appreciated

Based on the information provided, this agency finds that the site investigation and corrective action carried out at the above-referenced UST site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum releases(s) at the site is required.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code.

Please be aware that claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund (Fund) more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

If you have any questions or concerns, please contact Samantha Mak at (951) 320-2007 or Samantha.Mak@waterboards.ca.gov or Kenneth Williams at (951) 782-4496 or via email at Ken.Williams@waterboards.ca.gov.

Sincerely,

Hope Smythe Digitally signed by Hope Smythe
Date: 2020.07.06 10:22:58 -07'00'

Water Boards

Hope A. Smythe
Executive Officer

Enclosures: Case Closure Summary

cc w/enclosures:

Arcadis- Carl Donovan (Carl.Donovan@arcadis.com)
Arcadis- Siobhan Pritchard (Siobhan.Pritchard@arcadis.com)

CASE CLOSURE SUMMARY

I. AGENCY INFORMATION

DATE: July 6, 2020

AGENCY NAME: California Regional Water Quality Control Board, Santa Ana Region	**ADDRESS:** 3737 Main Street, Suite 500
CITY/STATE/ZIP: Riverside, CA 92501-3348	**PHONE:** (951) 320- 2007 or (951) 782-4496
STAFF: Samantha Mak	**Title:** Water Resource Control Engineer

II. CASE INFORMATION

SITE NAME:	Former Unocal Service Station No. 6975 (aka Chevron No. 306440)
LOCATION:	10451 Magnolia Avenue, Riverside
RB CASE #:	083303117T

CONTACT/BUSINESS NAME	ADDRESS	PHONE #/EMAIL
James Kiernan, Project Manager Chevron Environmental Management Company	101 Boilinger Canyon Road, C2102 San Ramon, California 94583	(925) 842- 3220 jkiernan@chevron.com

TANK #	SIZE IN GALLONS	CONTENTS	CLOSED IN PLACE OR REMOVED?	DATE
Tank 1	12,000-gallon	Gasoline	Removed	December 18, 1997
Tank 2	12,000-gallon	Gasoline	Removed	December 18, 1997
Tank 3	12,000-gallon	Gasoline	Removed	December 18, 1997
Tank 4	12,000-gallon	Diesel	Removed	December 18, 1997

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

CAUSE & TYPE OF RELEASE: Four (4) underground storage tanks (USTs), eight (8) dispenser islands, and associated piping were removed; source was undetermined.	
SITE CHARACTERIZATION COMPLETE: YES [X] NO [ ]	
MONITORING WELLS INSTALLED: Yes	**PROPER SCREENED INTERVAL:** YES [X] NO [ ]
HIGHEST GROUNDWATER (GW) DEPTH BELOW GROUND SURACE (bgs): 20.40 feet bgs (well GW5 in June 1999)	**LOWEST DEPTH:** 47.8 feet bgs (well GW20 in February 2010)
FLOW DIRECTION: Primarily to the west/southwest	**NEAREST/AFFECTED SURFACE WATER NAME:** NA
MOST SENSTIVE CURRENT GW USE: Municipal and domestic supply	**OFF-SITE BENEFICIAL USE IMPACTS:** NA
GROUNDWATER MANAGEMENT ZONE: Arlington Groundwater Basin	**REPORTS(s) FILED:** California Regional Water Quality Control Board - #8 (Yes)

REPORTS(s) ON FILE? Yes	3737 Main Street, Suite 500, Riverside, CA 92501-3348

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
MATERIAL	**AMOUNT**	**ACTION TREATMENT OR DISPOSAL WITH DESTINATION**	**DATE**
TANKS/ PIPING/ EQUIPMENT **RINSEATE**	Underground Storage Tanks (USTs), Dispenser Islands, Associated Piping, and 900 Gallons	A total of four (4) USTs, eight (8) dispenser islands, and associated piping were removed from the site. The tanks were noted to be in good condition with no evidence of leakage. Tank removal activities and soil sampling were witnessed by an inspector from the County of Riverside Department of Environmental Health (CRDEH). The USTs were transported and recycled at AMR. Also, UST rinseate was transported to the Demenno/Kerdoon facility located in Compton, California.	December 18 and 30, 1997
SOIL AND/OR GROUND-WATER	385 Tons	During tank removal activities, soil was over-excavated to approximately 20 feet bgs in both the eastern portion of the UST cavity and the dispenser island areas. Contaminated soil was transported to the TPS facility located in Adelanto, California.	December 18-30, 1997
LNAPL RECOVERY	94 Gallons (2004) and 71.83 Gallons (2007-2012)	Light non-aqueous phase liquid (LNAPL) or free product was detected in July 2004 in wells GW2, GW3, GW7, GW11, and GW12. LNAPL recovery was implemented on August 12, 2004. Subsequently, LNAPL was detected in wells GW1, GW2, GW7, GW8, GW10, GW18 through GW21, and GW24. In July 2007, LNAPL skimmers were added to wells GW19 through GW21 and GW24. In March 2010, the passive skimmer was removed from well GW24, decontaminated, and reinstalled in well GW18. Manual bailing was conducted periodically on wells GW1, GW2, GW4, GW8, and GW11.	August 12, 2004 through November 30, 2012
	6,371 Pounds (Hydrocarbons)	A soil vapor extraction (SVE) pilot test was conducted on well GW5A. Wells GW2, GW4, GW7, and GW8 were used as observation wells.	August 13-23, 2007
	761 Pounds (Hydrocarbons) and 321 Gallons (Groundwater)	A multiphase extraction (MPE) pilot test was conducted on well GW11. The MPE system operated for a total of 22.1 hours. The extracted groundwater was transported to Siemens Water Technology, located in Los Angeles, California.	August 23-24, 2007
	Three (3) Gallons (LNAPL)	Single-well surfactant treatment of well GW19 was conducted on November 8, 9, and 10, 2010. Six (6) gallons of surfactant (Gold Crew Release by Environmental Chemical Solutions, Inc.) with 144 gallons of tap water was mixed and injected in well GW19. On November 9-10, 2010, 400 gallons of the surfactant solution was recovered via vacuum truck. The recovered surfactant and groundwater were transported off-site as non-hazardous waste by Nieto and Sons Trucking, Inc. and transported to the Belshire Environmental facility located in Vernon, California, for disposal.	November 8-10, 2010

III. TREATMENT AND SITE CHARACTERIZATION INFORMATION – continued:

MATERIAL	AMOUNT	ACTION TREATMENT OR DISPOSAL W/DESTINATION	DATE
	18,618 Pounds (Hydrocarbons)	SVE and air sparging (AS) remediation were implemented. Due to operational issues, the SVE was shut-down on October 30, 2012, and was not restarted until January 8, 2013. On August 13, 2013, the AS system was activated. Extraction wells included wells VE3, GW1, GW2, GW4, GW8, and GW11. The AS system included up to 12 injections wells; Zone 1 (AS1, AS2, AS7, and AS8), Zone 2 (AS3 through AS5, and AS10), and Zone 3 (AS6, AS9, AS12, and AS13).	October 15, 2012 through December 17, 2013 (SVE) and August 13, 2013 through September 30, 2013

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE & AFTER REMEDIATION

CONTAMINANT	SOIL - Maximum (mg/kg or ppm)			WATER – Maximum (µg/l or ppb)	
	Removal Activities [1]10/97 & [2]12/97	Site Assessment 1997-2012	July 2014 Soil Confirmation Borings	Maximum Historical [3]2000-2014 Results	Latest Sampling Event [4,5]September 5, 2014
Total Petroleum Hydrocarbons-gasoline (TPH-g)	[1]**4100** (D5/6-10') [2]**16** (D7/8-20')	**4,400** (GW5-35')	**3.8** (CB2-40')	**LNAPL**	[4,8]**770 HD** (CB3) [5,8]**31,000/110,000** (GW18/Duplicate)
Total Petroleum Hydrocarbons-diesel (TPH-d)	[1]**6,300** (D3) [2,8]**ND** (D7/8-20')	**1,200** (AS3/VE3-43')	**18** (CB2-40')	**LNAPL**	[4,8]**1,200 HD** (CB1) [5]**14,000/17,000 HD** (GW18 and duplicate)
Benzene	[1]**0.0156** (T2-W-13') [2]**ND** (D7/8-20')	**26.6** (GW5-35')	**ND**	**LNAPL**	[4,7]**0.27J** (CB1) [5]**15** (GW19)
Toluene	[1]**56** (D7/8-10') [2]**0.17** (D7/8/-20')	**12.8** (GW5-35')	**ND**	**LNAPL**	[4]**ND**<1.0 [5]**12** (GW19)
Ethylbenzene	[1]**90** (D7/8-10) [2]0.091 (D7/8-20')	**61.7** (GW5-35')	**ND**	**LNAPL**	[4]**2.9** (CB1) [5]**270/320** (GW18/Dup.)

[1]The *initial* October 1997 maximum soil sample results of the former USTs and dispenser island excavation areas.

[2]Maximum December 29, 1997 confirmation soil results of the bottom (final depth) of the USTs and dispenser island excavation areas after over-excavation.

[3]LNAPL ranged from 0.04 feet (GW18) to 0.39 feet (GW4) in thickness. LNAPL skimmers were added to wells GW19 through GW21 and GW24. In March 2010, the passive skimmer installed in GW24 was removed, decontaminated, and reinstalled in well GW18. No detectable LNAPL was detected since 2011.

[4]The July 2014 maximum groundwater concentrations for confirmation borings CB1 through CB3.

[5]The September 2014 maximum groundwater concentrations.

[6]NA=compound was not analyzed and ND = compound was detected below the laboratory detection limit or non-detectable (ND).

[7]J=Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit; reported value is estimated

[8]HD= TPH-g and TPH-d chromatographic pattern was inconsistent with the profile of the reference fuel standard.

Continued:

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE & AFTER REMEDIATION

CONTAMINANT	*SOIL - Maximum (mg/kg or ppm)*			*WATER – Maximum (µg/l or ppb)*	
	Removal Activities [1]10/97 & [2]12/97	Site Assessment 1997-2012	July 2014 Soil Confirmation Borings	Maximum Historical [3]2000-2014 Results	Latest Sampling Event [4,5]September 5, 2014
Total Xylenes	[1]**580** (D7/8/-10') [2]**0.93** (D7/8-20')	**345** (GW5-35')	**0.00031** (CB2-40')	**LNAPL**	[4]**0.87J** (CB2) [5]**28** (GW19)
Methyl Tertiary Butyl Ether (MTBE)	[1]**3.5** (T2-E-13') [2]**ND**	**39.8** (GW5-35')	**ND**	**LNAPL**	[4]ND<1 0 [5]**6.0** (GW19)
Tert-butyl alcohol (TBA)	[1,2]**NA**	**NA/ND**	**0.015J** (CB1-25')	**29J** (GW11-5/12)	[4]**7.6J** (CB3) [5]**ND**
Tetrachloroethene	[1,2]**NA**	**0.006J** (GW1-20')	**ND**	**38** (GW13)	[4]**0.77J** (CB3) [5]**1.9** (GW10R & GW25)
n-Propylbenzene	[1,2]**NA**	**17** (AS3-43')	**0.00052J** (CB1-45')	**1,100** (GW11-9/11)	[4]**12** (CB1) [5]**960/1,200** (GW18/Dup.)
n-Butylbenzene	[1,2]**NA**	**15** (AS3-43')	**0.00023J** (CB2-45')	**430** (GW20-2/14)	[4]**9.5** (CB2) [5]**310/390** (GW18/Dup.)
sec-Butylbenzene	[1,2]**NA**	**3.7** (AS3-43')	**ND**	**170** (GW20-2/14)	[4]**1.6** (CB1) [5]**100/130** (GW18/Dup.)
Naphthalene	[1,2]**NA**	**7.1** (AS6/VE6-40')	**0.001J** (CB2-5')	**1,200** (GW11-9/11)	[4]**ND** [5]**110J/130J** (GW18/Dup.)
Isopropylbenzene	[1,2]**NA**	**5.3** (AS3-43')	**ND**	**300** (GW2-9/11)	[4]**3.7** (CB1) [5]**260/310** (GW18/Dup.)
Acetone	[1,2]**NA**	**1.4** (GW10R-40')	**0.026J** (CB1-40')	**520** (GW4-5/12)	[4]**11J** (CB2) [5]**ND**
p-Isopropyltoluene	[1,2]**NA**	**8.0** (AS2-60')	**ND**	**28** (GW20-2/14)	[4]**0.87J** (CB12) [5]**20J/24J** (GW18/Dup.)
1,2,4-Trimethylbenzene	[1,2]**NA**	**80** (AS12-43.5'-Duplicate)	**0.0039J** (CB1-45')	**1,700** (GW9)	[4]**5.1** (CB2) [5]**9.2** (GW19)

[1]The initial October 1997 maximum soil sample concentrations of the former USTs and dispenser island excavation areas.

[2]The December 29, 1997 maximum confirmation soil results of the bottom (final depth) of the USTs and dispenser island excavation areas after over-excavation

[3]LNAPL ranged from 0 04 feet (GW18) to 0.39 feet (GW4) in thickness. LNAPL skimmers were added to wells GW19 through GW21 and GW24. In March 2010, the passive skimmer installed in GW24 was removed, decontaminated, and reinstalled in well GW18. No detectable LNAPL was detected since 2011

[4]The July 2014 maximum groundwater concentrations of confirmation borings CB1 through CB3

[5]The September 2014 maximum groundwater concentrations

Continued:

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE & AFTER REMEDIATION					
	SOIL - Maximum (mg/kg or ppm)			*WATER – Maximum (µg/l or ppb)*	
CONTAMINANT	Removal Activities [1]10/97 & [2]12/97	Site Assessment [3]1997-2012	July 2014 Soil Confirmation Borings	Maximum Historical [3][6]2000-2014 Results	Latest Sampling Event [6][7]September 5, 2014
1,3,5-Trimenthylbenzene	[1]NA	26 (AS12-43.5'-Duplicate)	0.014 (CB2-40')	890 (GW20)	[4]14 (CB2) [7]100/120 (GW18)
Ethanol	[1]NA	NA/ND	ND	NA/370 (GW21-12/11)	[4]NA [7]1,200J/2,700 (GW18-Duplicate)

[1]The initial October 1997 maximum soil concentration results of the former USTs and dispenser island excavation areas

[2]The December 29, 1997 maximum confirmation soil concentrations of the bottom (final depth) of the USTs and dispenser island excavation areas after over-excavation

[3]LNAPL ranged from 0.04 feet (GW18) to 0.39 feet (GW4) in thickness. LNAPL skimmers were added to wells GW19 through GW21 and GW24. In March 2010, the passive skimmer installed in GW24 was removed, decontaminated, and reinstalled in well GW18. No detectable LNAPL was detected since 2011.

[4]The July 2014 maximum groundwater concentrations for confirmation borings CB1 through CB3

[5]The maximum concentrations of other volatile organic compounds (VOCs) that were detected in the soil samples, but not included in the above table:

- 2-butanone (MEK) was detected up to 0.4 ppm (SB21-40').
- Bromoform was detected up to 0.0016 ppm (GW17-20').
- Trichlorofluoromethane was detected up to 0.0006J ppm (GW19-35' & GW18-35').
- Trichloroethene was detected up to 8.2 ppm (GW12)
- Cis-1,2-dichloroethene was detected up to 1.0J ppm (GW19)
- Tert-butylbenzene was detected up to 0.510 ppm (GW27-40')
- 1,2,3-trichloropropane was detected up to 0.590 ppm (GW-27-40')
- Chloromethane was detected up to 4.4 ppm (AS12-40').
- Carbon disulfide was detected up to 0.00036J ppm (SV-15-30').
- Dichlorodifluoromethane was detected up to 0.0011J ppm (CB2-55')
- Methylene chloride was detected up to 0.0017J ppm (CB1-5').
- TPH-d - sample extract was subject to Silica Gel treatment prior to analysis was detected up to 13 ppm in sample CB1-20' and 9,400/7,800 HO ppm in sample GW18/duplicate

[6]The maximum concentrations of other VOCs that were detected in the groundwater samples, but not included in the above table:

- 4-Methyl-2-Pentone was detected up to 9.0J ppb (GW9 in 5/13)
- Hexanone was detected up to 23 ppb (GW20 in 11/12)
- 2-butanone (MEK) was detected up to 1,800 ppb (GW4 in 5/12).
- Trichloroethene was detected up to 8.2 ppb (GW12 in 12/00)
- Cis-1,2-dichloroethene was detected up to 2.0J ppb (GW18 in 5/10 and GW1 in 3/12)
- Chlorobenzene was detected up to 13 ppb (GW25 in 10/10).
- Tert-butyl benzene was detected up to 1.6J ppb (GW20 in 5/13)
- TPH-d - sample extract was subject to Silica Gel treatment prior to analysis was detected up to 420 ppb in sample CB2)
- Carbon disulfide was detected up to 0.93J ppb in sample CB1

[7]The September 2014 maximum groundwater concentrations

IV. CLOSURE

Does completed corrective action protect beneficial uses per the regional board basin plan? YES [X] NO [ ]
Does the corrective action protect public health for current land use? YES [X] NO [ ]
NOTE: In 2008, a soil vapor and risk assessment investigation was conducted. It was concluded that *"no chemicals of potential concern (COPCs) were identified for a commercial exposure scenario."* A third-party professional agreed (copy of letter is attached to summary) with the conclusions of the investigation and recommended that Regional Board staff approve the risk assessment as submitted. No further action or mitigation measures were required.

In 2012, an additional soil gas survey investigation (copies of report and general correspondence are uploaded on the State Board's GeoTracker database) was conducted under the direction of the Department of Toxic Substance Control (DTSC), School Property Unit, at the Montessori School property located to the west and down-gradient of the site. Tetrachloroethene (PCE) contamination was detected and it was attributed to a former dry cleaning facility that was located in a retail area located adjacent to the school and near soil gas probe SV16. It was concluded that the vapor intrusion pathway estimated for the school scenario were **below** EPA's target cancer risk range of $1x10^{-6}$ to $1x10^{-4}$ and California EPA and USEPA's target HI of 1.

Also, the petroleum-related COPCs that were identified in the investigation did not reveal an elevated potential cancer or non-cancer risk for occupants (child, students, or teachers) of the School site and it was concluded that *"no further evaluation of petroleum-fuel related hydrocarbon vapors was required in association with the School Site."*

DTSC required additional soil and vapor samples and analyses from soil gas probes SV14 through SV16. The sampling was completed in April and May 2013. It was concluded in the HHRA that the *"vapor intrusion pathway estimated for school scenario were below EPA's target cancer risk range of $1x10^{-6}$ to $1x10^{-4}$ and California EPA's and EPA's [U.S.] target HI of 1."* It was further concluded that *"the results of the risk evaluation conducted using the School Screen Model, based on the maximum detected petroleum hydrocarbon and VOC soil vapor concentrations collected near the existing school building at the School Site, indicate that the COPCs present in soil vapor in proximity to the School Site is **unlikely to pose an inhalation risk to current/future occupants in the building present on the School Site**."* A copy of DTSC's completion letter is attached to this summary.

SITE MANAGEMENT REQUIREMENTS
Should corrective action be reviewed if land use changes? YES [ ] NO [X] See above memo regarding risk assessments.

V. ADDITIONAL COMMENTS, DATA, ETC.

SITE HISTORY/LAND USE
On December 18, 1997, four (4) underground storage tanks (USTs), eight (8) dispenser islands, and associated piping were removed from the subject site. During removal and excavation activities, approximately 54 soil samples were collected. The soil results revealed that contaminated soil was detected primarily from the samples collected beneath the two (2) easternmost dispensers. Based on the soil results, over-excavation was conducted beneath four (4) dispenser islands and the USTs. Approximately 384.55 tons of contaminated soil were excavated and transported to the TPS Technologies facility located in Adelanto, California.

The former Unocal service station operated between November 1979 and 1997. The former service station building was demolished and there are no above-ground structures that remain at the site. The site is located between Tyler Street and Banbury Drive in the City of Riverside. The site is presently a vacant lot enclosed by a chain-linked (secured) fence and surrounded by commercial-zoned businesses and a Montessori School is located off-site to the west of the site. A former Chevron service station (No. 20-5889; a closed Regional Board UST case) is located approximately 460 feet northeast of the site. That site is also known as Riverside Partners (aka Riverside National Bank). Also, residential properties are located to the south of the commercial properties across Magnolia Avenue.

SITE ASSESSMENT
1998-2005
From April 1998 through September 2004, a total of 20 groundwater monitoring wells were installed at the site. The wells were drilled to total depths that ranged from 43.90 feet (GW11) to 50.25 feet (GW16) below the ground surface (bgs). All of the soil borings were converted to 4-inch PVC casing wells that were screened from 17-17.93 to 42.90-42.93 feet (GW11 through GW13), 19.30 to 44.30 feet (GW9), 20 to 50 feet (GW6, GW7, GW8, GW10, and GW14 through GW20), and approximately 24 to 43-44 feet (GW1 through GW4) bgs. Groundwater was encountered between 20 to 28.94 feet bgs. The groundwater gradient was approximately 0.006 ft/ft towards the west/southwest. The wells were drilled in the following areas of the site:

V. ADDITIONAL COMMENTS, DATA, ETC. – Continued:

- Former Dispenser Islands - Wells GW1 and GW2 were drilled (April 1998) in the former dispenser islands.
- Former UST Area - Wells GW3 and GW4 were drilled (April 1998) in the former UST area.
- Former UST and Dispenser Island Areas - Well GW5 was drilled (April 1998) north and northwest of the former UST and dispensers island areas, respectively.
- Other On-Site Areas - Well GW8 was drilled (March 2000) in the southeast corner of the property and directly southeast of the one dispenser island area. In September 2004, well GW8 was deepened from 40 to 60 feet bgs and screened from 20 to 50 feet bgs.
- Off-Site Wells:
    1. Off-site wells GW6 and GW7 were drilled (March 2000) up-gradient (northwest and north, respectively) of the site. In September 2004, well GW6 was deepened from 40 to 60 feet bgs and screened from 20 to 50 feet bgs.
    2. Off-site wells GW10 through GW13 were drilled (December 2000) off-site to the southwest, west, northwest, and north of the site, respectively.
    3. Off-site well GW14 was drilled (August 2004) at the northwest corner of the site and directly east of GW15 in the parking lot area.
    4. Off-site wells GW15 through GW18 were drilled (August 2004) on the other side of Papa John's Pizza to define the entire western boundary of the plume.
    5. Wells GW19 and GW20 were drilled (August 2004) south of the site within the Magnolia Avenue right-of-way.

From April 1998 through August 2004, approximately 116 soil samples were generally collected at five (5) foot intervals; 5 to 15 and 5 to 40 feet bgs. Elevated petroleum hydrocarbons were detected in the soil samples collected from boring GW5. Maximum total petroleum hydrocarbons-gasoline (TPH-g), benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) concentrations were detected in sample GW5-35' at 4,400 ppm, 26.6 ppm, 12.8 ppm, 61.7 ppm, 345 ppm, and 39.8 ppm, respectively. Well GW-5 was drilled north and northwest of the former UST and dispenser island areas, respectively.

Trace to low-level petroleum hydrocarbon concentrations were detected in the samples collected from borings GW1 through GW4. Only trace TPH-g, BTEX, and/or MTBE and tert-butyl alcohol (TBA) concentrations were detected at the 35 or 40-foot (deepest sample collected) for wells GW6 through GW8. The TPH-d results were all ND. All of the soil TPH-g, TPH-d, BTEX, MTBE, and TBA results for borings GW9 through GW11 were ND except trace total xylenes, 1,2,4-trimethylbenzene (1,2,4-TMB), 1,3,5-trimethylbenzene (1,3,5-TMB), and tetrachloroethene (PCE) concentrations detected at 0.0081 ppm (GP9-15') and all below 0.044 ppm (GW13-30'), respectively. Only a few trace BTEX concentrations (at or below 1.037 ppm) were detected in samples collected from borings GW14 and GW16 through GW20. All of the fuel oxygenates results were ND for these samples.

The initial groundwater samples collected from wells GW1 through GW20 revealed elevated petroleum concentrations detected in the samples collected from wells GW2, GW5, GW8, GW9, and GW13. Maximum TPH-g and TPH-d concentrations were detected up to 110,000 and 31,000 ppb, respectively. BTXE and MTBE concentrations were low-level concentrations compared to TPH-g concentrations. MTBE concentrations ranged from 270 ppb (GW5) to 490 ppb (GW1). Only traces of petroleum hydrocarbons were detected in the groundwater samples collected from wells GW10 and GW11. Other maximum VOCs concentrations are summarized on the table shown on pages 3 through 5 of this summary. Subsequently, LNAPL was detected in nine (9) wells; wells GW1 through GW3, GW6, GW8, GW11, GW12, GW19, and GW20. LNAPL thickness ranged from 0.13 feet to 1.4 feet.

On March 3, 2003, the County of Riverside Department of Environmental Health (CRDEH) transferred the case to Regional Board staff for lead oversight due to a possible commingled plume with the former Chevron station located at 10301 Magnolia Avenue. Chevron was directed to conduct further site assessment on that nearby site to fully delineate the groundwater contamination plume in this area. That site was also known as Riverside Partners (aka Riverside National Bank) and the site was closed by Regional Board staff on January 22, 2014.

2006-2008

Due to proposed redevelopment of the site, wells GW3, GW5, GW6, GW14, and GW15 were abandoned for the proposed building. Subsequently, no building was built due to the USA/world economy collapse in 2008-2009. From January 2006 through October 2008, the following wells were abandoned or installed off-site to fully define the contamination plume:

1. Boring/well GW21 (also referred to as SB21) was drilled (January 2006) up-gradient and to the northeast of the site.
2. Boring/well GW22 was drilled (May 2007) along the right-of-way of Magnolia to the northeast/east (up and cross-gradient) of the site.

V. ADDITIONAL COMMENTS, DATA, ETC. – CONTINUED:

3. Direct push soil borings MIP1 through MIP4, MIP6 through MIP14 were advanced (July 2007) throughout the site
4. Dry wells MW10 and GW13 were properly abandoned in October 2008
5. Replacement boring/well GW10R was drilled (October 2008) directly southwest/west of the site at the adjacent parcel.
6. Replacement boring/well GW13R was drilled (October 2008) north/northwest of the site.
7. Boring/wells GW23 and GW24 were drilled (October 2008) across Magnolia Avenue to the south/southwest and south/southeast of the site, respectively

The soil borings were drilled to total depths that ranged from approximately 49 feet (GW22) to 60 feet (GW10R, GW13R, GW23, and GW24) bgs. The wells were screened at 9 to 49 feet (GW22), 20 to 50 feet (GW21), and 30 to 60 feet (GW10R, GW13R, GW23, and GW24). The 2006, 2008, and earlier investigations revealed the following site geology:

1. Ground surface to 30 feet - soils consist primarily of unconsolidated alluvial deposits of interbedded sands, silty sands, clayey sands, silts, and clays.
2. From 30 to 80 feet bgs - soils consist primarily of sands.
3. From 41 to 48 feet bgs - a discontinuous silt/clay interval is present.

Generally, soil samples were collected at five (5) foot intervals from 5-10 to 45-60 feet bgs. Deeper replacement wells MW10R and GW13R were sampled between 30 feet to 60 feet bgs.

Only trace to low level TPH-g, TPH-d, and/or volatile organic compounds (VOCs) concentrations were detected in the samples collected from borings GW21, MW22, GW10R, GW13R, GW23, and GW24. The initial groundwater samples for the above-listed wells also revealed trace to low-level TPH-g, TPH-d, and/or VOCs concentrations. Based on the findings of GW23 and GW24, the plume to the south was sufficiently defined. It should be noted that from 2008 to 2009, the average groundwater elevation in wells increased by approximately four [4] feet.

In July 2007, LNAPL characterization was conducted on the product collected from wells GW1, GW8, GW10, GW11, GW18, and GW20. The analysis confirmed that all six (6) LNAPL samples were leaded gasoline. Methyl lead was detected in all six (6) LNAPL samples. Methyl lead was generally used in gasoline products between 1960 to the mid-1980's. No fuel oxygenates were detected in any of the LNAPL samples. The consultant also noted that the lack of n-butane and butane in the LNAPL also indicated a prolonged weathering of the gasoline product. Based on whole oil analysis, the LNAPL samples were grouped together based on similar chromatograms according to the project consultant. The groups included:

- Wells GW10, GW16, and GW20 – It appeared that they were similar products, but from separate releases associated with both the site and the former up-gradient Chevron Service Station No. 20-5899. The other possibility was that they were not similar products, but became commingled over time. A third possibility was that the LNAPL in well MW10 was derived from a separate and unidentified source relative to LNAPL in wells MW18 and MW20.
- Wells GW1 and GW8 – LNAPL detected in these two (2) wells appeared to be weathered products of the first grouping or from a separate release
- Well GW11 – According to the lab analysis, LNAPL contained higher concentrations of aromatic VOCs compared to the first two groups. This indicated that LNAPL in GW11 was either a weathered product of the LNAPL detected in the second group or a separate source (area of MIP4) of product high in aromatic VOCs.

From August 13 to August 23, 2007, a soil vapor extraction (SVE) pilot test was conducted on well GW5. Wells GW2, GW4, GW7, and GW8 were used as observation wells. The initial TPH-g and MTBE influent vapor concentrations were noted at 52,000 ppmv and 170,000 ppbv, respectively. No benzene concentrations were noted during the initial and final samples for well GW5A. However, 450 ppbv of benzene was detected in the midpoint sample. A radius of influence (ROI) was observed between 10 to 16 feet. The final TPH-g and MTBE influent results were detected at 8,700 ppmv and <5,000 ppbv, respectively. A total of 6,371 pounds of hydrocarbons were recovered during the 10-day operation.

On August 23-24, 2007, a multiphase extraction (MPE) pilot test was conducted on well GW11. The MPE system operated for a total of 22.1 hours. A total of 761 pounds of hydrocarbons and 321 gallons of groundwater were recovered. The extracted groundwater was transported to Siemens Water Technology in Los Angles, California.

V. ADDITIONAL COMMENTS, DATA, ETC. - Continued

From February 25 to August 21, 2008, soil gas samples were collected at 13 soil vapor probe locations (SV1 through SVE13) located throughout the subject site. Soil gas samples were collected at the five-foot depth of wells SV2 through SV5, SV7, SV8, SV10, SV12, and SV13. Deeper soil gas samples were collected from soil gas probes SV1, SV6, SV9, and SV11 at the 5, 15, and 35-foot depths. A risk evaluation of the vapor intrusion pathway was conducted. Based on the data, it was concluded that "*potential risk/hazards estimated for the site are below target levels considered to be acceptable according to CalEPA (2005a) guidance.*" The findings were also briefly summarized on page 6 of this summary. As required by this agency, AECOM's risk evaluation of the vapor intrusion pathway was also reviewed and verified by a third-party reviewer, a copy of this letter is attached to this summary. The letter recommended that Regional Board staff approve the risk assessment and agreed that no further risk assessment or mitigation measures were required.

It should be noted that from 1998 to 2008, the average groundwater elevation in wells decreased approximately 20 feet. This was likely due to the nearby Arlington desalter wells.

2009-2012

From October 2009 to February 2012, the following borings were drilled.

On-Site Borings/Wells.

1. On-site borings/wells AS1, AS2, AS3 and AS5 were drilled (July-September 2010) to the northeast, east, southeast and west of the former UST and dispenser island areas, respectively.
2. On-site deeper borings SB22 and SB23 were drilled (November 2012) to fully define the vertical extent of contamination. SB- 22 and SB23 were located within the former dispenser island area and adjacent to AS2 (previous site assessment results confirmed that a deeper boring [>60 feet bgs] was required in the area of boring/well AS2) and adjacent to well AS3/VEW3 along the southern boundary of the site and Magnolia Avenue, respectively.

Off-Site Borings/Wells.

1. Off-site boring/wells GW25 and GW26 were drilled (October 2009 and March 2010) southwest (down-gradient of the site) in the parking lot area located between the Montessori School's (School) playground and the Auto Sound store and at the corner of Auto Sound near Magnolia Avenue, respectively.
2. Off-site borings/wells AS4, AS6/VE6 (dual-nested), and AS10 were drilled (July-September 2010) on the property located directly adjacent to the west of the site. These wells were located directly west of the former UST area, west of the site, and southwest of the site, respectively.
3. Off-site borings/wells AS9/VE9 (dual-nested), AS11, AS12, and AS13/VE13 (dual-nested) wells were drilled (July-September 2010) on the property located at the northwest corner of Banbury Drive and Magnolia Avenue and down-gradient of the site.
4. Off-site boring/well GW27 was drilled (September 2010) as the far down-gradient well located southwest of well MW26.
5. Off-site multi-level (quadruple-nested) soil vapor probe SV14 was drilled (February 2012) directly east of the School within the parking lot.
6. Off-site multi-level (quadruple-nested) soil vapor probe SV15 was drilled (February 2012) southeast of the School and adjacent to well GW25.
7. Off-site multi multi-level (quadruple-nested) soil vapor probe SV16 was drilled (February 2012) outside along the northern boundary of the School building.

During the 2009 through 2012 investigations, approximately 161 soil samples were collected and analyzed. Soil samples were generally collected at five (5) foot intervals from 5 to 30 feet (SV14 through SV16), 10 to 60 feet (AS3 through AS6, AS9, AS12, AS13, GW25, GW26, and GW27), 35 to 60 feet (AS11), 43-45 to 60 feet (AS1 and AS2), and 60-62 to 80 feet (SB23 and SB24). Wells included shallow and/or deeper screened intervals. The vapor, soil, and groundwater results are summarized briefly below.

- Vapor Results - On April 22 and 23, 2012, vapor samples were collected from vapor probes SV14 through SV16. In May 2013, the DTSC required additional sampling of SV14 through SV16. The 2012-2013 soil vapor investigation and human health risk assessment was conducted under the direction of DTSC to determine if any health effects existed at the nearby Montessori School located down-gradient of the site. For further details regarding the investigation, report(s), and correspondence(s), refer to the State Board's GeoTracker database.

  It was concluded that the results were "*below EPA's target cancer risk range of $1x10^{-6}$ to $1x10^{-4}$ and California EPA's and EPA's target HI of 1.*" Also, the "*soil vapor in proximity to the School Site is unlikely to pose an inhalation risk to current/future occupants in the building present on the School Site.*"

V. ADDITIONAL COMMENTS, DATA, ETC.

- Soil Results- Maximum TPH-g, TPH-d (some of the samples were not analyzed for TPH-d), ethylbenzene, total xylenes, and MTBE concentrations were detected up to 3,400 ppm (AS3-43'), 1,200 ppm (AS3-43'), 20/20 ppm (AS12-43.5'/duplicate), 0.075/68 ppm (AS12-43.5/duplicate), and 0.028 ppm (AS13/VE13-40'), respectively. All benzene and toluene results were ND. Majority of the other VOCs were detected below 1.0 ppm. In addition, majority of the results for the samples collected from 10 to 35-40 feet were ND No soil samples were collected from AS10 due to the close proximity (<5 feet) to existing well GW10

  With respect to the deeper boring results, TPH-g, ethylbenzene, total xylenes, and several other VOCs concentrations were detected in the soil samples collected from boring SB22 at the 60, 65, and 75-foot depths. The 70 and 80-foot depth results were all ND. Maximum TPH-g, ethylbenzene, and total xylenes were detected in sample SB22-60'/duplicate at 0.0049/0.018 ppm, 0.072/0.183 ppm, and 0.026/0.018 ppm, respectively. All of the results for TPH-d, TPH-g (C_6-C_{12}; analyzed as an extended carbon chain by EPA Method 8015B), benzene, toluene, and all of the fuel oxygenates were ND and all of the other VOCs results were detected at less than 0.3 ppm. All of the soil results for SB23 and SV16 were ND. Therefore, borings SB22 and SB23 satisfactorily defined the vertical extent of contaminant beneath the subject site.

- Groundwater Results - TPH-g concentrations ranged from 3,000 ppb (GW26) to 3,400 ppb (GW25). Again, only trace to low-level VOCs concentrations were detected in the groundwater samples collected from wells GW25, GW26, and GW27. On April 23, 2012, LNAPL was recovered from wells GW1, GW2, GW4, GW8, and GW18. From 2004 through April 2012, a total of 71.826 gallons of LNAPL were recovered.

On October 15, 2012, the SVE system was activated. In October 2012, the influent vapor sampling results revealed maximum TPH-g, toluene, ethylbenzene, and total xylenes concentrations detected at 4,200 ppmv (October 16, 2012), 0.086 ppmv (October 16, 2012), 4.2 ppmv (October 16, 2012), and 0.86 ppmv (October 26, 2012), respectively. In October 2012, all of the results for benzene, MTBE, and TBA were ND. Due to operational issues, the SVE was shut-down on October 30, 2012. The system was not restarted until January 8, 2013.

2013

On January 8, 2013, the SVE system was reactivated and the AS system was activated on August 13, 2013. Extraction wells included wells VE3, GW1, GW2, GW4, GW8, and GW11. The AS system included up to 12 injections wells; Zone 1 (AS1, AS2, AS7, and AS8), Zone 2 (AS3 through AS5, and AS10), and Zone 3 (AS6, AS9, AS12, and AS13). By September 24, 2013, a total of 16,517 pounds of hydrocarbons were recovered by the SVE. On February 11, 2014, rebound vapor testing revealed that BTEX and ethanol results were all at or below 0.0120 ppmv and 0.00048J ppmv, respectively. MTBE, TCE, and PCE results were all ND.

2014

In July 2014, a total of three (3) soil confirmation borings (CB1, CB2, and CB2) were each drilled to a total depth of approximately 55.75 feet bgs The confirmation soil borings were drilled in the following areas of the site:

- Boring CB1 was drilled at the north end of the two (2) former dispenser islands, which were located at the northeast area of the site; near wells AS1 and GW1 (VE).
- Boring CB2 was drilled north of the former UST area and southwest of boring CB1; between wells GW5 and AS5.
- Boring CB3 was drilled within the former UST excavation area and near wells GW4 (VE) and AS4.

During drilling activities, groundwater was encountered from approximately 40-45 feet bgs. Soils were consistent with earlier investigations. A total of 35 soil samples were collected and analyzed. Petroleum hydrocarbons were detected in the samples collected from all three (3) soil confirmation borings The detections are summarized below:

1. TPH-d concentrations (sample extract was treated with Silica Gel treatment prior to analysis) were detected in 14 of 35 soil samples up to **13 ppm** (CB2-15').
2. Total xylenes concentration of **0.00031J ppm** was detected (CB2-40').
3. TBA concentrations were detected in three (3) of 35 soil samples up to **0.015J ppm** (CB1-25').

Benzene, toluene, ethylbenzene, and MTBE results were all **ND**. In addition, acetone, 2-Butanone (MEK), n-BB, dichlorodifuluoromethane, naphthalene, n-PB, 1,2,4-TMB, and 1,3,5-TMB concentrations were detected in five (5), two (2), two (2), 12, one (1), one (1), one (1), and one (1) of the 35 samples, respectively.

V. ADDITIONAL COMMENTS, DATA, ETC.

All of these results were detected at or less than **0.026J ppm.** In addition, laboratory-associated carbon disulfide and methylene chloride concentrations were also detected in some of the samples; all of these results were detected at or less than **0.0027J ppm**. All other soil results were ND.

All of the five (5) and 10-foot samples were ND for benzene and ethylbenzene. Naphthalene was detected at 0.001J ppm in sample CB2-5'. Therefore, none of these results exceeded the Low-Threat Underground Storage Tank Case Closure Policy's (LTCP) Table 1 *(Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health)* for Residential, Commercial/ Industrial, and Utility Worker land use.

Based on the results of this investigation in comparison to the pre-remediation soil results, the SVE system was effective in the remediation of subsurface petroleum hydrocarbons present beneath the site. Residual petroleum hydrocarbons were detected at very trace concentrations. Therefore, no further soil remediation or assessment was required.

Groundwater samples were also collected from the three (3) soil confirmation borings. Trace to low-level petroleum hydrocarbons were detected in all three locations. Maximum TPH-g, TPH-d, benzene, ethylbenzene, total xylenes, and TBA concentrations were detected at 770 ppb (CB3), 1,200 ppb (CB2), 0.27J ppb (CB1), 0.56J ppb (CB3), 0.87J ppb (CB2), and 7.6J ppb (CB3), respectively. Toluene and TBA results were all ND. Other VOCs were also detected. The maximum concentration was 1,3,5-TMB at 14 ppb (CB2). Majority of the other VOCs were detected at less than 1.0 ppb.

In September 2014, groundwater monitoring and sampling activities were conducted. Wells GW1, GW2, GW4, GW7, GW9, GW11, and GW12 could not be sampled due to insufficient groundwater volume. Also, well GW22 was paved over. Depth to groundwater ranged from 42.69 (GW11) to 46.69 (GW16) ft/ft. The groundwater gradient flow direction was to the west/southwest flow direction. The findings of this latest groundwater event are summarized below:

1. TPH-g concentrations were detected in seven (7) of the 14 samples up to **31,000/110,000 ppb** (GW18/duplicate). Historically, LNAPL was detected in several wells.
2. TPH-d concentrations were detected in all 14 samples up to **14,000/17,000 ppb** (GW18/duplicate). Historically, LNAPL was detected in several wells.
3. Benzene concentrations were detected in four (4) of the 14 samples up to **15 ppb** (GW19).
4. Toluene concentrations were detected in six (6) of the 14 samples up to **12 ppb** (GW19).
5. Ethylbenzene concentrations were detected in six (5) of the 14 samples up to **270/320 ppb** (GW18/duplicate).
6. Total Xylenes concentrations were detected in five (5) of the 14 samples up to **28 ppb** (GW19).
7. MTBE concentrations were detected in four (4) of the 14 samples up to **6.0 ppb** (GW19).
8. Ethanol concentrations were detected in sample GW18 and duplicate at **1,200J/2,700J ppb**. Note that the USTs and dispensers were removed from this site in 1997; site is a vacant lot.

All the TBA results were ND. There were several other VOCs that were detected. The latest results of these other VOCs can be found in the table shown on pages 4 and 5 of this summary.

A third quarter 2018 groundwater monitoring event was conducted on September 27 and 29, 2018. All 22 groundwater wells were attempted for sampling with only 6 of the 22 wells able to be sampled due to insufficient groundwater volume. GW-22 (located to the west of the site in Magnolia Avenue) was paved over and inaccessible. The depth to groundwater of the wells ranged from 42.50 to 54.47 ft/ft. The groundwater flow direction was Southwest. The findings of this groundwater event are summarized below:

1. Low concentrations of TPH-d (up to 96 µg/L) were detected in three of the wells; the current concentration in GW-26 was the lowest to date in this well and no TPH-d was detected in GW-27 for the first time.
2. TPH-g was only detected in GW-25 (110 µg/L), which was the lowest to date in this well.
3. BTEX and MTBE were not detected in any of the wells
4. No ethylbenzene or xylenes were detected in GW-25 for the first time during the current event.
5. Low concentrations of tetrachloroethene (PCE) (up to 2.4 µg/L) continue to be detected in wells GW10R and GW-25

None of the wells had detections of LNAPL and zero gallons of LNAPL were recovered. The site conditions continue to meet all of the general and media-specific criteria of the Low-Threat Underground Storage Tank Case Closure Policy (LTCP).

June 5, 2020- Remaining site infrastructure which includes groundwater monitoring wells, remediation wells, and soil vapor probes were properly destroyed and detailed in the well destruction report submitted by Arcadis on behalf of Chevron Environmental Management Company.

SENSITIVE RECEPTORS – The following receptors were identified for this site:
Human Receptors:

1. A Montessori School (pre-kindergarten) is located approximately 630 feet west (down-gradient) of the site
2. A residential trailer park is located approximately 840 feet west (down-gradient) of the site

Municipal Wells There are no municipal water supply wells within one (1) mile of the site The closest production wells are five extraction wells associated with the Arlington Desalter facility, which is located approximately one (1) mile southwest (down-gradient) of the site along Magnolia Avenue. Groundwater extracted from these wells are treated by reverse osmosis and then blended at the Arlington Desalter facility It should be noted that the drop in water levels at this site, and surrounding area, is likely due to the Arlington Desalter pumping activities

CLOSURE – Closure is recommended based on the following factors

1. In December 1997, all USTs, dispenser islands, and associated piping were removed from the site. Approximately 900 gallons and 385 tons of contaminated liquids and soils were removed from the site, respectively

V. ADDITIONAL COMMENTS, DATA, ETC. – Continued:

2. From August 12, 2004 through November 30, 2012, approximately 165 83 gallons of LNAPL were recovered at the site

3. In August 2007, SVE and MPE pilot tests covered approximately 7,132 tons and 321 gallons of hydrocarbons and liquids from the site, respectively

4. In November 2010, an additional three gallons of LNAPL was recovered from well GW19 Also during this time, a surfactant solution was injected into well GW19 and recovered via vacuum truck

5. From October 2012 through September 2013, an additional 18,618 pounds of hydrocarbons were recovered via SVE. An AS system operated concurrently with SVE.

6. Soil was adequately defined both laterally and vertically Based on the 2014 soil confirmation results, remediation was very effective in the remediation of the subsurface Also, the five (5) and 10-foot confirmation samples were ND for benzene and ethylbenzene. Naphthalene was detected at 0 001J ppm in sample CB2-5'. Therefore, none of these results exceeded the LTCP's Table 1 *(Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health)* for Residential, Commercial/ Industrial, and Utility Worker land use. Based on the trace to low-level concentrations of residual petroleum hydrocarbons, no further remediation is warranted

7. Historically, both LNAPL and elevated TPH-g and TPH-d dissolved phase concentrations were detected beneath the site Historically, only trace to low levels of VOCs concentrations were detected beneath the site. Remediation has effectively removed the LNAPL (last detected in 2011) and elevated dissolved phase TPH-g and TPH-d concentrations. The residual TPH-g/TPH-d dissolved phase concentrations in groundwater remain to the southwest of the site along the northern side of Magnolia Avenue Based on the residual TPH-g/TPH-d and low-level VOCs concentrations, the remaining petroleum hydrocarbons should not pose a threat to water quality in this area

8. Historically, two (2) soil vapor investigations and/or human health risk assessments were conducted on-site (2008) and off-site (2013) for the nearby Montessori School (under the direction of DTSC). Findings of these investigations revealed no human impact for both on and off-site. It should be noted that a PCE release from a nearby former dry cleaner facility was discovered during the investigations at the Montessori School As a result, this former dry cleaner facility is under investigation by Regional Board (SLIC Unit) and DTSC staff Refer to attached letters to the summary regarding the non-threat findings of these investigations

Therefore, based on the above factors, closure is recommended for the subject site.

This closure summary does not include all of the data for this cleanup. It was prepared by the Santa Ana Regional Water Quality Control Board (Regional Board) for the purpose of providing a brief summary for case closure evaluation. All environmental reports pertaining to this cleanup site as well as the Regional Board case file should be reviewed in their entirety to obtain further details regarding this cleanup.

VI. REGIONAL BOARD REPRESENTATIVE DATA RWQCB SUPERVISOR

RWQCB SUPERVISOR: Kenneth R. Williams	**TITLE:** UST Section Chief, Senior Engineering Geologist
SIGNATURE: *Kenneth R. Williams*	**DATE:** July 4th, 2020