



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA4-29

Date Hole Started: 10/30/97 Date Hole Finished: 10/30/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company:

Driller: Jorge

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 2.5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	N
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3726.2

MP Elevation (ft):

Remarks:

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA4-29A	GRAB		0.0 - 0.2'			0.0 - 0.3'
	SSIA4-29A2	GRAB		0.0 - 0.2'			GRAVEL grey to black ballast 0.3 - 2.5'
							Gravelly SAND with Silt Fine to medium grained, Silty, Gravelly, moderate yellowish brown 10yr 5/4, dry dense cobbles
	SSIA4-29B	SS		1.5 - 3.0'			
5							

GEOTECH 0734R1.GPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-1

Date Hole Started: 7/7/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3720.76

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-1A	G			0.0 - 0.2'		0.0 - 5.0' Silty SAND with some Gravel Brown, fine-grained to medium-grained, dry.
	SSIA5-1B	SS			1.5 - 2.5'		
	SSIA5-1C	SS			3.0 - 4.0'		
	SSIA5-1D	SS			4.0 - 5.0'		
5							

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HYDROMETRICS INC.
Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSI A5-2

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order R1

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP: NA

Surface Casing Height (ft):

Date: NA

Riser Height (ft):

MP Description: Ground Surface

Ground Surface Elevation (ft): 3722.15

MP Height Above or Below Ground (ft): 0

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSI A5-2A				0.0 - 0.2'		0.0 - 0.2' Silty SAND Brown, fine to medium, dry with gravel and debris from past demolition/ 0.2 - 5.0' SAND Brown, fine to medium, poorly graded, dry with occasional gravel, no H2O TD 5'.
	SSI A5-2B				1.5 - 2.5'		
	SSI A5-2C				3.0 - 4.0'		
	SSI A5-2D				4.0 - 5.0'		
5							

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-3

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc. Property
Legal Description: Asarco Plant
Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3721.95

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-3A	G			0.0 - 0.2'		0.0 - 5.0' SAND Brown, fine to medium, poorly graded, dry with occasional fine gravel w/some cobbles at surface, moist at 5 ft, no H2O TD 5'.
	SSIA5-3B	SS			1.5 - 2.5'		
	SSIA5-3C	SS			3.0 - 4.0'		
	SSIA5-3D	SS			4.0 - 5.0'		
5							

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-4

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc. Property
Legal Description: Asarco Plant
Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	
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5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3718.60

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-4A	G			0.0 - 0.2'		0.0 - 0.2' GRAVEL Coarse 0.2 - 4.0' SAND Brown, fine to medium, poorly graded, dry, with red brick and lumber debris interbedded.
	SSIA5-4B	SS			1.5 - 2.5'		
	SSIA5-4C	SS			3.0 - 4.0'		
	SSIA5-4D	SS			4.0 - 5.0'		4.0 - 5.0' Sandy CLAY Brown, wet.



HYDROMETRICS INC.

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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-5

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

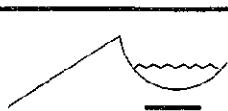
Ground Surface Elevation (ft): 3717.91

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-5A	G			0.0 - 0.2'		0.0 - 2.5' Gravelly SAND Brown to black, fine to medium, poorly graded, dry.
	SSIA5-5B	SS			1.5 - 2.5'		
	SSIA5-5C	SS			3.0 - 4.0'		2.5 - 4.0' Clayey SAND Brown, fine to clayey, moist.
	SSIA5-5D	SS			4.0 - 5.0'		4.0 - 5.0' CLAY Brown moist, TD 5', no H2O.
5							

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSI A5-6

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3718.14

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-6A	G			0.0 - 0.2'		0.0 - 4.0' Silty SAND Brown, fine, dry.
	SSIA5-6B	SS			1.5 - 2.5'		
	SSIA5-6C	SS			3.0 - 4.0'		
	SSIA5-6D	SS			4.0 - 5.0'		4.0 - 5.0' Sandy CLAY Brown, dry with some red brick debris, TD 5', no H2O.

GEOTECH 0734RI.GPJ HYD-TUC.GDT 7/16/97



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-7

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

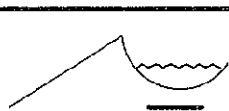
Ground Surface Elevation (ft): 3719.36

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-7A	G			0.0 - 0.2'		0.0 - 1.0' ASPHALT
	SSIA5-7B	SS			1.5 - 2.5'		1.0 - 3.0' SAND Brown, fine to medium, dry, hydrocarbon stained and wet at 2'.
	SSIA5-7C	SS			3.0 - 4.0'		3.0 - 5.0' Sandy CLAY Black, wet, with interbedded calcareous nodules.
	SSIA5-7D	SS			4.0 - 5.0'		
5							

GEOTECH 0734RLGPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.
Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-8

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N

Well installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3720.28

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-8A	G			0.0 - 0.2'		0.0 - 3.0' SAND Brown, fine to medium, poorly graded, dry, perched H2O.
	SSIA5-8B	SS			1.5 - 2.5'		
	SSIA5-8C	SS			3.0 - 4.0'		3.0 - 5.0' Sandy CLAY Brown, moist, hydrocarbon odor w/black staining at 4.5-5, TD 5, no H2O
	SSIA5-8D	SS			4.0 - 5.0'		
5							

GEOTECH 0734RI.GPJ HYD-TUC.GDT 7/16/93



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSI A5-9

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3723.40

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-9A	G			0.0 - 0.2'		0.0 - 2.0' Gravelly SAND Brown, fine to medium, poorly graded, dry with occasional cobbles close to the surface.
	SSIA5-9B	SS			1.5 - 2.5'		
							2.0 - 5.0' SAND Brown to black, fine to medium, poorly graded, dry, slight hydrocarbon odor at 4.75 to 5, TD 5, No H2O.
	SSIA5-9C	SS			3.0 - 4.0'		
	SSIA5-9D	SS			4.0 - 5.0'		

GEOTECH 0734RLGPI HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-10

Date Hole Started: 7/3/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	N		
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3721.37

MP Elevation (ft):

Remarks:

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-10A	G			0.0 - 0.2'		0.0 - 5.0' SAND with some Gravel Brown, fine to medium, poorly graded, dry with some fine gravel closest to the surface, moist below 4, slight hydrocarbon odor at tip of 5 sample (D), TD 5', no H2O.
	SSIA5-10B	SS			1.5 - 2.5'		
	SSIA5-10C	SS			3.0 - 4.0'		
	SSIA5-10D	SS			4.0 - 5.0'		
5							

GEOTECH 0734RIGU HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSI A5-11

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3718.46

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-11A	G			0.0 - 0.2'		0.0 - 3.0' SAND Brown, fine-grained to medium-grained, poorly graded, dry.
	SSIA5-11B	SS			1.5 - 2.5'		
	SSIA5-11C	SS			3.0 - 4.0'		3.0 - 4.0' Clayey SAND Brown, fine-grained to medium-grained, moist.
	SSIA5-11D	SS			4.0 - 5.0'		4.0 - 5.0' Sandy CLAY Brown, moist, TD 5, no H2O.

GEOTECH 0734RLGPJ HYD-TUG GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-12

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	
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5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

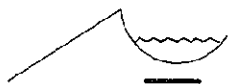
Ground Surface Elevation (ft): 3719.67

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-12A	G			0.0 - 0.2'		0.0 - 2.5' SAND Brown to black, fine to medium, poorly graded, dry, 4" thick organic layer at 18".
	SSIA5-12B	SS			1.5 - 2.5'		
	SSIA5-12C	SS			3.0 - 4.0'		2.5 - 5.0' Sandy CLAY Brown, moist, TD 5, H2O.
	SSIA5-12D	SS			4.0 - 5.0'		

GEOTECH 0794RIGPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-13

Date Hole Started: 7/8/97 Date Hole Finished: 7/8/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	N		
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3721.84

MP Elevation (ft):

Remarks:

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-13A	G			0.0 - 0.2'		0.0 - 4.0' SAND Brown, fine to medium, poorly graded, brown, dry to moist.
	SSIA5-13B	SS			1.5 - 2.5'		
	SSIA5-13C	SS			3.0 - 4.0'		
	SSIA5-13D	SS			4.0 - 5.0'		4.0 - 5.0' Clayey SAND Brown, moist, TD 5, no H2O.
5							

GEOTECH 0734RLG/PJ HYD-TUC/GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-14

Date Hole Started: 7/6/97 Date Hole Finished: 7/9/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

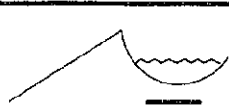
Ground Surface Elevation (ft): 3724.63

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-14A	G			0.0 - 0.2'		0.0 - 0.2' SAND Reddish brown, fine-grained, poorly graded, dry. VFIII
							0.2 - 5.0' Gravelly SAND Brown, fine to medium, poorly graded, dry, TD 5', no H2O.
	SSIA5-14B	SS			1.5 - 2.5'		
	SSIA5-14C	SS			3.0 - 4.0'		
	SSIA5-14D	SS			4.0 - 5.0'		

GEOTECH 0734RI.GPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-15

Date Hole Started: 7/14/97 Date Hole Finished: 7/14/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: LJ

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3725.48

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-15A	G			0.0 - 0.2'		0.0 - 1.0' Gravelly SAND Pale yellow brown (10YR 6/2), fine to coarse, gap graded, medium dense, mix, landscape, gravel. [Fill]
	SSIA5-15B	SS	8/1.5	1.50	1.5 - 3.0'		1.0 - 4.0' SAND Moderate yellow brown (10 YR 5/4), fine to coarse, gap graded, loose.
	SSIA5-15C	SS	10/1	1.00	3.0 - 4.0'		
	SSIA5-15D	SS	8/1	1.00	4.0 - 5.0'		
5							

GEOTECH 073491.GPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.
Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-16

Date Hole Started: 7/14/97 Date Hole Finished: 7/14/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: LJ

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3721.78

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-16A	G			0.0 - 0.1'		0.0 - 3.0' Gravelly SAND Pale yellow brown (10 YR 6/7), fine to coarse, loose.
	SSIA5-16B	SS	15/1.5	1.50	1.5 - 3.0'		
	SSIA5-16C	SS	3/1	1.00	3.0 - 4.0'		3.0 - 4.0' SAND Moderate yellow brown (10 YR 6/2), fine to medium, med. dense, uniform, moist.
	SSIA5-16D	SS	6/1	1.00	4.0 - 5.0'		4.0 - 5.0' Clayey SILT Moderate yellow brown, (10 YR 6/2), moderate plasticity, firm, moist.
5							

GEOTECH 0734RI.GPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

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Tucson, Arizona

Soil Boring Log

Hole Name: SSI A5-17

Date Hole Started: 7/14/97 Date Hole Finished: 7/14/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc. Property
Legal Description: Asarco Plant
Descriptive Location:

Recorded By: LJ
Drilling Company: Layne Christensen Co.
Driller: Dave Hogan
Drilling Method: Hollow Stem Auger
Drilling Fluids Used: None
Purpose of Hole: Soil Samples
Target Aquifer: NA
Hole Diameter (in): 6-inch
Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N
Surface Casing Used? N
Screen/Perforations? N
Sand Pack? N
Annular Seal? N
Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N
Water Samples Taken? N
Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3725.09

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-17A	G					0.0 - 3.5' Gravelly SAND Pale yellow, brown (10YR 6/2), fine to coarse, medium dense, gap graded, brick @ 20'.
	SSIA5-17B	SS	41/1.5	1.50	1.5 - 3.0'		
	SSIA5-17C	SS	12/1	1.00	3.0 - 4.0'		
	SSIA5-17D	SS	35/7	0.70	4.0 - 5.0'		3.5 - 5.0' SAND Pale yellow brown (10 YR 6/2), fine to medium, loose, uniform, dry.
5							

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Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA5-18

Date Hole Started: 7/14/97 Date Hole Finished: 7/14/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: LJ

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3722.53

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-18A	G			0.0 - 0.2'		0.0 - 5.0' SAND Pale yellow brown (10 YR 6/2), fine to coarse, uniform, loose, dry, moist @ 4.5'.
	SSIA5-18B	SS	12/1.5	1.50	1.5 - 3.0'		
	SSIA5-18C	SS	5/1	1.00	3.0 - 4.0'		
	SSIA5-18D	SS	8/1	1.00	4.0 - 5.0'		
5							

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSI A5-19

Date Hole Started: 7/14/97 Date Hole Finished: 7/14/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: LJ

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

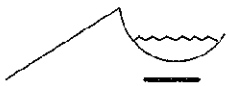
Ground Surface Elevation (ft): 3722.15

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA5-19A	G			0.0 - 0.2'		0.0 - 5.0' Gravelly SAND Pale yellow brown (10 YR 6/2), loose concrete, slag, limestone, gap graded, wet @ 4.8'.
	SSIA5-19B	SS	18/1.5	1.50	1.5 - 3.0'		
	SSIA5-19C	SS	14/1	1.00	3.0 - 4.0'		
	SSIA5-19D	SS	32/1	1.00	4.0 - 5.0'		
5							

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HYDROMETRICS INC.
Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-1

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 3

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3775.62

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-1A	G			0.0 - 0.2'		0.0 - 0.3' CONCRETE
							0.3 - 2.0' Clayey Gravelly SAND Brown, fine to medium.
	SSIA8-1B	SS			1.5 - 2.5'		2.0 - 2.2' SLAG Refusal at 1.5', no water, TD 1.5'.
	SSIA8-1C	SS			2.5 - 3.0'		



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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-2

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3775.47

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-2A	G			0.0 - 0.2'		0.0 - 0.3' ASPHALT
							0.3 - 2.5' Clayey Gravelly SAND Brown, fine to medium, with some fine gravel (andesite), and slag.
	SSIA8-2B	SS			1.5 - 2.5'		
							2.5 - 5.0' SLAG
	SSIA8-2C	G			3.0 - 4.0'		
	SSIA8-2D	G			4.0 - 5.0'		
5							

GEOTECH 0734RL.GPJ HYD-TUC.GDT 7/16/93



HYDROMETRICS INC.
Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-3

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3774.87

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-3A	G			0.0 - 0.2'		0.0 - 0.3' ASPHALT
							0.3 - 4.0' Clayey Gravelly SAND Brown, fine to medium, moist, with some fine gravel, red brick, debris at 3.5 ft., dark staining with some slag below 3 ft.
	SSIA8-3B	SS			1.5 - 2.5'		
	SSIA8-3C	SS			3.0 - 4.0'		
	SSIA8-3D	SS			4.0 - 5.0'		4.0 - 5.0' SAND Brown, fine to medium, dry, with construction debris at tip of spoon, black stained, red brick.
5							

GEOTECH 0734PLGRJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.
Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-4

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3775.21

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-4A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 2.0' Clayey Gravelly SAND Brown, fine to medium, moist with some fine gravel.
	SSIA8-4B	SS			1.5 - 2.5'		
							2.0 - 5.0' SLAG With copper residue, blue green, light material cinderlike, light brown sand with red brick debris at top of sampler, TD 5' no H2O.
	SSIA8-4C	SS			3.0 - 4.0'		
	SSIA8-4D	SS			4.0 - 5.0'		
5							

GEOTECH 0734ELGPJ HYD-TUC.GDT 7/16/98



HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-5

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc. Property
Legal Description: Asarco Plant
Descriptive Location:

Recorded By: HDK
Drilling Company: Layne Christensen Co.
Driller: Dave Hogan
Drilling Method: Hollow Stem Auger
Drilling Fluids Used: None
Purpose of Hole: Soil Samples
Target Aquifer: NA
Hole Diameter (in): 6-inch
Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N
Surface Casing Used? N
Screen/Perforations? N
Sand Pack? N
Annular Seal? N
Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N
Water Samples Taken? N
Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3775.44

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-5A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 5.0' Clayey Gravelly SAND Brown, fine to medium, moist, with some fine gravel.
	SSIA8-5B	SS			1.5 - 2.5'		
	SSIA8-5C	SS			3.0 - 4.0'		
	SSIA8-5D	SS			4.0 - 5.0'		

GEOTECH 0734RIG-FJ HYD-TUC-GDT 7/16/98



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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-6

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-Inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

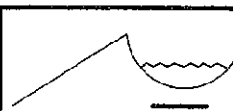
Ground Surface Elevation (ft): 3775.96

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-6A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 4.0' Silty Gravelly SAND Brown, fine to medium, dry, with some fine gravel.
	SSIA8-6B	SS			1.5 - 2.5'		
	SSIA8-6C	SS			3.0 - 4.0'		
	SSIA8-6D	SS			4.0 - 5.0'		4.0 - 5.0' Gravelly Silty SAND Brown, fine to coarse, dry, with some cobbles, TD 5', no H2O.
5							

GEOTECH 0734RI.GPJ HYD-TUC.GDT 7/16/98



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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-7

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3776.77

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-7A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 3.0' Clayey Gravelly SAND Brown, fine to medium, dry, with some fine gravel.
	SSIA8-7B	SS			1.5 - 2.5'		
	SSIA8-7C	SS			3.0 - 4.0'		3.0 - 5.0' Silty Gravelly SAND Brown, fine to medium, dry with some fine gravel, TD 5', no H2O.
	SSIA8-7D	SS			4.0 - 5.0'		
5							

GEOTECH 0734H12PJ HYD-TUC.GDT 7/16/98



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Tucson, Arizona

Soil Boring Log

Hole Name: SSI A8-8

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3777.89

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-8A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 5.0' Silty Gravelly SAND Brown to reddish-brown, fine to medium, dry, with some fine gravel.
	SSIA8-8B	SS			1.5 - 2.5'		
	SSIA8-8C	SS			3.0 - 4.0'		
	SSIA8-8D	SS			4.0 - 5.0'		

GEOTECH 0734PL.GPJ HYD-TUC.GDT 7/16/98



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Tucson, Arizona

Soil Boring Log

Hole Name: SSI A8-9

Date Hole Started: 7/16/97 Date Hole Finished: 7/16/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3778.18

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-9A	G			0.0 - 0.2'		0.0 - 0.2' SLAG
							0.2 - 0.2' Silty SAND Brown, fine to medium, dry.
							0.2 - 5.0' Clayey SAND Brown, fine to medium, moist.
	SSIA8-9B	SS			1.5 - 2.5'		
	SSIA8-9C	SS			3.0 - 4.0'		
	SSIA8-9D	SS			4.0 - 5.0'		

GEOTECH 0734RI.GPJ HYD-TUC.GDT 7/16/98



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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-10

Date Hole Started: 7/17/97 Date Hole Finished: 7/17/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3776.96

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-10A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 0.5' BASE COARSE (Fill)
							0.5 - 5.0' Clayey Gravelly SAND Brown, fine to medium, moist with some fine gravel and inter slag gravel
	SSIA8-10B	SS			1.5 - 2.5'		
	SSIA8-10C	SS			3.0 - 4.0'		
	SSIA8-10D	SS			4.0 - 5.0'		
5							

GEOTECH 0734RILGPJ HYD-TUC.GDT 7/16/93



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Tucson, Arizona

Soil Boring Log

Hole Name: SSI A8-11

Date Hole Started: 7/17/97 Date Hole Finished: 7/17/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3776.58

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSI A8-11A	G			0.0 - 0.2'		0.0 - 1.0' SAND Tan to black, fine to coarse, slightly silty, dry (chat)
	SSI A8-11B	SS			1.5 - 2.5'		1.0 - 5.0' Silty SAND Reddish-brown, fine to medium, dry, TD 5', no H2O.
	SSI A8-11C	SS			3.0 - 4.0'		
	SSI A8-11D	SS			4.0 - 5.0'		
5							



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Soil Boring Log

Hole Name: SSIA8-12

Date Hole Started: 7/17/97 Date Hole Finished: 7/17/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3776.48

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-12A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 0.5' BASE COARSE
							0.5 - 2.5' Gravelly Silty SAND Brown to black, fine to medium, dry.
	SSIA8-12B	SS			1.5 - 2.5'		
	SSIA8-12C	SS			3.0 - 4.0'		2.5 - 5.0' Gravelly SAND Brown (mottled), fine to coarse, dry, with some fine gravel.
	SSIA8-12D	SS			4.0 - 5.0'		
5							

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Soil Boring Log

Hole Name: SSIA8-13

Date Hole Started: 7/17/97 Date Hole Finished: 7/17/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3775.86

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-13A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 0.5' BASE COARSE
							0.5 - 4.0' Clayey Gravelly SAND Brown to black, fine to medium, clayey, moist with some fine gravel.
	SSIA8-13B	G			1.5 - 2.5'		
	SSIA8-13C	SS			3.0 - 4.0'		
	SSIA8-13D	SS			4.0 - 5.0'		4.0 - 5.0' Silty SAND Brown, fine to medium, dry, TD 5, No H2O.
5							

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Tucson, Arizona

Soil Boring Log

Hole Name: SSI A8-14

Date Hole Started: 7/17/97 Date Hole Finished: 7/17/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 4

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING	
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Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3777.01

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSI A8-14A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 1.0' Silty SAND Brown, fine to medium, dry with some fine gravel
	SSI A8-14B	G			1.5 - 2.5'		1.0 - 4.0' SLAG Refusal
	SSI A8-14C	G			3.0 - 4.0'		
	SSI A8-14D	G			4.0 - 5.0'		



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Soil Boring Log

Hole Name: SSIA8-15

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):


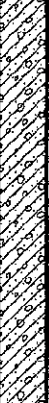
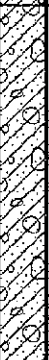

Riser Height (ft):

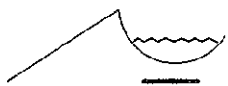
Ground Surface Elevation (ft): 3778.84

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

GEOTECH 0734RLGPJ HYD-TUC.GDT 7/16/98

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-15A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 2.5' Clayey Gravelly SAND Brown, fine to medium, moist with some fine gravel.
	SSIA8-15B	SS			1.5 - 2.5'		
							2.5 - 4.5' Gravelly Clayey SAND Brown, fine to medium, moist.
	SSIA8-15C	G			3.0 - 4.0'		
	SSIA8-15D	G			4.0 - 5.0'		4.5 - 5.0' SLAG
5							



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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-16

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3777.40

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-16A	G			0.0 - 0.2'		0.0 - 0.4' SLAG Aggregate, some sand fine to coarse, dry.
							0.4 - 1.2' Gravelly SAND Light brown (5YR 5/6), fine to coarse, loose gap graded, dry.
	SSIA8-16B	SS	18/1.5	1.00	1.5 - 2.5'		1.2 - 3.8' SAND Light brown (5YR 5/6), fine to medium, uniform, med. dense, dry.
	SSIA8-16C	SS	12/1	0.80	3.0 - 4.0'		
	SSIA8-16D	SS	8/1	0.80	4.0 - 5.0'		3.8 - 4.1' SLAG
5							

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HYDROMETRICS INC.

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Tucson, Arizona

Soil Boring Log

Hole Name: SSI A8-17

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc. Property
Legal Description: Asarco Plant
Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 3

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING	
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Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3779.85

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSI A8-17A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 5.0' Clayey Gravelly SAND Brown, fine to medium, with some fine gravel and intermixed slag, 4" thick layer at slag at 36".
	SSI A8-17B	SS			1.5 - 2.5'		
	SSI A8-17C	G			3.0 - 4.0'		



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Soil Boring Log

Hole Name: SSIAB-18

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 3

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	N		
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Annular Seal?	N		
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N
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Water Samples Taken?	N
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Boring Samples Taken?	N
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Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3776.98

MP Elevation (ft):

Remarks:

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIAB-18A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 2.5' Clayey Gravelly SAND Brown, fine to medium, moist with some fine gravel.
	SSIAB-18B	SS			1.5 - 2.5'		
	SSIAB-18C				3.0 - 4.0'		2.5 - 3.0' SLAG Refusal
	SSIAB-18D				4.0 - 5.0'		
5							



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Soil Boring Log

Hole Name: SSIA8-19

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3780.51

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-19A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 4.5' Clayey Gravelly SAND Brown, fine to medium, moist with some gravel.
	SSIA8-19B	SS			1.5 - 2.5'		
	SSIA8-19C	SS			3.0 - 4.0'		
	SSIA8-19D				4.0 - 5.0'		
							4.5 - 5.0' SLAG

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Tucson, Arizona

Soil Boring Log

Hole Name: SSIAB-21

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3777.82

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIAB-21A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 5.0' Clayey Gravelly SAND Brown to black, fine to medium, moist, with some fine gravel and slag.
	SSIAB-21B	SS			1.5 - 2.5'		
	SSIAB-21C	G			3.0 - 4.0'		
	SSIAB-21D	G			4.0 - 5.0'		
5							

GEOTECH 0734FI.GPJ HYD-TUC.GDT 7/16/98



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Soil Boring Log

Hole Name: SSIA8-22

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0



Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3774.56

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-22A	G			0.0 - 0.2'		0.0 - 0.5' SLAG
							0.5 - 5.0' SAND Moderate yellowish-brown (10YR 5/4) to light brown (5YR 5/6), fine to medium, medium dense, uniform, dry.
	SSIA8-22B	SS			1.5 - 2.5'		
	SSIA8-22C	SS			3.0 - 4.0'		
	SSIA8-22D	SS			4.0 - 5.0'		
5							

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Soil Boring Log

Hole Name: SSI A8-23

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3781.38

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-23A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 0.5' BASE COARSE
							0.5 - 5.0' Clayey Gravelly SAND Brown, fine to medium, moist with some fine gravel, no H2O.
	SSIA8-23B	SS			1.5 - 2.5'		
	SSIA8-23C	G			3.0 - 4.0'		
	SSIA8-23D				4.0 - 5.0'		
5							

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Soil Boring Log

Hole Name: SS\A8-24

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 2

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N
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Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal?	N
---------------	---

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed?	N
Yes	10
No	10
Total	20

Water Samples Taken? N

Boring Samples Taken? Y XRF 5 foot intervals

Static Water Level Below MP: NA

Surface Casing Height (ft):

Date: NA

Riser Height (ft):





MP Description: Ground Surface

Ground Surface Elevation (ft): 3776.77

MP Height Above or Below Ground (ft): 0

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-24A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 0.5' BASE COARSE
							0.5 - 1.5' Gravelly Silty SAND Brown, medium to fine, moist, with some fine gravels.
	SSIA8-24B	G			1.5 - 2.5'		1.5 - 2.0' SLAG Refusal



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Soil Boring Log

Hole Name: SSI A8-25

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 1.9

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

INTERVAL

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3772.02

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-25A	G			0.0 - 0.2'		0.0 - 1.9' SLAG Dusky yellowish-brown (10YR 2/2), fines, RR track ballast; generally SLAG, moist, some white staining.
	SSIA8-25B	G			1.5 - 2.5'		
	SSIA8-25C				3.0 - 4.0'		
	SSIA8-25D				4.0 - 5.0'		

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Soil Boring Log

Hole Name: SSI A8-26

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 1.5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? 'N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water, Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Surface Casing Height (ft):

Date: NA

Riser Height (ft):


MP Description: Ground Surface

Ground Surface Elevation (ft): 3776.50

MP Height Above or Below Ground (ft): 0

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-26A	G			0.0 - 0.2'		0.0 - 1.5' SLAG Gravel-sized, coarse, sandy (RR track ballast), auger would not advance past 18".
	SSIA8-26B	G			1.5 - 2.5'		



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Soil Boring Log

Hole Name: SSIA8-27

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3779.55

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-27A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 0.5' BASE COARSE
							0.5 - 4.0' Gravelly SAND Fine to coarse, clayey, brown to black, moist, with some fine gravel. Auger refusal at 4' on s'ag.
	SSIA8-27B	G			1.5 - 2.5'		
	SSIA8-27C	SS			3.0 - 4.0'		

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HYDROMETRICS INC.

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Tucson, Arizona

Soil Boring Log

Hole Name: SSIA8-28

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc. Property
Legal Description: Asarco Plant
Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3772.02

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-28A	G			0.0 - 0.2'		0.0 - 0.8' FILL Crushed landscape rock, aggregate, very pale orange, some slag.
	SSIA8-28B	G			1.5 - 2.5'		0.8 - 3.5' SAND Dusky yellowish-brown (10 YR 2/2), fine to coarse, loose, uniform, dry.
	SSIA8-28C	SS			3.0 - 4.0'		
	SSIA8-28D	SS			4.0 - 5.0'		3.5 - 5.0' Gravelly SAND Pale yellowish-brown, (10 YR 6/2), fine to coarse, loose, gap graded, gravel of limestone, dry, downward-fining.

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Tucson, Arizona

Soil Boring Log

Hole Name: SS/A8-29

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 5

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well installed? N

Surface Casing Used? .N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Surface Casing Height (ft):

Date: NA

Riser Height (ft):


MP Description: Ground Surface

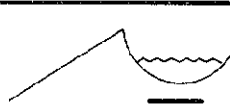
Ground Surface Elevation (ft): 3777.17

MP Height Above or Below Ground (ft): 0

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-29A	G			0.0 - 0.2'		0.0 - 3.5' Gravelly SAND Black with interbedded slag layers, auger refusal at 3.5 feet in slag.
	SSIA8-29B	G			1.5 - 2.5'		



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Soil Boring Log

Hole Name: SSI A8-30

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 1.5

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3774.82

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-30A	G			0.0 - 0.2'		0.0 - 1.0' Gravelly SAND Dark yellow brown w/ green (10 YR 4/2), fine to coarse, gap graded, medium dense, dry, fines appear to be concentrate.
							1.0 - 1.5' SLAG



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Soil Boring Log

Hole Name: SSIA8-31

Date Hole Started: 7/18/97 Date Hole Finished: 7/18/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc. Property

Legal Description: Asarco Plant

Descriptive Location:

Recorded By: HDK

Drilling Company: Layne Christensen Co.

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Soil Samples

Target Aquifer: NA

Hole Diameter (in): 6-inch

Total Depth Drilled (ft): 4

WELL COMPLETION Y/N DESCRIPTION INTERVAL

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? N

Annular Seal? N

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y XRF

5 foot intervals

Static Water Level Below MP: NA

Date: NA

MP Description: Ground Surface

MP Height Above or Below Ground (ft): 0

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3778.94

MP Elevation (ft):

Remarks: Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	SSIA8-31A	G			0.0 - 0.2'		0.0 - 0.2' ASPHALT
							0.2 - 3.5' Gravelly SAND Dark yellowish-brown (10YR 4/2), fine to coarse, loose, gap graded.
	SSIA8-31B	SS	40/1.5	1.30	1.5 - 3.0'		
							3.5 - 4.0' SLAG

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-1

Date Hole Started: 6/19/97 Date Hole Finished: 6/19/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc.

Legal Description: Asarco Plant

Descriptive Location: SLAGPILE S of Cemetery

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 9 inch

Total Depth Drilled (ft): 63.5

WELL COMPLETION Y/N

Well Installed? N

Surface Casing Used? N

Screen/Perforations? N

Sand Pack? Y

Annular Seal? Y

Surface Seal? N

DEVELOPMENT/SAMPLING

Well Developed? N

Water Samples Taken? N

Boring Samples Taken? Y

DESCRIPTION

INTERVAL

12-20 CSSI

Bentonite Chips

35 - 63.5 Feet

5 foot intervals

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3808.57

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0.0 - 39.0'							SLAG
39.0 - 47.0'	RIBH-1A	SS	20/50	1.00	40.0 - 42.0' Rock in shoe		Gravelly SAND Brownish gray (5YR 4/1), fine to coarse, loose, gap graded, dry; gravels composed of slag, limestone, brick fragments @ 45°, glass (blue, green, purple, clear, amber).
47.0 - 51.0'	RIBH-1B	SS	20/50	1.00	45.0 - 47.0' Brick in shoe		(Fill) Gravelly Silty SAND Light brown (5YR 5/6), fine to coarse, loose, gap graded, moist.
51.0 - 53.5'	RIBH-1C	SS			50.0 - 52.0'		SAND Light brown (5YR 5/6), fine to medium uniform, medium dense, moist.
53.5 - 63.5'	RIBH-1D	G			55.0 - 57.0'		Gravelly SAND Light brown (5YR 5/6), fine to coarse, loose, gap, moist, H2O @ 63.5.
60.0 - 62.0'	RIBH-1E	G					

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-2

Date Hole Started: 6/30/97 Date Hole Finished: 6/30/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc.

Legal Description: Asarco Plant

Descriptive Location: Parker Bros. Slag Pile

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 6 inch

Total Depth Drilled (ft): 18

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	Y	12-20 CSSI	0 - 18 Feet
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Annular Seal?	Y	Bentonite Chips	
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft): 3780.59

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
							0.0 - 3.0' SLAG
5							3.0 - 9.0' Gravelly SAND Light brown (5YR 5/6), fine to coarse, loose, gap graded, gravels of quartzite.
	RIBH-2A	SS	50/4*	0.25	7.0 - 9.0' Rock in shoe		
10							9.0 - 13.5' Clayey Silty SAND Pale yellow brown (10 YR 6/2), fine graded, dense, moderate plasticity, some fine bedding.
	RIBH-2B	SS	50/1'	1.00	10.0 - 12.0' tight		
15							13.5 - 18.0' Gravelly Clayey SAND Pale yellow brown (10 YR 6/2), fine to coarse, gap graded, med. dense, dry, gravel 5%.
	RIBH-2C	SS	50/1	1.00	15.0 - 17.0' tight		
20							18.0 - 0.0' BEDROCK Auger Refusal, TD=18'

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-3

Date Hole Started: 6/30/97 Date Hole Finished: 6/30/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc.

Legal Description: Asarco Plant

Descriptive Location: Parker Bros. Slag Pile

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 7 inch

Total Depth Drilled (ft): 41

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	Y	12-20 CSSI	31 - 41 Feet
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Annular Seal?	Y	Bentonite Chips	
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	N		5 foot intervals
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Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

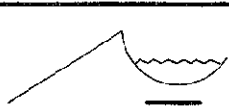
Ground Surface Elevation (ft): 3770.32

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
0							0.0 - 27.0' SLAG
5							
10							
15							
20							
25							
28.0	RIBH-3A	SS	40/2	2.00	28.0 - 30.0'		27.0 - 34.0' SAND Moderate yellow brown (10 YR 5/4), fine to coarse uniform loose, some gravels of slag brick etc., moist, 1" tar zone, HC odor.
30							
35	RIBH-3B	SS	75/1.5	1.50	35.0 - 37.0'		34.0 - 41.0' Gravelly SAND Moderate yellow brown (10 YR 5/4), fine to coarse, loose, gap graded, moist, H2O = 40.5, TD = 41.
37							
40	RIBH-3C	SS	50/1	1.00	40.0 - 42.0' Rock in shoe		
42							
45							

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-4

Date Hole Started: 6/30/97 Date Hole Finished: 6/30/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc.

Legal Description: Asarco Plant

Descriptive Location: Canyon to EP-85

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 7 inch

Total Depth Drilled (ft): 16

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	Y	12-20 CSSI	
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Annular Seal?	Y	Bentonite Chips	
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING			
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Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft): 3735.90

MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	RIBH-4A	SS	63/1	1.00	0.0 - 2.0' Rock in shoe		0.0 - 1.0' Gravelly SAND Pale yellow brown (10 YR 6/2), fine to coarse, loose, gap graded, dry, gr of 15, quartzite, and slag.
5							1.0 - 9.5' SLAG
10	RIBH-4B	SS			10.0 - 12.0' Rock in shoe		9.5 - 16.0' Gravelly SAND Pale brown yellow (10YR 6/2), fine to coarse, loose, gap graded, dry, gravels of quartzite, H2O @ 14.5.
15	RIBH-4C	SS			15.0 - 17.0'		
20							

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Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-5

Date Hole Started: 6/30/97 Date Hole Finished: 6/30/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc.

Legal Description: Asarco Plant

Descriptive Location: Along Paisano across from IBWC

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 7 inch

Total Depth Drilled (ft): 17

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	Y	12-20 CSSI	12 - 17 Feet
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Annular Seal?	Y	Bentonite Chips	
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	Y	XRF	5 foot intervals
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Static Water Level Below MP:

Surface Casing Height (ft):

Date:

Riser Height (ft):

MP Description:

Ground Surface Elevation (ft): 3729.79

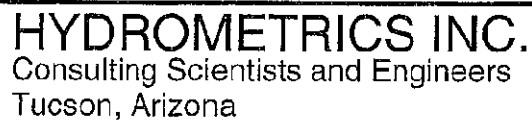
MP Height Above or Below Ground (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
							0.0 - 2.0' SLAG SLAG
	RIBH-5A	SS	47/2	2.00	2.0 - 4.0'		2.0 - 12.0' Gravelly SAND Pale yellow brown (10 YR 6/2), fine to coarse, loose, gap graded, moist, quartz gravels, diesel odors and staining @ .5
5							
	RIBH-5B	SS	35/2	2.00	8.0 - 10.0'		
10							
	RIBH-5C	SS	30/2	2.00	10.0 - 12.0'		
	RIBH-5D	SS	40/2	2.00	12.0 - 14.0'		12.0 - 17.0' SAND Pale yellow brown (10 YR 6/2), fine to medium, loose uniform, WET, H2C @ 15', 3 1/2 of HC.
15							
	RIBH-5E	SS	21/2	2.00	15.0 - 17.0'		
20							

GEO/TECH 0734R1/GPJ HYD-UDC/GDT 7/16/98



Hole Name: RIBH-6

Date Hole Started: 6/30/97 Date Hole Finished: 6/30/97

Total Depth Drilled (ft): 5

Boring Samples Taken? N 5 foot intervals

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples



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Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-7

Date Hole Started: 7/1/97 Date Hole Finished: 7/1/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI
County: El Paso State: Texas
Property Owner: ASARCO, Inc.
Legal Description: Asarco Plant
Descriptive Location: Near EP-58

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
Well Installed?	N		
Surface Casing Used?	N		
Screen/Perforations?	N		
Sand Pack?	Y	12-20 CSSI	8 - 12 Feet
Annular Seal?	Y	Bentonite Chips	
Surface Seal?	N		
DEVELOPMENT/SAMPLING			
Well Developed?	N		
Water Samples Taken?	N		
Boring Samples Taken?	Y	XRF	5 foot intervals

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 7 inch

Total Depth Drilled (ft): 12

Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft):

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	RIBH-7A	SS	72/2	2.00	0.0 - 2.0'		0.0 - 1.5' Gravelly SAND Pale yellow brown (10 YR 6/2), fine to coarse, gap graded, dry.
							1.5 - 4.0' SAND Pale yellow brown (10 YR 6/2), fine to coarse, loose uniforms, dry.
5	RIBH-7B	SS	18/2	2.00	5.0 - 7.0'		4.0 - 12.0' Gravelly Silty SAND Pale yellow brown (10 YR 6/2), fine to coarse loose, gap graded. Diesel @ 9.5, H2O @ 12, 9-11, Silty Sand.
10	RIBH-7C	SS	6/2	2.00	10.0 - 12.0'		
15							

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HYDROMETRICS INC.

Consulting Scientists and Engineers
Tucson, Arizona

Soil Boring Log

Hole Name: RIBH-8

Date Hole Started: 7/1/97 Date Hole Finished: 7/1/97

Client: ASARCO, Inc.

Project: Asarco El Paso Agreed Order RI

County: El Paso State: Texas

Property Owner: ASARCO, Inc.

Legal Description: Asarco Plant

Descriptive Location: Left Field Foul Line

Recorded By: Lairy Johnson

Drilling Company: Layne

Driller: Dave Hogan

Drilling Method: Hollow Stem Auger

Drilling Fluids Used: None

Purpose of Hole: Boring

Target Aquifer: Alluvial/Colluvial

Hole Diameter (in): 7 inch

Total Depth Drilled (ft): 12

WELL COMPLETION	Y/N	DESCRIPTION	INTERVAL
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Well Installed?	N		
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Surface Casing Used?	N		
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Screen/Perforations?	N		
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Sand Pack?	Y	12-20 CSSI	8 - 12 Feet
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Annular Seal?	Y	Bentonite Chips	
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Surface Seal?	N		
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DEVELOPMENT/SAMPLING

Well Developed?	N		
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Water Samples Taken?	N		
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Boring Samples Taken?	N		5 foot intervals
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Static Water Level Below MP:

Date:

MP Description:

MP Height Above or Below Ground (ft):

Surface Casing Height (ft):

Riser Height (ft):

Ground Surface Elevation (ft): 3724.60

MP Elevation (ft):

Remarks: All soil descriptions and size fraction distributions based on field observations and tests. Samples were collected with a 2-inch ID split spoon and grab samples

DEPTH	SAMPLE NUMBER	SAMPLE TYPE	BLOW COUNT	RECOVERY (feet)	DRILLING AND GEOTECHNICAL NOTES	GRAPHICS	GEOLOGICAL DESCRIPTION
	RIBH-8A	SS	6 1/2	1.50	0.0 - 2.0'		0.0 - 1.0' Gravelly SAND Pale yellow brown (10YR 6/2), fine to coarse, loose, gap graded, limestone, gravel, dry.
							1.0 - 2.5' SAND Moderate yellow brown (10YR 5/4), fine to medium, med. dense, uniform dry.
5							2.5 - 5.5' Gravelly SAND Pale yellow brown (10YR 6/2), fine to coarse, med. dense, loose, dry, coke bottle @ 4".
	RIBH-8B	SS	9/2	2.00	5.0 - 7.0'		5.5 - 6.5' SAND Light brown (5YR 5/6), fine to coarse, loose, uniform, dry.
							6.5 - 8.5' Gravelly SAND Light brown (5YR 5/6), fine to coarse, loose, gap graded, dry.
10							8.5 - 12.0' SAND Dark yellow brown (10YR 4/2), uniform, fine grained, med. dense, HC @ 9.5, H2O @ 10.
	RIBH-8C	SS	4/2	2.00	10.0 - 12.0'		
15							

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