

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



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

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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. The 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

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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.

Jane March for

Solid Waste Section Manager

Sincerely,

HDR ENGINEERING, INC.

Jason Timmons, P.E.

Solid Waste Project Manager

Attachments (report, 3 DVD)

cc: Patricia Berry, SWMG

Larry Ruiz, SWMG Megan Miller, SWMG

Ron Cope, EPC

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

Work Performed March 2011

DOOR OF THE STANDARD COMMENTS OF THE STANDARD

Conducted By: Florida Jetclean 800-226-8013

inserted into OCULUS

APR - 6 2011

Initials: GB

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

DATE

: 3/24/2011

TO

: Walter Gray, Larry Ruiz - Hillsborough County Solid Waste

FROM

: Ralph Calistri (floridajetclean@vahoo.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.

		the december of the selection of the sel
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:

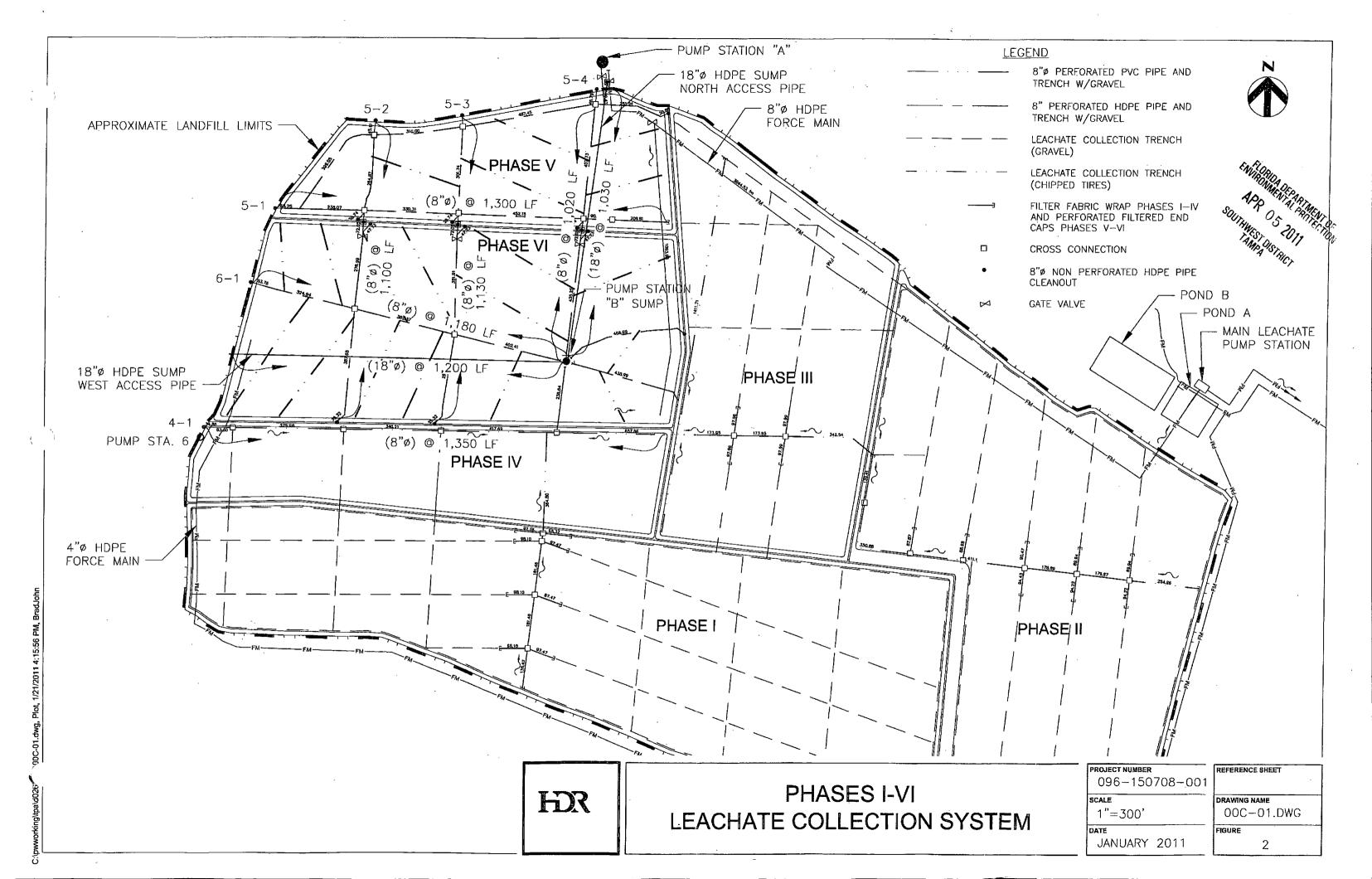
After the high-pressure water-jetting was completed, the above piping was video-inspected as far as possible utilizing certified explosion-proof video-inspection equipment. In any areas where the inspection camera was submerged under liquid, video quality may be negatively impacted. No specific pipe 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, Ralph Calistri - Florida Jetclean



CCTV Surveys List for SWA

Number of surveys in this list is 8

as of Monday, March 21, 2011

Unit of measure: ft

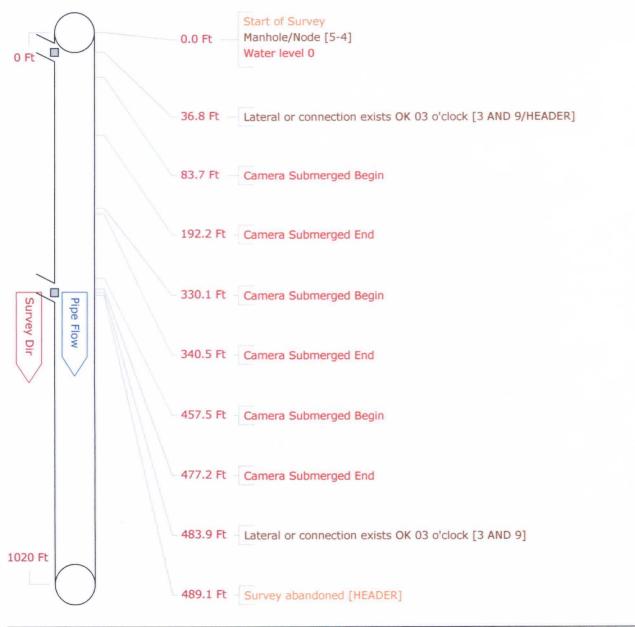
Setup	Date	Street	Start MH	Finish MH	Dir	Size inch	Pre Clean	Vid Cassette	Scheduled Length	Surveyed Length
1	3/15/2011	HILLSBOROUGH SCLF	5-4	B SUMP	D	8	Y	1	1,020.0	489.1
2	3/15/2011	HILLSBOROUGH SCLF	5-3	B SUMP	D	8	Y	1	1,130.0	419.7
3	3/15/2011	HILLSBOROUGH SCLF	5-2	B SUMP	D	8	Y	1	1,100.0	712.7
4	3/15/2011	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	Υ	2	1,180.0	385.2
6	3/15/2011	HILLSBOROUGH SCLF	4-1	B SUMP	D	8	Υ ·	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 Total Length Surveyed 9,261.0

4,791.1



Pipe Graphic	Report of PLR 5-4	Α		for	SWA			
Work Order	Contract			Video	1		Setup	1
Facility	Opera	ator 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)				We	ather D	ry	
Pipe Use Othe	r (state in comments)	Schedule	length	1020.0 Ft	From	5-4	Dej	oth Ft
Shape Circu	lar	Size 8	by	ins	То	B SUMF	Der Der	oth Ft
Material Othe	r (state in comments)	Joint spa	cing	Ft	Directi	ion Dov	vnstream	
Lining		Year laid			Pre-cle	an Y	Last cleaned	3/14/2011
General note	HDPE LEACHATE COLLECTION	N			Structu	ıral	Service	Constructional
Location note	JETTING=1020				Miscel	laneous	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



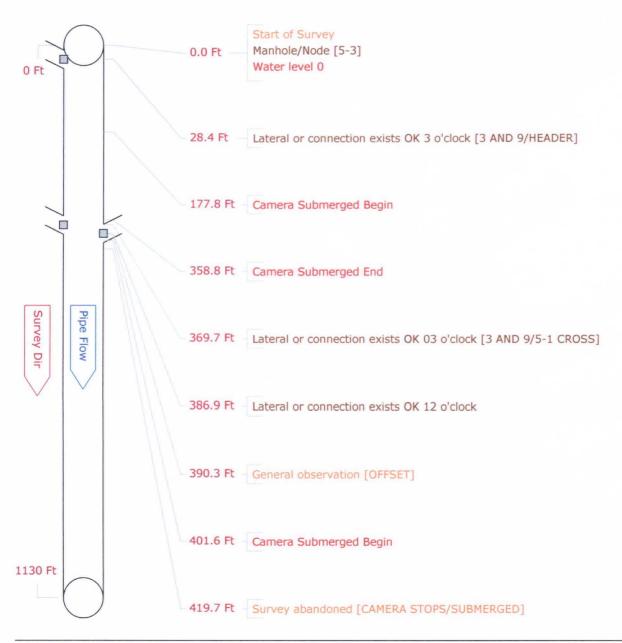
Date: 03/15/2011 Comments: 3 AND 9 Distance: 483.9 Ft

Obs: Lateral or connection exists OK



for SWA

	port or r art o c					7-7-2-7-7-7						
			BMN			Video Van	1 Ref 2					3/15/2011
	HILLSBOROUGH SCLF			City		SCLF						
ре	Berm											
ose	Other (state in comments)						We	athe	r Di	ry		
Other (s	state in comments)	Sche	dule	length	1130.0	Ft	From	5-3	3	De	epth	Ft
Circular		Size	8	by	ins		То	В	SUMP	De	pth	Ft
Other (s	state in comments)	Joint	spa	cing	Ft		Directi	on	Dow	nstream		
		Year	laid				Pre-cle	an	Υ	Last cleaned	3/	14/2011
е Н	OPE LEACHATE COLLECTION	N					Structu	ıral		Service	Co	nstructional
te JE	TTING=1130						Miscell	aneo	ous	Hydraulic		
	oose Other (s Other (s	Contract Open HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) HDPE LEACHATE COLLECTION	Contract Operator E HILLSBOROUGH SCLF De Berm Dose Other (state in comments) Other (state in comments) Circular Other (state in comments) Other (state in comments) Circular Other (state in comments) HDPE LEACHATE COLLECTION	Contract Operator BMN HILLSBOROUGH SCLF De Berm Dose Other (state in comments) Other (state in comments) Circular Other (state in comments) Schedule Size 8 Joint space Year laid	Contract Operator BMN HILLSBOROUGH SCLF City De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Circular Other (state in comments) Other (state in comments)	Contract Operator BMN HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Schedule length 1130.0 Size 8 by ins Other (state in comments) Joint spacing Year laid HDPE LEACHATE COLLECTION	Contract Video Operator BMN Van HILLSBOROUGH SCLF City SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Size 8 by ins Other (state in comments) Other (state in comments) Other (state in comments) Figure 8 by ins Other (state in comments) Figure 8 by Ins Other (state in comments) Other (state in comments) Figure 8 by Ins Other (state in comments) Figure 8 by Ins Other (state in comments)	Contract Operator BMN Van Ref 2 HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Circular Other (state in comments)	Contract Operator BMN Van Ref 2 HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Schedule length Size 8 by ins To B S Other (state in comments) From 5-3 Other (state in comments)	Contract Operator BMN Van Ref 2 HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Schedule length Size 8 by ins To B SUMP Other (state in comments) Year laid HDPE LEACHATE COLLECTION SIZE STRUCTURE STRUCTURE Video 1 Van Ref 2 Weather Dr From 5-3 To B SUMP Other (state in comments) Structural	Contract Operator BMN Van Ref 2 Surveyed O HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Schedule length Size 8 by ins Other (state in comments) To B SUMP De Direction Downstream Year laid HDPE LEACHATE COLLECTION Structural Service	Contract Operator BMN Van Ref 2 Surveyed On HILLSBOROUGH SCLF De Berm Oose Other (state in comments) Other (state in comments) Circular Other (state in comments) Schedule length Size 8 by ins Other (state in comments) To B SUMP Depth Other (state in comments) From 5-3 Depth Other (state in comments) To B SUMP Depth Other (state in comments) Fe HDPE LEACHATE COLLECTION Structural Service Contract Video 1 Surveyed On Other Surveyed On Othe





CCTV pictures of 5-3

B

for SWA

Work Order

Video 1

Surveyed On 03/15/2011

Direction Downstream Setup 2

Street Name HILLSBOROUGH SCLF

City Name SCLF

Weather Dry

Location Berm

ity Name SCLF

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

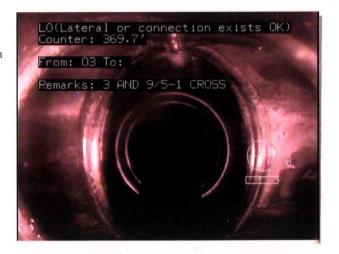
Distance: 369.7 Ft

Obs: Lateral or connection

exists OK

Comments:

3 AND 9/5-1 CROSS



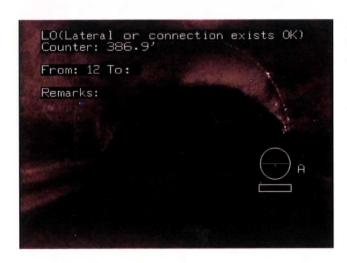
Date: 03/15/2011 **Distance:** 386.9 Ft

Obs: Lateral or

OK

connection exists

Comments:



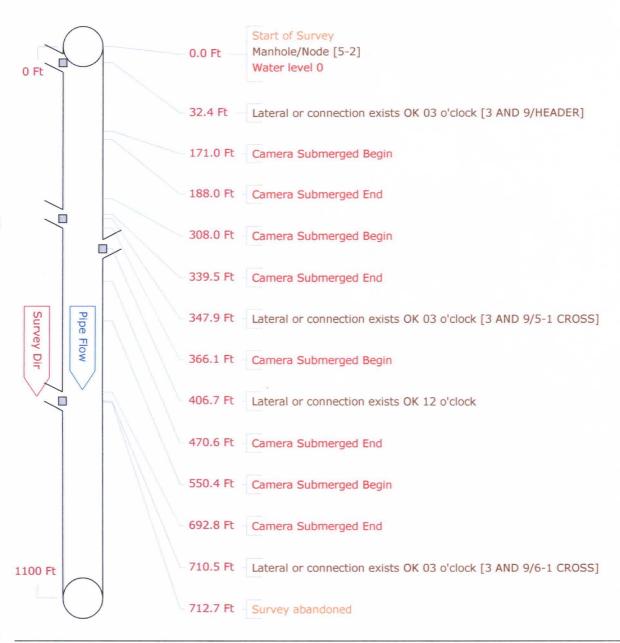
Date: 03/15/2011 **Distance:** 390.3 Ft

Obs: General observation

Comments: OFFSET



Work Orde	er	Contract Opera		BMN			Video	1 Ref 2			Setup Surveyed On		11
1 activity		Opera	atoi i	DIVITA			Vall	IXCI 2			our veyeu on	00/10/20	
Street Nam	ne	HILLSBOROUGH SCLF			City		SCLF						
Location t	ype	Berm											
Surface													
Survey pu	rpose	Other (state in comments)						Wea	athe	r Di	ry		
Pipe Use	Other (state in comments)	Sche	dule	length	1100.0	Ft	From	5-2		Dep	oth	Ft
Shape	Circula	r	Size	8	by	ins		То	В	SUMP	Dep	oth	Ft
Material	Other (state in comments)	Joint	spac	ing	Ft		Directi	on	Dow	nstream		
Lining			Year	laid				Pre-cle	an	Υ	Last cleaned	3/14/2011	
General no	ote H	DPE LEACHATE COLLECTION	N					Structu	ıral		Service	Construction	nal
Location n	ote JE	ETTING=1100						Miscell	aned	ous	Hydraulic		





CCTV pictures of 5-2

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

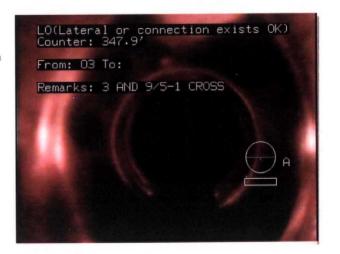
Distance: 347.9 Ft

Obs: Lateral or connection

exists OK

Comments:

3 AND 9/5-1 CROSS



Date: 03/15/2011 Distance: 710.5 Ft

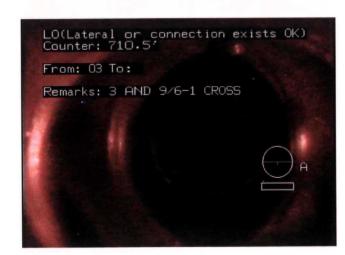
Obs: Lateral or

connection exists

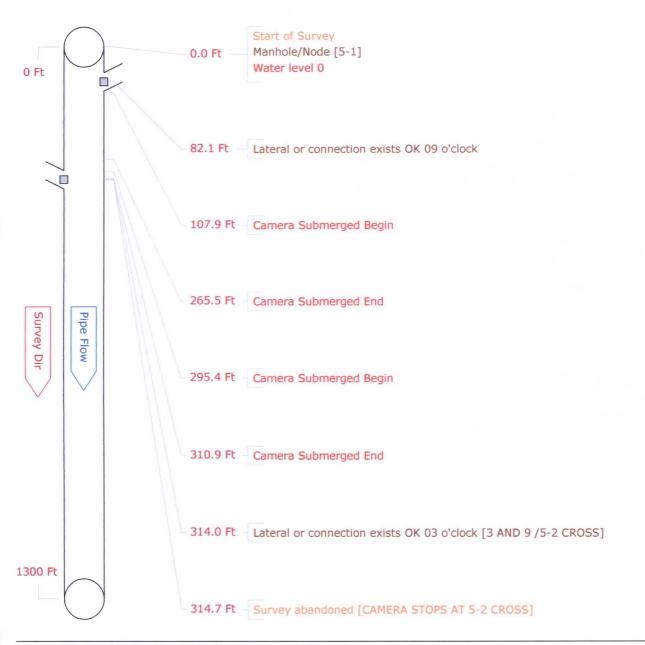
OK

Comments:

3 AND 9/6-1 CROSS



p		opont or r art .					10000000	E1 52 81 S.					
Work Orde Facility	r	Contract Opera		BMN			Video Van	2 Ref 2			Setup Surveyed On	4 03/15/2	2011
Street Nam	ie	HILLSBOROUGH SCLF			City		SCLF						
Location t	уре	Berm											
Surface													
Survey pu	rpose	Other (state in comments)						Wea	athe	r Di	ry		
Pipe Use	Other (state in comments)	Sche	dule	length	1300.0	Ft	From	5-1		Dep	oth	Ft
Shape	Circula	r	Size	8	by	ins		То	В	SUMP	Dep	th	Ft
Material	Other (state in comments)	Join	t spa	cing	Ft		Directi	on	Dow	nstream		
Lining			Year	laid				Pre-cle	an	Υ	Last cleaned	3/14/20	11
General no	te H	DPE LEACHATE COLLECTION	N					Structu	ıral		Service	Construc	tional
Location n	ote JE	ETTING=1300						Miscell	aneo	ous	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

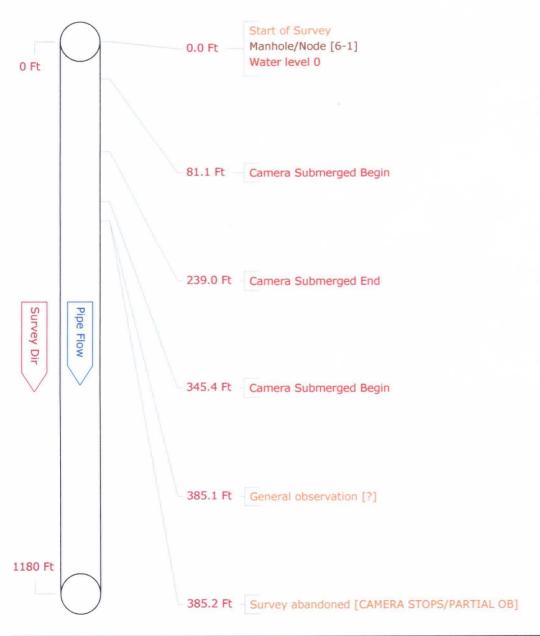
Comments:

CAMERA STOPS AT 5-2

CROSS

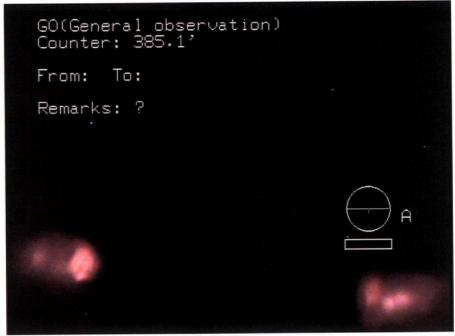


ripe Gia	Pilic K	epoil of PLK 0-1	_				101	0007					
Work Orde	r	Contract					Video	2			Setup	5	
Facility		Opera	ator E	BMN			Van	Ref 2			Surveyed On	03/15/201	1
Street Nam	ne	HILLSBOROUGH SCLF			City		SCLF						
Location t	ype	Berm											
Surface													
Survey pu	rpose	Other (state in comments)						Wea	athe	r Dr	У		
Pipe Use	Other (s	state in comments)	Sched	dule l	ength	1180.0	Ft	From	6-1		Dep	oth F	-t
Shape	Circula	r	Size	8	by	ins		То	В	SUMP	Dep	oth i	Ft
Material	Other (state in comments)	Joint	spac	ing	Ft		Directi	on	Dow	nstream		
Lining			Year	laid				Pre-cle	an	Υ	Last cleaned	3/14/2011	
General no	ote HI	DPE LEACHATE COLLECTION	N					Structu	ral		Service	Construction	al
Location n	ote JE	TTING=1180						Miscell	ane	ous	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

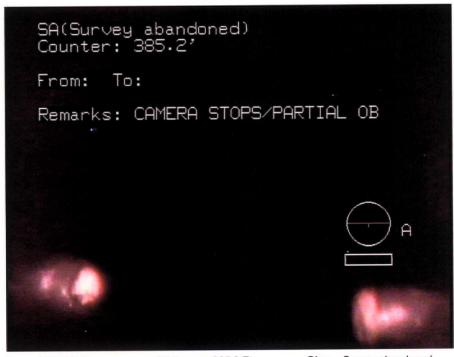


Date: 03/15/2011

Distance: 385.1 Ft

Obs: General observation

Comments: ?



Date: 03/15/2011

Distance: 385.2 Ft

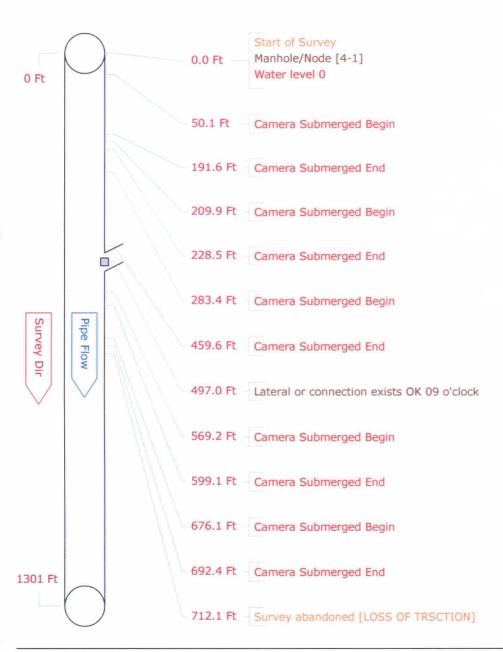
Obs: Survey abandoned

Comments: CAMERA STOPS/PARTIAL OB



Miscellaneous

Hydraulic

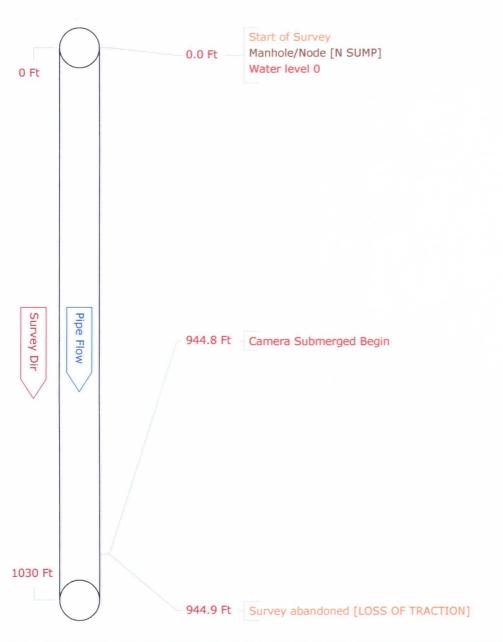




Location note

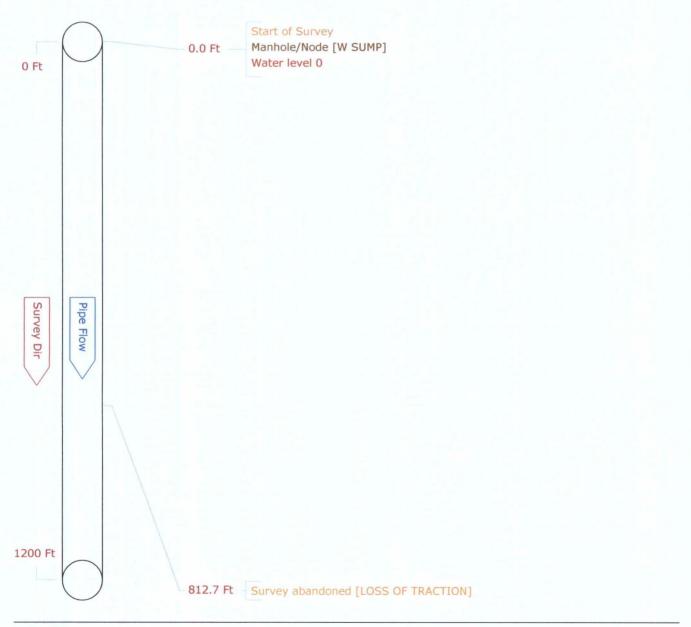
JETTING=1301

i ipe Gia	pilic ix	epoil of FER 14 OOM		_			101	OVVI					
Work Orde	r	Contract					Video	3			Setup	7	
Facility		Opera	ator I	BMN			Van	Ref 2			Surveyed On	03/16/20	111
Street Nam	e	HILLSBOROUGH SCLF			City		SCLF						
Location t	уре	Berm											
Surface													
Survey pu	rpose	Other (state in comments)			alical transfer and a second			We	athe	er Dr	у		
Pipe Use	Other (s	state in comments)	Sche	dule	length	1030.0	Ft	From	N:	SUMP	Dej	oth	Ft
Shape	Circular	r	Size	18	by	ins		То	В	SUMP	Dep	oth	Ft
Material	Other (state in comments)	Joint	spa	cing	Ft		Directi	ion	Dow	nstream		
Lining			Year	laid				Pre-cle	an	Υ	Last cleaned	3/16/2011	I
General no	te Hi	OPE LEACHATE COLLECTIO	N					Structu	ıral		Service	Construction	nal
Location n	ote JE	TTING=1030						Miscell	lane	ous	Hydraulic		
						-							





r ipe Grapine i	report of FER WOOM		101	OVVA		
Work Order Facility	Contra Ope	ct erator BMN	Video Van	3 Ref 2	Setup Surveyed On	8 03/16/2011
Street Name Location type Surface	HILLSBOROUGH SCLF Berm	City	SCLF			
Survey purpose Other (state in comments)		Weather Dry				
Shape Circula	(state in comments) ar (state in comments)	Schedule length Size 18 by Joint spacing Year laid	1200.0 Ft ins Ft	From W SUMF To B SUMF Direction Dow Pre-clean Y		
General note HDPE LEACHATE COLLECTION Location note JETTING=1200				Structural Miscellaneous	Service (Constructiona





Media Insert

DEP Box Number: <u>D</u>	IWM-SWD-SW-225							
Pride Box Number:	DEPS_S12B2024							
Permit # / Pre Index ID #: 156 41137								
	Slides							
2	CD/ DVD Disk							
	Floppy Disk							
•	Negatives							
Notes:	i / f							