UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105
Underground Storage Tanks Program Office
(LND-4-3)

AUG 23 2017

CERTIFIED MAIL: 7008 1830 0002 6279 8388
RETURN RECEIPT REQUESTED

Ms. Brenda Pusher-Begay, Environmental Manager
White Mountain Apache Tribe
Environmental Protection Office
P.O. Box 816
Fort Apache, Arizona 85926

Subject: No further action for the underground storage tank cleanup site at the former location of Rex Graham's Indian Pine Shell Station, near the intersection of Arizona State Highways 73 and 260, in Pinetop, Arizona (EPA ID# WMAP-056)

Dear Ms. Begay:

The U.S. Environmental Protection Agency ("EPA") is sending this letter to inform you of our determination regarding the status of the underground storage tank ("UST") cleanup site at the former location of Rex Graham's Indian Pine Shell Station ("Site"), located near the intersection of Arizona State Highways 73 and 260, in Pinetop, Arizona, on land of the White Mountain Apache Tribe ("Tribe"). EPA has determined, in concert with your office, that no further action ("NFA") is warranted for the Site, at this time, based on data contained in the report entitled "Leaking Underground Storage Tank Site Assessment," dated June 2017, and previous data in EPA's files. Specifically, this NFA determination is based on the following:

- Although localized, residual hydrocarbon compounds and lead are present in soil and groundwater at the Site, direct human exposure to these contaminants through dermal contact, ingestion and/or inhalation is unlikely based on the current use of the Site.
- The Site is currently a vacant lot and the Tribe has indicated that it has no plan to develop the Site in the future.
- The shallow groundwater beneath the Site is not currently used and the Tribe has indicated that it has no plan to use the shallow groundwater in the future.
- The adjacent recreational vehicle park operated by the Tribe obtains its drinking water from the Tribal drinking water supply system.
- The Casino Well, which provides drinking water to Hon-Dah Resort-Casino, is the nearest Tribal drinking water well at approximately 1,200 feet east of the Site. However, the Casino Well is hydraulically upgradient of the Site, and has never shown hydrocarbon compound detections during its monitoring.

- Three other active Tribal drinking water wells are located approximately 1.5 to 1.8 miles from the Site, and none of these wells has shown hydrocarbon compound detections during its monitoring.

Conclusion

As noted previously in this letter, localized, residual hydrocarbon and lead contamination in soil and groundwater is present at the Site. However, for the reasons noted above, this residual contamination does not appear to pose a threat to human health and the environment. EPA appreciates your office's support of this NFA determination for the Site. Please note that if additional information becomes available in the future regarding hydrocarbon contamination in soil and/or groundwater at the Site, or the use of the Site changes, EPA may determine that additional site assessment and/or corrective action is warranted. If you have any questions regarding the information contained in this letter, please contact Chris Prokop of my staff at (415) 972-3363 or prokop.chris@epa.gov, or you may contact me directly at (415)-972-3369 or linder.steven@epa.gov.

Sincerely,

Steven C. Linder, P.E., Manager
Underground Storage Tanks Program

Enclosure: Background on Former UST Operations, UST Removals, Site Assessment and Remediation

Cc (via email, all w/enclosure):

Gerd von Glinski, Hydrology and Water Resources Program, White Mountain Apache Tribe
Laurel Lacher, Lacher Hydrological Consulting
Terry Hill, Environmental Protection Office, White Mountain Apache Tribe
Brent Kurth, General Manager, Hon-Dah Resort-Casino
John Krause, BIA, Phoenix Area Office
Rear Admiral Charles Ty Reidhead, MD MPH, Area Director, IHS Phoenix Area Office
Captain Michael Welch, Director, Environmental Health and Engineering, IHS Phoenix Area Office

ENCLOSURE
Former Rex Graham's Indian Pine Shell Station
Underground Storage Tank Cleanup Site
Pinetop, Arizona (EPA ID# WMAP-056)
Background on Former UST Operations, UST Removals, Site Assessment and Remediation

Former UST operations

There is little information in EPA's files on the operational history of the underground storage tank ("UST") systems at the former Rex Graham's Indian Pine Shell Station ("Site"). However, EPA's files contain a photograph dated 1958 of the operational Site, which shows the full business name on the roof of the station building (see Figure 1). In addition, aerial photographs from 1980 and 1991 appear to show the station building immediately west of the former "Y-shaped" highway intersection (see Figure 2). Based on these documents and interviews with Tribal members, the Site was located immediately east of Hon-Dah Resort-Casino's ("Resort") current recreational vehicle ("RV") park administration building, and UST operations began at least in the 1950s and probably continued through at least the early 1980s. EPA's additional interviews with Tribal members have indicated that prior to the Highway 73/260 realignment in the late 1990s by the Arizona Department of Transportation ("ADOT"), the Site may have been within ADOT's highway right-of-way. After the realignment, however, the Site appeared to be within the boundary of the White Mountain Apache Tribe ("Tribe").

UST removals by the Tribe

On May 16, 1994, the Tribe's contractor (USTank Management) removed the two 6,000 gallon USTs (one gasoline and the other diesel) at the Site and collected/analyzed soil samples (see Figure 3). None of the original Site buildings was present, but the foundation pad and dispenser island were visible. This work was documented in the June 1994 UST Closure Report. The USTs were reportedly in relatively good condition, but hydrocarbon releases to soil were documented by hydrocarbon odors and the analytical results, which showed lower-level concentrations for total petroleum hydrocarbons (9.0 milligrams per kilogram ("mg/kg")) and total xylenes (0.02 mg/kg). The Closure Report noted that five cubic yards of petroleum-contaminated soil ("PCS") had been stockpiled in preparation for offsite disposal, but EPA's files contain no documentation of this offsite disposal. The Closure Report makes no mention of the former Rex Graham's Indian Pine Shell Station, and simply refers to the Site as a "former retail gas station."

Area-wide site assessment work by the Tribe

In 1996, the Tribe constructed an RV park immediately west of the Site. In October 1998, the Tribe's contractor (Water Management Consultants) conducted an area-wide soil and groundwater assessment that included the Site, the Resort's active UST facility and the landfill just east of the Resort. On October 29, 1998, soil samples were collected from five borings at the Site at 5.5-6.0 feet below ground surface ("bgs") and analyzed for petroleum hydrocarbons. The analytical results for the soil sample from boring RV-E (eastern portion of the Site) showed concentrations for benzene (23 mg/kg) and ethylbenzene (49 mg/kg) above EPA's current Regional Screening Levels ("RSLs") for residential settings. The soil samples from the other four borings at the Site showed no hydrocarbon detections.

Three of the above-noted soil borings were converted to groundwater monitoring wells (MW-RV-E, MW-RV-NENE and MW-RV-DWYE), and the water levels in these and other nearby wells documented a northwestern groundwater flow direction. On October 30, 1998, groundwater samples were collected

from these three monitoring wells and analyzed for petroleum hydrocarbons. The analytical results for the groundwater sample from well MW-RV-E showed concentrations for benzene (11 milligrams per liter ("mg/l")), toluene (5.3 mg/l) and ethylbenzene (1.9 mg/l) above EPA's Maximum Contaminant Levels ("MCLs"). The groundwater samples from the two other monitoring wells at the Site showed no hydrocarbon detections. In a memorandum dated March 20, 2000, Laurel Lacher, former hydrologist with the Tribe's Hydrology and Water Resources Program ("HWRP"), recommended remediation "by excavation and pumping" in the area of well MW-RV-E "as soon as possible" to address the elevated hydrocarbon contamination.

Remedial activities by the Tribe

In spring 2000, pursuant to the recommendations of the Tribe's HWRP, the Tribe reportedly removed PCS from an excavation that was approximately about 100 feet long, 30 feet wide and up to 12 feet deep (the depth of bedrock) in the vicinity of well MW-RV-E (see Figure 4). In his January 10, 2017 email to Chris Prokop, of my staff, Kirk Massey, formerly with the Tribe's Environment Protection Office ("EPO"), confirmed that he oversaw the PCS excavation work and documented that work with photographs and notes. In the same email, Mr. Massey sketched the approximate location of the former excavation on a map. Mr. Massey indicated that hydrocarbon vapors from the excavation were documented by elevated photo-ionization detector ("PID") readings, and that no confirmatory soil or groundwater samples were collected when the excavation activities ended. In her March 3, 2017 email to Mr. Prokop, Ms. Lacher provided a sketch that refined the approximate location of the former excavation. The PCS was reportedly stockpiled in the Resort's landfill, and the excavation was reportedly backfilled with clean soil. The previously most contaminated monitoring well (MW-RV-E) was removed by the excavation. Mr. Massey could not recall seeing a report documenting the PCS removal work, and Mr. Massey's photographs and notes were not in the possession of the Tribal EPO at the time of EPA's request for them.

Site assessment work funded by EPA

In 2011, EPA conducted research to determine the responsible party ("RP") for the Site. This research, which included multiple interviews with area residents, documented that Rex Graham had died many years prior to this and that no appropriate RP could be found. In 2012, EPA's contractor through the U.S. Army Corps of Engineers conducted a geophysical study and collected soil samples from two 4.5-foot deep excavations in areas characterized by geophysical anomalies. The purposes of this study were to determine if any UST system components remained in the subsurface, and if residual PCS or contaminated groundwater were present at the Site. No UST system components were found during this study, but the analytical results for trench soil samples from 3.5-4.0 feet bgs showed maximum concentrations for benzene (1.9 mg/kg), ethylbenzene (36 mg/kg), naphthalene (77 mg/kg) and 1,2,4-trimethylbenzene (330 mg/kg) above EPA's RSLs for residential settings. No groundwater was encountered during this field work. The Final Site Assessment Report ("SAR #1"), dated November 12, 2012, recommended further investigation at the Site to determine the extent of hydrocarbon contamination in soil and groundwater.

In response to the recommendations in SAR #1, EPA conducted additional assessment work at the Site in May 2017, which included the following (overseen by staff from the Tribal EPO and HWRP):

- Drilling 10 borings from five to 16 feet bgs, which were the depths of refusal (see Figure 4).

- Collecting two soil samples from each boring and analyzing those samples for volatile organic compounds ("VOCs") by EPA Method 8260B/5035, semi-volatile organic compounds ("SVOCs") by EPA Method 8270C, gasoline-range organics ("GRO"), diesel-range organics ("DRO") and oil-range organics ("ORO") by EPA Method 8015D, total lead by EPA Method 6010B, and tetraethyl lead by EPA Method 8270C/3550B.

- Collecting groundwater samples from three of the 10 borings that contained groundwater (SB-3, SB-5 and SB-6) and analyzing those samples for the same compounds listed above.

- Collecting groundwater samples from the two existing groundwater monitoring wells at the Site (MW-RV-NENE and MW-RV-DWYE) and analyzing those samples for the same compounds listed above.

- Collecting groundwater samples from ADOT's inactive drinking water well immediately north of the Resort and analyzing those samples for the same compounds listed above.

The activities listed above and all data generated were described in the report entitled, "Leaking Underground Storage Tank Site Assessment" ("SAR #2"), dated June 2017.

Discussion of the laboratory analyses in SAR #2 and comparison with EPA screening criteria

The laboratory analyses for the soil samples showed no detections, or very low concentrations for VOCs, except for borings SB-4 and SB-9. The soil samples from 2.0-3.5 feet bgs in borings SB-4 and SB-9 had concentrations of ethylbenzene (8.9 mg/kg and 17.0 mg/kg, respectively) and naphthalene (5.7 mg/kg and 7.8 mg/kg, respectively) slightly above EPA's residential RSLs for these two compounds. It should be noted that none of the ethylbenzene and naphthalene concentrations in soil exceeded EPA's RSLs for commercial settings. The GRO concentrations in these same borings were also slightly elevated, with a maximum GRO concentration of 1,700 mg/kg in boring SB-9. DRO was only detected in the soil sample from boring SB-4 at a concentration of 370 mg/kg. Tetraethyl lead was detected in the soil samples from borings SB-4, SB-8 and SB-10 at concentrations ranging from 0.0026 mg/kg to 0.53 mg/kg.

There were no VOC detections in the groundwater samples from the two existing monitoring wells at the Site, or in the water sample from ADOT's inactive drinking water well. The analytical results for the "grab" groundwater samples from borings SB-3, SB-5 and SB-6 also showed minimal hydrocarbon contamination except for the benzene concentration (34 micrograms per liter ("µg/l")) in the groundwater sample from SB-3, which was above EPA's 5 µg/l MCL for benzene. In addition, the grab groundwater samples from borings SB-3 and SB-5 had total lead concentrations (160 µg/l in both) above EPA's 15 µg/l MCL for lead. It should be noted that all groundwater samples collected during this site assessment had elevated turbidity readings of 60.42 to 685.2 nephelometric turbidity units ("NTUs"), and such NTU readings commonly result in elevated concentrations for metals in unfiltered groundwater samples due to contaminant adsorption onto suspended soil particulates.

Discussion of potential receptors to the residual contamination at the Site

The Site is currently a vacant lot immediately east of the Resort's RV park administration building. On June 8, 2017, Brent Kurth, General Manager for the Resort, informed Mr. Prokop that the Resort had no current development plans for the Site or the vacant lot. The Casino Well, which provides drinking water to the Resort, is the nearest Tribal drinking water well at approximately 1,200 feet east of the Site. However, the Casino Well is hydraulically upgradient of the Site, and the groundwater samples collected

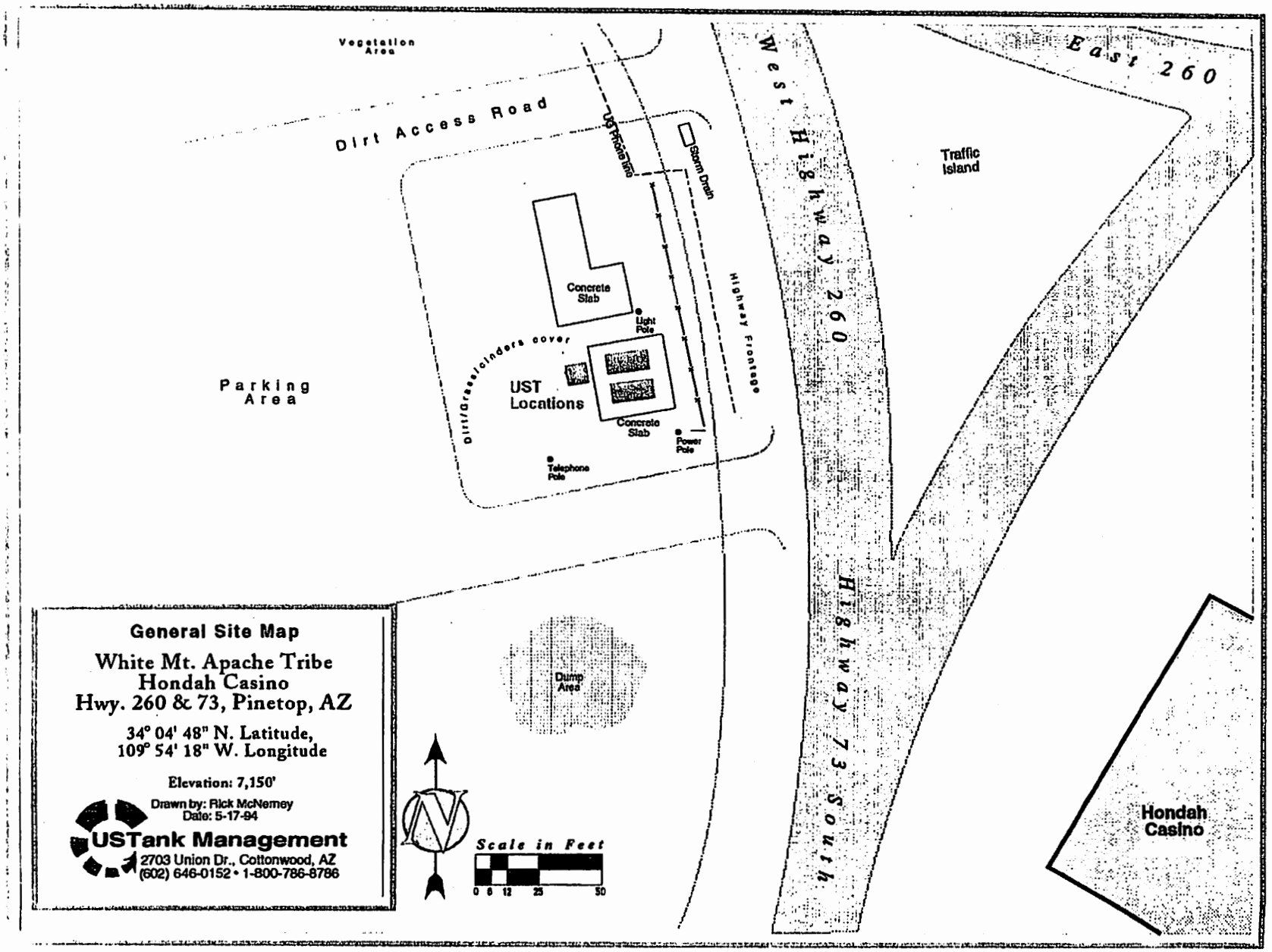
by the Tribe from this well on July 21, 2009 and August 4, 2014 showed no VOC detections. Staff with EPA Region 9's Drinking Water Protection Section also indicated that there had been no hydrocarbon compound detections during sampling events at the Casino Well prior to 2009.

Three other active Tribal drinking water wells are located between 1.5 and 1.8 miles from the Site, and these include the Smoke Shop Well, the Meadow Well and the Kinney Mountain Well. However, none of these wells has shown hydrocarbon compound detections during its monitoring. In addition, none of these wells is hydraulically downgradient of the Site.

FIGURE 1


FIGURE 2
G
H
H
H

FIGURE 3


Vegetation Area
Dirt Access Road
Ug Phone Line
Storm Drain
West Highway 260
East 260
Traffic Island
Concrete Slab
Light Pole
Highway Frontage
Dirt/Grass/cinders cover
Parking Area
UST Locations
Concrete Slab
Power Pole
Telephone Pole
Dump Area
Highway 73 South
Hondah Casino
N
Scale in Feet
0 6 12 25 50
General Site Map
White Mt. Apache Tribe
Hondah Casino
Hwy. 260 & 73, Pinetop, AZ
34° 04' 48" N. Latitude,
109° 54' 18" W. Longitude
Elevation: 7,150'
Drawn by: Rick McNerney
Date: 5-17-94
USTank Management
2703 Union Dr., Cottonwood, AZ
(602) 646-0152 • 1-800-786-8786

NORTH

FIGURE 4

EXPLANATION

- PETROLEUM CONTAMINATED SOIL REMOVAL AREA (APPROXIMATE)
- FORMER STATION LOCATION (APPROXIMATE-NOT TO SCALE)
- ASSUMED LOCATION OF FORMER TANK BASIN
- GROUNDWATER MONITORING WELL
- SOIL TEST BORINGS WITH ID. NO.
- WATER SUPPLY WELL

SOURCE: GOOGLE EARTH IMAGE (May 20, 2016)

0 100 200 FEET

SCALE: 1 INCH ≅ 100 FEET

iina ba, Inc. Project No.: USARMY0-00005

USACE Contract No.: W9123P7-14-D-0001-00012

iiná bá, Inc.

FIGURE 2: SITE LAYOUT MAP

LEAKING UNDERGROUND STORAGE TANK SITE ASSESSMENT

FORMER REX GRAHAM (INDIAN PINES) SHELL (WMAP #056)

HIGHWAY 73 AND HIGHWAY 260

PINETOP, NAVAJO COUNTY, ARIZONA