AP - 121

GENERAL CORRESPONDENCE

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD
Sent: Friday, November 22, 2019 9:45 AM
To: 'Moore, John'; 'Moore, Brian'
Cc: 'McCartney, Gregory J.'; Griswold, Jim, EMNRD; Wade, Gabriel, EMNRD
Subject: RE: Wingate Geoprobe Investigation WMW-2 Benzene Exceedance (AP-121) Work Plan

FYI: Per John Moore's Phone Msg. of 11/21 at 13:13, the pond photos referenced in yesterday's msg. below were from a different site, i.e., AP-111 SWMU-1, and are not related to the Wingate Facility (AP-121).

Please disregard any OCD comments on the "ponds" below, and OCD will remove the "pond" section, photos, etc. from the admin. record today.

Thank you.

From: Chavez, Carl J, EMNRD
Sent: Thursday, November 21, 2019 11:14 AM
To: 'Moore, John' <JMoore5@Marathonpetroleum.com>; 'Moore, Brian' <BMoore1@Marathonpetroleum.com>
Cc: McCartney, Gregory J. <gjmccartney@marathonpetroleum.com>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Wade, Gabriel, EMNRD <Gabriel.Wade@state.nm.us>
Subject: RE: Wingate Geoprobe Investigation WMW-2 Benzene Exceedance (AP-121) Work Plan

John:

The New Mexico Oil Conservation Division (OCD) has reviewed the Marathon Memorandum (see attachment) dated November 1, 2019 related to the above subject topic.

OCD hereby **approves** the attached Memorandum with maps, etc. (hereafter work plan) with some conditions (see "Conditions" below).

OCD Conditions:

1) Adhere to EPA QA/QC and DQOs during the environmental field investigation, sampling and analytical lab work.
2) Work plan Section c.iv.5: One environmental soil sample at BH-1, BH-2, BH-3, BH-4 and BH-5 from above the water table is required with 8260 Method lab analysis is required.
3) Based on step out approach, i.e., BHs 6 – 11, based on field PID > 1 ppm results per BH, continued step-out to complete horizontal characterization of contamination is required (see OCD "Recommendations" section below).
4) More information on the ponds and their proximity or intersection with potential GW contamination observed at WMW-2 is needed.
5) Provide a work schedule to OCD within 30 days from the date of this message.

OCD observations:

1) The map with proposed BHs does not have a scale; however, all BHs appear to be within Marathon Property.
2) Marathon mentions WMW-7 was installed into an artesian saturated sand zone below clay with head indicative of artesian condition. There appears to be a shallow water table aquifer or perched aquifer present at the facility. Perhaps the water table pinches out in the vicinity of WMW-7.
3) WMW-2 appears to be at or near the benzene source area.
4) No soil sampling is proposed.
5) All of the proposed BHs appear to be on Marathon Property.

6) The railroad loadout rack is currently the suspected source for Benzene.
7) Pond correspondence from Marathon indicates ponds are likely in hydrogeologic connection with GW (water table) in the ponds and there appears to be discoloration of soils and water present.

OCD comments:

1) OCD is concerned there is a dissolved phase VOC plume migrating off-property toward the SW based on historical GW surface maps.
2) OCD is concerned there may be a VOC Plume South of I-40 based on consistent historical Benzene concentrations detected in WMW-2.
3) OCD is concerned based on Benzene concentrations consistently detected in WMW-2 there may be "free product" present.
4) There appears to be a shallow water table aquifer present; however, Marathon by mention of WMW-7 seems to indicate there was no water table encountered there and a deeper saturated zone was encountered and where MMW-7 was installed. However, based on head elevations it would seem the water surface map from the AGWMR is likely a piezometric (water table) surface map. This is further supported by information associated with the ponds (see attachment).

OCD recommendations:

1) Since Marathon has a Geoprobe Rig, and a shallow water table, borings could be installed across I-40 South of WMWs 2, 4 and 7. The Geoprobe could be used to physically excavate boreholes for permanent MW emplacement at the water table with sand, gravel pack around screen, bentonite above sand, and well caps with locks.

OCD pond comments and/or questions:

1) OCD had difficulty correlating pond photos to ponds on attached maps. For example, a pond photo displays a culvert, which may mean it is a facility stormwater run-in and/or run-off pond?
2) There is mention by Marathon that head in the pond photos is from the water table aquifer in hydrogeologic connection with the pond(s).
3) The pond photos appear to exhibit soil staining and discolored groundwater.
4) Could Marathon correlate the pond photos with any of the attached maps?
5) If any of the ponds are the evaporation ponds for the facility, is Marathon working to repair or install a liner system over the breached liner system?
6) Has Marathon collected any soil and water media environmental lab samples from the ponds in the photos?

Please contact me to arrange a communication phone call or if you have work plan questions. Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Moore, John <JMoore5@Marathonpetroleum.com>
Sent: Friday, November 1, 2019 3:05 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: McCartney, Gregory J. <gjmccartney@marathonpetroleum.com>
Subject: [EXT] Wingate

Carl,

Attached, please find an outline of the anticipated work at Wingate to help define the benzene in the groundwater. If you have any questions, please let me know.

John Moore, P.E.
Environmental Superintendent
JMoore5@Marathonpetroleum.com

MPC – Gallup Refinery
92 Giant Crossing Road
Gallup, NM 87301
Phone: (505) 722-0205
Mobile: (307) 337-7642
www.Marathonpetroleum.com

Chavez, Carl J, EMNRD

From: Moore, John <JMoore5@Marathonpetroleum.com>
Sent: Friday, November 1, 2019 3:05 PM
To: Chavez, Carl J, EMNRD
Cc: McCartney, Gregory J.
Subject: [EXT] Wingate
Attachments: WMW-2.docx; Figure 1 Proposed Borehole Locations.jpg

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John Moore, P.E.
Environmental Superintendent
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Figure 1
Proposed borehole locations

Legend
BH-7
CT
CGC
CW
Cm
Cpa
DOS
DCt
DE
DGC
Dab
Dal
Ps
PFNMs
Pp
PNq
PNMa
PNMb
PCsh
PCt
PNMa
PNq
PCg
PCm
PCq
PCmm
PCd
PCg
PCmp
PCsb
NA
NA
NA
NA
Mm
Ml
Kss
Kf
KCm
Kk
Kmk
Kmr
Kmt
Kq
Kss
Jm
Kc
Kb
Kal
Kf
KCm
Kk
Kmk
Kmr
Kmt
Kq
Kss
Jm
Jgs
Je
Feature 9
Feature 8
Feature 7
Feature 6
Feature 5
Feature 4
Feature 3
Feature 2
Feature 15
Feature 14
Feature 13
Feature 12
Feature 11
Feature 10
Feature 1
Qal
Qt
Qal
Qg2
Qg
Qal
Qm
Qhr
Qhs
Qw
Qf
Qgm
Qw
Qk
Qg
Qm
Qmm
Qmr
Qab
Qag
Qcc
Qpcf
Qpcg
Qpch
Qpck
Qpcl
Qpco
Qpcp
Qpm
Qpca
Qpcc
Qpcg
Qpch
Qpcm
Qpcz
Qpcrc
Qpub
Qpuc
Qpuf
Qpus
Qpusf
Qr
Qsb
Qsit
Qsw
Qt
Qtb
Qtb
Qtb
80 ft
20 m
Google Earth

BH-1
BH-2
BH-3
BH-4
BH-5
BH-6
BH-7
BH-8
BH-9
BH-10
BH-11
WMW-2
WMW-4
WMW-5

memorandum

To:	Carl Chavez, Oil Conservation Division (OCD)
From:	John Moore, Marathon Petroleum Corporation (Marathon)
cc:	Greg McCartney, Marathon; Heidi Jones, Trihydro
Date:	November 1, 2019
Re:	Wingate Facility – WMW-2 Benzene Exceedance

Proposed Path Forward -

- Historical Document review – Determine the presence of benzene during prior due diligence efforts preceding sales of the property.
    - WMW-2 was installed in 1991 and the first sample collected was in July of 1991 with a benzene concentration 26 milligrams / liter (mg/L). Concentrations have been as high as 37 mg/L in 1993.
- Conduct a Geoprobe investigation in the area of the rail load out rack as outlined below.

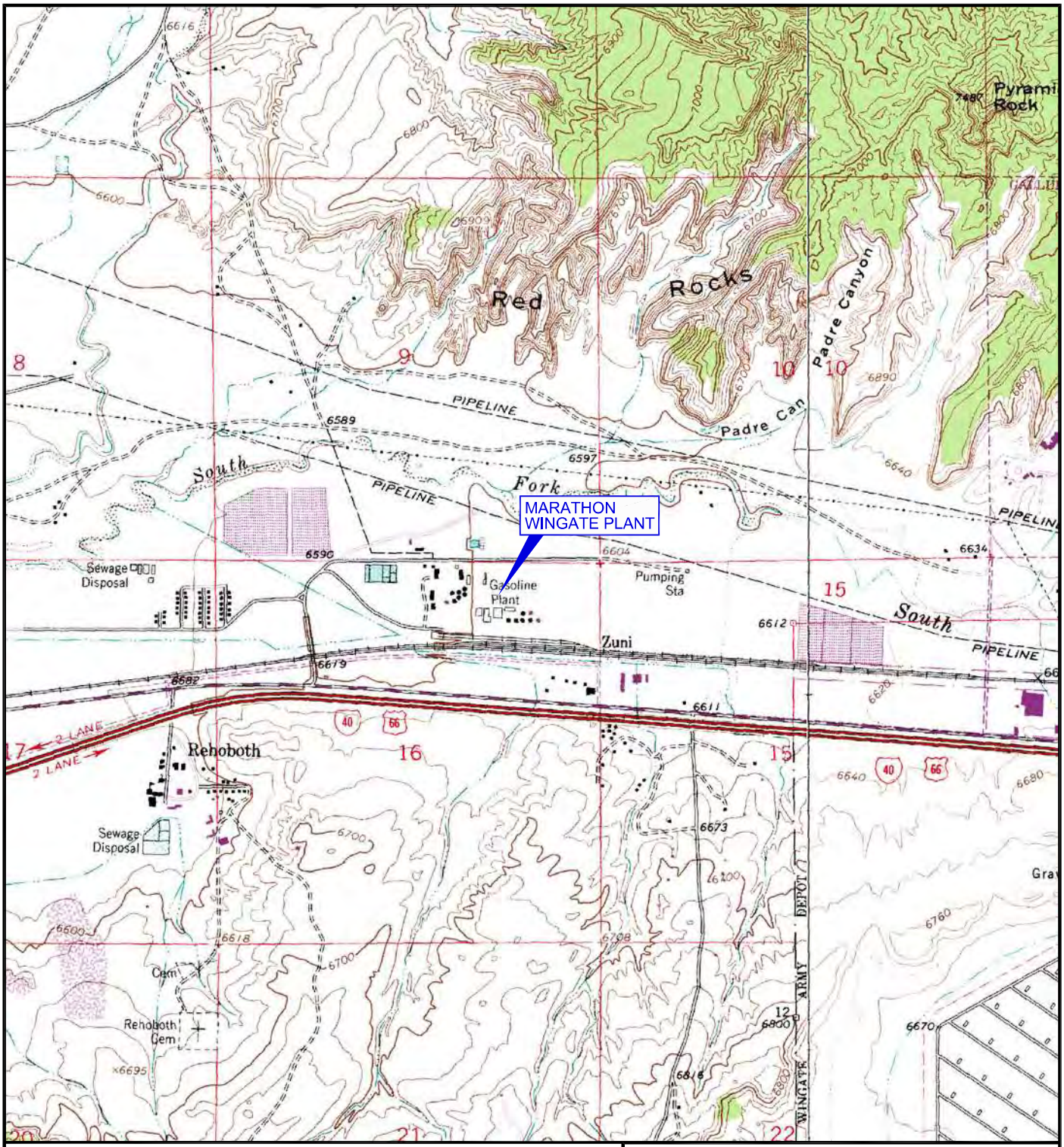
Borehole installation

a. Install five boreholes with a Geoprobe to a depth of approximately 15-32 feet below ground surface (bgs) or to the top of groundwater, whichever is shallower.
b. The first group of borings (BH-1 through BH-5) will be installed around WMW-2 in the locations shown on Figure 1.
c. The second group of borings will only be installed if benzene concentrations of soil samples screened with an UltraRae instrument exceed 1 part per million 2 feet above where groundwater is first encountered.
    i. Based on borehole logs for WMW-7 which is due west of WMW-2 (unable to locate log for WMW-2)
        1. The WMW-7 borehole log indicates a hard, dry, plastic clay/silty clay to a depth of approximately 26 feet bgs.
        2. A fine-grained, well sorted sand was encountered at 26 feet bgs. The sand was wet and continued to a depth of 38 feet bgs
        3. Based on the clay above the sand only being damp, it quite possible that the groundwater is under confining conditions. Static water level was at 9.33 feet bgs and several feet above the top of the screened interval.
    ii. The boreholes will be installed to four feet into the first saturated interval encountered.
    iii. The boreholes will be continuously cored and described by a geologist.
    iv. A 2-inch diameter temporary PVC screen will be placed in the borehole
        1. The temporary monitoring well will be gaged periodically with an interface probe
        2. After the fluid level stabilizes, a groundwater sample will be collected

v. The samples will be analyzed for:
    1. BTEX by EPA Method 8260B
    2. SVOC by EPA Method 8270
    3. Chloride, sulfate, and nitrate by EPA Method 300.0A
    4. Alkalinity by EPA Method 310.1
    5. Metals including mercury, arsenic, barium, calcium, cadmium, chromium, magnesium, selenium, silver, sodium, and lead by EPA Method 6010B
    6. Total dissolved solids (TDS) by EPA Method 160.1
    7. pH by EPA Method 150.1

d. After sampling, the temporary well screens will be extracted and the borehole will be abandoned with bentonite pellets below the water level and bentonite chips above the water table
e. The borehole locations will be marked and surveyed either with a GPS unit or by traditional survey methods.

- Marathon will evaluate the data obtained through the Geoprobe investigation and determine the appropriate next steps with the Oil Conservation Division.



Map Source: USGS 7.5 Min. Quad Sheets CHURCH ROCK, NM., 1963, Photorevised 1979; GALLUP EAST, NM., 1963, Photorevised 1979.

N

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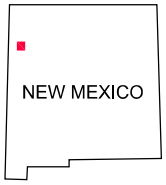
SCALE IN FEET



QUADRANGLE LOCATION

MARATHON PETROLEUM COMPANY LP
WINGATE PLANT

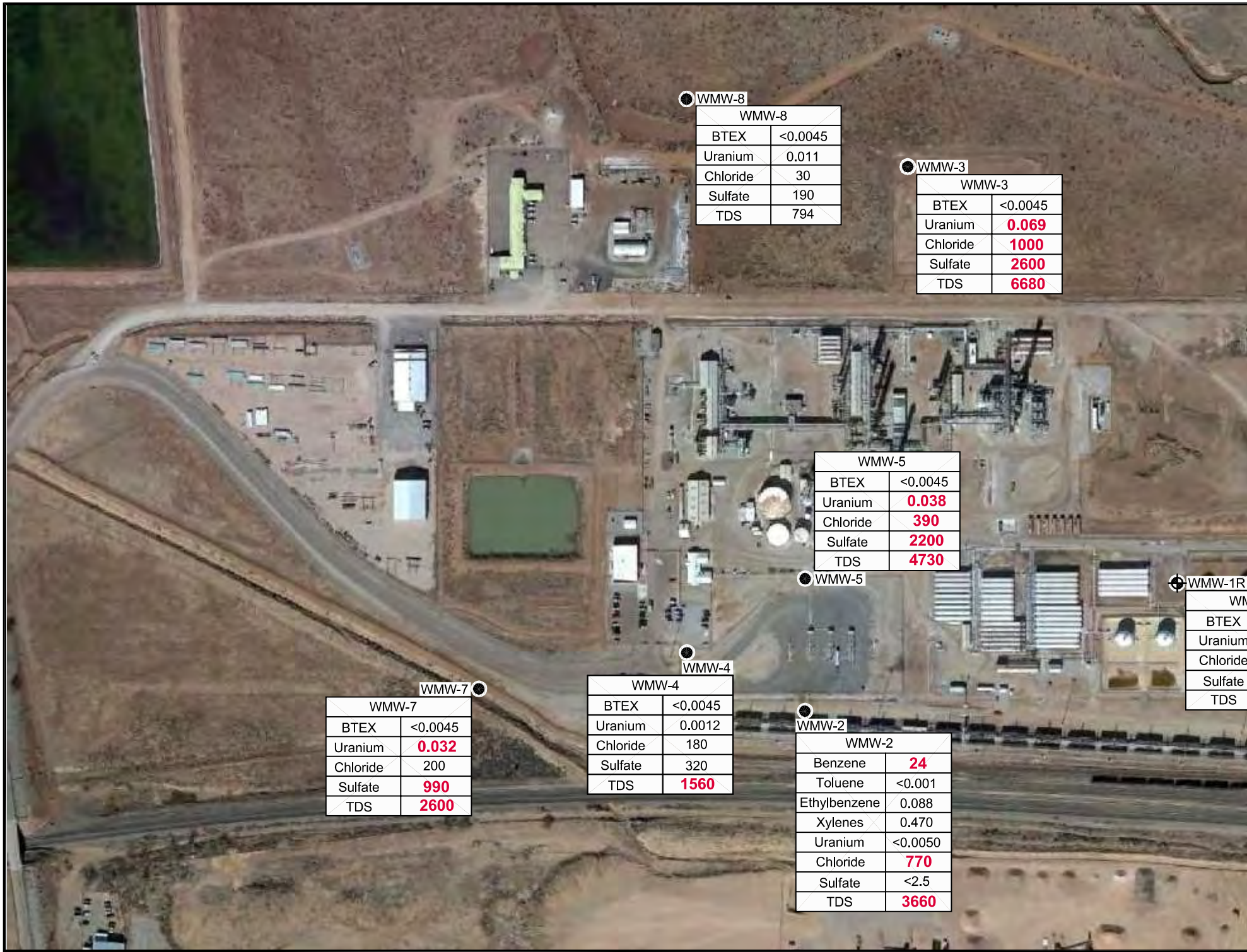
PROJ. NO.: Marathon	DATE: 07/20/19	FILE: Mathon–dA164

FIGURE 1
SITE LOCATION MAP

DiSorbo
Environmental Consulting Firm
8501 N. MoPac Expy.
Suite 300
Austin, Texas 78759

Aerial Map Source: Google Map, 02/19/2014.

Aerial Map Source: Google Map, 02/19/2014.



Aerial Map Source: Google Map, 02/19/2014.