ANCHOR QEA

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July 15, 2013

Mr. Gary Miller, Remedial Project Manager
U.S. Environmental Protection Agency, Region 6
Superfund Division (6SF-RA)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: San Jacinto River Waste Pits Superfund Site
Monthly Progress Report No. 44 June 2013/July 2013
U.S. EPA Region 6, CERCLA Docket No. 06-03-10 UAO for RI/FS

Project Number: 090557-01.04

Dear Mr. Miller:

Attached please find the Monthly Progress Report No. 44 for June 2013/July 2013. This report was prepared on behalf of the International Paper Company and McGinnes Industrial Maintenance Corporation for the San Jacinto River Waste Pits Superfund Site in Channelview, Texas. Should you have any questions, please contact me at (228) 818-9626 or email me at dkeith@anchorqea.com.

Sincerely,

David C. Keith
Project Coordinator

cc: Steve Tzhone, USEPA
Barbara Nann, USEPA
Phil Slowiak, International Paper
David Moreira, MIMC
Jennifer Sampson, Integral

Attachments

DCK/tlf

Monthly Progress Report No. 44 June 2013/July 2013
Submitted July 15, 2013
San Jacinto River Waste Pits Superfund Site
USEPA Region 6, CERCLA Docket No. 06-03-10 UAO for RI/FS
Channelview, Texas

The Unilateral Administrative Order (UAO) for the Remedial Investigation/Feasibility Study (RI/FS) at the San Jacinto River Waste Pits Superfund Site (Site) in Channelview, Texas, (USEPA Region 6, CERCLA Docket No. 06-03-10 UAO for RI/FS) was issued on November 20, 2009. The Respondents include International Paper Company (IP) and McGinnes Industrial Maintenance Corporation (MIMC).

A. Summary of Work Performed – June 2013/July 2013

The Respondents, Anchor QEA, and Integral Consulting completed work on the following tasks:

- Submitted Monthly Progress Report No. 43 to the United States Environmental Protection Agency (USEPA) on June 17, 2013.
- On July 2, 2013 conducted a WebEx meeting requested by USEPA and U.S. Army Corps of Engineers (USACE) to review the results of hydrodynamic modeling with respect to the northern impoundments, and to review potential remedial alternatives for the Draft Feasibility Study (FS).
- Completed the second phase (July 2013) of field investigations as outlined in the Groundwater Sampling and Analysis Plan (SAP) Addendum 2 to further evaluate conditions in the area south of I-10 the week of July 8, 2013.
- Continued work on the Draft FS for the Site.
- Completed validation of chemistry data for groundwater collected south of I-10 in May 2013. Posted updated RI/FS database project web page on July 15, 2013.

B. Summary of Agency Communications

The written communications between Respondents and USEPA subsequent to the issuance of the UAO are summarized in the attached Table 1.

C. Summary of Sampling Results

Attached Field notes from Groundwater SAP Addendum 2 (July 2013) sampling event.

D. Problems, Delays, and Solutions

San Jacinto River Fleet Operations (SJRF)

As summarized in previous monthly reports for the RI/FS, the Respondents continue to be concerned about the potential impacts of the SJRF operations in the immediate vicinity of the Site. On January 2, 2013, Respondents submitted their comments on the Revised SJRF Draft Sampling and Analysis Plan via email to USEPA. The Respondents will continue to work with USEPA on this issue. Respondents will also continue to work with USEPA and SJRF, if necessary, should there be a need for access to the SJRF property for purposes of RI/FS activities. Those discussions would be based on prior communications in that regard, which are described in the monthly reports submitted under the Administrative Settlement Agreement and Order on Consent for Removal Action for the Site.

Project Schedule

The Respondents' Project Coordinator and USEPA's Remedial Project Manager developed the attached July 2013 Revised RI/FS Schedule, to allow time for development of remedial alternatives (as discussed by USEPA and Respondents, including during the July 2, 2013 meeting) and completion of the Draft FS. This schedule was submitted to USEPA in a letter dated July 12, 2013 and Respondents are awaiting USEPA approval.

E. Projected Work for Next Two Reporting Periods – July 2013/August 2013

The Respondents, Anchor QEA, and Integral Consulting expect to conduct the following tasks during the remainder of July 2013 through August 2013:

- Continue work on the Draft FS for the Site and submit the Draft FS on August 30, 2013.
- Complete the laboratory analyses and data validation associated with the second phase (July 2013) field investigations as outlined in the Groundwater Sampling and Analysis Plan (SAP) Addendum 2 to further evaluate conditions in the area south of I-10.

- Continue to participate in and support USEPA on community awareness and outreach issues.
- Continue to work with USEPA and SJRF, if necessary, on issues associated with SJRF's potential impacts on the Site.

F. Schedule

As discussed in Paragraph D above, the attached July 2013 Revised Schedule was developed by the Respondents' Project Coordinator and USEPA's Remedial Project Manager. This schedule was submitted to USEPA in a letter dated July 12, 2013 and Respondents are awaiting USEPA approval.

Prepared by:

David C. Keith

Project Coordinator

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
12/4/2009	Required Notifications pursuant to Paragraphs 51 and 75 of UOA	None	NA	Provided notice of intent to comply and “sufficient cause” defenses and identified Project Coordinator.
12/7/2009	Copies of Letters to McGinnes Heirs Regarding Site Access	None	NA	
12/10/2009	Draft Scoping Meeting Minutes	None	NA	
12/14/2009	Copy of Response from Big Star Barge & Boat Company Regarding Site Access	None	NA	
12/15/2009	Monthly Progress Report No. 1	None	NA	
12/18/2009	Status Report on Site Access	1/12/2010	Actions to date did not constitute "best efforts" to gain access.	Respondents and EPA spoke regarding the matter in further detail on 1/8/10.
12/21/2009	HASP	None	NA	
12/21/2009	Anchor QMP	None	NA	
12/21/2009	Integral QMP	None	NA	
1/7/2010	Request for comments regarding access agreement for Big Star Barge & Boat Company	None	NA	
1/11/2010	Proposed Draft AOC for time critical removal action	1/12/2010	Respondents’ proposed AOC has been forwarded to headquarters and Philip Allen for comment. Time critical removal action requires imminent and substantial endangerment finding.	
1/12/2010	Copy of Consent Form for Site Access from Big Star Barge & Boat Company	None	NA	
1/12/2010	Notice of UAO Deficiency	None	Actions to date did not constitute “best efforts” to gain access.	
1/13/2010	Draft Sediment Sampling and Analysis Plan Minutes	None	NA	
1/13/2010	Draft Database and Data Exchange Minutes	None	NA	
1/15/2010	Monthly Progress Report No. 2	None	NA	
1/15/2010	Update Regarding Respondents' Efforts to Obtain Access Agreement, Response to Letter from Barbara Nann and Request for Extension	1/21/2010	Efforts to obtain Site access are "encouraging."	
1/20/2010	Correspondence from Port of Houston Authority regarding access	None	NA	
1/21/2010	Copies of Site Access Letter From Attorney for McGinnes Heirs	1/22/2010	EPA requested another copy of the letter	
1/21/2010	Correspondence with Port of Houston Authority Regarding revised fence alignment	None	NA	

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San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
1/22/2010	Copies of Site Access Letter From Attorney for McGinnes Heirs	None	NA	
1/25/2010	Copies of Letters Sent to Gary Gladfelter and Tanya Ammons Regarding Site Access	None	NA	
1/27/2010	Draft 1/20/10 Alignment Meeting Minutes	None	NA	
1/27/2010	Copy of Correspondence with Big Star Barge & Boat Company Regarding Site Access	None	NA	
1/27/2010	EPA's response to Respondents' proposed AOC regarding Time Critical Removal Action	None	EPA will give Respondents additional time to respond as to whether Group wants to enter into AOC for Site stabilization.	
1/29/2010	Copy of Revised Consent Form for Site Access from Big Star Barge & Boat Company	None	NA	
2/2/2010	Copy of Correspondence with Big Star Barge & Boat Company Regarding Site Access	None	NA	
2/4/2010	Respondents' proposed changes/comments on proposed AOC for Time Critical Removal Action	3/5/2010	Awaiting finalization of action memo for site stabilization before making additional changes to the AOC for site stabilization.	
2/10/2010	Draft Memorandum San Jacinto River Waste Pits Superfund Site Time Critical Removal Action	Non	NA	
2/11/2010	Copy of Revised Consent Form for Site Access from Big Star Barge & Boat Company	None	NA	
2/11/2010	Copy of executed Consent Form for Site Access from Big Star Barge & Boat Company	2/17/2010	EPA approved of the form and will await an access agreement allowing for the RI/FS to take place.	
2/15/2010	Monthly Progress Report No. 3	None	NA	
2/16/2010	Draft Sediment Sampling and Analysis Plan/QAPP	None	Comments received March 10, 2010	
2/16/2010	Correspondence to EPA regarding update to Respondents' efforts to obtain access to the site	None	NA	
2/17/2010	Submitted the Agency Review Draft of the Quality Assurance Project Plan and Field Sampling Plan for Sediment Sampling	Consolidated comments received on March 10, 2010	Follow up meeting conducted with EPA, TCEQ and Trustees on March 16 and comment/response table developed for submittal with Draft Final report	Draft Final document submitted on 4/9/2010.
2/18/2010	Sampling Plan for sediment sampling on February 17, 2010	2/19/2010	EPA will forward for review to EPA's financial assurance expert.	
2/18/2010	Correspondence from MIMC regarding financial assurance bond	2/19/2010	EPA will forward for review to EPA's financial assurance expert.	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
2/19/2010	Copy of presentation regarding Short-Term Communications Plan	None	NA	
2/22/2010	Letter to Barbara Nann regarding MIMC's responsibility to provide access to the V.C. McGinnes, Trustee tract	None	NA	
3/18/2010	Draft Sediment Sampling and Analysis Plan Comment Review Meeting Minutes March 16, 2010, TCEQ, Austin Texas	None	NA	
4/7/2010	Draft Field Sampling Plan and Job Safety Analyses for the TCRA sampling	None	NA	This sampling was requested by EPA in an email on March 26, 2010.
4/9/2010	Submitted the Draft RI/FS Work Plan and SLERA	June 3, 1010	Comments received from EPA by email	
4/9/2010	Submitted the Draft Final of the Quality Assurance Project Plan and Field Sampling Plan for sediment sampling	None	NA	
4/15/2010	Submitted Monthly Progress Report No. 5 on April 15, 2010	None	NA	
		4/26/2010	Approval letter from EPA for implementation of the RI/FS Sediment QAPP/SAP.	Agency requested replacement pages for Final QAPP/SAP.
4/30/2010	Submitted replacement pages to EPA, TCEQ and the trustees for the Final SAP/QAPP on April 30, 2010	None	NA	
5/11/2010	Submitted the Draft Chemical Fate and Transport Modeling Study design and sampling and analysis plan addendum on May 11	None	NA	
5/14/2010	Submitted a Soil Sampling and Analysis Plan for the TxDOT right-of-way to TxDOT and EPA	None	NA	Submitted to TxDOT as part of effort to obtain access into the TxDOT right-of-way for RI/FS and TCRA activities.
5/17/2010	Submitted Monthly Progress Report No. 6 on May 17, 2010	None		
5/21/2010	Submitted revised TxDOT right-of-way sampling and analysis plan	None		Comments received from TxDOT on May 25, 2010.

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
5/25/2010	Submitted email outlining sediment sampling and analysis deviations	5/26/2010	EPA agreed to recommendations and asked that human health locations on west bank be reconsidered.	Human health locations on west bank moved with EPA concurrence in email on May 28, 2010.
5/27/2010	Submitted revised TxDOT right-of-way sampling and analysis plan	None		TxDOT approved the revised sampling and analysis plan on June 11, 2010.
5/28/2010	Submitted email summary of VOC data from sediment sampling	5/28/2010	EPA concurred that no further VOC analyses were required.	
6/7/2010	Response to 6/4/10 email from Barbara Nann regarding access for 3 soil samples in western impoundment	None		
6/11/2010	Submitted Draft Tissue Sampling and Analysis Plan and Draft Technical Memorandum on Bioaccumulation Modeling on June 11, 2010	None		
6/15/2010	Submitted Monthly Progress Report No. 7 on June 15, 2010	None		
6/25/2010	Submitted comments and responses on Draft RI/FS Work Plan	None		
7/9/2010	Submitted Revised Draft RI/FS Work Plan	7/12/2010 8/26/2010	Email from B. Nann forwarding edits to RI/FS work plan. Email from Steve Tzhone with additional comments concerning Site History and soil sampling in the area of former impoundments south of I-10.	
7/15/2010	Submitted Monthly Progress Report No. 8 on July 15, 2010	None		
7/27/2010	Provided EPA a draft response to comments on the Draft Fate and Transport Memorandum Review	8/12/2010	Email from S. Tzhone forwarding two additional comments on the Fate and Transport Modeling Memorandum	
8/16/2010	Submitted Monthly Progress Report No. 9 on August 16, 2010	None		

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
8/17/2010	Submitted revised response to comments on the Fate and Transport Sampling and Analysis Plan	8/31/2010 9/7/2010	Email from S. Tzhone approving the revised response to comments and authorizing submittal of the Final Draft document. Email from S. Tzhone providing comments from USGS on sampling and analysis plan and direction to incorporate comments as EPA comments by phone. Comments need to be addressed prior to implementing field work.	
8/18/2010	Submitted Draft Addendum to the Sampling and Analysis Plan (SAP): Sediment Study	8/23/2010	Email from S. Tzhone approving the addendum SAP and authorizing sampling in Cedar Bayou.	
8/18/2010	Submitted revised response to comments on the Bioaccumulation Modeling and Tissue Sampling and Analysis Plan	8/31/2010	Email from S. Tzhone approving the revised response to comments and authorizing submittal of the Final Draft documents.	
8/19/2010	Submitted Draft Meeting Minutes - Agency Comments on Tissue SAP and Technical Memorandum on Bioaccumulation Modeling	None		
9/3/2010	Submitted Draft Final RI/FS Work Plan	10/7/2010	Letter of deficiency from S. Tzhone requiring Respondents to incorporate EPA's Comment Number 4 (sampling of south impoundment) provided to the respondents on August 26, 2010, as part of the RI/FS.	Respondents have 14 days to comply from the date of the letter.
9/9/2010	Submitted letter to Steve Tzhone regarding Site Warning and Protective Measures	9/1/2010	Email from S. Tzhone approving the proposed scope of work for additional fencing and signs and requesting clarification and final design for impoundment signs and buoy placement.	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
9/10/2010	Submitted letter to Steve Tzhone and Barbara Nann concerning MIMC's participation in soil sampling in the area of former impoundment south of I-10	10/8/2010	Letter to MIMC counsel from B. Nann expressing disagreement with MIMC's letter and reiterating position that south impoundment must be sampled.	
9/10/2010	Submitted the Draft Soil Sampling and Analysis Plan for the RI/FS	None		
9/10/2010	Submitted Draft Final Tissue SAP, and Draft Final Technical Memorandum on Bioaccumulation Modeling			
9/15/2010	Submitted Monthly Progress Report No. 10 on September 15, 2010	10/7/2010	Letter of deficiency from S. Tzhone requiring Respondents to submit all raw data with monthly progress reports.	Respondents have 14 days to comply from the date of the letter.
9/16/2010	Submitted letter outlining proposed buoy and warning signs at impoundments	9/16/2010	Email from S. Tzhone approving final design for signs and buoy system	
9/23/2010	Submitted an email with clarifications required for the final Sampling and Analysis Plan: Tissue Study on the following topics: Laboratory Certification, selection of tissue analytes, and a few editorial changes to the tables and text re: lipid analysis methods.	9/24/2010	Email from Steve Tzhone indicating that EPA agreed with the response to EPA's concerns about laboratory certification, and agreeing to the proposed edits. EPA approved the final Tissue SAP and Technical Memorandum on Bioaccumulation Modeling on September 24, 2010.	
9/28/2010	Submitted Final Sampling and Analysis Plan: Tissue Study and Final Technical Memorandum on Bioaccumulation Modeling on September 28, 2010.	9/29/2010	EPA approved of the Tissue SAP Addendum.	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
9/30/2010	Submitted Draft TxDOT Right-Of-Way Data Report on September 30, 2010.	None		
10/1/2010	Submitted Draft Groundwater QAPP and FSP on October 1, 2010.	None		
		10/7/2010	Email from B. Nann regarding status of access efforts.	
		10/11/2010	Email from B. Nann encouraging diligent efforts on access.	
10/13/2010	Email to B. Nann regarding the status of access efforts and need for a conference call between TxDOT, EPA and respondents to discuss	10/14/2010	Email from B. Nann agreeing to conference call.	
10/15/2010	Submitted Monthly Progress Report No. 11 on October 15, 2010			
10/18/2010	IP Letter responding to NOD regarding south area investigation			
10/20/2010	Submitted revised monthly reports for June, July, August, and September 2010 and accompanying raw data on discs			
10/21/2010	MIMC letter responding to NOD regarding south area investigation			
10/21/2010	Joint letter responding to NOD regarding raw data			
10/21/2010	Submitted Draft Final RI/FS Work Plan	11/2/2010	Draft Final RI/FS Work Plan approval letter from S. Tzhone provided by email	
		10/25/2010	Email from B. Nann approving use of TxDOT right-of-way for gravel road	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		10/29/2010	Received certified letter from B. Nann regarding UAO deliverables	
11/1/2010	Certified letter to B. Nann from IP counsel detailing Respondents' efforts to obtain Site Access Agreements with TxDOT and Big Star Barge and Boat			
		11/2/2010	Received certified letter from B. Nann regarding best efforts for obtaining Site Access	
		11/3/2010	Email from S. Tzhone to D. Keith expressing concerns with field sampling procedures used during the week of October 25, 2010	
11/5/2010	Email from D. Keith to S. Tzhone regarding compliance with UAO deliverable procedures and proposed future deliverable procedures	11/5/2010	Email from S. Tzhone to D. Keith concurring with proposed procedures	
		11/8/2010	Email from B. Nann concurring with proposed procedures	
11/8/2010	Email from D. Keith to S. Tzhone concerning revisions to field procedures to be used in the future.			
11/8/2010	Re-submitted Revised Draft Groundwater Study SAP	11/22/2010	Email from S. Tzhone with comments on Groundwater SAP	
11/8/2010	Re-submitted Draft Soil Sampling and Analysis Plan	11/22/2010	Email from S. Tzhone with comments on Soil SAP	Additional comments received from S. Tzhone on 11/30/2010
11/12/2010	Certified letter to B. Nann from Al Axe reiterating and detailing Respondents' efforts to obtain Site Access Agreements with TxDOT and Big Star Barge and Boat			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
11/15/2010	Submitted Monthly Progress Report No. 12 on November 15, 2010			
11/30/2010	Submitted Draft Final Comment/Response Matrix of the Fate and Transport Modeling Memorandum	12/8/2010	Email from S. Tzhone approving the Draft Final Comment/Response matrix	
11/30/2010	Transferred preliminary Big Star soils data to USEPA as a mix of excel and PDF files via email, and then submitted the complete preliminary invalidated data to USEPA via email December 1, 2010			
12/6/2010	Submitted Draft Comment/Response Matrix for Groundwater SAP	12/14/2010	Email from S. Tzhone approving the Draft Final Comment/Response matrix	
12/9/2010	Submitted Draft Comment/Response Matrix for Soil SAP			
12/15/2010	Submitted Monthly Progress Report No. 13 on December 15, 2010			
12/16/2010	Submitted the Draft Final Groundwater Study Sampling and Analysis Plan on December 16, 2010	12/23/2010	Email and letter from S. Tzhone approving the Groundwater Study Sampling and Analysis Plan	Requested final copies be provided to remove "Draft" from "Draft Final" - implementation of field work approved
12/17/2010	Submitted the Draft Final Chemical Fate and Transport Modeling Memorandum December 17, 2010	1/10/2011	Email and letter from S. Tzhone approving the Chemical Fate and Transport Modeling Memorandum	Requested final copies be provided to remove "Draft" from "Draft Final"
12/17/2010	Submitted an Addendum to the Soil SAP to describe a soil investigation in the area South of I-10 on December 17, 2010	1/18/2011 2/3/11	Emailed letter from S. Tzhone providing comments to the Draft Addendum to the Soil SAP Additional comments from TCEQ on Draft Addendum to the Soil SAP received from S. Tzhone by email	Conference calls to discuss comments with agencies on January 25 and February 7
12/22/2010	Submitted the Draft Final Sampling and Analysis Plan: Soil Study on December 22, 2010	1/10/2011	Email and letter from S. Tzhone approving the Sampling and Analysis Plan: Soil Study	Requested final copies be provided to remove "Draft" from "Draft Final"
1/13/2011	Submitted Final Groundwater Study Sampling and Analysis Plan			
1/13/2011	Submitted Final Chemical Fate and Transport Modeling Memorandum			

Table 1
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San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
1/14/2011	Submitted the Final Sampling and Analysis Plan: Soil Study			
1/14/2011	Submitted Monthly Progress Report No. 14			
1/24/2011	Email from D. Keith to S. Tzhone regarding schedule for soil sampling activities			
1/27/2011	Letter from IPs counsel submitted to USEPA regarding International Papers efforts to obtain access for the south area investigation			
1/27/2011	Provided USEPA a compilation of historical aerial photographs of the project area on the project web portal			
2/1/2011	Submitted a DVD containing all draft documents for the SJRWP RI/FS submitted to USEPA via the project portal through January 25, 2011			
2/11/2011	Submitted Draft Contaminants of Potential Concern Memorandum	3/10/2011	Received comments on Draft COPC Technical Memorandum	
2/14/2011	Submitted Draft Revised RI/FS Schedule	2/15/2011	Approval letter from EPA for revised RI/FS schedule	
2/15/2011	Submitted Monthly Progress Report No. 15			
2/15/2011	Submitted the Draft Bed Property Study Field Sampling Plan	3/3/2011	Received emailed comments from S. Tzhone on Draft Bed Property Study FSP	
2/15/2011	Submitted the Draft Bathymetry Survey Field Sampling Plan	3/3/2011	Received emailed comments from S. Tzhone on Draft Bathymetry Survey FSP	
2/22/2011	Submitted Draft Final Sampling and Analysis Play, Soil Study Addendum 1	3/4/2011	Approval letter from USEPA for Draft Final Sampling and Analysis Play, Soil Study Addendum 1	
3/2/2011	Submitted Draft Current Velocity Study Field Sampling Plan			
3/8/2011	Submitted Draft Comment Response Matrices for the Draft Bed Property Study and Draft Bathymetry Survey FSPs	3/9/2011	Phone conversation with Steve Tzhone indicated that responses were approved	
3/9/2011	Submitted Final Sampling and Analysis Plan, Soil Study Addendum 1			

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San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
3/11/2011	Phone call from J. Sampson (proxy for D. Keith) to S. Tzhone to report field observations of a petroleum odor and oily sheen on some subsurface soil samples from the south impoundment soil study area	3/11/2011	Received an email from S. Tzhone acknowledging the phone report, and with direction to: 1) proceed with sampling according to the approved Soil SAP Addendum 1, and 2) to provide a summary report of field observations when the sampling event is complete	
3/15/2011	Submitted Monthly Progress Report No. 16			
3/15/2011	Submitted the Draft Final Bed Property Study and the Draft Final Bathymetric Survey Field Sampling Plans	3/21/2011	Approval letter from USEPA for Draft Final Bed Property Study and the Draft Final Bathymetric Study FSP	
3/16/2011	Submitted the Draft Sedflume Study FSP, the Draft Radioisotope Coring Study FSP, and the Draft Upstream Sediment Load Study FSP	4/8/2011	Received emailed comments from S. Tzhone on the Draft Sedflume Study FSP, the Draft Radioisotope Coring Study FSP, and the Draft Upstream Sediment Load Study FSP	Conference call to discuss comments with agencies on April 15, 2011
3/16/2011	Submitted Field Report on south impoundment soil sampling			
3/18/2011	Submitted a letter to USEPA on behalf of International Paper regarding the completion of the south impoundment sampling			
3/25/2011	Submitted the Final Bed Property Study and the Final Bathymetric Survey Field Sampling Plans			
3/28/2011	Submitted the Draft Comment/Response Matrix for the Draft Currently Velocity Study Field Sampling Plan	4/6/2011	Received emailed comments from S. Tzhone with two additional comments on the Draft Current Velocity Study FSP	
		3/29/2011	Received emailed letter from S. Tzhone requesting Respondents participate in Residential Soil Sampling as part of USEPA's Community Engagement Initiative	Respondents provided USEPA their response to this request on April 15, 2011
3/30/2011	Submitted the Draft Comment/Response matrix with responses to USEPA comments on the COPC Technical Memorandum	4/1/2011	Conference call with USEPA to discuss comments	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
4/7/2011	Submitted an email request for assistance in obtaining Quality Assurance Project Plan and laboratory validation packages for the TCEQ Total Maximum Load programs. These documents are necessary to meet all requirements of USEPA comments on the COPC Technical Memorandum			
4/8/2011	Submitted Revised Comment/Response Matrix for USEPA comments on the COPC Technical Memorandum	5/5/2011	Received approval letter from Carlos Sanchez for Gary Miller on the Draft COPC Technical Memorandum	
4/8/2011	Submitted the Draft Final Current Velocity Study FSP	5/3/2011	Received approval letter from Carlos Sanchez for Gary Miller on the Draft Final Current Velocity Study Field Sampling Plan	
4/14/2011	Submitted the Draft Comments/Responses matrices for the Draft Sedflume Study, Draft Radioisotope Coring Study, and the Draft Upstream Sediment Load Study Field Sampling Plans	4/15/2011	Conference call with USEPA to discuss comments	
4/15/2011	Submitted Monthly Progress Report No. 17			
4/15/2011	Provided USEPA and TCEQ Site groundwater data maps and tables associated with implementation of the north impoundment Groundwater Field Sampling Plan			
		4/19/2011	Received letter from Carlos Sanchez notifying Respondent's that USEPA has changed the designated EPA Project Coordinator under the UAO to M. Gary Miller effective April 19, 2011	
4/25/2011	Submitted Draft Final Upstream Sediment Load Field Sampling Plan	5/5/2011	Received phone request form Gary Miller to provide redline/strikeout version of Word document for EPA review.	Provided redline strikeout version of document for review by email from Teri Freitas on behalf of David Keith
4/28/2011	Submitted Draft Final Radioisotope Coring Study Field Sampling Plan	5/5/2011	Received approval letter from Carlos Sanchez on behalf of Gary Miller for the Draft Final Radioisotope Coring Study Field Sampling Plan	

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San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		4/29/2011	Received email from Gary Miller with three additional questions on the Draft Sedflume Study Field Sampling Plan	
5/5/2011	Submitted Draft Final Sedflume Field Sampling Plan	5/20/2011	Received approval letter from USEPA on the Draft Final Sedflume Study Field Sampling Plan	
5/9/2011	Submitted Final Current Velocity Study Field Sampling Plan			
5/9/2011	Submitted Final Radioisotope Coring Study Field Sampling Plan			
5/16/2011	Submitted Monthly Progress Report No. 18			
		5/18/2011	Received approval letter from USEPA on the Draft Final Upstream Sediment Load Field Sampling Plan	
		5/23/2011	Received letter from Gary Miller directing Respondents sample residential soils in the area	Respondents provided USEPA their response to this request on May 31, 2011
5/24/2011	Submitted Final Upstream Sediment Load Study Field Sampling Plan			
5/24/2011	Submitted Final Sedflume Field Sampling Plan			
5/25/2011	Submitted email request to USEPA for approval to begin monitoring well decommissioning	6/2/2011	Received email approval from Gary Miller to proceed with this work in accordance with the work plan	
5/27/2011	Submitted all Working Documents from the SJRWP Site Portal on DVD			
6/10/2011	Submitted Draft Soil Sampling and Analysis Plan Addendum 2	7/19/2011	Received draft approval and comments on the Draft Addendum 2 Sampling and Analysis Plan for Residential Soil Sampling	This is the sampling and analysis plan for residential soil sampling. The sampling and analysis plan was approved with modifications noted in the letter from USEPA
6/14/2011	Posted an updated Site database to the project web portal			
6/15/2011	Submitted Monthly Progress Report No. 19			
7/15/2011	Submitted Monthly Progress Report No. 20			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
7/20/2011	Correspondence between MIMC counsel and USEPA regarding draft Preliminary Site Characterization Report and south impoundment issue			
7/20/2011	Correspondence between International Paper counsel and USEPA regarding draft Preliminary Site Characterization Report and south impoundment issue			
7/20/2011	Submitted the Draft Preliminary Site Characterization Report			
7/21/2011	Submitted Field Sampling Report: 2010 Sediment Study			
7/21/2011	Submitted Field Sampling Report: Tissue Study			
7/21/2011	Submitted Field Sampling Report: 2010-2011 Soil Study			
7/21/2011	Submitted Field Sampling Report: Groundwater Study			
7/22/2011	Submitted letter to USEPA regarding modeling schedule - due to drought in the Houston area	10/19/2011	Received letter from Gary Miller approving change in submittal date for the Chemical Fate and Transport Modeling Study to February 1, 2012	
7/25/2011	Submitted a Final Addendum 2 to the Soil Sampling and Analysis Plan for Residential Sampling			
7/25/2011	Provided USEPA draft language for an information sheet for residential sampling			
		7/29/2011	Received email from Steve Tzhone regarding potential CenterPoint Energy pipeline planned for construction within the project area	
8/1/2011	Email from Respondents' Project Coordinator to USEPA transmitting draft consent to access for residential sampling			
		8/2/2011	Received copy of email prepared by USEPA counsel regarding comments on draft consent to access for residential sampling	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		8/2/2011	Email from A. Foster to Respondents' counsel transmitting draft letters designating Respondents as EPA's representatives for Big Star access	
		8/3/2011	Email from A. Foster to Respondents' counsel transmitting copy of letter from EPA to San Jacinto River Fleet regarding its activities at the Site, expressing intent to pursue access from Big Star/San Jacinto River Fleet, and requesting summary of Respondents' problems in obtaining access from Big Star	
		8/3/2011	Email from A. Foster to Respondents' counsel regarding fact sheet associated with residential sampling	
8/3/2011	Submitted email to Gary Miller requesting change to approved Addendum 2 to the Soil Sampling and Analysis Plan. The requested revision involved a change from archiving deeper samples to including a second potential soil sampling mobilization and collection of deeper samples if required based on the results of the surface sampling. The revision was requested on the basis of a meeting between USEPA and Respondents on August 3, 2011 during which it was decided to limit the underground utility locate effort prior to mobilization for sampling so that sampling could occur sooner.	8/3/2011	Received email from Gary Miller approving proposed change to residential soil sampling and requesting a revised final soil sampling plan addendum	
8/3/2011	Email between MIMC counsel, on behalf of Respondents, and USEPA regarding revised version of consent to access for residential soil sampling			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
8/3/2011	Email between MIMC counsel, on behalf of Respondents, and USEPA regarding revised version of consent to access for residential soil sampling and providing contact information for lessee of Big Star property and for Big Star counsel.			
8/4/2011	Submitted Revised Addendum 2 to the Soil Sampling and Analysis Plan for Residential Sampling			
8/8/2011	Submitted Memorandum to Gary Miller outlining data gap issues identified in the Draft Preliminary Site Characterization Report			A meeting was held with USEPA and other agencies in Austin on August 30, 2011 to discuss these issues. A revised memorandum was submitted on September 7, 2011 based on verbal comments received from USEPA following that meeting
		8/9/2011	Email from A. Foster to Respondents' counsel regarding revised letter of designation	
		8/10/2011	Email from J. Hernandez to Respondents' counsel regarding revised letter of designation	
		8/10/2011	Received a draft letter from USEPA describing additional study in the area of the impoundment south of I-10	
8/15/2011	Submitted Monthly Progress Report No. 21			
8/26/2011	Submitted preliminary unvalidated residential soil sampling data to USEPA			Followed electronic data deliverables from the analytical laboratory with an Excel summary spreadsheet on August 29, 2011
9/2/2011	Submitted validated residential soil sampling data to USEPA			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
9/2/2011	Submitted email to Gary Miller and Valmichael Leos requesting clarification on a potential chemical monitoring program for the TCRA armored cap			In order to start the development of a sampling plan for this program, respondents need to know the following from USEPA: (1) Is the use of passive SPME acceptable to USEPA for the cap monitoring (2) Will this program be conducted as part of the TCRA AOC or RI/FS UAO program, and (3) Who will be the lead contact from USEPA for development and approval of the TCRA chemical monitoring program
9/7/2011	Submitted a revised memorandum outlining data gap issues identified in the Draft Preliminary Site Characterization Report to reflect changes requested by USEPA			
9/11/2011	Submitted a Draft Fact Sheet for the Site to USEPA for consideration			This fact sheet was requested by USEPA
9/15/2011	Submitted Monthly Report No. 22			
9/19/2011	Submitted Draft Addendum 1 to the Sediment Sampling and Analysis (SAP) for additional sediment sampling	10/3/2011	Received letter from Gary Miller providing conditional approval of the SAP	
9/19/2011	Submitted Draft Addendum 1 to the Tissue Sampling and Analysis Plan (SAP) for additional background catfish and crab sampling	10/3/2011	Received letter from Gary Miller providing conditional approval of the SAP	
9/21/2011	Submitted letter to USEPA regarding ADCP servicing issue and San Jacinto River Fleet Operations	10/19/2011	Received letter from Gary Miller to continue deployment of the acoustic doppler profiler and the re-deployment of the suspended sediment sampler when water is again flowing over the Lake Houston dam	
9/22/2011	Submitted Attachment B2 (Toxicity of Dioxin-Like Compounds to Invertebrates, Fish, Reptiles, Birds and Mammals) in Appendix B of the Final RI/FS Work Plan			
10/4/2011	Submitted Addendum 1 to the Sediment Sampling and Analysis (SAP) for additional sediment sampling			Addressed conditions outlined in conditional approval letter received on 10/3/2011
10/5/2011	Submitted Addendum 1 to the Tissue Sampling and Analysis Plan (SAP) for additional background catfish and crab sampling			Addressed conditions outlined in conditional approval letter received on 10/3/2011
10/12/2011	Submitted Draft Dioxin Treatability Study Literature Review			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
10/14/2011	Submitted letter to USEPA regarding Field Studies Issues	11/10/2011	Received an email from Gary Miller to David Keith stating that after discussions with partner agencies, the request to remove the ADCP and discontinue data collection for the current velocity and upstream sediment load studies is approved	If a high flow event occurs, or appears likely at any time within the next two months, then the ADCP shall be re-installed and data collection for the current velocity and upstream sediment load studies resumed. Based on the timing of any such high flow event during this time, a request for extension of the submittal date for the Fate and Transport Model Study will be considered to allow sufficient time for inclusion and evaluation of any new velocity and sediment load data
10/17/2011	Submitted Monthly Report No. 23			
		10/19/2011	Received letter from Gary Miller approving change in submittal date for the Chemical Fate and Transport Modeling Study to February 1, 2012	
10/28/2011	Email from Jennifer Sampson with Integral Consulting to Gary Miller requesting approval to include three additional samples with percent fines of 81.5, 82.3, and 83.2 be added to seven other samples from the Addendum 1 to the Sediment Sampling and Analysis (SAP) for analysis of dioxins and furans and organic carbon	11/1/2011	Email approval from Gary Miller to Jennifer Sampson for the analysis of additional samples as requested	
11/15/2011	Submitted Monthly Report No. 24			
11/16/2011	Prepared and submitted a meeting summary for the proposed armored cap monitoring program to USEPA			
		11/16/2011	Received and reviewed draft comments from USEPA on the draft Preliminary Site Characterization Report (PSCR)	
		11/23/2011	Received and reviewed revised draft comments from USEPA on the draft PSCR	
		11/29/2011	Received and reviewed a draft letter from USEPA regarding comments and directives for additional sampling on the southern impoundment area on behalf of IP	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
11/29/2011	Email from David Keith to Mr. Miller forwarding technical literature on the use of sediment traps			
		12/1/2011	Received and reviewed a fingerprint analysis on the southern impoundment area from Mr. Miller on behalf of IP. The analysis was prepared by Dr. Linda Broach with TCEQ	
12/5/2011	Provided copies of residential soil sampling consent forms to Mr. Miller			
12/6/2011	Provided Mr. Miller a table pairing residential soil sample identification numbers and physical street addresses			
		12/9/2011	Received a letter from Mr. Miller providing conditional approval of the PSCR. The letter further instructed the Respondents to provide a comment response matrix to USEPA for approval, followed by submittal of the Final PSCR	
		12/9/2011	Received a letter from Mr. Miller providing final comments and directives for additional sampling in the southern impoundment area on behalf of IP	
12/13/2011	Prepared and submitted a meeting summary for the Fate and Transport Modeling Workshop #2 to USEPA			
12/15/2011	Submitted Monthly Report No. 25			
12/29/2011	On behalf of International Paper, submitted Draft Soil SAP Addendum 3, Draft Sediment SAP Addendum 2, and Draft Groundwater SAP Addendum 1			
1/3/2012	Submitted a draft matrix summarizing the Respondents proposed revisions to the PSCR to address USEPA comments received on December 8, 2011	1/5/2012	Received email from Mr. Miller approving the proposed revisions to the PSCR	Revisions will be incorporated into the Final PSCR

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		1/5/2012	Received approval in a phone call from Mr. Miller on the conceptual TCRA chemical monitoring approach and was directed to develop a SAP for that program	
1/10/2012	Provided email notification to Mr. Miller that the project database had been updated and posted the project web portal			
1/17/2012	Submitted Monthly Report No. 26			
1/19/2012	Submitted the Draft Alternatives Memorandum, Draft Toxicological and Epidemiological Studies Memorandum, and Draft Exposure Assessment Memorandum			
2/1/2012	Submitted Chemical Fate and Transport Modeling Report on February 1, 2012			
		2/9/2012	Email from J. Hernandez to Respondents' counsel forwarding draft pre-construction baseline site assessment work plan for San Jacinto River Fleet project ("SJRF Draft SAP")	
2/14/2012	Submitted a letter to USEPA regarding revisions to the RI/FS schedule			
		2/14/2012	Email from J. Hernandez to Respondents' counsel forwarding copy of USEPA letter to San Jacinto River Fleet dated 12/1/2012	
		2/15/2012	Email from J. Hernandez to Respondents' counsel regarding deadline for comments on the SJRF Draft SAP	
2/15/2012	Submitted Monthly Report No. 27			
2/28/2012	Submitted Final Preliminary Site Characterization Report on February 28, 2012			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		3/1/2012	Received comments from Mr. Miller on: 1) Draft Addendum 1 to the Groundwater Study Sampling and Analysis Plan for Additional Sampling South of Interstate Highway 10	
			2) Draft Addendum 2 to the Sediment Sampling and Analysis Plan for Additional Sampling South of Interstate Highway 10	
			3) Draft Addendum 3 to the Soil Sampling and Analysis Plan for Additional Sampling South of Interstate Highway 10	
3/8/2012	Submitted a letter to USEPA regarding the Respondents' concerns about the San Jacinto River Fleet operations, and provided comments on the Draft SAP			
3/15/2012	Submitted Draft Baseline Ecological Risk Assessment on March 15, 2012			
3/15/2012	Submitted Monthly Report No. 28			
4/2/2012	Submitted Soil SAP Addendum 3, Sediment SAP Addendum 2, and Groundwater SAP Addendum 1 to USEPA	4/11/2012	Received approval on the Soil Sampling and Analysis Plan (SAP) Addendum 3, Sediment SAP Addendum 2, and Groundwater SAP Addendum 1 from USEPA by letter and email from Gary Miller	
4/5/2012	Submitted cover letter and Revised Schedule for RI/FS deliverables to USEPA	4/11/2012	Received approval on the Revised RI/FS Schedule from USEPA by email from Gary Miller	
4/16/2012	Submitted Monthly Report No. 29			
4/16/2012	Submitted Draft Sampling and Analysis Plan (SAP) for the TCRA Cap Porewater Assessment	5/9/2012	Received approval with modifications on the Draft SAP: Time Critical Removal Action (TCRA) Cap Porewater Assessment on May 9, 2012	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		4/24/2012	Received comments from Gary Miller on the Draft Exposure Assessment Memorandum (EA) and the Draft Toxicological and Epidemiological Studies (TES) Memorandum	Received clarification on comments regarding the EA and TES Memos from USEPA by email to the Respondents' Project Coordinator on May 10, 2012
		5/1/2012	Email from J. Hernandez to Respondents' counsel regarding SJRF Draft SAP currently under USEPA review	
		5/8/2012	Received comments from USEPA on the Draft Chemical Fate and Transport Modeling Study	
5/15/2012	Submitted Monthly Report No. 30			
		5/16/2012	Emails from J. Hernandez to Respondents' counsel providing comments to the SJRF Draft SAP from NOAA, TCEQ, and the Harris County Pollution Control Services	
5/22/2012	Submitted Sampling and Analysis Plan (SAP) for the TCRA Cap Porewater Assessment			
5/22/2012	Submitted Final Exposure Assessment Memorandum and Final Toxilogical and Epidemiological Studies Memorandum to USEPA			
		6/6/2012	Received additional comments from USEPA on the Draft Chemical Fate and Transport Modeling Study	
		6/12/2012	Received copy of 6/12/2012 correspondence from USEPA to SJRF providing USEPA's comments to the SJRF Draft SAP	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
6/13/2012	Provided USEPA a letter regarding the installation of two additional Performance Reference Compound samplers in the TCRA Cap Porewater Assessment implementation to provide an intermediate check on equilibrium conditions between the samplers and cap porewater on June 13, 2012			
6/15/2012	Provided USEPA a letter and updated RI/FS schedule on June 15, 2012			
6/15/2012	Submitted Monthly Report No. 31			
		6/22/2012	Received comments from USEPA on the Draft Baseline Ecological Risk Assessment	
7/10/2012	Provided USEPA a letter outlining a process to resolve comments from USEPA on the draft BERA, and requested the draft final BERA be submitted on August 22, 2012	7/17/2012	Received approval letter from G. Miller	
7/16/2012	Submitted Monthly Report No. 32			
7/18/2012	Submitted Draft Final Chemical Fate and Transport Modeling Study	9/13/2012	Received approval of the Draft Final Chemical Fate & Transport on September 13, 2012, with requirements to address additional comments for the final report in the approval letter	Received clarification on modifications requested by USEPA on the Draft Final Chemical Fate and Transport Modeling Report by email from Gary Miller on September 25, 2012, conducted additional analyses, and prepared and submitted the final report to USEPA on October 11, 2012. Mr. Miller agreed to extending the submittal due date on the Final Fate and Transport Modeling Report to allow time for the Respondents to conduct additional evaluations requested by EPA in the approval letter in a phone call with the Respondents Project Coordinator on October 3, 2012.
		8/13/2012	Received comments from USEPA on the Draft Remedial Alternatives Memorandum	
8/15/2012	Provided email notification to Mr. Miller that the project database had been updated and posted to the project web portal			
8/15/2012	Submitted Monthly Report No. 33			

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
8/22/2012	Submitted Draft Final Baseline Ecological Risk Assessment	2/26/2013	Received conditional approval of Draft Final Baseline Ecological Risk Assessment	The approval letter provided by USEPA was date stamped February 7, 2013; however it was not transmitted to the Respondents until February 26, 2013. The approval letter included comments and directives from USEPA that require additional revisions be made in the final report.
9/11/2012	Submitted Draft Final Remedial Alternative Memorandum	11/14/2012	Received approval of the Draft Final Remedial Alternatives Memorandum on November 14, 2012, with requirements to address additional comments for the report in the approval letter	
9/17/2012	Submitted Monthly Report No. 34			
		10/4/2012	Received approval letter from G. Miller for TES Memorandum	
		10/4/2012	Received approval letter from G. Miller for the EA Memorandum	
10/4/2012	Provided email notification to Mr. Miller that the project database had been updated and posted to the project web portal			Included validated Armored Cap Porewater Assessment Data
10/11/2012	Submitted the Final Chemical Fate and Transport Modeling Report to USEPA			
10/15/2012	Submitted Monthly Report No. 35			
10/19/2012	On behalf of IP, provided USEPA with boring logs on the three South Impoundment monitoring wells, water table levels, and well construction information			
10/30/2012	Provided USEPA a draft summary presentation of the armored cap porewater monitoring evaluation and results to use in a planned community meeting			
11/14/2012	Provided USEPA a letter confirming that delivery of the draft RI Report and BHHRA on December 5, 2012 was approved, and providing an updated RI/FS schedule reflecting that change, and other associated changes in the Feasibility Study schedule that were made to maintain the overall project schedule	12/6/2012	Received email approval from Gary Miller that the November 2012 RI/FS schedule was approved as presented	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
		11/14/2012	Received approval of the Draft Final Remedial Alternatives Memorandum on November 14, 2012, with requirements to address additional comments for the report in the approval letter	
11/15/2012	Submitted Monthly Report No. 36			
12/3/2012	Submitted Final Remedial Alternatives Memorandum to USEPA			
12/5/2012	Submitted Draft Remedial Investigation Report and Draft Baseline Human Health Risk Assessment to USEPA. Also submitted five field sampling reports including: • Field Sampling Report: 2011 – 2012 Sediment Study • Field Sampling Report: 2011 Tissue Study • Field Sampling Report: 2012 Soil Study • Field Sampling Report: TCRA Cap Porewater Assessment • Field Sampling Report Addendum 1 Groundwater Study	3/25/2013	Received conditional approval of the Draft Baseline Human Health Risk Assessment	
12/17/2012	Submitted Monthly Report No. 37			
1/2/2013	Respondents submitted their comments on the Revised San Jacinto River Fleet Draft Sampling and Analysis Plan, via email, to USEPA			
1/15/2013	Submitted Monthly Report No. 38			
2/15/2013	Submitted Monthly Report No. 39			
		2/26/2013	Received conditional approval of the Draft Final Baseline Ecological Risk Assessment	The approval letter provided by USEPA was date stamped February 7, 2013; however it was not transmitted to the Respondents until February 26, 2013. The approval letter included comments and directives from USEPA that require additional revisions be made in the final report.
3/15/2013	Submitted Monthly Report No. 40			
		3/25/2013	Received conditional approval of the Draft Baseline Human Health Risk Assessment (BHHRA) by email on March 25, 2013, followed by regular mail on March 28, 2013.	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
3/20/2013	Sent an email to USEPA to obtain clarification on USEPA comments number 4 and 8 on the Draft BERA. Additional email correspondence between the Respondents and USEPA related to these comments occurred on April 10, 2013.			USEPA is currently considering the Respondents latest findings related to these comments.
4/1/2013	Respondents submitted a letter to USEPA explaining the nature of the possible delays regarding the November 2012 RI/FS Schedule.			
		4/4/2013	Received conditional approval of the Draft Remedial Investigation (RI) Report by email on April 4, 2013, followed by regular mail on April 8, 2013.	
4/4/2013	On behalf of IP, submitted the Draft Groundwater Sampling and Analysis Plan (SAP) Addendum 2 for additional groundwater investigations in the area south of I-10.	4/23/2013	Received conditional approval of the Groundwater SAP Addendum 2.	
4/8/2013	Respondents provided written notice required under Paragraph 92 with respect to possible delays in the performance of certain actions set forth in the approved November 2012 RI/FS Schedule.			
4/10/2013	Sent an email to USEPA to follow up on correspondence related to USEPA comments number 4 and 8 on the Draft BERA.			USEPA is currently considering the Respondents latest findings related to these comments.
4/10/2013	Sent an email to USEPA to obtain clarification on the USEPA Guidance on the classification of Principal Threat Waste.			USEPA is currently considering the Respondents inquiry.
4/12/2013	Provided an email to USEPA requesting a meeting be conducted on April 24, 2013 to discuss USEPA comment 38 on the Draft RI Report.			
4/15/2013	Submitted Monthly Report No. 41.			
4/26/2013	Submitted proposed revised RI/FS schedule to USEPA.	5/14/2013	Received email approval of proposed revised RI/FS Schedule from USEPA.	

Table 1
Summary of Agency Communication
San Jacinto River Waste Pits Superfund Site

Respondents Submittal Date	Respondents Communication Summary	Response from USEPA Date	USEPA Communication Summary	Notes
4/29/2013	Submitted Final Groundwater SAP Addendum 2 to the USEPA.			
5/6/2013	Submitted Final Baseline Ecological Risk Assessment to USEPA.			
5/14/2013	Submitted letter to USEPA providing an evaluation of the potential classification of Principal Threat Waste at the Site.			
5/15/2013	Submitted Monthly Report No. 42.			
5/21/2013	Submitted Final RI Report to USEPA.			
5/22/2013	Submitted Final BHHRA Report to USEPA.			
6/6/2013	Submitted corrected tables for the Final RI Report to USEPA.			Included replacement pages for Tables 2-1, 6-1, 6-2, and 6-3.
6/17/2013	Submitted Monthly Report No. 43.			
7/12/2013	Submitted proposed revised RI/FS schedule to USEPA.			
7/15/2013	Provided email notification to Mr. Miller that the updated RI/FS database had been updated and posted to the project web portal.			

Table 2. Summary of Data Files Provided

Project	SDG	Lab Data Packages	Lab Electronic Data Deliverables
San Jacinto South Impoundments Field Sampling Data Sheets July 2013			
San Jacinto South Impoundments Well Details July 2013			
San Jacinto South Impoundments Field Sampling Data Sheets July 2013			

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: San Jacinto Waste Pits Superfund Site - South Impoundment **WELL ID: SJMW005**

SITE ADDRESS: Channelview, Texas **BLIND ID:** —

DUP ID: —

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		(Partly cloudy)		**TEMPERATURE:**	°F 92 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
7/11/13	07:43	22.87	N.A	7.97	N.A	14.9	X 1	2.43
/ /	:	.	.	.	.		X 3	7.29

Gal/ft = (dia./2)^2 x 0.163	1.5" =	0.057	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	7/11/13	13:15	B	3	40 ml	HCl	YES	NO	—	✓
Amber Glass	7/11/13	13:15	B	7	1L	(None) (HCl) (H_2SO_4)	YES	NO	—	✓
White Poly	7/11/13	13:15	B	4	500ml	None / (HNO_3)	YES	NO	NA	✓
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 14

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-Gx)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease) (8081A) (1613B) (8082) (8270C)
	WHITE - Poly	(TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F) (6010B/6020)[2]
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)
	WHITE - Poly	(7470A)

WATER QUALITY DATA Purge Start Time: 08:05 Pump/Bailer Inlet Depth: 20'

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3		.	See Development Form					
2		.	.		.		.	
1		.	.		.		.	
0		0.00	.		.		.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Four 1L ambers filtered for dioxins/furans. One 500ml poly filtered for dissolved metals.

- VOA's effervesed
- TSS/TDS bottles changed the sample to black.

SAMPLER: Benjamin Johnson + Holly Sinnaha
(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: San Jacinto Waste Pits Superfund Site - South Impoundment **WELL ID:** ~~SJMW004D~~ EB

SITE ADDRESS: Channelview, Texas **BLIND ID:**

DUP ID:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	Partly cloudy					**TEMPERATURE:**	°F 94	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
N/A/	N:A	N.A	N.A	N.A	N.A	N.A	X 1	N.A
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)^2 x 0.163	1.5" =	0.057	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump **(B) Peristaltic Pump** (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA

Sample Depth: NA [√ if used]

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	7/11/13	14:25	B	3	40 ml	HCl	YES	NO	—	✓
Amber Glass	7/11/13	14:25	B	7	1L	(None) (HCl) (H_2SO_4)	YES	NO	—	✓
White Poly	7/11/13	14:25	B	4	500	None HNO_3	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 14

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) **(8260B)** (BTEX) (NWTPH-Gx)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease) (8081A) **(1613B)** **(8082)** **(8270C)**
	WHITE - Poly	**(TDS)** **(TSS)** (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F) **(6010B/6020)**[2]
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)
	WHITE - Poly	**(7470A)**

WATER QUALITY DATA

Purge Start Time: N:A Turb Pump/Bailer Inlet Depth: NA

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4	B	N.A	6.65	0.011	29.73	0.1	6.06	clear, colorless
3		.	.		.		.	
2		.	.		.		.	
1		.	.		.		.	
0		0.00	.		.		.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Four 1L ambers filtered for dioxins/furans. One 500ml poly filtered for dissolved metals.

* Some VOC Releases during collection.

SAMPLER: Benjamin Johnson * Holly Samuels
(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

ANCHOR QEA
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: San Jacinto Waste Pits Superfund Site - South Impoundment **WELL ID:** SJMW004D

SITE ADDRESS: Channelview, Texas **BLIND ID:**

DUP ID:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		Partly Cloudy		**TEMPERATURE:**	°F 98.	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
7/12/13	13:	65.30	N.A	10.66	N.A	74.62	X 1	12.17
/ /	07:25	.	.	.	.		X 3	36.51

Gal/ft = (dia./2)^2 x 0.163	1.5" =	0.057	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump **(B) Peristaltic Pump** (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA Sample Depth: 250'

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	7/12/13	13:55	B	3	40 ml	HCl	YES	NO	–	√
Amber Glass	7/12/13	13:55	B	2	1L	(None) (HCl) (H_2SO_4)	YES	NO	–	√
White Poly	7/12/13	13:55	B	4	500 ml	None HNO3	YES	NO	NA	√
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 14

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-Gx)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease) (8081A) (1613B) (8082) (8270C)
	WHITE - Poly	(TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F) (6010B/6020)[2]
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)
	WHITE - Poly	(7470A)

WATER QUALITY DATA Purge Start Time: 06:10 Pump/Bailer Inlet Depth: 250'

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3		.	See Development Log		.		.	
2		.	.		.		.	
1		.	.		.		.	
0		0.00	.		.		.	

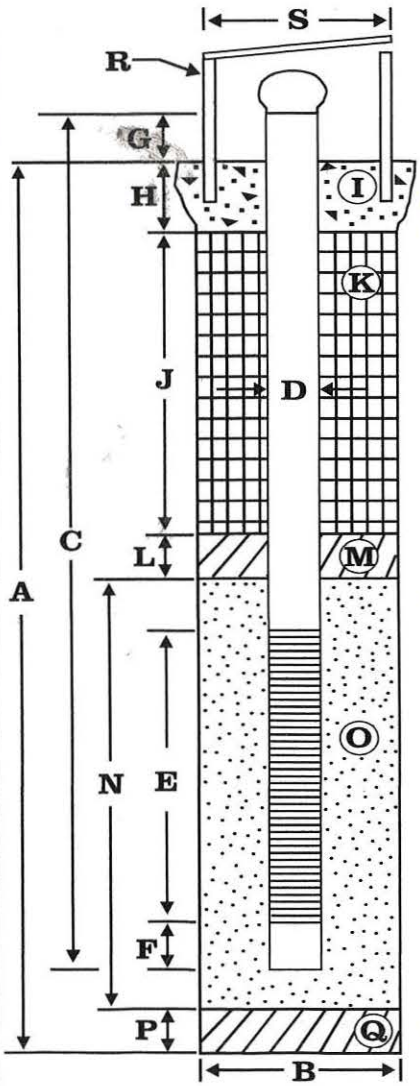
[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Four 1L ambers filtered for dioxins/furans. One 500ml poly filtered for dissolved metals.

SAMPLER: Benjamin Johnson Holly Samuha
(PRINTED NAME) (SIGNATURE)

WELL DETAILS

Project Number:	100720	Boring/Well No.:	SJMW004D
Client Name:	International Paper	Top of Casing Elev.:	
Project Name:	San Jacinto Super Fund – South Impoundment	Ground Surface Elev.:	
Location:	Channelview, TX	Installation Date:	7/11/13
Driller:	Major Drilling - Nick Moreno	Permit/Start Card No.:	—



	Depth (feet)	Elev. (ft, msl)
	3.3	
	2.8	
	0.0	
	2.0	
	65.0	
	70.~~8~~2	
	72.7	
	82.7	
	83.0	
	83.0	
	85.0	

Installed by: Ben Johnson

Reviewed by:

Date:

EXPLORATORY BORING

A. Total depth: 85.0 ft.

B. Diameter 10"-45, 5 7/8"-85 in.

Drilling method: RotoSonic

WELL CONSTRUCTION

C. Well casing length: 85.8 ft.

Well casing material: PVC Sch 40

D. Well casing diameter: 2.0 in.

E. Well screen length: 10.0 ft.

Well screen type: Slotted PVC

Well screen slot size: 0.01 in.

F. Well sump/end cap length: 0.3 ft.

G. Well casing height (stickup): 2.8 ft.

H. Surface seal thickness: 2.0 ft.

I. Surface seal material: Concrete

J. Annular seal thickness: 63.0 ft.

K. Annular seal material: Portland cement

L. Filter pack seal thickness: 5.2 ft.

M. Filter pack seal material: Bentonite chips

N. Sand pack thickness: 12.8 ft.

O. Sand pack material: 1A Silica

P. Bottom material thickness: ~~Native~~ ft. 2.0 ft

Q. Bottom material: Native

R. Protective casing material: Steel

Well centralizer depths: — ft.

S. Protective casing diameter: in.

Square monument 4x4"

NOTES:

Sand: 1111 1/1

Chips: 1

Concrete: 111

Bentonite: 1

10' + 0.3' = 10.3 + 80' = 90.3' - 5.25'

= 85.05'

* cut = 0.2' above gs

Coupling placed. Couldn't get rig off.

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER: Benjamin Johnson
DRILLING CONTRACTOR: Major Drilling Nick Moreno
DRILLING METHOD: Rotosonic
HOLE DIAMETER: 10" to 45', 5 7/8" to 85'

BORING #: SJMW004D
DATE BEGAN: 7/9/13
DATE COMPLETED: 7/11/13
TOTAL DEPTH: 85
SHEET 1 OF 5

Field location of boring: Immediately North of SJMW004S ≈ 75 yds north of parking pad in Musgrove lot.

Time	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	P.I.D VOC (ppm)			RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	SLT %
1021		CB	0.1			4.9	0		SP	0-0.5 ft Gravelly Sand (SP), dark brown, fine-medium grains, loose, dry, some organic debris, no odor (Fill)	20	80	
								1					
								2	CL				
								3		0.5-2.0 ft ~~Sandy gravel (GW)~~ Clay with Sand (CL), gray to white, unrounded gravel, loose, dry, anthropogenic debris (wire, mat), gravel like clumps of clay. (Fill)		15	85
								4	ML				
1035		CB	0.1			9.3	5.0	5					
								6		2.0-~~2.5~~ 6.0 ft Silt (ML), black, no plasticity, no dry strength, moist, loose, anthropogenic debris (mat, wire), no odor (Fill) ↑ wood		10	90
								7	ML				
								8					
								9	CL	@ 2.6-3.1 ft white clay lay fading to gray. No anthropogenic debris visible.			
								10					
								1	SP				
								2					
								3		6.0-7.0 ft Silt with Sand (ML), black, no plasticity, grainy clumbs of fines, moist, slight reducing odor, no anthropogenic material (Fill)		20	80
								4	CL				
1105		CB	0.0			9.7	15.0	5					
								6		7.0-9.8 ft Clay (CL) gray with black mottling, dense, high plasticity, moist, slight reducing odor, some trace gravel (Fill) @ 9.3-9.8 ft shells in matrix	5		95
								7					
								8	CL				
								9					
								0					

Remarks:

9.8-12.6 Sand (SP), gray, mostly fine grains, dry, loose, no odor (Fill) 95 5

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER: Benjamin Johnson
DRILLING CONTRACTOR: Major Drilling
DRILLING METHOD: Rotosonic
HOLE DIAMETER: 10" to 45', 5 7/8" to 85'

BORING #: SJMW004D
DATE BEGAN: 7/9/13
DATE COMPLETED: 7/11/13
TOTAL DEPTH: 85'
SHEET 2 OF 5

Field location of boring

Time	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	P.I.D VOC (ppm)			RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	SLT %
		CB					15.0	21		12.6-15.0 ft Clay (CL), black, medium plasticity, medium density, moist, lots of wood debris, no odor. (Fill)			100
								2	CL				
								3		15.0-16.5 ft ~~Sand~~ Silty Sand (SP-SM), gray, fine sand, loose, wet, no odor (Fill)		80	20
								4	ML				
1130		CB	0.0			6.9	25.0	25		16.5-23.3 ft Clay (CL), black, high plasticity, dense, moist, anthropogenic debris (mold, wood) (Fill)		5	95
								6	CL				
								7	SP	@ 19.4-23.3 ft color changes to gray ← roots			
								8					
								9					
								30	ML	23.3-25.0 ft Sandy Silt (ML), gray, mostly fine sand, medium density, no plasticity, moist, no odor, (Fill)		35	65
								1	SP				
									ML				
								2					
								3	SP				
								4	ML	25.0-26.4 ft Clay (CL), dark gray, medium plasticity, soft, moist/damp, wood debris (Fill)		5	95
1200		CB	0.0			7.6	35.0	35					
								6		26.4-42.75 ft Sand (SP) gray, fine grains, loose, wet, no odors, (alluvium?)		95	5
								7	SP				
								8		@ 29.3-30.0 ft Silt			
								9		Content up silt with sand (ML)			
								40		@ 30.7-31.3 ft Silt (ML)			

Remarks:

@ 33.1-33.8 ft silt (ML)
@ 34.0 medium grains
Dense

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER Benjamin Johnson
DRILLING CONTRACTOR Major Drilling Nick Moreno
DRILLING METHOD Rotosonic
HOLE DIAMETER 10" to 45', 5 7/8" to 85'

BORING # SJMW004D
DATE BEGAN 7/19/13
DATE COMPLETED 7/21/13
TOTAL DEPTH 85'
SHEET 3 OF 3

Field location of boring

Time	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	P.I.D VOC (ppm)			RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	SLT %
		CB					35			@ 38.8 ft Silt lense			
								1	Sp				
										@ 41.0-45 ft Mostly medium to coarse sand			
								2					
								3	—	42.7 - 70.0 ft Clay (CL),	5		95
								4	CL	greenish gray, some gray/brown mottling, very dense, moist, high plasticity, beaumont formation? (Alluvium) Some gravel inclusions			
1400		CB	0.0		46.2	3.2	45.0	45					
								6	CL				
1430	Stopped 7/19/13	CB	0.0				47.0	7		~~45.0 - 47.0 No Recovery~~			
								8		@ 45.0-46.9 ft Clay coated in grout from seal.			
								9					
								50					
								1		@ 50-63.8 ft Turning more brown.			
								2					
								3					
								4	CL				
0800		CB	0.0			46.0	55.0	55					
								6					
								7					
								8					
								9					
								0					

Remarks:

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER: Benjamin Johnson
DRILLING CONTRACTOR: Major Drilling
DRILLING METHOD: Rotosonic
HOLE DIAMETER: 10" to 45 ft, 5 7/8" to 66'

BORING #: SJMW004D
DATE BEGAN: 7/9/13
DATE COMPLETED: 7/11/13
TOTAL DEPTH: 85'
SHEET 4 OF 5

Field location of boring

Time	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	P.I.D VOC (ppm)			RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	SLT %
		CB	0.0				55.0	61		e53.8-54.9 ft reddish tint			
								2		e57.4-58.3 ft			
								3	CL	very well defined laminae			
								4					
0938		CB	0.0			6.0	65.0	65		e 65.0-70.0 ft Increasing sand in clay, gray with brown mottling, occasional sand laminations		20	80
								6					
								7					
								8					
								9					
	filter back							90		70.0-82.5 ft Silty sand (SM), gray with some brown streaks, fine grained sand, no plasticity, firm, moist, no odor, (Alluvium) some fine gravel inclusions	5	60	40
								1	SM				
	filter back							2					
								3					
								4		72			
1020		CB	0.1			5.0	75.0	75					
								6					
								7					
								8					
								9					
1045		CB	0.0				80.0	80					

Remarks:

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER: Benjamin Johnson
DRILLING CONTRACTOR: Major Drilling
DRILLING METHOD: Rotosonic
HOLE DIAMETER: 8" to 45', 5 7/8" to 85'

BORING #: SJMW004D
DATE BEGAN: 7/9/13
DATE COMPLETED: 7/11/13
TOTAL DEPTH: 85'
SHEET 5 OF 5

Field location of boring

Time	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	P.I.D VOC (ppm)			RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	SLT %
1045		CB	0.0				60						
								61	SW	@60.0 - 60.5 ft Some clay band, red in matrix.			
								2					
								3		62.5 - 85.0 ft clay (CL), gray + brown, medium plasticity, stiff, moist (Alluvium)		10	90
								4	CL				
							85.0	5					
								6					
								7					
								8					
								9					
								0					
								1					
								2					
								3					
								4					
								5					
								6					
								7					
								8					
								9					
								0					

Remarks:

WELL DEVELOPMENT FORM

ANCHOR QEA

Personnel: Ben Johnson & Holly Samaha	**Date:** 7/12/13	**Well:** SJMW004D
Project Name: San Jacinto Waste Pits - South Impoundment	**Initial time:** 0725	**Final time:** 1347
Project #: 100720-01.01	**Initial DTB:** 85.30	**Final DTB:** 85.19
Site Location: Channelview, Texas	**Initial DTW:** 10.68	**Final DTW:** 17.02
Development Method: Low Flow with P-Pump	**Casing Volume:** 12.16 gal	
Total Water Removed:	**Casing Diameter:** 2"	
Water Contained: Yes	**Meter #:** pine # 13046	

Estimate of specific capacity or recharge to well: 0.055 gpm / 6.34 ft = 0.0087 gpm/ft

Gal/ft = (dia./2)^2 x 0.163	1.5"=0.103	6"=1.469	2"=0.163	3"=0.367	4"=0.653	8"=2.608	10"=4.080	12"=5.875

Time	Cum. Vol. Removed	D.O. (mg/L)	Turbidity (NTU)	Temp. (°C)	EC (mS/cm)	pH	ORP (mV)	DTW (TOC)	Appearance/Comments
0810	Ø	—	—	—	—	—	—	—	Start of Test/development
0820	0.79	1.04	235.5	29.46	1.051	8.87	-236.6	—	cloudy, brown 300 mL/min
0830	1.52	0.70	116.0	29.74	1.076	8.90	-246.1	—	" " 280 mL/min
0840	2.20	0.70	67.6	29.77	1.103	8.91	-250.5	—	" " 260 mL/min
0850	2.8	0.68	112.6	29.77	1.129	8.92	-254.3	16.87	cloudy, brown 230 mL/min
0900	3.4	0.63	70.3	29.86	1.180	8.93	-256.6	16.98	" " 230 mL/min
		* Stopped to check for tubing leaks *							
		* Started at 0906 *							
0910	4.0	0.76	88.7	30.19	1.668	8.67	-254.0	15.96	slightly cloudy, brown/grey 230 mL/min
0920	4.63	0.24	8.7	29.60	3.006	8.16	-253.2	—	clear, grey tint 240 mL/min
0930	5.23	0.23	71.4	29.75	3.406	8.01	-273.6	16.75	slightly cloudy, grey tint 230 mL/min
0940	5.83	0.22	12.2	29.86	3.116	8.10	-281.6	16.79	slightly cloudy, grey tint 230 mL/min
0950	6.43	0.21	27.2	29.99	3.719	7.87	-344.6	16.64	slightly cloudy, grey tint 240 mL/min
1000	7.06	0.21	17.8	30.01	3.864	7.83	-342.8	16.73	slightly cloudy, grey tint 240 mL/min
1010	7.69	0.20	11.0	30.21	4.075	7.76	-359.2	16.75	slightly cloudy, grey tint 240 mL/min
1020	8.32	0.20	9.2	30.32	4.265	7.71	-351.2	16.78	slightly cloudy, grey tint 240 mL/min
1030	8.90	0.20	379.2	30.58	4.522	7.43	-351.2	16.75	cloudy, grey tint 220 mL/min
1040	9.42	0.19	495.6	30.72	4.607	7.62	-354.1	16.64	cloudy, grey/brown 200 mL/min
1050	10.00	0.20	323.2	30.94	4.618	7.61	-356.8	16.60	cloudy, grey/brown 220 mL/min
1100	10.56	0.19	466.6	30.96	4.748	7.58	-362.4	16.52	cloudy, grey/brown 220 mL/min
1110	11.13	0.18	130.7	31.06	4.402	7.62	-365.2	16.54	cloudy, grey/brown 210 mL/min
* 1120	12.17	0.18	187.6	30.86	4.943	7.54	-372.7	16.50	cloudy, grey/brown 200 mL/min
* 1140	12.72	0.18	463.0	31.29	4.790	7.57	-383.9	16.50	cloudy, grey/brown 210 mL/min
1200	13.76	0.18	91.5	31.24	5.109	7.51	-385.8	16.48	cloudy, grey/brown 200 mL/min
1210	14.28	0.18	63.3	31.24	5.227	7.50	-390.2	16.48	cloudy, grey/brown 200 mL/min
1220	14.80	0.17	36.8	31.20	5.283	7.49	-393.4	16.49	cloudy, grey/brown 200 mL/min
1230	15.32	0.17	22.6	31.31	5.329	7.49	-395.6	16.49	cloudy, grey/brown 200 mL/min
* 1240	15.93	0.17	115.8	30.60	5.347	7.48	-396.6	16.67	cloudy, grey/brown 230 mL/min
1300	17.06	0.17	98.4	30.29	5.435	7.47	-399.4	16.81	cloudy, grey/brown 230 mL/min
1310	17.71	0.17	96.9	29.99	5.499	7.46	-402.0	16.91	cloudy, grey/brown 220 mL/min
1320	18.34	0.17	82.9	30.07	5.529	7.46	-403.9	16.94	cloudy, grey/brown 240 mL/min

Notes: * 20 min

3785.4 mL/gal

WELL DEVELOPMENT FORM

ANCHOR QEA

Personnel: Ben Johnson & Holly Samaha	**Date:** 7/12/13	**Well:** SJMW004D
Project Name: San Jacinto Waste Pits - South Impoundment	**Initial time:** 0725	**Final time:** 1347
Project #: 100720-01.01	**Initial DTB:** 85.30	**Final DTB:** 85.19
Site Location: Channelview, Texas	**Initial DTW:** 19.66	**Final DTW:** 17.02
Development Method: Low Flow with P-Pump	**Casing Volume:** 12.16 gal	
Total Water Removed:	**Casing Diameter:** 2"	
Water Contained: Yes	**Meter #:** PINC # 13046	

Estimate of specific capacity or recharge to well:

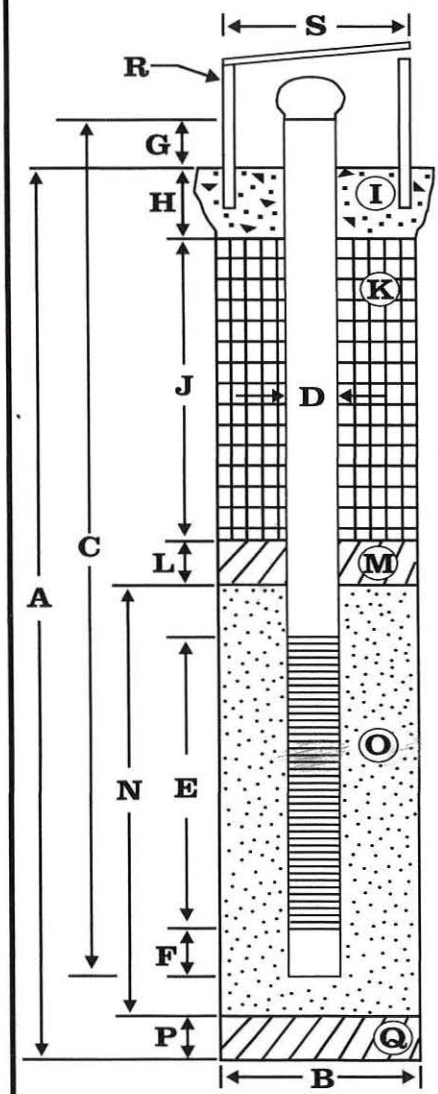
Gal/ft = (dia./2)^2 x 0.163	1.5"=0.103	6"=1.469	2"=0.163	3"=0.367	4"=0.653	8"=2.608	10"=4.080	12"=5.875

Time	Cum. Vol. Removed	D.O. (mg/L)	Turbidity (NTU)	Temp. (°C)	EC (uS/cm)	pH	ORP (mV)	DTW (TOC)	Appearance/Comments
1330	16.97	0.17	87.5	30.10	5.577	7.46	405.7	16.98	slightly cloudy, grey 240 mL/min
1340	19.22	0.16	72.8	30.19	5.621	7.45	405.5	17.02	slightly cloudy, grey 240 mL/min
1344	19.44	0.16	70.9	30.06	5.633	7.45	405.8	17.02	slightly cloudy, grey 210 mL/min
~~1350~~ 1347	19.61	0.16	72.1	30.02	5.642	7.45	406.1	17.02	slightly cloudy, grey 210 mL/min

Notes:

WELL DETAILS

Project Number:	100720	Boring/Well No.:	SJMW005
Client Name:	International Paper	Top of Casing Elev.:	
Project Name:	San Jacinto Super Fund – South Impoundment	Ground Surface Elev.:	
Location:	Channelview, TX	Installation Date:	7/10/13
Driller:	Major Drilling - Nick Moreno	Permit/Start Card No.:	—



	Depth (feet)	Elev. (ft, msl)
	3.0	
	2.6	
	Ø	
	1.9	
	1.9	
	3.9	
	5.0	
	20.0	
	20.3	
	20.3	
	25.0	

Installed by: Ben Johnson

Reviewed by:

Date:

EXPLORATORY BORING

A. Total depth: 25.0 ft.

B. Diameter 6.0 in.

Drilling method: Rotosonic

WELL CONSTRUCTION

C. Well casing length: 22.9 ft.

Well casing material: PVC

D. Well casing diameter: 2.0 in.

E. Well screen length: 15.0 ft.

Well screen type: Slotted PVC

Well screen slot size: 0.01 in.

F. Well sump/end cap length: 0.3 ft.

G. Well casing height (stickup): 2.5 ft.

H. Surface seal thickness: 2.0 ft.

I. Surface seal material: Portland Cement

J. Annular seal thickness: — ft.

K. Annular seal material: —

L. Filter pack seal thickness: 2.0 ft.

M. Filter pack seal material: Bentonite chips

N. Sand pack thickness: 16.4 ft.

O. Sand pack material: 1A Silica Sand

P. Bottom material thickness: 4.5/0.2 ft.

Q. Bottom material: Bentonite chips/Sand

R. Protective casing material: Steel

Well centralizer depths: — ft.

S. Protective casing diameter: — in.

Flush mounted 4x4"

NOTES:

Chips: 1 1
Sand: IIII
Screen (0.01): 15'
Sump: 0.3'
Riser: 5' +

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER: Benjamin Johnson
DRILLING CONTRACTOR: Major Drilling
DRILLING METHOD: Rotosonic
HOLE DIAMETER: 6"

BORING #: SJMW005
DATE BEGAN: 7/9/13
DATE COMPLETED: 7/9/13
TOTAL DEPTH: 25 ft
SHEET: 1 OF 2

Field location of boring: ~115 ft West of SJMW004D

Time	Well or Piezometer Details	Sampling Method	P.I.D VOC (ppm)			Recovery (feet)	Depth Sampled	Depth in Feet	Soil Group Symbol (USCS)	Lithologic Description	GRVL %	SND %	SLT %
1637		CB	0.1			2.5	0			0.0 - ~~3.6~~ 3.0 ft Sandy Silt (ML), brown, no plasticity, forms angular/subrounded chunks, loose, dry, anthropogenic debris. (Fill)		35	65
								1					
								2	ML				
								3					
									CL				
								4	CL	3.0 - 3.5 ft Gravelly Clay (CL), brown, fines with misc gravel/brick/anthropogenic inclusions, firm, moist anthropogenic material (Fill)	30		70
1650		CB	0.0			2.1	5.0	5					
								6	X				
								7	Rock	3.5 - 5.0 ft Clay with gravel (CL), brown, small gravel, soft, moist, wood debris, some concrete/brick (Fill) no odor	15		85
								8					
			0.1					9					
1714		CB	0.0			4.6	10.0	10	SP	@ 3.5 - 4.0 ft Black laminations.			
								1		5.0 - 6.6 ft Silt F			
								2		6.6 - 7.8 Rock			
								3	CL	7.8 - 9.7 Clay (CL), gray (inside core) soft, moist, lots of wood debris ~35%, no odor (Fill)		10	90
								4					
1731		CB			5.0	3.7	15.0	15					
								6		9.7 - 11.6 Sand (SP), gray/light gray, fine grain, loose, moist slight HC odor, (Fill) *small spots of NAPL?		95	5
								7					
								8		@ 10.2 ft wood debris			
								9		11.6 - 20.0 ft Clay (CL), Dark gray/black, medium plasticity, soft moist, some wood/plant debris, (Fill)		5	95
							20.0	20					

Remarks:

15.0-20.0 ft slight mineral odor, sheen

@ 11.9 - 12.8 ft lots of debris

lighter gray color.

@ 19.4 - 20.0 ft light gray, firm.

ANCHOR QEA

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: San Jacinto Waste Pits - South Imp
PROJECT NUMBER: 100720-01.01
GEOLOGIST/ENGINEER Benjamin Johnson
DRILLING CONTRACTOR Major Drilling
DRILLING METHOD Rotosonic
HOLE DIAMETER 6"

BORING # SJMW005
DATE BEGAN 7/9/13
DATE COMPLETED 7/9/13
TOTAL DEPTH 25 ft
SHEET 2 OF 2

Field location of boring

Time	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	P.I.D VOC (ppm)			RECOVERY (feet)	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION	GRVL %	SND %	SLT %
1756		C.B				4.1	20.0	21	SP	Dropped 20-25 ft Sample @ 1752			
									ML				
								2		20.0 - 25.0 ft Sand (SP), light gray, fine grains, loose, wet, no odor. (Alluvium)		95	5
								3	SP				
								4	ML	@ 20.6 - 21.2 ft Sandy silt ~~with Sand~~ (ML)			
—		—				—	25.0	25	SP				
								6		@ 23.0 - 24.3 ft Sandy silt (ML)			
								7					
								8					
								9					
								0					
								1					
								2					
								3					
								4					
								5					
								6					
								7					
								8					
								9					
								0					

Remarks:

WELL DEVELOPMENT FORM

ANCHOR QEA

Personnel: Ben Johnson & Holly Samaha	**Date:** 7/11/13	**Well:** SJMW005
Project Name: San Jacinto Waste Pits - South Impoundment	**Initial time:** 0743	**Final time:** 1313
Project #: 100720-01.01	**Initial DTB:** ~~20~~ 22.87	**Final DTB:** 22.78
Site Location: Channelview, Texas	**Initial DTW:** 7.97 ft	**Final DTW:** 8.15
Development Method: Low Flow with P-Pump	**Casing Volume:** 2.43 gal	
Total Water Removed:	**Casing Diameter:** 2"	
Water Contained: Yes ~~0.16~~	**Meter #:** Pine #13046	

Estimate of specific capacity or recharge to well: 0.16 gpm / 0.18 ft = 0.88 gpm/ft

Gal/ft = (dia./2)^2 x 0.163	1.5"=0.103	6"=1.469	2"=0.163	3"=0.367	4"=0.653	8"=2.608	10"=4.080	12"=5.875

Time	Cum. Vol. Removed	D.O. (mg/L)	Turbidity (NTU)	Temp. (°C)	EC (mS/cm)	pH	ORP (mV)	DTW (TOC)	Appearance/Comments	
0805	0.62	0.59	689.0	24.5	2.919	6.78	-266	8.01	sheen	250 mL/32 s
0810	1.15	0.41	330.3	24.37	2.979	6.78	-282.2	7.95		250 mL/40 s
0815	2.15	0.37	98.5	24.45	3.014	6.75	-309.2	7.95		250 mL/40 s
0825	3.05	0.36	-57.8	24.94	2.990	6.67	-354.5	7.96		250 mL/42 s
0835	3.99	0.52	-73.9	25.03	3.002	6.69	-375.8	7.96		250 mL/39 s
0845	5.00	0.25	-78.9	25.08	3.033	6.69	-392.0	7.97		250 mL/41 s
0855	5.96	1.29	-87.0	25.14	3.082	6.70	-393.3	8.04		250 mL/35 s
0905	7.09	0.89	2.0	25.16	3.120	6.67	-385.3	8.05	turned up pumping rate & recalibrated turb	250 mL/31 s
0915	8.13	0.25	2.7	25.27	3.149	6.68	-407.8	8.04		250 mL/38 s
0922	9.29	0.21	4.0	25.32	3.176	6.69	-413.7	8.06		250 mL/34 s
0932	10.55	0.18	2.1	25.50	3.215	6.70	-415.6	8.05		250 mL/31 s
0943	11.79	0.18	2.2	25.60	3.263	6.70	-419.1	8.08		250 mL/32 s
0954	12.71	0.16	4.1	25.56	3.263	6.69	-431.2	8.01		250 mL/43 s
1007	13.57	0.16	2.3	25.46	3.335	6.69	-446.5	8.06		250 mL/46 s
1019	14.61	0.15	0.9	25.42	3.374	6.69	-437.3	8.09		250 mL/38 s
1031	15.62	0.14	0.9	25.37	3.426	6.69	-462.3	8.09	stopped to increase pump rate	250 mL/34 s
1043	16.94	0.15	0.9	25.80	3.425	6.69	-467.3	8.10		250 mL/30 s
1054	18.28	0.14	0.6	25.79	3.457	6.69	-477.4	8.10		250 mL/34 s
1105	19.35	0.14	0.8	25.96	3.498	6.69	-476.6	8.10		250 mL/37 s
1118	20.42	0.14	1.4	26.07	3.592	6.69	-485.5	8.06		250 mL/45 s
1133	21.3	0.14	0.1	26.17	3.639	6.69	-493.7	8.06	increased pump rate	250 mL/46 s
1147	22.16	0.14	0.7	26.25	3.793	6.70	-497.9	8.10		250 mL/60 s
1200	22.82	0.13	2.2	24.94	3.738	6.67	-501.9	8.12	changed battery source for pump	250 mL/25 s
1210	24.4	0.13	1.6	25.26	3.522	6.69	-501.7	8.13		640 mL/min
1220	26.09	0.13	1.4	25.28	3.529	6.69	-513.3	8.15		640 mL/min
* 1230	27.76	0.13	1.2	25.26	3.567	6.69	-517.7	8.16	Sulfur smell	640 mL/min
1250	31.16	0.13	0.9	25.23	3.640	6.68	-530.2	8.17	Sulfur smell	600 mL/min
1303	32.79	0.13	0.8	25.21	3.689	6.68	-530.1	8.15	sulfur smell	620 mL/min
1313	34.42	0.13	0.8	25.15	3.721	6.68	-535.6	8.15		620 mL/min

Notes: * 20 min interval

Page ___ of ___

ANCHOR QEA

Project: San Jacinto - South
Job No.:
Subject: Drilling & Sampling
Date: 7/9/13 Time: 0640
Attendees: Ben J & Nick, Brad, and Shane from Major
Page: 1 Of:
Made By:
Route To:

☐ Calculations ☐ Telecon ☐ Meeting Notes

0640 - 0650 On site

0650 Drillers arrive

0650 - 0715 Getting access through first gate with the help of Anthony from Kirby.

0715 - 1015 Setting up at SJMW004D. placed directly north of SJMW004S.
@0730 Safety tailgate
@0750 fuse blown on truck, Cannot pump fuel to Bobcat (?)
@0750- Filling water from spigot.

1015 - 1215 Drilling SJMW004D Step down. Sampled with 6" CB. to 45 ft bgs.

1215 - 1240 Phone call with Chris, log review, and travel to Lowes.

1240 - 1340 Lunch, and IDW management

1340 - 1405 Coring out ~~2'~~ 45 - 47' bgs to Set 6" Casing.
• Major has 5 7/8" OD CB for boring below Step down.

1405 - 1545 Setting 6" Casing. 50' total
@1410 tested 5 7/8" bit in casing. Didn't fit. Brought over two new pieces.
@1420 Tremie is to big for annulus. pump grout and displace.
• Cement: ~~IIII~~ 1
• Bentonite ~~(grout)~~ : 11
6" Casing Set to 48.4' bgs
@1539 Strong Solvent Smell from Casing / bore hole during removal of 911.

ANCHOR QEA

Project: San Leanto-South
Job No.:
Subject: Drilling & Sampling
Date: 7/9/13 Time:
Attendees: Ben J, Nick, Shane, & Brad
Page: 2 Of:
Made By:
Route To:

☐ Calculations ☐ Telecon ☐ Meeting Notes

1545-1620 Demob from SJMW004D and set up at SJMW005 ≈115 ft West of SJMW004D.

1620-1815 Boring SJMW005 0 to 45

* Organic Vapors Continue in ≈30 sec bursts every 2-4 min, wind blowing west to the from source? 5-4 ppm Seemed to stop around 1715

@ 1720 Witness NAPL on drill rods and produced NAPL from 9.7-11.6' Sand interval by liquifying in hand.

@ 1752 dropped 20-25' Sample

@ 1756 Vapor bursts back

ANCHOR QEA

Project: San Jacinto South
Job No.:
Subject: Well Installation
Date: 7/10/13 Time:
Attendees: Ben
Page: 1 Of:
Made By:
Route To:

☐ Calculations ☐ Telecon ☐ Meeting Notes

0645-0700 onsite waiting for major
@0700 major onsite
0700-0715 Setting up.
• Spoke to Chris about well specs 1' sand above screen otz.

0715-0830 Installing SJMW005
• ~~15' of~~ Tagged water at 3'
• 15' 0.1 screen, 0.3' sump, 10' riser
• 1A filter pack?
@0730 partial bore hole collapse
Clean out performed

0830-1130 Letting seal set, drillers running errands. Ben doing paper work.
@1100-1130 lunch.

1130-1545 Cutting 6" casing at SJMW004D
Setting monument and surface completion at SJMW005.
@1405 changing spindle on drill rig.

1545-1645 Setting 5 7/8" casing down to 45' in SJMW004D. Step down:
@ Some grout returns at 40'

ANCHOR QEA

Project: San Jacinto Job No.:
Subject: GW Sampling / Well Install Date: 7/11/13 Time:
Attendees: Ben, Holly, Nick, Shane, & Brad Page: 1 Of:
Made By:
Route To:

☐ Calculations ☐ Telecon ☐ Meeting Notes

0630 - 0745 Onsite Setting up SJMW005.
@0700 Nick arr onsite
@0705 Holly onsite
• Standards Check, Cond, & orp seem bad.

0745 - 0900 Boring SJMW004D 45 - 65ft

0900 - 0940 Drillers run for supplies. Helped Holly with sampling
• recalibrated turbidity on YSI

0940 - 1050 Boring SJMW004D 65 - 85ft

1050 - 1200 Setting SJMW004D to 83ft bgs. 10' Screen. Filter pack and filter pack seal in place

1200 - 1330 Sampling / Testing SJMW005
@1245 drillers to lunch & store.
Holly grabbed lunch.
@1305 drillers returned

1330 - 1400 Continuing well install at SJMW004D. Holly sampling SJMW005.
• Tremie grout
•

1400 - 1500 Collecting Equipment blank

1500 - 1700 Performing Surface Completion at SJMW004D. & demobing
@1600 Holly offsite

1700 - 1715 Collecting coordinates of new wells

ANCHOR QEA

Project: San Jacinto-South
Job No.:
Subject: Well development
Date: 7/12/13 Time:
Attendees: Ben, Holly, Nick, Shane, & Brad
Page: Of:
Made By:
Route To:

☐ Calculations ☐ Telecon ☐ Meeting Notes

0545-0715 Drillers onsite picking up.
@0705 Holly onsite

0715-0800 Surface completion at SJMW004D
prep for development, test, and sampling.

0800-1350 Start development/test Holly
venting wells and taking levels
- pump rate slowed 200-250ml/min
- turbidity fluctuating 256-450 NTU
- couldn't get tubing to screen/zone.

1350-1500 Sampling SJMW004D

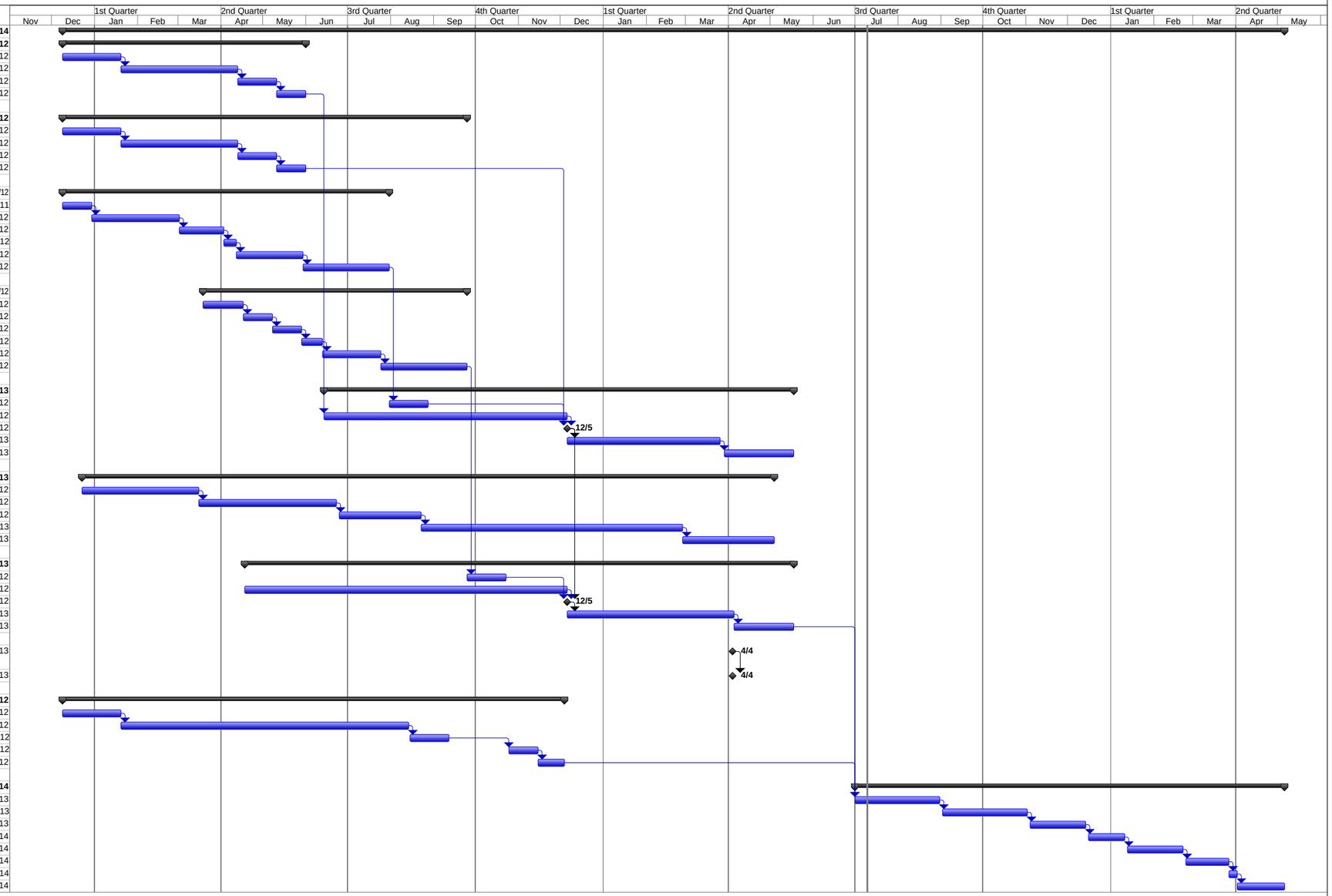
1500-1545 Site clean up and demob
- 3 empty drums labelled and placed under house
- other drums used left for veolia

@1515 Holly to lab.
- Dioxins stay in Houston
- All others to Kelso.

San Jacinto River Wastepits Superfund Site RI/FS
DRAFT

Revised July 2013

ID	Task Name	Duration	Start	Finish
1	**Post Site Characterization Report Deliverables**	**627 days**	**Fri 12/9/11**	**Mon 5/5/14**
2	**Exposure Assessment (EA) Memorandum**	**125 days**	**Fri 12/9/11**	**Thu 5/31/12**
3	Submit Draft of EA Memo	30 days	Fri 12/9/11	Thu 1/19/12
4	Agency Review	60 days	Fri 1/20/12	Thu 4/12/12
5	Final EA Memorandum Submitted	20 days	Fri 4/13/12	Thu 5/10/12
6	EPA Approval of EA Memorandum	15 days	Fri 5/11/12	Thu 5/31/12
7				
8	**Toxicological and Epidemiological Studies (TES) Memorandum**	**207 days**	**Fri 12/9/11**	**Mon 9/24/12**
9	Submit Draft of TES Memo	30 days	Fri 12/9/11	Thu 1/19/12
10	Agency Review	60 days	Fri 1/20/12	Thu 4/12/12
11	Final TES Memorandum Submitted	20 days	Fri 4/13/12	Thu 5/10/12
12	EPA Approval of TES Memorandum	15 days	Fri 5/11/12	Thu 5/31/12
13				
14	South Impoundment Investigation Phase II	167 days	Fri 12/9/11	Mon 7/30/12
15	Submittal of Draft Soil, GW and Sediment SAP Addenda	15 days	Fri 12/9/11	Thu 12/29/11
16	Agency Review and comments on SAP Addenda	45 days	Fri 12/30/11	Thu 3/1/12
17	Prepare Draft Final SAP Addenda	22 days	Fri 3/2/12	Mon 4/2/12
18	EPA Review and Approval of SAP Addenda	7 days	Tue 4/3/12	Wed 4/11/12
19	Field Sampling Phase II	34 days	Thu 4/12/12	Tue 5/29/12
20	Sample analysis, data validation and data management	44 days	Wed 5/30/12	Mon 7/30/12
21				
22	Cap Porewater Study	136 days	Mon 3/19/12	Mon 9/24/12
23	Submitttal of Draft Cap Porewater Study SAP/FSP	21 days	Mon 3/19/12	Mon 4/16/12
24	Agency Review and comments on SAP/FSP	15 days	Tue 4/17/12	Mon 5/7/12
25	Prepare Draft Final SAP/FSP	15 days	Tue 5/8/12	Mon 5/28/12
26	EPA Review and Approval of SAP/FSP Addenda	11 days	Tue 5/29/12	Tue 6/12/12
27	Field Sampling	30 days	Wed 6/13/12	Tue 7/24/12
28	Sample analysis, data validation and data management	44 days	Wed 7/25/12	Mon 9/24/12
29				
30	Baseline Human Health Risk Assessment BHHRA Report	**242 days**	**Thu 6/14/12**	**Fri 5/17/13**
31	Evaluate South Impoundment Data	20 days	Tue 7/31/12	Mon 8/27/12
32	Prepare Draft of BHHRA Report	125 days	Thu 6/14/12	Wed 12/5/12
33	Submit Draft BHHRA Report	0 days	Wed 12/5/12	Wed 12/5/12
34	EPA Review and Conditional Approval of Draft BHHRA Report	78 days	Thu 12/6/12	Mon 3/25/13
35	Final BHHRA Report Preparation and Submittal	36 days	Fri 3/29/13	Fri 5/17/13
36				
37	**Baseline Ecological Risk Assessment (BERA) Report**	**356 days**	**Fri 12/23/11**	**Fri 5/3/13**
38	Submit Draft of BERA Report	60 days	Fri 12/23/11	Thu 3/15/12
39	Agency Review	71 days	Fri 3/16/12	Fri 6/22/12
40	Draft Final BERA Report Preparation and Submittal	43 days	Mon 6/25/12	Wed 8/22/12
41	EPA Review and Conditional Approval of Draft Final BERA Report	134 days	Thu 8/23/12	Tue 2/26/13
42	Final BERA Report Preparation and Submittal	48 days	Wed 2/27/13	Fri 5/3/13
43				
44	**Remedial Investigation (RI) Report**	**283 days**	**Wed 4/18/12**	**Fri 5/17/13**
45	Evaluate Armored Cap Data for Report	20 days	Tue 9/25/12	Mon 10/22/12
46	Prepare Draft of RI Report	166 days	Wed 4/18/12	Wed 12/5/12
47	Submit Draft RI Report	0 days	Wed 12/5/12	Wed 12/5/12
48	EPA Review and Conditional Approval of Draft RI Report	86 days	Thu 12/6/12	Thu 4/4/13
49	Final RI Report Preparation and Submittal	31 days	Fri 4/5/13	Fri 5/17/13
50				
51	**South Impoundment Groundwater SAP Addendum 2 Implementation and Reporting**	0 days	Thu 4/4/13	Thu 4/4/13
52	To be determined	0 days	Thu 4/4/13	Thu 4/4/13
53				
54	**Remedial Alternatives Memorandum**	**257 days**	**Fri 12/9/11**	**Mon 12/3/12**
55	Submit Draft of RA Memorandum	30 days	Fri 12/9/11	Thu 1/19/12
56	Agency Review	147 days	Fri 1/20/12	Mon 8/13/12
57	Prepare and Submit Draft Final RA Memorandum	20 days	Wed 8/15/12	Tue 9/11/12
58	EPA Review and Conditional Approval of Draft Final RA Memorandum	15 days	Thu 10/25/12	Wed 11/14/12
59	Final RA Report Memorandum and Submittal	13 days	Thu 11/15/12	Mon 12/3/12
60				
61	**Feasibility Study (FS) Report**	**221 days**	**Mon 7/1/13**	**Mon 5/5/14**
62	Prepare and Submit Draft FS Report	45 days	Mon 7/1/13	Fri 8/30/13
63	Agency Review	45 days	Mon 9/2/13	Fri 11/1/13
64	Prepare and Submit Final Interim FS Report	30 days	Mon 11/4/13	Fri 12/13/13
65	EPA Approval of Final Interim FS Report	20 days	Mon 12/16/13	Fri 1/10/14
66	EPA Prepares "Proposed Plan"	30 days	Mon 1/13/14	Fri 2/21/14
67	EPA Accepts Public Comment on Proposed Plan	23 days	Mon 2/24/14	Wed 3/26/14
68	EPA Provides Comments to Respondents	4 days	Thu 3/27/14	Tue 4/1/14
69	Prepare and Submit Final FS Report	24 days	Wed 4/2/14	Mon 5/5/14



Project: EPAs UAO-RI Schedule after
Date: Wed 7/10/13

Task | Split | Milestone | Summary | Project Summary | External Tasks | External Milestone | Inactive Task | Inactive Milestone | Inactive Summary | Manual Task | Duration-only | Manual Summary Rollup | Manual Summary | Start-only | Finish-only | Progress | Deadline

ANCHOR QEA