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5 January 2016

Mr. Gary Miller
Task Order Monitor
U.S. Environmental Protection Agency (EPA) Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RE: Field Activity Report
San Jacinto River Waste Pits
Remedial Investigation/Feasibility Study Oversight
Channelview, Harris County, Texas
Contract: EP-W-06-004
Task Order: 0130-RSBD-06ZQ

Dear Mr. Miller:

EA Engineering, Science, and Technology, Inc., PBC (EA) is providing one electronic (e-mail) copy of the Field Activity Report, which summarizes Field Oversight activities performed by the Potential Responsible Party's contractor conducted on 23 December and 28–31 December 2015 for the above-referenced Task Order.

Please do not hesitate to contact me at (972) 315-3922 if you have any questions.

Sincerely,

Brian Yost, CHMM
Project Manager

BY/ab

cc: Michael Pheeny, EPA Contract Officer (letter only)
Rena McClurg, EPA Project Officer (letter only)
Tim Startz, EA Program Manager (letter only)
File

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TRANSMITTAL OF DOCUMENTS FOR ACCEPTANCE BY EPA	DATE: **5 January 2016**	TRANSMITTAL NO.: **0004**

TO:	FROM:
Mr. Gary Miller **U.S. Environmental Protection Agency Region 6**	**Brian Yost** **EA Engineering, Science, and Technology, Inc., PBC**

SUBTASK NO.	DELIVERABLE	NO. OF COPIES
3	San Jacinto River Waste Pits Superfund Site Remedial Investigation/Feasibility Study Oversight Field Activity Report	1 Portable Document Format (PDF) Version Submitted via E-mail

ACCEPTANCE ACTION	
DOCUMENTS FOUND ACCEPTABLE (LIST BY SUBTASK NO.)	NAME/TITLE/SIGNATURE OF REVIEWER DATE

FIELD ACTIVITY REPORT
23 AND 28–31 DECEMBER 2015
SAN JACINTO RIVER WASTE PITS
CHANNELVIEW, HARRIS COUNTY, TEXAS

This Field Activity Report summarizes activities conducted 23 and 28–31 December 2015 at the San Jacinto River Waste Pits (site), located in Channelview, Harris County, Texas. Under the U.S. Environmental Protection Agency (EPA) direction, EA Engineering, Science, and Technology, Inc., PBC (EA) performed oversight of field activities performed by the Potentially Responsible Party's (PRP) consultant; Anchor QEA (Anchor).

Participants onsite during field activities:

- Brian Yost, EA Project Manager
- John Bonner, EA Mid-level Scientist
- Duane Thomas, EA Mid-level Scientist
- Gary Miller, EPA Region 6
- Wendell Mears, Anchor
- Holly Samaha, Anchor
- USA Environmental, Inc., (USA Environmental) various personnel.

HEALTH AND SAFETY

EA personnel reviewed and signed EA's Health and Safety Plan (HSP) prior to arriving at the site. In addition, EA reviewed and signed Anchor's HSP prior to entering the work area.

SITE ACTIVITIES

23 December 2015

John Bonner with EA traveled to the site from the Houston, Texas office and arrived at 0930 hours after obtaining a sample kit from TestAmerica Laboratories, Inc. (TestAmerica). The task for the day was to split sediment samples with Anchor and ship them to TestAmerica for dioxin and furan analysis by EPA Method 1613B. This analytical method was selected based on its use by the PRP.

The temperature throughout the day was approximately 70°F with gusty winds from the south and light rain.

Daily activities included the following:

- Discussed sampling activities and schedule with Anchor personnel

- Anchor collected sediment samples from the following locations starting at 1330 hours and ending at 1530 hours
    - Three samples from the suspected damaged cap area off the northwest toe of the cap
    - Two samples from the northwest toe of the cap's sloped area
    - Two samples approximately 50 feet from the northwest toe of the cap.

Collection of sediment samples was hindered by the presence of rocks (suspected of being part of the cap) and oyster shells. It was determined that samples would be composite samples versus grab samples due to the low volume of sediment retrieved with the sampling equipment.

EA was provided sediment sample material from each of the three locations to utilize for split sampling analysis. EA processed a total of three samples. EA utilized the same sample identification nomenclature as Anchor and added the identifier "EA-SS" to the end. The samples were placed in a sample cooler and packed with wet ice.

EA departed the site at 1630 hours, however, was unable to arrive at the TestAmerica facility prior to closing. The samples were transported to EA's Houston office and secured in a dedicated sample refrigerator. The samples were repacked on 24 December 2015 and delivered to TestAmerica the same day at 1009 hours with an estimated turnaround time of 15 working days.

28 December 2015

EA (Brian Yost) traveled from the Lewisville, Texas office and arrived at the site at 1530 hours to confirm no work was being performed by Anchor or USA Environmental. No activities were taking place and the site was secured with a chain and locks on the entrance gate.

29 December 2015

During the day, the temperature ranged from approximately 43°F in the morning to approximately 57°F in the afternoon with no precipitation occurring. Cloudy conditions with a light wind from the north in the morning changing to the east in the afternoon.

EA (Brian Yost) arrived at the site at 0900 hours to determine if Anchor was starting work earlier than the scheduled 1300 hours start time. Upon arrival, Holly Samaha with Anchor and a crew from USA Environmental were present at the site and receiving equipment and materials.

Daily activities included the following:

- A tailgate safety meeting was conducted to discuss the daily activities.

- Anchor and USA Environmental were receiving equipment and materials. Equipment and materials present at the site included a mid-size track hoe and a Bobcat frontend loader and one roll of geotextile fabric.

- USA Environmental utilized the mid-size track hoe to smooth out the rock surface of the cap to allow for the placement of wooden mats to protect the cap covering.

- The wooden mats arrived and were unloaded between 1000 – 1045 hours. Approximately 300 feet of wooden mats were delivered and placed on the cap. Wooden mats to be utilized at the shoreline were secured for the night at a higher elevation due to the concern about rain or high tide carrying them away into the river. The wooden mats in this area will be staged again along the shore line in the morning of 30 December 2015. The placement of the wooden mats took approximately 4 hours.

- The final piece of equipment, a long-stick track hoe, was received at 1500 hours and was secured at the site.

EA departed the site for the day at 1515 hours.

30 December 2015

During the day the temperatures ranged from approximately 46°F in the morning to 56°F in the afternoon with intermittent light rain. Winds were out of the north-north east at 5–10 miles per hour (mph).

EA (Duane Thomas and Brian Yost) arrived at approximately 0650 hours for oversight of the day's planned work. Anchor representative Holly Samaha was on site, as well as their contractor USA Environmental.

The daily activities were as follows:

- A tailgate safety meeting was held by both EA (Brian Yost) and Anchor (Holly Samaha) at 0700 hours.

- USA Environmental resumed staging equipment and crane matting to access the work area from the east berm at 0707 hours.

- Rip rap deliveries began at 0826 hours. Four to six rock trucks were expected to deliver material during the morning. The unwashed 12–20 inch angular rip rap was staged at the base of the east berm. USA Environmental began moving the rock to the work area (WA) with the onsite skid steer with bucket attachment. The rock truck drivers were unwilling to drop the stone on the berm closer to the WA due to the rough condition of the mats and road leading out to the WA. This left USA Environmental with a run of approximately 600 feet to move rock from the dumping

area to the WA. USA Environmental and Anchor procured an off-road front end loader to address this situation due to site conditions.

- At 1030 hours, the rented front end loader arrived and USA Environmental began moving rip rap from the dumping area to the WA. Both machines (skid steer and front end loader) were used to haul rock to the WA.

- EA inquired about the polyvinyl chloride (PVC) marker stakes that were placed in the water delineating the WA. The Anchor work plan called for rip rap placement in a 5 foot overlap of the WA. EA inquired to Anchor representative, Holly Samaha, if the markers had taken into account the overlap or were the original GPS points for the WA. The stakes delineated the original WA.

- At approximately 1300 hours, the contracted boat operator was onsite to begin pulling the non-woven geofabric from the shore to the WA.

- The stakes delineating the northern and western portion of the WA were removed to allow for fabric placement. This also removed the visual reference for the boat crew as to the extent of the WA.

- USA Environmental experienced difficulty in getting the fabric from the shore to the WA. Several attempts were needed to get the proper boat orientation. The rip rap used to "pin" the north east corner of the fabric was dropped from approximately 10 feet, exceeding the work plan height of 2–3 feet.

- At 1400 hours, the boat captain contracted to USA Environmental refused to navigate his boat near the WA if there were any remaining PVC or floating markers that could compromise his equipment. USA Environmental began marking the shoreline with locations that additional sheets of fabric were pulled from.

- USA Environmental continued placing fabric and rip rap until approximately 1700 hours. Due to the turbidity and lack of reference markers it is unclear if the rip rap achieved total coverage or 5 feet of overlap outside of the WA per the Anchor work plan.

- USA Environmental continued clean up and re-staging of crane mats until 1730 hours.

EA (Duane Thomas) departed the site at 1745 hours.

<u>31 December 2015</u>

During the day the temperatures ranged from 46°F to 50°F with overcast skies and winds from the north-north east at 10 to 15 mph.

EA (Duane Thomas) arrived onsite at 0652 hours. Anchor representative, Holly Samaha, and Anchor subcontractor USA Environmental arrived by 0700 hours. The planned activities for the day were to probe the thickness and extent of the installed rip rap cap repair.

The daily activities were as follows:

- After the tailgate safety meeting, USA Environmental began placing crane mats in the water from the shoreline to the WA at 0733 hours. The tide and north winds would not allow access to the northern most corners of the WA. The water depths caused the crane mats to float. The extent of the rip rap repair of the WA was not visible from shore. The PVC marker stakes had been removed making visual referencing difficult. Anchor representatives used a 4-foot utility probe with a length of tape measure attached to probe the thickness of the rock by placing the end of the probe on the fabric, then subtracting the depth of the water to the rock.

- Anchor and USA Environmental chose to continue with the probing around the shoreline until the tide and water levels over the cap repair subsided allowing access to the northern most extents of the WA.

- At 0942 hours additional rip rap was placed at the western edge of the WA after probing measurements came up at a thickness of 9 inches.

- From 0942 hours until 1054 hours Anchor and USA Environmental continued probing, moving first east then north to cover the WA. Anchor and USA Environmental reported that the top of the rock was visible from the crane mats. EA attempted to use aerial photography to confirm the extent of the rip rap repair. The turbidity and roughness of the water prevented definitive images from the air above the cap. Photographic documentation obtained during the field activities are provided at the end of this report in Appendix A. Scanned pages of the field logbook are included in Appendix B.

- At 1054 hours Anchor called the repair effort complete and began moving the excess rip rap stock pile from the cap to the original dumping area. USA Environmental also began removing the crane mats from the cap area to a staging area.

- Anchor informed EPA (Gary Miller) and EA that the surveyors would not conduct the post repair survey until Monday, 4 January 2016, due to the inclement weather and water conditions.

EA (Duane Thomas) departed the site at 1215 hours.

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

23 December 2015: Probing of armored cap for sediment sampling locations.

23 December 2015: Typical material collected for sediment sample analysis.

29 December 2015: Label from Geotextile Fabric Material to be used on armored cap.

29 December 2015: Typical placement of wooded mats for equipment movement across the site.

30 December 2015: Placement of wooded mats for the working area along the shoreline.

30 December 2015: Attempting to place fabric in the area of concern.

30 December 2015: USA Environmental dumping rip rap from over 3 feet.

31 December 2015: USA Environmental staging crane mats for probing activities.

31 December 2015: Cap status and probing NE-SE. Repair nearly visible beneath surface.

31 December 2015: Anchor and USA Environmental probing rip rap thickness.

31 December 2015: Cap status and repair probing set up.

APPENDIX B

FIELD LOGBOOK PAGES

Location

Date

Project / Client

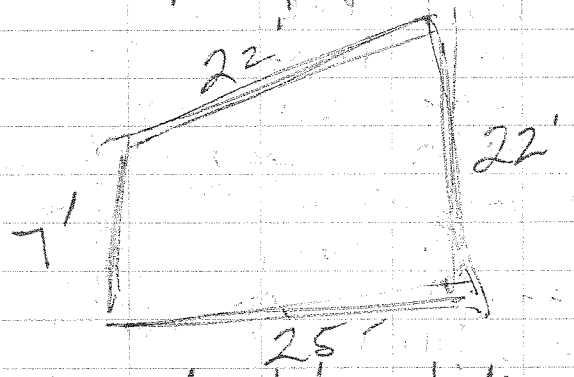
Location Houston, Harris Co, TX Date 12/23/15

Project / Client EPA Region / San Jacinto River Waste Pits

07:30 - Depart Houston office for Test America lab to pick up sample kit
08:15 - Arrive @ TA lab - picked up sample kit - exchanged 5 clear 4 oz soil jars for 5 Amber 8 oz soil jars
08:30 - Depart TA for site
09:30 - Arrive onsite
Weather: Cloudy / Warm / 70s F / Wind gusty out of South some light rain
Task of the Day: collect split sediment samples w PRP consultant
09:45 - Gary Miller (Region EPA) arrives on site
10:00 - Anchor QEA Field Supervisor Wendell Wynn arrive onsite
10:15 - HASP overview / review
10:30 - Benchmark Environmental (sub to Anchor) arrives by boat to location of damaged area
11:00 - Start process of staking damaged area ~~out~~ boundaries

Location Houston, Harris Co, TX Date 12/23/15
Project / Client San Jacinto River Waste Pits
EPA Reg 6

with pvc piping as follows:



12:00 - Complete staking damaged area (photo)
12:02 - Boat launch area to pick up sample kit from boat launch
12:30 - Boat arrives / prepare plan with all parties to collect sediment samples:
3 samples from damaged area
2 samples from Toe of slope
2 samples from approx 50 ft from Toe of slope
13:30 - Start collecting sediment samples from areas
Split samples as follows:

Location Houston, Harris Co. TX Date 12/23/15
Project / Client San Jacinto River Waste Pits / EPA Reg 6

1 sample from damaged area
1 sample from Toe of slope
1 sample from approx 50 ft from Toe of slope
Sample SJNE083 (Sample ID: SD0005) collected @ 1410 from damage area (photo)
Sample SJNE085 (Sample ID: SD0006) collected @ 1455 from Toe of slope
Sample SJNE087 (Sample ID: SD0009) collected @ 1535 from approx 50 ft from Toe of slope
All samples will be labeled as follows:
Sample ID - EA - SS

16:00 - all sample brought to shore and placed on ice in cooler.
16:30 - Depart site for Houston office
12/23/15 JB

Location Houston, Harris Co. TX Date 12/24/15

Project / Client San Jacinto River Waste PRAs / EPA Region 6

0800 - CoC completed
photos downloaded
samples prepare for
lab drop off

0930 - Depart office for
TA labs to drop off
samples

10:15 - Sample dropped off
@ TA Labs for shipping
to Sacramento, CA on Mon
Dec 28

10:30 - Return to Houston office

JTB
12/24/15

Location Date

Project / Client

Location _____ Date _____

Project / Client

12/30/15

0650 - Arrived @ site.
Present: Yost, Thomas EA
Miller - EPA
Samaha - Anchor
USA Environmental

Location Houston, Harris Co, TX Date 12/30/15

Project / Client San Jacinto Waste Pits, EPA 6
Cap Repair

0530 Depart for site
WEATHER: Showers early, then cloudy in the afternoon, High 56°F. Winds NNE at 5-10 mph. Chance of rain 40%
0650 Meet Curry Miller, EPA 6 + Brian Yost EPA
0700 Meet with BY for Safety Meeting
0705 Site Specific Safety Meeting with Anchor rep Samantha
PLAN FOR THE DAY: Continue placing mats + staging longstick. Eventually begin placing rip rap.
0707 Morning equipment prep
0743 *Photo: Staging mats
0810 *Photo: mat staging
0826 1st rock truck arrives
*Rock is 6"-24" unwashed limestone
*Photo Dumping rock
*. Dumping/staging rip rap is a long run of ≈ 600-700 ft with bobcat
Dump driver unwilling to use mat road
0841 USA cutting and moving geo-fabric in position
*Photo: Cutting + preparing geofabric

Location Houston, Harris Co, TX Date 12/30/15
Project / Client San Jacinto Waste Pits, EPA 6
Cap Repair

1030 Frontend loader arrives to speed up rip rap staging
1220 Boat for setting fabric on-site
* Work Area stakes do not account for overlap of area of 5' outside of work space. EA discusses with EPA & Holly Sumaha of Anchor
- USA provide mark on ground 5' out on shore for reference
* Photo: marking 5' overlap
1337 USA begins pulling fabric with boat - stakes still in
1352 Stakes pulled in NE corners and sides of work area, reference frame lost
- rock dropped to fix NE corner dropped from 3+ feet in air, fabric not stretched
1400-1530 Boat captain refuses to navigate boat to any float or marker attached to bottoms. Corners of work area are lost on the east. USA will continue one sheet of fabric at time and anchor one corner with rock on both ends, then rock in the work area
1553 Anchoring 3rd Sheet
* Photo: anchoring 3rd sheet

Location Houston, Harris Co, TX Date 12/30/15
Project / Client San Jacinto, Waste Pits EPA 6
Cap Repair

1618 Anchoring 4th fabric sheet
* Photo: attaching sheet
1640 Geo Fabric in, 5' overlap on extremeties likely not achieved in all areas
1700 Rip rap placement complete
1700 - 1730 Clean up, mat movement off cap
1745 Depart Site

Location Houston, Harris Co, TX Date 12/31/15

Project / Client San Jacinto Waste Pits

Cap Repair, De-Mob, survey

0545 Depart for site

0652 Arrive at site

WEATHER: Overcast, High 54°F, Winds NNE at 10-15 mph

0700 Safety Meeting

PLAN FOR THE DAY: Survey repair of cap, (thickness) demob

* Holley Sanabria will probe work area to gauge thickness of rock placement

* Tide is up, repair not visible, no markers visible

0733 begin placing crane mats for probing effort

* Pledo placing mat

* Photo: placing mat over repair work area

0800 Water too deep to probe. ~~Will~~ Anchor will get boat. Unclear what type of boat. Corners of work area are not visible from shore. Outer limits are marked with paint laterally on shore

0845 Aerial Vid of Pics of cap or probing activities

0912 USA will add some rock to low spot near west edge of work area

* Photo: adding rock to work area

Location Houston, Harris Co, TX Date 12/31/15

Project / Client San Jacinto, Waste Pits

Cap Repair, probing

* Photo: Graduated utility probe (tape measure for probing

1000 USA will add some more rock to NE corner of WA. => Anchor finding & identifying some holes

0816 USA to add more rock to eastern portion of work area closer to shore

1054 Anchor calls crew complete will move left over rock to original dumping area by entrance road. & begin demobilizing mat & machines

1054 - 1200 Demobilizing equipment and materials

1215 JEA (OT) departed site