

April 4, 2011

Ms. Susan Pelz, P.E.
Program Manager, Solid Waste
Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

**Re: Southeast County Landfill
Phases I-VI Leachate Collection System
Water Jet Cleaning and Video Inspection Report
FDEP Permit No.: 35435-014-SO/01
WACS Facility ID No.: SWD/29/41193**

Dept. Of Environmental Protection
APR 05 2011
Southwest District

Dear Susan:

On behalf of the Hillsborough County Public Utilities Department, Solid Waste Management Group (SWMG), HDR submits this letter to provide the water jet cleaning and video inspection report, video recordings, and operational evaluation of the Phases I-VI leachate collection system (LCS) to the Florida Department of Environmental Protection (Department) as required by Specific Condition Part C.8.h.1) of the above referenced permit. Please note that on March 14, 2011 via email, the Department granted the SWMG a request for time extension from the deadline provided in the permit to complete the LCS cleaning and video inspection by March 15, 2011. The SWMG contracted with Florida Jetclean to perform the work which began on March 14, 2011, and was completed on March 17, 2011 in accordance with the proposed schedule in the request for time extension.

The water jet cleaning and video inspection included the following LCS piping in Phases IV, V, and VI:

Location	Access Point	Approx. Length	Pipe Type
Phase IV	Cleanout 4-1	1,300 feet	8" PVC Header
Phase V	Cleanout 5-1	1,300 feet	8" HDPE Header
Phase V	Cleanout 5-2	1,100 feet	8" HDPE Header
Phase V	Cleanout 5-3	1,130 feet	8" HDPE Header
Phase V	Cleanout 5-4	1,020 feet	8" HDPE Header
Phase V	North Sump Access	1,030 feet	18" HDPE Pipe
Phase V	North Sump Access	1,030 feet	4" HDPE Pipe
Phase VI	Cleanout 6-1	1,180 feet	8" HDPE Header
Phase VI	West Sump Access	1,200 feet	18" HDPE Pipe

These locations are shown in the site map provided in the Florida Jet Clean report attached. In addition, the DVD videos accompanying the Florida Jet Clean report are enclosed for the Department's review and records.

The SWMG and HDR reviewed the report and videos received from Florida Jetclean. In summary, Florida Jetclean was able to water jet clean the entire length of each pipe listed above with no obstructions or blockages. Following water jet cleaning of the piping, a tracked, explosion-proof video camera was used to video each pipe, except for the 4-inch pump discharge line at the north cleanout for PPS-B, to the maximum length achievable by the equipment. In general, the video inspection length is limited due to loss of traction or inability of the equipment to navigate over pipe weld beads at lateral pipe or header connections. From the video inspection at each location, it appears that all pipes are flowing normally and operating as designed. There are several areas in the piping where the camera becomes submerged, however, in most instances, the top of water can be seen by the camera indicating that the pipe is only partially full and is maintaining positive flow.

The following observations were noted during video inspection of the LCS piping:

- In Cleanout Pipe 5-3 at approximately 390 feet, the camera encountered an apparent offset in the pipe. After review of the Phases V and VI Construction Quality Assurance Report prepared in 1992, the LCRS piping was joined using fusion, flange and electro-fusion couplings. After reviewing the video of this location, it appears that the offset may be an electro-fusion coupling. Drainage rock and debris does not appear to be falling into the space between the pipe and the reflection in the video indicates a solid material behind the pipe, which may be the wall of an electro-fusion couple. Since the camera was able to navigate past this location and the pipe was jet cleaned the entire length, it appears that the pipe is functioning normally, therefore HDR does not believe any actions are required at this location based on the above observations.

Also, at this location, the camera stopped at approximately 420 feet. The reason for the stoppage could not be determined since the picture was dark, however, since the pipe was jet cleaned the entire length, a blockage or obstruction is not present. The camera stoppage was mostly likely due to loss of traction or from pipe welds that could not be navigated. HDR does not recommend any action for this location based on the above observations.

- In Cleanout Pipe 6-1 an obstruction was noted that prevented the camera from proceeding forward. The obstruction could not be identified, but it is clear from the video that the obstruction is not blocking flow in the pipe and appears to be small points in the side wall of the pipe, possibly weld beads. Again, Cleanout Pipe 6-1 was water jet cleaned the entire length of the pipe with no noted problems and the pipe appears to be operating normally. HDR does not recommend any action in

Ms. Susan Pelz, P.E.
April 4, 2011
Page 3

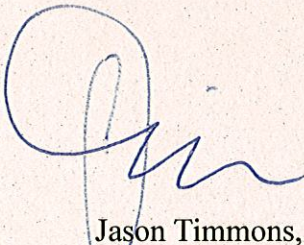
response to the observed obstruction since it does not appear to be hindering flow in the LCS pipe.

Please note that from review of the video inspection lengths that were achieved and from the water jet cleaning that was performed the entire length of the LCS piping, the sinkhole, which recently developed in Phase VI, does not appear to have impacted the operation and flow of the LCS piping in Phases IV, V, and VI.


In conclusion, after review of the water jet cleaning and video inspections of the Phases I-VI LCS, the SWMG and HDR concur with the evaluation by Florida Jetclean that the Phases I-VI LCS piping appears to be clean, blockage free, and is flowing properly. The next water jet cleaning and video inspection report of the Phases I-VI LCS will be submitted to the Department by June 15, 2013, as required by the SCLF operations permit.

Please call me at 813-282-2358 if you have any questions or require additional information regarding the Phases I-VI LCS water jet cleaning and video inspection evaluation and attached documents.

Sincerely,
HDR ENGINEERING, INC.



Jason Timmons, P.E.
Solid Waste Project Manager



Richard A. Siemering
Solid Waste Section Manager

Attachments (report, 3 DVD)

cc: Patricia Berry, SWMG
Larry Ruiz, SWMG
Megan Miller, SWMG
Ron Cope, EPC

FLORIDA JETCLEAN

HIGH PRESSURE WATER JETTING
VIDEO PIPELINE INSPECTION
NO DIG POINT REPAIRS
WWW.FLORIDAJETCLEAN.COM

19019 FERN MEADOW LOOP
LUTZ, FL 33558
TEL: 800-226-8013 FAX: 813-926-4616
FLORIDAJETCLEAN@YAHOO.COM

Hillsborough County Solid Waste Southeast County Landfill High-pressure Water-jetting & Explosion-proof Video-inspection

Dept. Of Environmental Protection
APR 05 2011
Southwest District

Work Performed March 2011

Conducted By:
Florida Jetclean
800-226-8013

FLORIDA JETCLEAN

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FLORIDAJETCLEAN@YAHOO.COM

DATE : 3/24/2011
TO : Walter Gray, Larry Ruiz – Hillsborough County Solid Waste
FROM : Ralph Calistri (floridajetclean@yahoo.com)
SUBJECT : Hillsborough County Southeast Landfill – LCS Maintenance

Florida Jetclean was mobilized to the Hillsborough County Southeast Landfill to conduct high-pressure water-jetting and explosion-proof video-inspection services on the Phase IV, V, and VI leachate collection system piping from 3/14/2011-3/17/2011. Included in this package is the written report, jetcleaning log, video inspection logs, and the DVD format video inspection videos for further reference.

High-Pressure Water-Jetting:

The below leachate collection pipe segments were high-pressure jetcleaned their full lengths with achieved distances and notes documented in the below jetcleaning log.

LOCATION	DISTANCE ACHIEVED	PIPE TYPE & COMMENTS
Phase IV – CO 4-1	1,300'	8" PVC Header - Entire Pipe Cleaned
Phase V – CO 5-1	1,300'	8" HDPE Header - Entire Pipe Cleaned
Phase V – CO 5-2	1,100'	8" HDPE Header - Entire Pipe Cleaned
Phase V – CO 5-3	1,130'	8" HDPE Header - Entire Pipe Cleaned
Phase V – CO 5-4	1,020'	8" HDPE Header - Entire Pipe Cleaned
Phase V – N. Sump	1,030'	18" HDPE Pipe - Entire Pipe Cleaned
Phase V – N. Sump	1,030'	4" HDPE Pipe - Entire Pipe Cleaned
Phase VI – CO 6-1	1,180'	8" HDPE Header - Entire Pipe Cleaned
Phase VI – W. Sump	1,200'	18" HDPE Pipe - Entire Pipe Cleaned

Explosion-proof Video-inspection:

After the high-pressure water-jetting was completed, the above piping was video-inspected as far as possible utilizing certified explosion-proof video-inspection equipment. In any areas where the inspection camera was submerged under liquid, video quality may be negatively impacted. No specific pipe defects were noted during the video-inspections. The pipe graphic reports for each video inspection setup are included in this package for your further review, with summarized results listed below.

LOCATION	DISTANCE ACHIEVED	COMMENTS / RESULT
Phase IV – CO 4-1	712.1'	Maximum achievable camera distance.
Phase V – CO 5-1	314.7'	Camera could not transition across 5-2 pipe.
Phase V – CO 5-2	712.7'	Camera could not transition across 6-1 pipe.
Phase V – CO 5-3	419.7'	Camera stops submerged.
Phase V – CO 5-4	489.1'	Camera could not transition across header.
Phase V – N. Sump 18"	944.9'	Maximum achievable camera distance.
Phase VI – CO 6-1	385.2'	Camera stops at partial obstruction.
Phase VI – W. Sump	812.7'	Maximum achievable camera distance.

Overall Assessment:

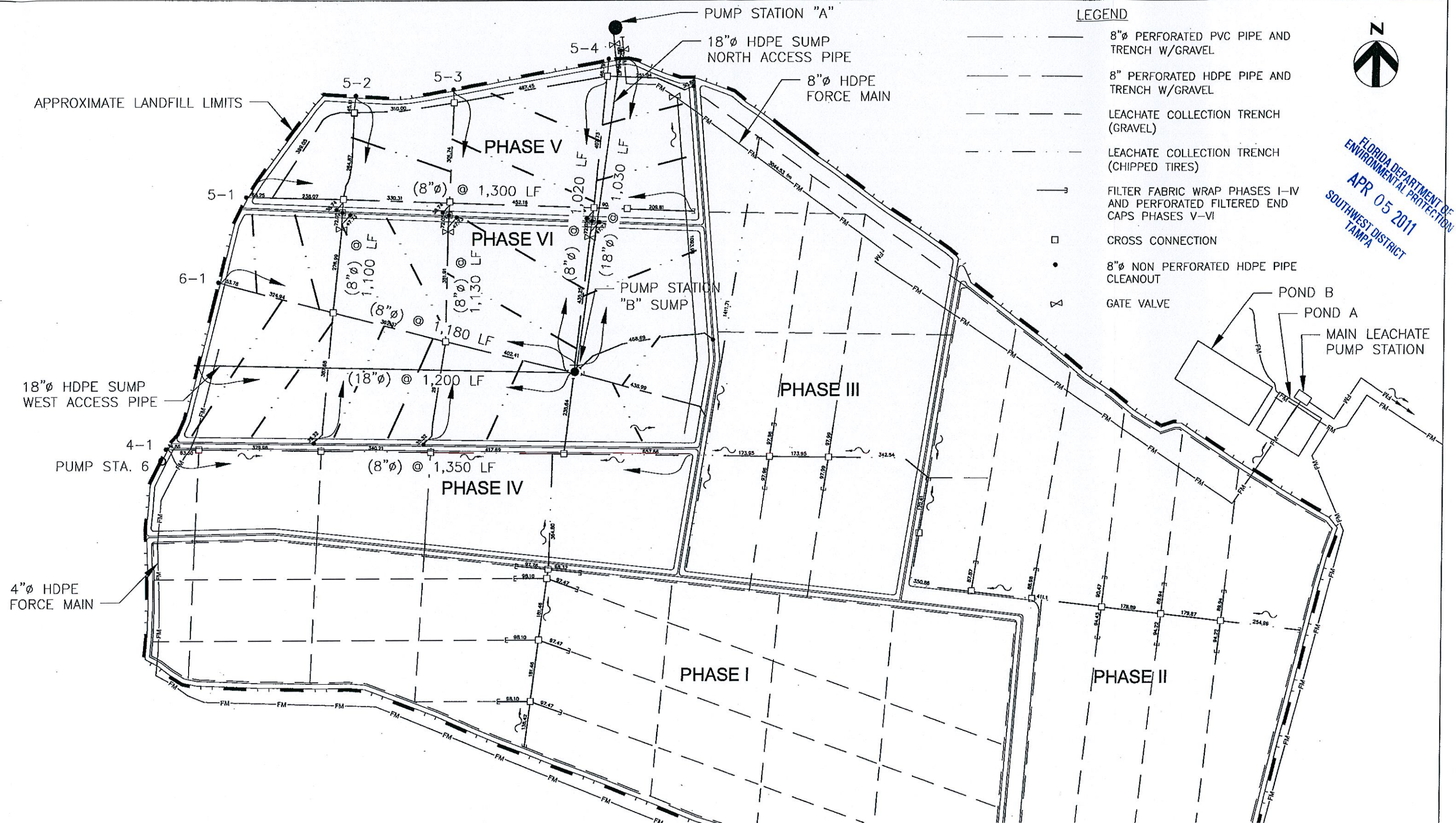
Based on both the high-pressure water-jetting and explosion-proof video-inspection results, this system is clean, blockage free, and appears to flow and drain properly.

Regards,

A handwritten signature in black ink, appearing to read "Ralph Calistri". The signature is fluid and cursive, with a prominent "R" and a long, sweeping underline.

Ralph Calistri - Florida Jetclean

C:\pwworking\tpaid026\00C-01.dwg, Plot, 1/21/2011 4:15:56 PM, Brad John



HDR

PHASES I-VI LEACHATE COLLECTION SYSTEM

PROJECT NUMBER
096-150708-001

SCALE
1"=300'

DATE
JANUARY 2011

REFERENCE SHEET

DRAWING NAME
00C-01.DWG

FIGURE
2

CCTV Surveys List for SWA

Number of surveys in this list is 8 as of Monday, March 21, 2011

Unit of measure: ft

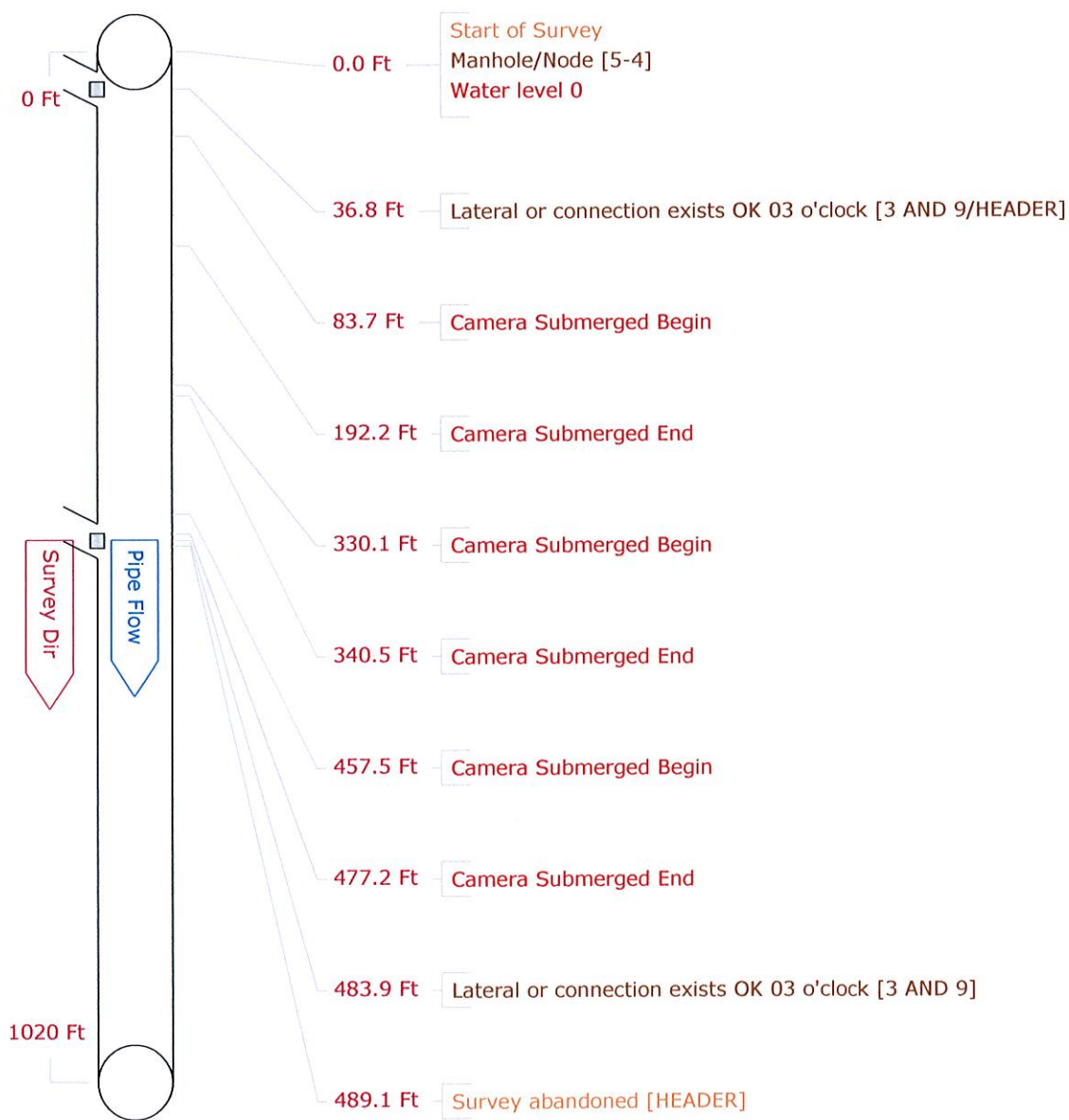
Setup	Date	Street	Start MH	Finish MH	Dir	Size inch	Pre Clean	Vid Cassette	Scheduled Length	Surveyed Length
1	3/15/2011	HILLSBOROUGH SCLF	5-4	B SUMP	D	8	Y	1	1,020.0	489.1
2	3/15/2011	HILLSBOROUGH SCLF	5-3	B SUMP	D	8	Y	1	1,130.0	419.7
3	3/15/2011	HILLSBOROUGH SCLF	5-2	B SUMP	D	8	Y	1	1,100.0	712.7
4	3/15/2011	HILLSBOROUGH SCLF	5-1	B SUMP	D	8	Y	2	1,300.0	314.7
5	3/15/2011	HILLSBOROUGH SCLF	6-1	B SUMP	D	8	Y	2	1,180.0	385.2
6	3/15/2011	HILLSBOROUGH SCLF	4-1	B SUMP	D	8	Y	2	1,301.0	712.1
7	3/16/2011	HILLSBOROUGH SCLF	N SUMP	B SUMP	D	18	Y	3	1,030.0	944.9
8	3/16/2011	HILLSBOROUGH SCLF	W SUMP	B SUMP	D	18	Y	3	1,200.0	812.7
Total Scheduled Length									9,261.0	
Total Length Surveyed										4,791.1



FLORIDA JETCLEAN Phone: 1-800-226-8013 Fax: 813-926-4616

Pipe Graphic Report of PLR 5-4 A for SWA

Work Order		Contract		Video	1	Setup		1
Facility		Operator		BMN	Van Ref	2	Surveyed On	03/15/2011
Street Name		HILLSBOROUGH SCLF		City		SCLF		
Location type		Berm						
Surface								
Survey purpose				Other (state in comments)				
				Weather Dry				
Pipe Use		Other (state in comments)		Schedule length		1020.0 Ft		
Shape		Circular		Size 8		by ins		
Material		Other (state in comments)		Joint spacing		Ft		
Lining				Year laid				
General note				HDPE LEACHATE COLLECTION		Structural		Service
Location note				JETTING=1020		Miscellaneous		Constructional
						Hydraulic		



Work Order	Surveyed On 03/15/2011	Setup 1
Street Name HILLSBOROUGH SCLF		Video 1
City Name SCLF	Weather Dry	
Location Berm		
From Manhole 5-4	To Manhole B SUMP	Direction Downstream

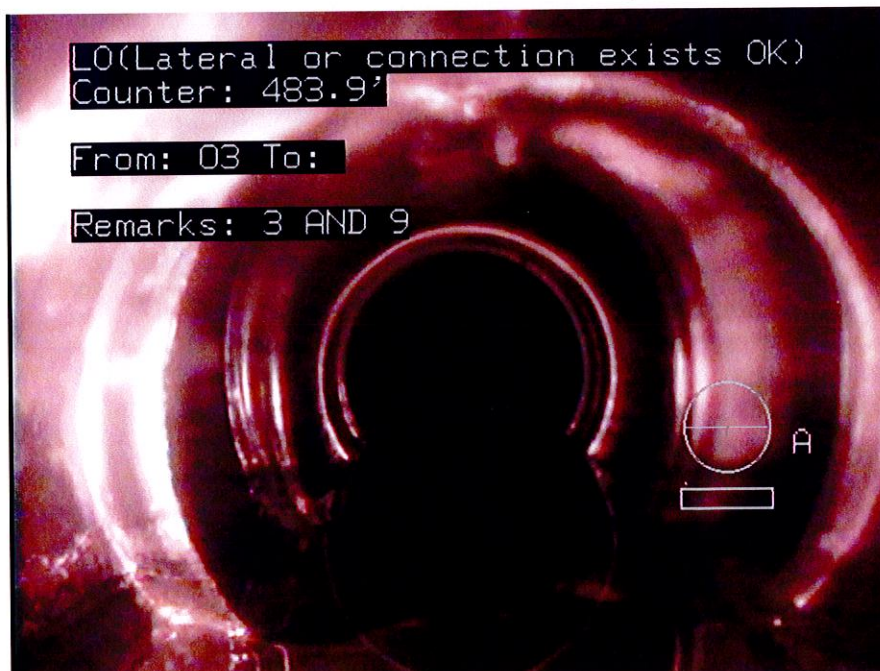


Date: 03/15/2011

Distance: 36.8 Ft

Obs: Lateral or connection exists OK

Comments: 3 AND 9/HEADER



Date: 03/15/2011

Distance: 483.9 Ft

Obs: Lateral or connection exists OK

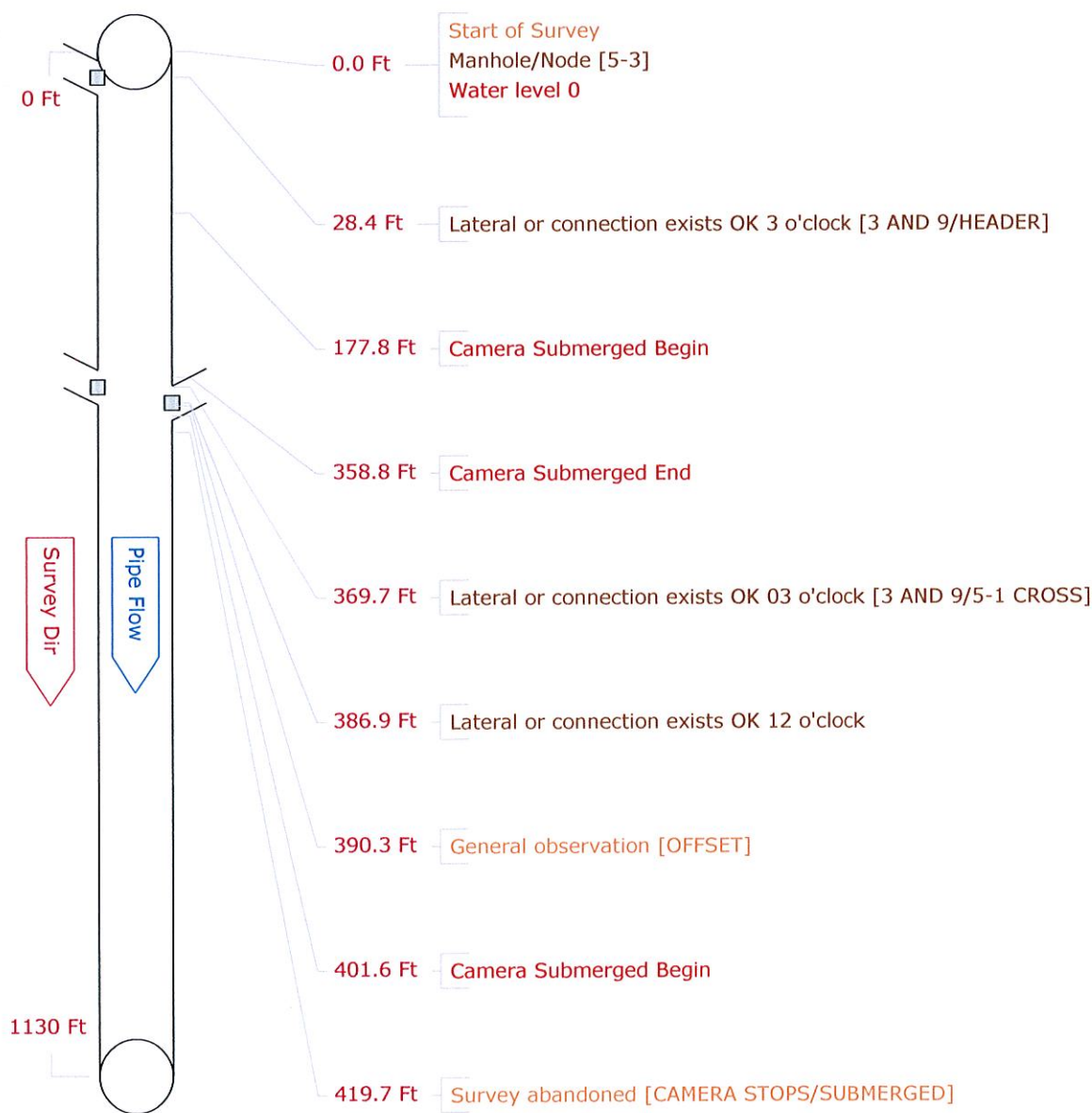
Comments: 3 AND 9

Pipe Graphic Report of PLR 5-3

B

for SWA

Work Order	Contract	Video	1	Setup	2
Facility	Operator BMN	Van Ref	2	Surveyed On	03/15/2011
Street Name	HILLSBOROUGH SCLF	City	SCLF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)	Weather	Dry		
Pipe Use	Other (state in comments)	Schedule length	1130.0 Ft	From	5-3
Shape	Circular	Size	8 by ins	To	B SUMP
Material	Other (state in comments)	Joint spacing	Ft	Direction	Downstream
Lining		Year laid		Pre-clean	Y
				Last cleaned	3/14/2011
General note	HDPE LEACHATE COLLECTION	Structural		Service	Constructional
Location note	JETTING=1130	Miscellaneous		Hydraulic	



Work Order	Video 1	Surveyed On 03/15/2011	Direction Downstream	Setup 2
Street Name HILLSBOROUGH SCLF	City Name SCLF	Weather Dry		
Location Berm	From Manhole 5-3		To Manhole B SUMP	

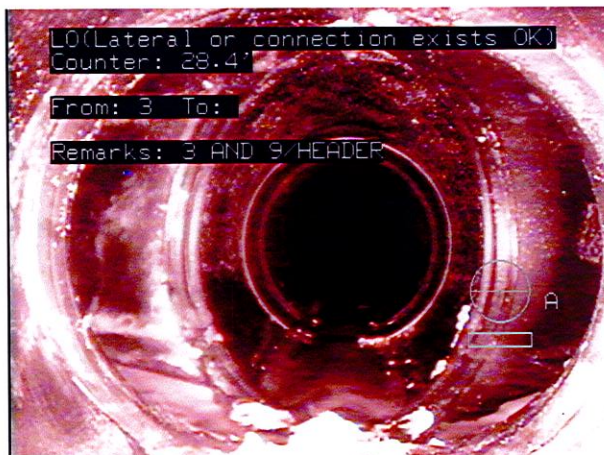
Date: 03/15/2011

Distance: 28.4 Ft

Obs: Lateral or connection
exists OK

Comments:

3 AND 9/HEADER



Date: 03/15/2011

Distance: 369.7 Ft

Obs: Lateral or connection
exists OK

Comments:

3 AND 9/5-1 CROSS

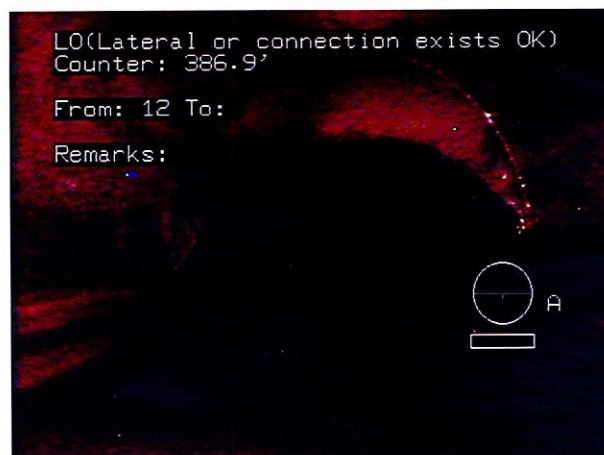


Date: 03/15/2011

Distance: 386.9 Ft

Obs: Lateral or
connection exists
OK

Comments:



Date: 03/15/2011

Distance: 390.3 Ft

Obs: General observation

Comments:

OFFSET

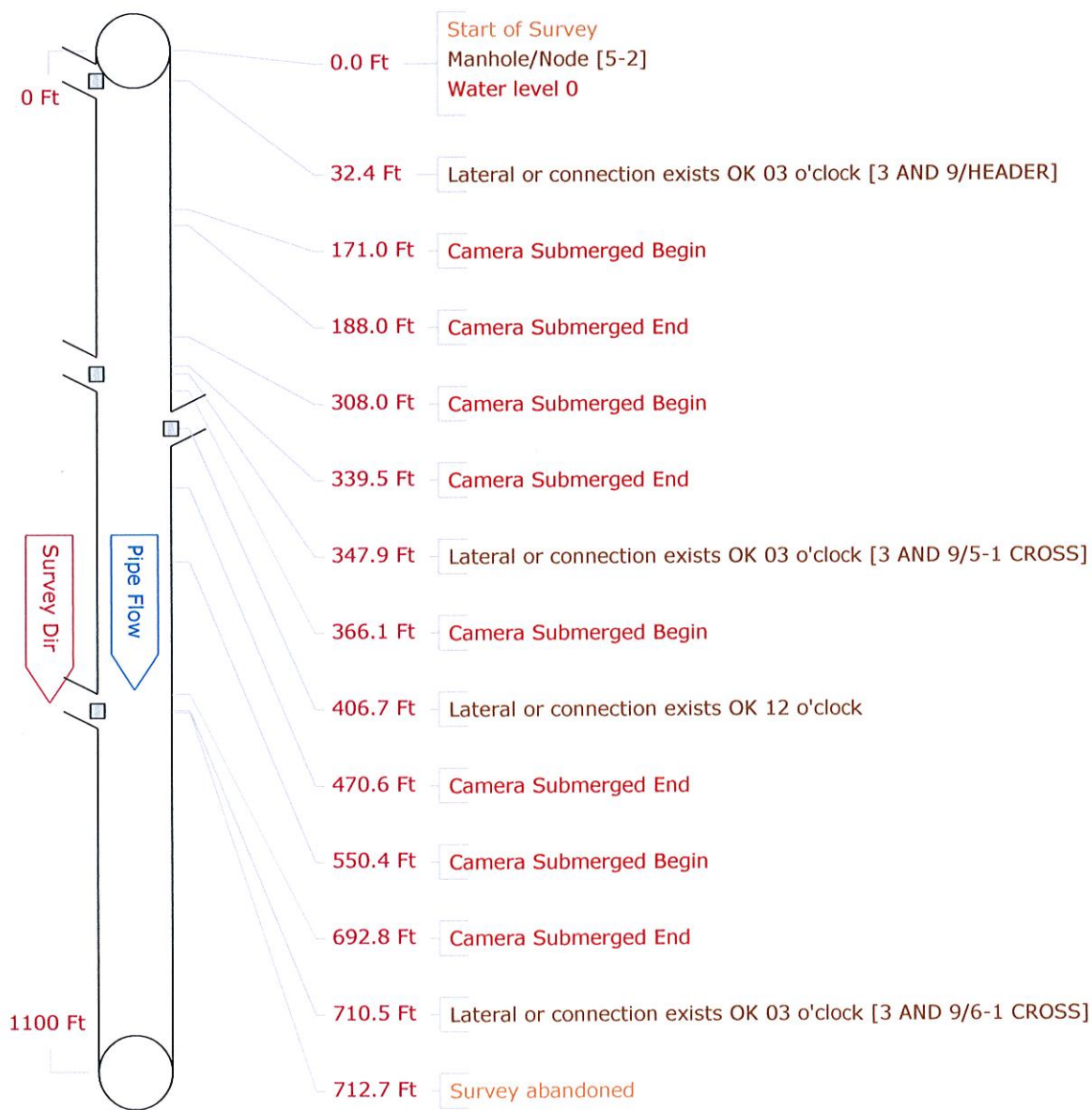


Pipe Graphic Report of PLR 5-2

C

for SWA

Work Order	Contract	Video	1	Setup	3
Facility	Operator BMN	Van Ref	2	Surveyed On	03/15/2011
Street Name	HILLSBOROUGH SCLF	City	SCLF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)	Weather	Dry		
Pipe Use	Other (state in comments)	Schedule length	1100.0 Ft	From	5-2
Shape	Circular	Size	8 by ins	To	B SUMP
Material	Other (state in comments)	Joint spacing	Ft	Direction	Downstream
Lining		Year laid		Pre-clean	Y
				Last cleaned	3/14/2011
General note	HDPE LEACHATE COLLECTION	Structural		Service	Constructional
Location note	JETTING=1100	Miscellaneous		Hydraulic	



CCTV pictures of 5-2

C

for SWA

Work Order	Video 1	Surveyed On 03/15/2011	Direction Downstream	Setup 3
Street Name HILLSBOROUGH SCLF	City Name SCLF	Weather Dry		
Location Berm	From Manhole 5-2	To Manhole B SUMP		

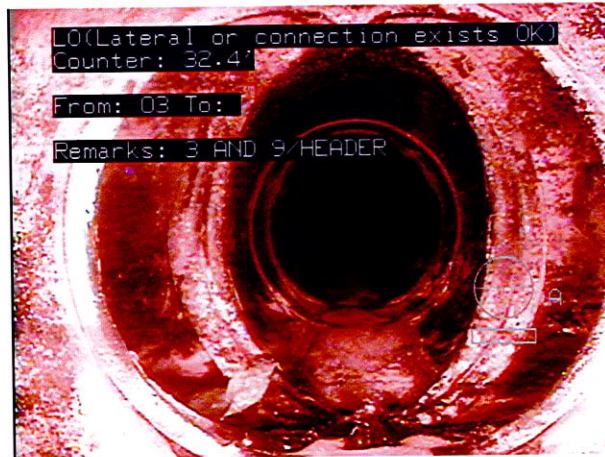
Date: 03/15/2011

Distance: 32.4 Ft

Obs: Lateral or connection exists OK

Comments:

3 AND 9/HEADER



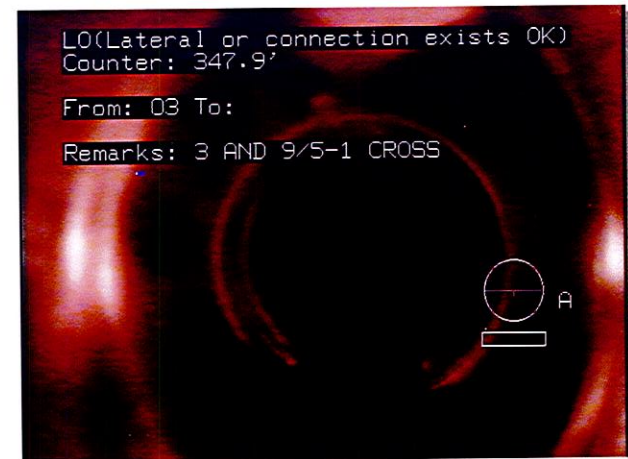
Date: 03/15/2011

Distance: 347.9 Ft

Obs: Lateral or connection exists OK

Comments:

3 AND 9/5-1 CROSS



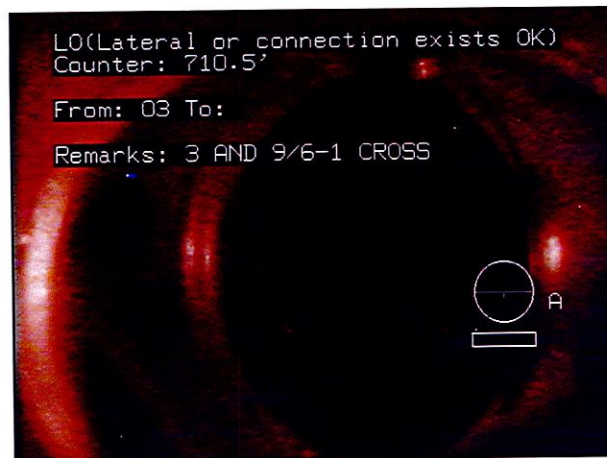
Date: 03/15/2011

Distance: 710.5 Ft

Obs: Lateral or connection exists OK

Comments:

3 AND 9/6-1 CROSS

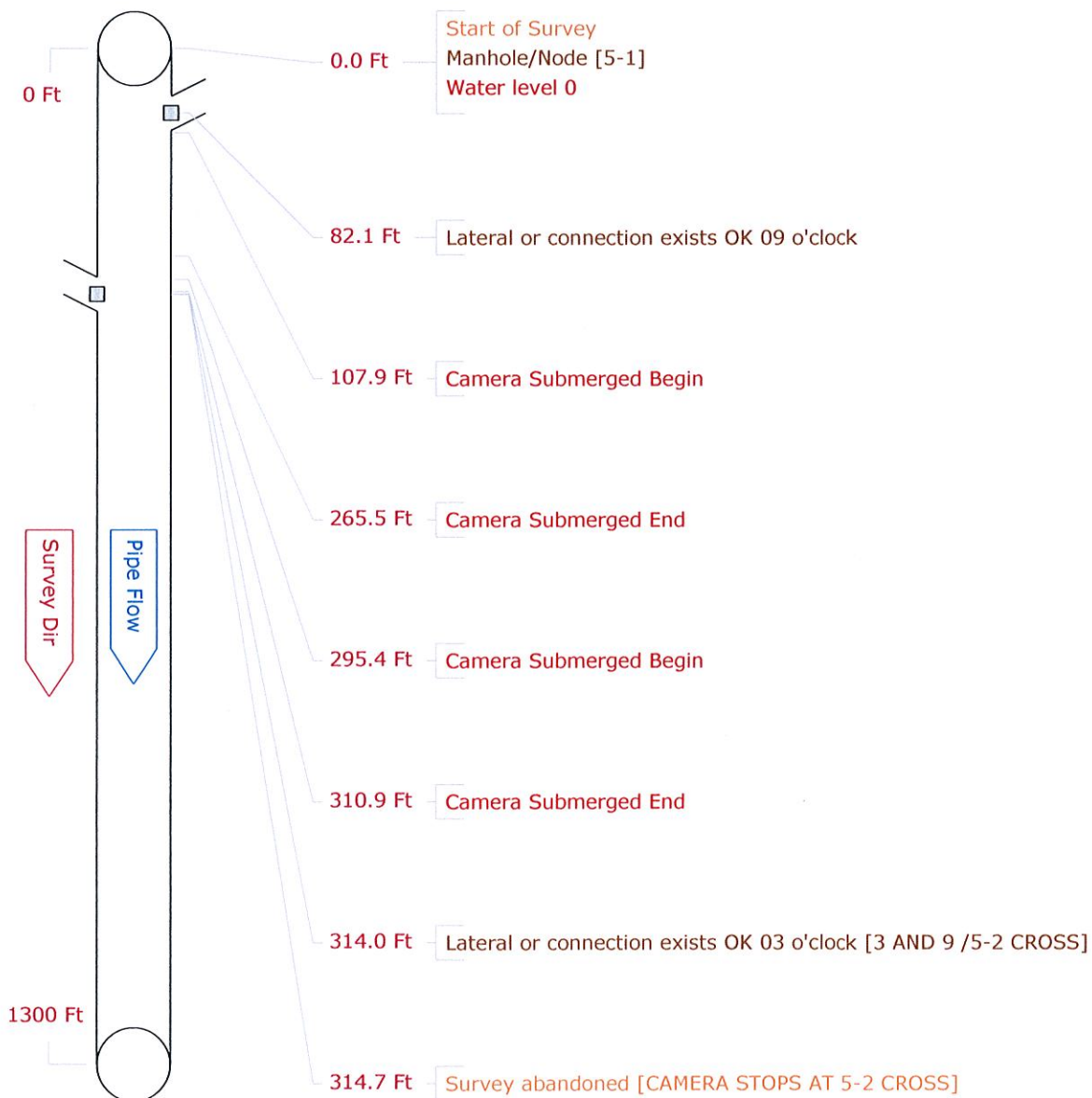


Pipe Graphic Report of PLR 5-1

D

for SWA

Work Order		Contract		Video 2		Setup 4	
Facility		Operator BMN		Van Ref 2		Surveyed On 03/15/2011	
Street Name		HILLSBOROUGH SCLF		City		SCLF	
Location type		Berm					
Surface							
Survey purpose		Other (state in comments)			Weather Dry		
Pipe Use		Other (state in comments)		Schedule length 1300.0 Ft		From 5-1 Depth Ft	
Shape		Circular		Size 8 by ins		To B SUMP Depth Ft	
Material		Other (state in comments)		Joint spacing Ft		Direction Downstream	
Lining				Year laid		Pre-clean Y Last cleaned 3/14/2011	
General note		HDPE LEACHATE COLLECTION			Structural Service Constructional		
Location note		JETTING=1300			Miscellaneous Hydraulic		



CCTV pictures of 5-1

D

for SWA

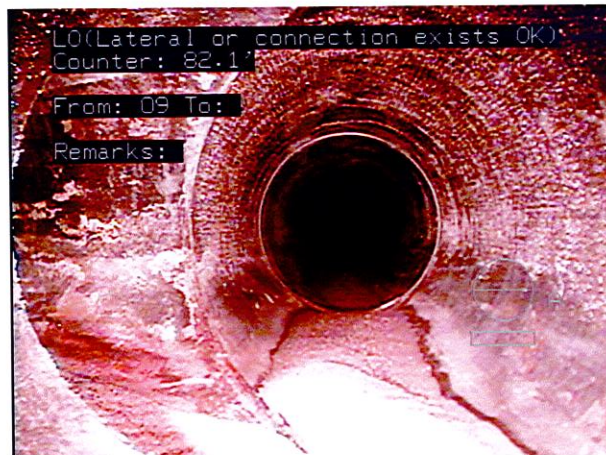
Work Order	Video 2	Surveyed On 03/15/2011	Direction Downstream	Setup 4
Street Name HILLSBOROUGH SCLF	City Name SCLF	Weather Dry		
Location Berm	From Manhole 5-1	To Manhole B SUMP		

Date: 03/15/2011

Distance: 82.1 Ft

Obs: Lateral or connection
exists OK

Comments:



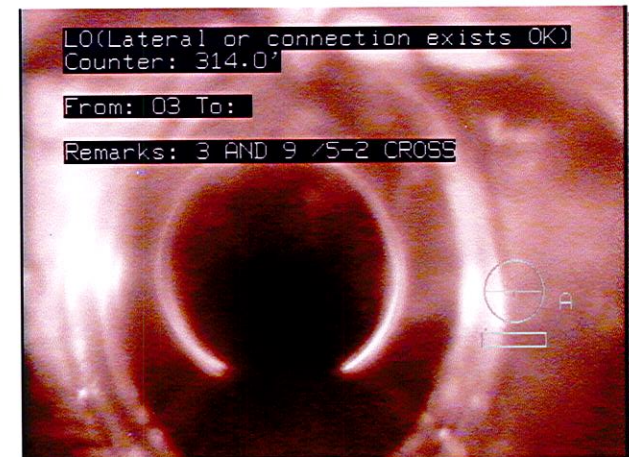
Date: 03/15/2011

Distance: 314.0 Ft

Obs: Lateral or connection
exists OK

Comments:

3 AND 9 /5-2 CROSS



Date: 03/15/2011

Distance: 314.7 Ft

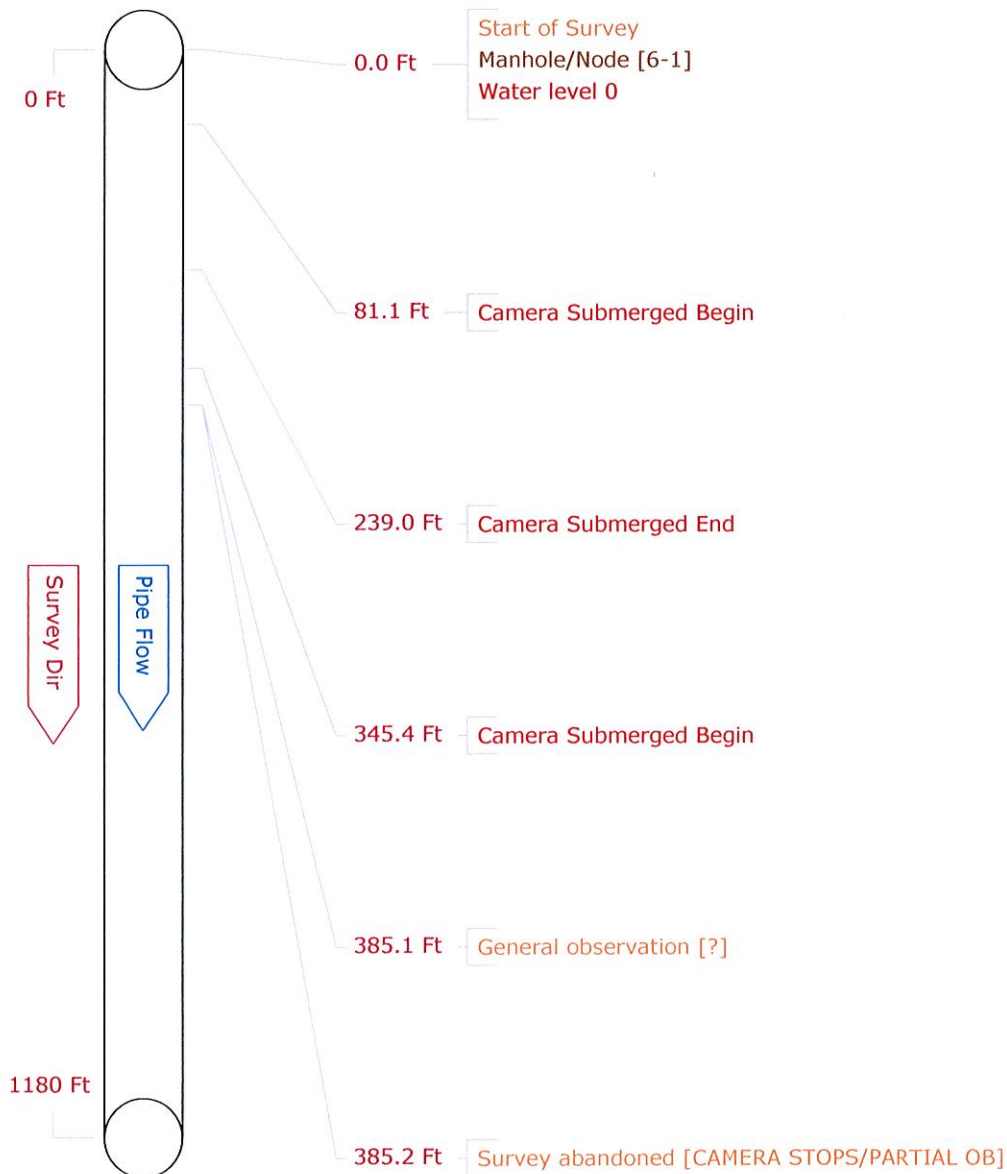
Obs: Survey abandoned

Comments:

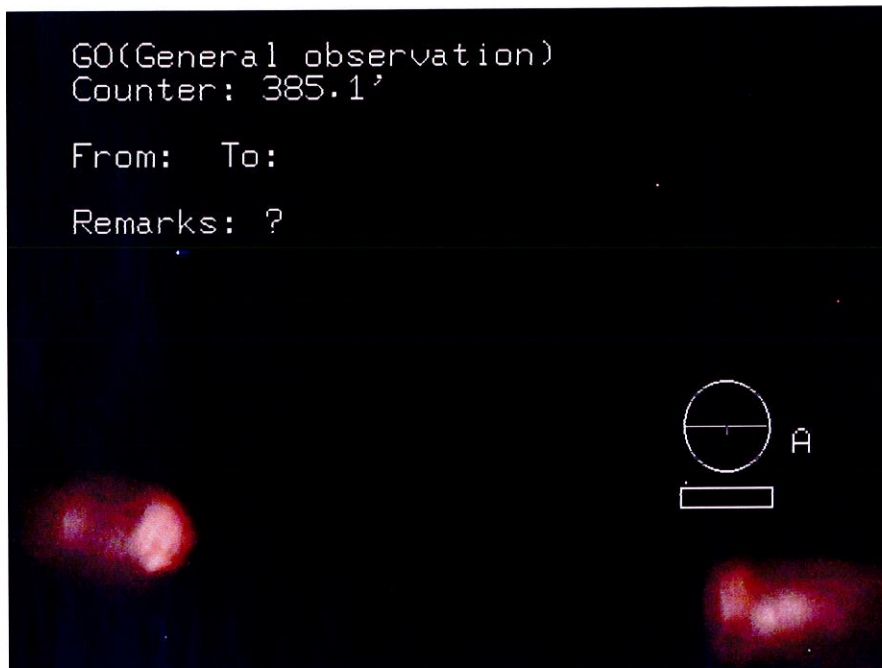
CAMERA STOPS AT 5-2
CROSS

Pipe Graphic Report of PLR 6-1 E for SWA

Work Order	Contract	Video	Setup
Facility	Operator BMN	Van Ref 2	Surveyed On 03/15/2011
Street Name	HILLSBOROUGH SCLF	City	SCLF
Location type	Berm		
Surface			
Survey purpose	Other (state in comments)	Weather	Dry
Pipe Use	Other (state in comments)	Schedule length	1180.0 Ft
Shape	Circular	Size 8 by ins	From 6-1 Depth Ft
Material	Other (state in comments)	Joint spacing	Ft
Lining		Year laid	
General note	HDPE LEACHATE COLLECTION	Direction	Downstream
Location note	JETTING=1180	Pre-clean Y	Last cleaned 3/14/2011
		Structural	Service Constructional
		Miscellaneous	Hydraulic



Work Order	Surveyed On 03/15/2011	Setup 5
Street Name HILLSBOROUGH SCLF	Video 2	
City Name SCLF	Weather Dry	
Location Berm		
From Manhole 6-1	To Manhole B SUMP	Direction Downstream

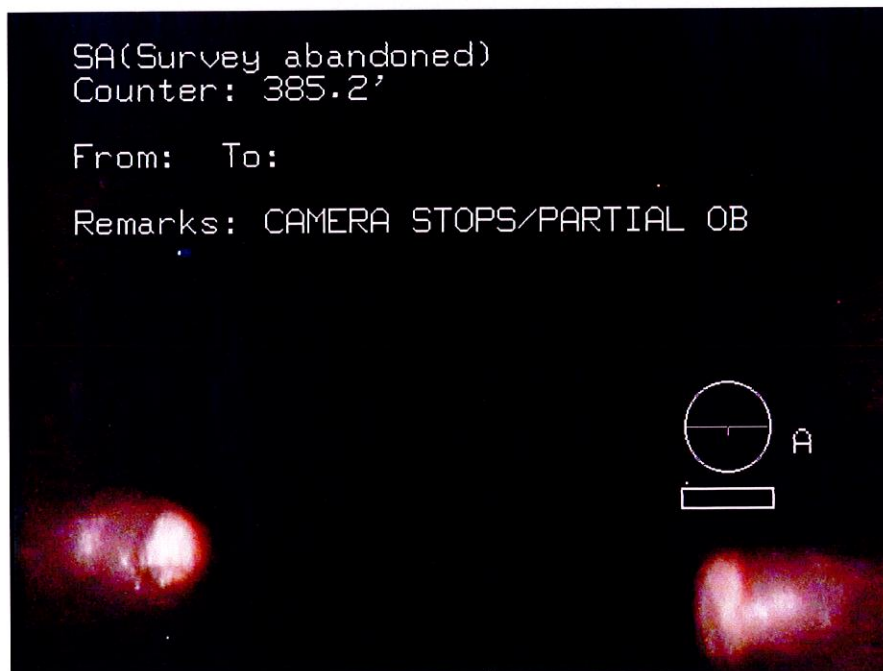


Date: 03/15/2011

Distance: 385.1 Ft

Obs: General observation

Comments: ?



Date: 03/15/2011

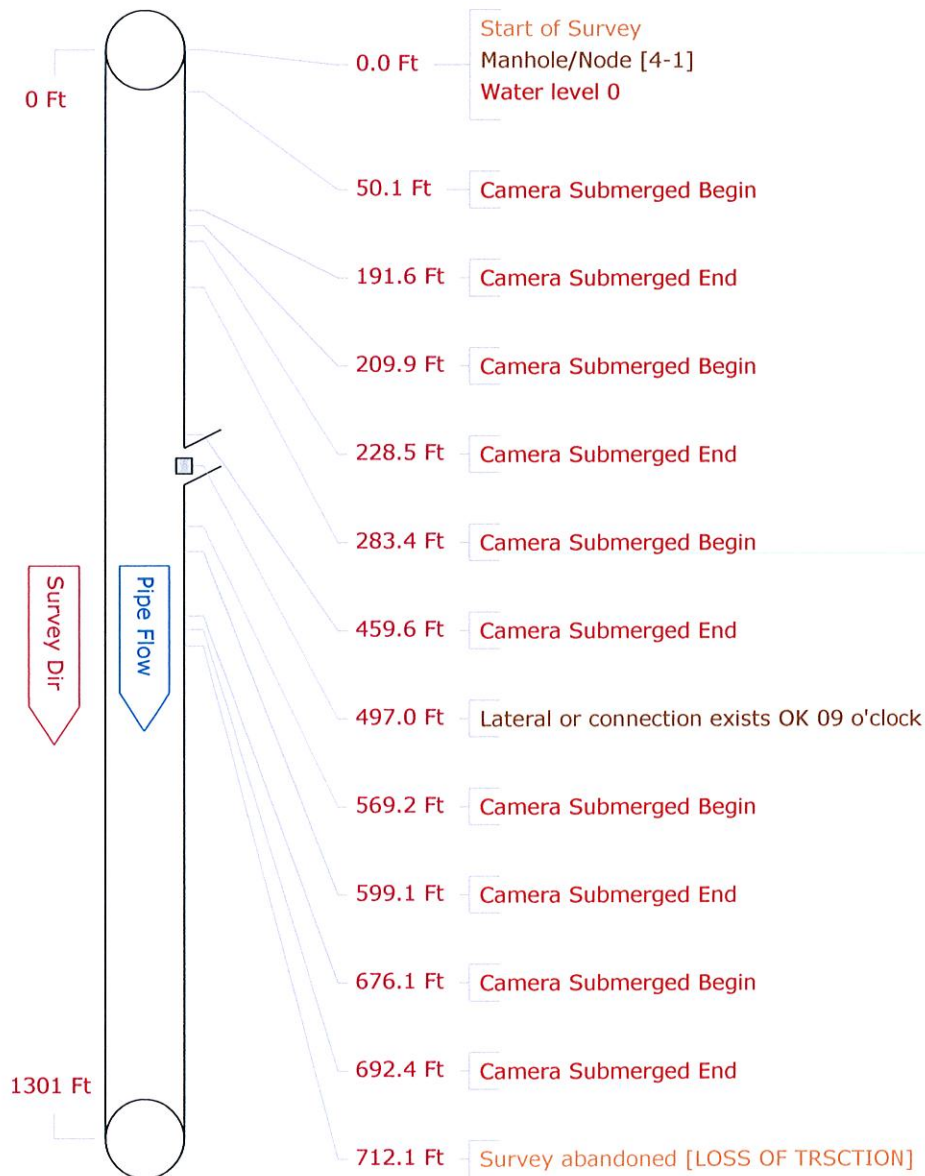
Distance: 385.2 Ft

Obs: Survey abandoned

Comments: CAMERA STOPS/PARTIAL OB

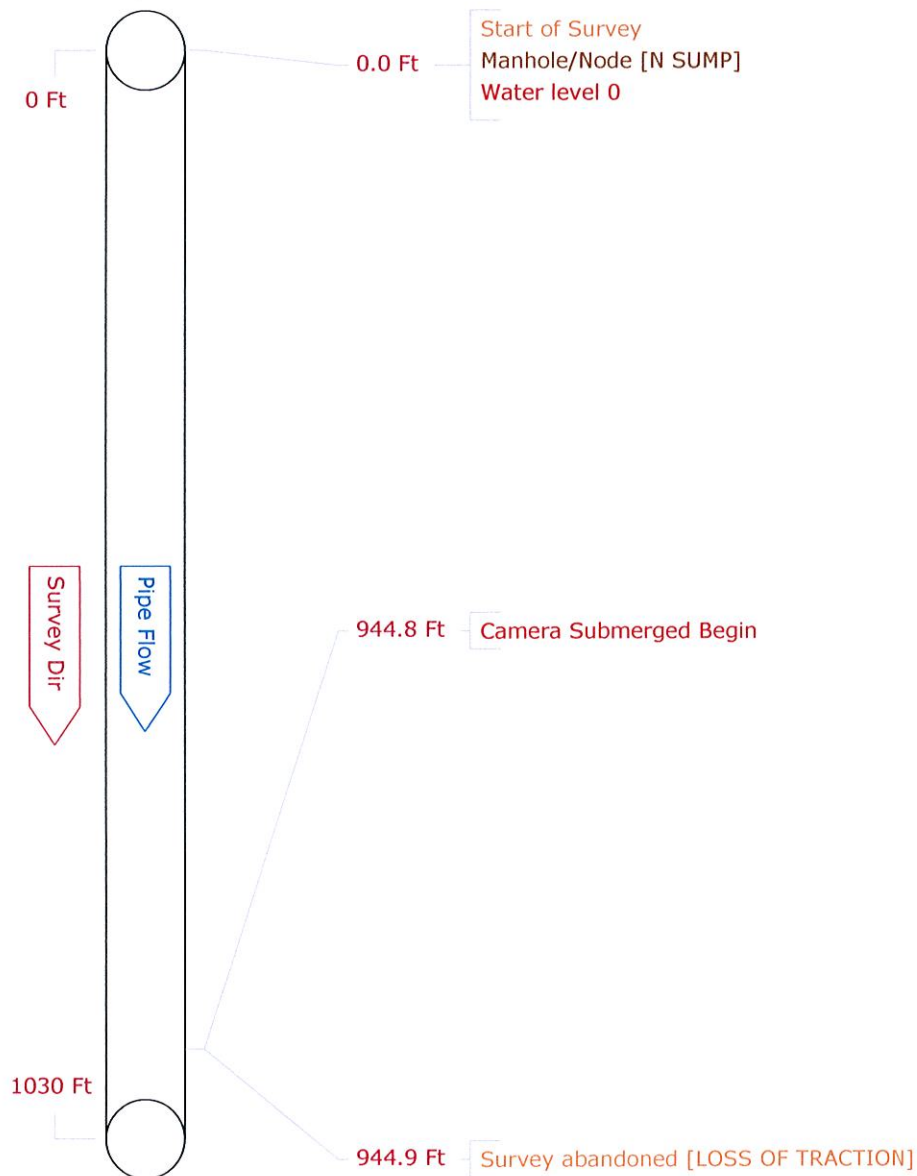
Pipe Graphic Report of PLR 4-1 F for SWA

Work Order	Contract	Video	2	Setup	6
Facility	Operator BMN	Van Ref	2	Surveyed On	03/15/2011
Street Name	HILLSBOROUGH SCLF	City	SCLF		
Location type	Berm				
Surface					
Survey purpose	Other (state in comments)	Weather	Dry		
Pipe Use	Other (state in comments)	Schedule length	1301.0 Ft	From	4-1
Shape	Circular	Size 8 by ins		To	B SUMP
Material	Other (state in comments)	Joint spacing	Ft	Direction	Downstream
Lining		Year laid		Pre-clean	Y
				Last cleaned	3/14/2011
General note	HDPE LEACHATE COLLECTION	Structural		Service	Constructional
Location note	JETTING=1301	Miscellaneous		Hydraulic	



Pipe Graphic Report of PLR N SUMP G for SWA

Work Order	Contract	Video	Setup
Facility	Operator BMN	Van Ref 2	Surveyed On 03/16/2011
Street Name	HILLSBOROUGH SCLF	City	SCLF
Location type	Berm		
Surface			
Survey purpose	Other (state in comments)	Weather	Dry
Pipe Use	Other (state in comments)	Schedule length	1030.0 Ft
Shape	Circular	Size 18 by ins	
Material	Other (state in comments)	Joint spacing	Ft
Lining		Year laid	
From	N SUMP	Depth	Ft
To	B SUMP	Depth	Ft
Direction	Downstream		
Pre-clean	Y	Last cleaned	3/16/2011
General note	HDPE LEACHATE COLLECTION	Structural	Service Constructional
Location note	JETTING=1030	Miscellaneous	Hydraulic



Pipe Graphic Report of PLR W SUMP G for SWA

Work Order		Contract		Video		3		Setup		8							
Facility		Operator		BMN		Van Ref		2		Surveyed On		03/16/2011					
Street Name		HILLSBOROUGH SCLF				City		SCLF									
Location type		Berm															
Surface																	
Survey purpose		Other (state in comments)					Weather		Dry								
Pipe Use		Other (state in comments)		Schedule length		1200.0 Ft		From		W SUMP		Depth		Ft			
Shape		Circular		Size		18 by		ins		To		B SUMP		Depth		Ft	
Material		Other (state in comments)		Joint spacing		Ft		Direction		Downstream							
Lining				Year laid				Pre-clean		Y		Last cleaned		3/16/2011			
General note		HDPE LEACHATE COLLECTION						Structural		Service		Constructional					
Location note		JETTING=1200						Miscellaneous		Hydraulic							

