

June 16, 2014

Ms. Rebecca Little Owl
IBWC, U.S. Section
Headquarters
4171 N. Mesa, Bldg. C 100
El Paso, TX 79902-1441

Re: Closeout Report for American Canal Clean-up
Former ASARCO Smelter Site, El Paso, Texas

Dear Ms. Little Owl:

Please see the attached closeout report for the clean-up efforts to the American Canal. Activities completed included removal of clean sloughed soil and rock material from the canal, and slope and fence repair. The area cleaned out was located (slough location) 300 feet downstream of where the canal transitions to an open channel on the east side of Paisano Drive.

The work was performed by VIVA Environmental Inc., beginning on May 5, 2014 and finishing May 22, 2014. A total of 400 feet of canal was cleaned out downstream of the slough location. Additionally, approximately 100 feet of slope was repaired and fencing was replaced at the location of the slough.

If you have any questions or need additional details or photographs, please contact me at (915) 249-8658 or by email at bill.sabatka@arcadis-us.com.

Yours Truly,



Bill Sabatka, P.E.
Project Environmental Engineer





May 28, 2014

Bill Sabatka, P.E., Project Environmental Engineer
Malcolm Pirnie, Inc.
211 North Florence, Suite 202
El Paso, Texas-79901

RE: Clean-up and removal of sloughed soils and rock from the American Canal, repairs to the slope between the rail road tracks and the canal, and repairs to canal fencing.

Project # ARCA.14.4.2.TX.N

This report summarizes the field activities which included inspection, clean up and removal of sloughed soil and rock material (debris), and reparation of the slope and fencing performed by VIVA Environmental, Inc. (VIVA) beginning Monday, May 5, 2014 and finishing on Thursday, May 22, 2014 at the American Canal adjacent to the west slope of the Former ASARCO Smelter Site, El Paso, TX.

Due to significant rainfall in September 2013, a portion of the Site side slope eroded and sloughed into the American Canal (canal). In response to a request by the International Boundary and Water Commission (IBWC) VIVA was subcontracted to Malcom Pirnie, Inc. to perform a cleanup and removal of sloughed debris in the canal. In addition to the debris removal, VIVA was also tasked to repair the slope between the rail road tracks and the canal and repair the fence in the affected area. Due to the location of the work, near an active rail road, state highway, and US/Mexico border, Peter Felix III, O.H.S.T., of VIVA established contact with Burlington Northern, Santa Fe Rail Road (BNSF), Border Patrol and Texas Department of Transportation to inform them about the removal plans.

Canal Inspection - March 2014

A team of Malcolm Pirnie and VIVA staff inspected the canal to further characterize the volume and extent downstream of the debris. During the inspection, the canal had a water depth of approximately 1-2 feet. It was determined the extent of the loose debris extended 400 feet downstream of the slough area and beyond that distance, the material in the canal was consolidated and covered in moss, indicating it was present prior to the slough.

Kickoff Meeting - April 2014

On April 22, 2014 a kickoff meeting occurred with representatives from IBWC, VIVA, Malcom Pirnie, and El Paso County Water Improvement District #1 (EPCWID#1). The EPCWID was involved with the removal because they were identified as the user of the water in the canal.



During the kickoff meeting, the scope of work and methodology was discussed and approved by IBWC, EPWCID#1. A timeline and schedule were also discussed.

Safety

A Health and Safety Plan was developed by VIVA and approved by Malcom Pirnie prior to initiating work. The plan stated the scope of work in five phases and site specific detailed safety plans.

Everyday operation began with a morning safety meeting at 7 a.m. assuring that all the technicians/crew understood the health & safety measures while working at the site. The entire operation was coordinated with Malcom Pirnie, IBWC, BNSF, and Border Patrol as required. A BNSF rail road flagman was onsite and was in contact with the local BNSF rail yard during the entire cleanup operation.

As a precaution to mitigate any unavoidable oil spills or contamination of the water from the heavy equipment operating in the canal, VIVA set up an adsorbent/hard boom across the canal downstream. The boom remained set up throughout the duration of the heavy equipment operation. Also, decontamination of heavy equipment, ladders and tools used in the canal was conducted by using a pressure washer to wash down the equipment outside the canal prior to being placed in the water.

Clean-up and Removal Operations

On May 1, VIVA technicians mobilized to the canal site and started preparing the staging area. The crew safeguarded the staging area, put up traffic control signs. A site Safety Manager was appointed at the site to assure that the safety measures were followed per the approved Health and Safety Plan.

The removal operation began on Monday, May 5. Crew members initially set up safety lines from north to south parallel to the canal by anchoring two poles. Another set of poles were anchored adjacent to railroad track to carry oversized material. After the safety lines were established, crew members began dislodging the loose debris on the slope between the track and canal. Throughout the duration of the operation, crew members built the slope between the rail road track and the canal back to form, matching the surrounding conditions of the slope.

The mucking and scooping of debris was performed by a skid steer and an excavator along with manual labor. Every morning the skid steer was hoisted into the canal with the excavator and hoisted out at the end of the day. The skid steer would muck the debris/sediments and place the material in the bucket of the excavator that was staged outside of the canal. The excavator would then place the material into a dump truck waiting in the staging area. Technicians also scooped the materials manually with buckets and shovels to aid in the cleanup operation. Once the dump truck was loaded, it was hauled to the Former ASARCO Smelter site for disposal. Routine monitoring of the operation was performed by Malcom Pirnie. The clean-up and removal operation, including the slope repair was complete on May 20. A total of 13 truckloads estimated at 10 cubic yards per load were removed from the canal. Photographs documenting the

clean-up and removal were taken at every stage of the operation, and are shown in the Photolog in Appendix A.

The crew then completed installing new T-posts and installing chain-link fence with three strands of barbed-wire on May 21 completing the operation. Approximately 100 feet of fencing was installed.

Closeout Meeting - May 2014

On May 22, Gilbert Anaya, Rebecca Little Owl, and Tony Solo with the IBWC, Pete Rodriguez with EPCID#1, Bill Sabatka with Malcom Pirnie and Pete Felix of VIVA conducted a closeout meeting, including a site walk and inspection. At the end of the meeting, IBWC and EPCWID#1 concurred that the removal and clean-up was sufficient and no additional efforts were necessary.

If you have any questions or require additional information, please do not hesitate to contact me at 915-779-5395 ext. 115.

Respectfully,

Susmita Bandyopadhyay, PhD
Environmental Engineer

VIVA Environmental, Inc.

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E-mail: ws115@vivaenvironmental.com

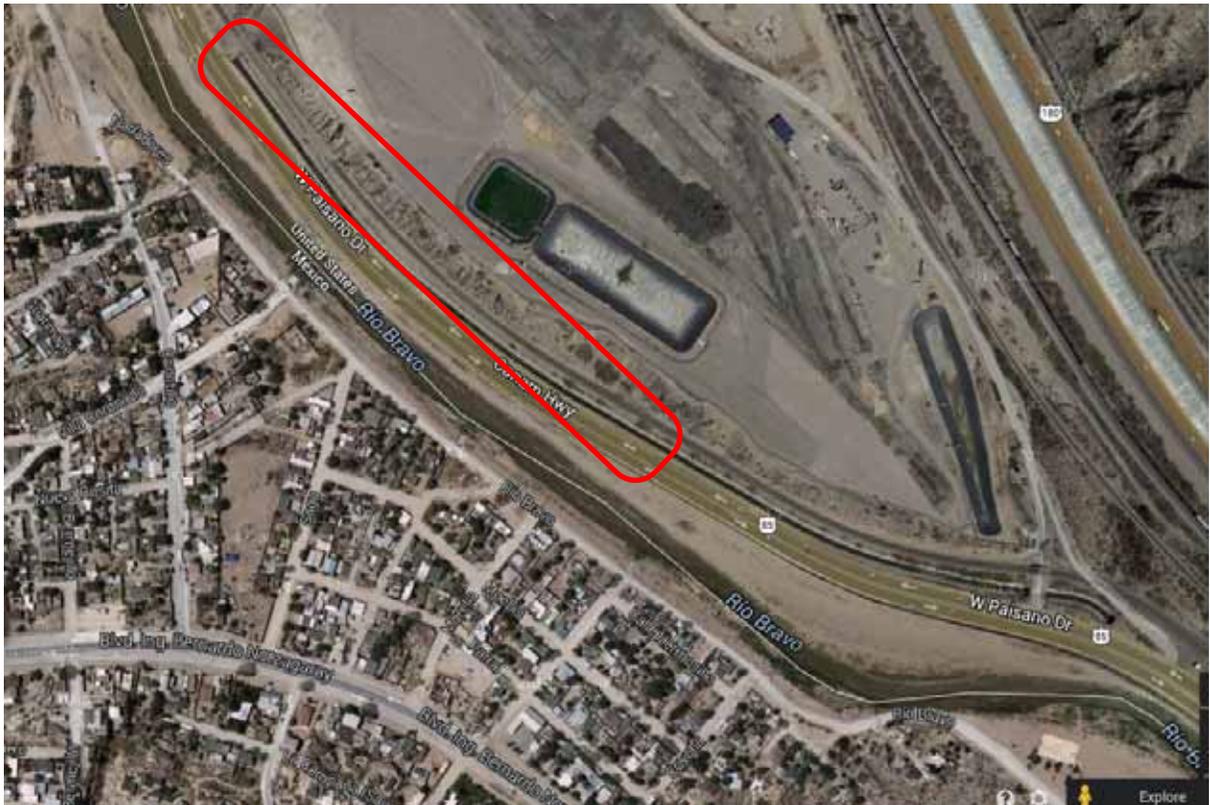
Internet: www.vivaenvironmental.com



Appendix A - Photolog

1. SITE LOCATION
2. BEFORE CLEAN UP
3. HEAVY EQUIPMENT OPERATION
4. CLEANING OPERATIONS
5. MANUAL CLEANING
6. FENCING
7. POST CLEAN-UP CONDITIONS

Site Location



1-1) Site location including staging area. Source of picture, Google Maps 2014.

Before Clean Up



2-1) Sloughed rock and soil material (debris).



2-2) View of initial removal area, looking upstream.



2-3) View of initial removal area, looking downstream.



2-4) View of fence pushed over from soil and rocks.

Heavy Equipment Operation



3-1) Adsorbent boom downstream of work zone.



3-2) Decontamination of equipment.



3-3) Hoisting skid steer into canal.



3-4) Hoisting skid steer into canal.

Cleaning Operations



4-1) Skid steer operating in canal.



4-2) Skid steer hauling material to excavator for removal (traveling in reverse to prevent water from entering skid steer cab).



4-3) Skid steer placing debris in excavator bucket.



4-4) Skid steer removing debris, looking downstream.

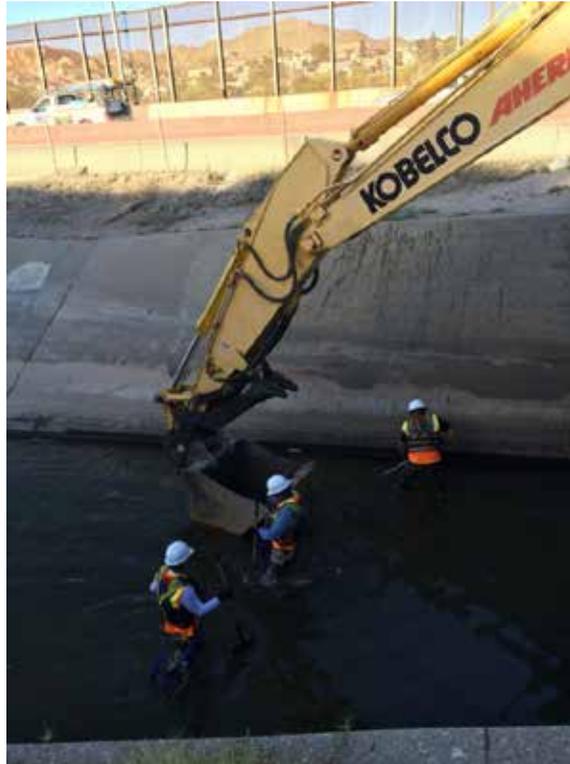


4-5) Skid steer removing and hauling away debris.

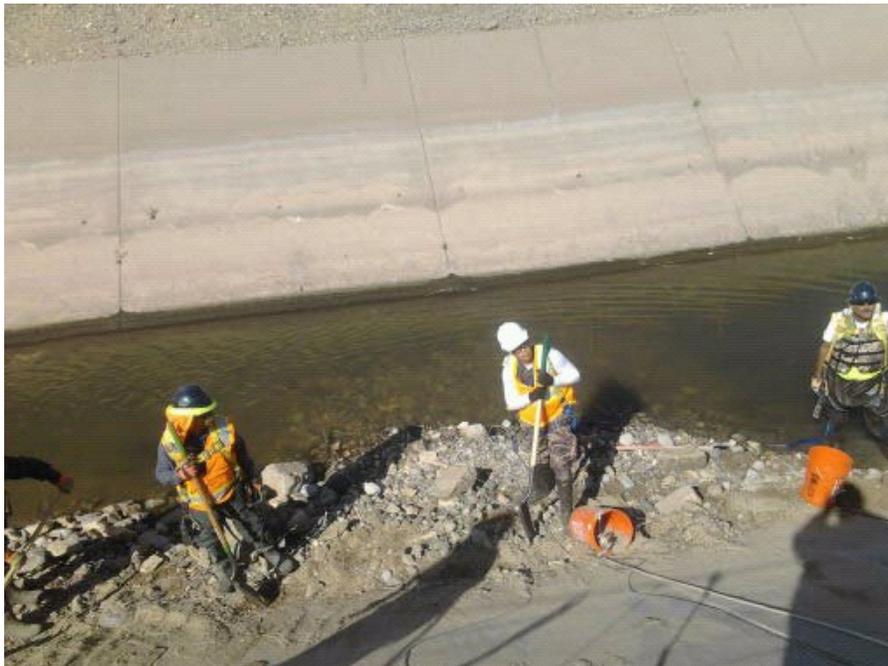


4-6) Placement of debris into dump truck.

Manual Cleaning



5-1) Manual removal of debris with hand labor.



5-2) Manual removal of debris with hand labor.



5-3) Manual removal of debris and placement back onto slope.



5-4) Manual removal of debris and placement back onto slope.

Fencing



6-1) Fence installation.



6-2) Fence installation.

Post Clean-up Conditions



7-1) Conditions after debris removal. Note: smooth water surface, no ripples.



7-2) Conditions after debris removal as seen from the staging area looking downstream.



7-3) Repaired fence and slope.



7-4) Repaired fence.