

APPENDIX N
SEWER LINE VIDEO SURVEY REPORT

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File: 012/CY06

1622.20020905.001



Science Applications International Corporation
An Employee-Owned Company

September 5, 2002

Mr. Glen Beckham
U.S. Army Corps of Engineers, Louisville District
ATTN: CELRL-PM-M
600 Martin Luther King, Jr. Place
P.O. Box 59
Louisville, Kentucky 40202-0059

Reference: Contract No. DACA 62-00-D-0001, Delivery Order No. CY06
Contract No. DACA 27-97-D-0025, Delivery Order No. 0003
Contract No. F44650-99-0007, ECAS 186

Subject: Storm and Sanitary Sewer Video Survey Data for Phase II Remedial Investigations (RIs) at Load Lines 1, 2, 3, 4 and 12

Dear Mr. Beckham:

Enclosed for your records are video tape logs and paper copies of the project logs for the storm and sanitary sewer camera surveys conducted at Load Lines 1, 2, 3, 4, and 12. In addition, data provided for Load Lines 2, 3, and 4 includes a compact disk containing digital photographic records of the camera surveys. These surveys were performed as part of the Phase II RI field investigations at each of the facilities. Transmittal of these data completes a key action item derived from the July 17, 2002, comment response meeting for the draft Phase II RI report for Load Line 1. Science Applications International Corporation appreciates the opportunity to provide these services to the U.S. Corps of Engineers, Louisville District and RVAAP.

If you have questions or comments, please feel free to contact me at (865) 481-4614.

Sincerely,

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Kevin Jago
Project Manager

cc: John Jent - USACE

cc w/o Enclosure: Ike Diggs - SAIC
Mark Patterson - OSC
Martha Turpin - SAIC
Bob Whelove - OSC
Project File
SAIC CRF

	DATE	AREA	STREET	FROM MANHOLE	TO MANHOLE	SECTION	PIPE SIZE	TAPE #
1	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 21	South	53.38	10"	001
2	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 21	North	51.89	15"	001
3	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 20	South	10.74	15"	001
4	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 20	North	22.47	15"	001
5	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 20	East	55.47	12"	001
6	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 14	South	53.18	15"	001
7	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 14	North	11.63	15"	001
8	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 12	South	53.68	24"	001
9	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 12	North	52.09	15"	001
10	08/06/2001	Ravenna Army	Load Line 2 Bldg. 802	D.B. 12	East	54.48	30"	001
11	08/06/2001	Ravenna Army	Load Line 2	D.B. 11	East	51.3	8"	001
12	08/06/2001	Ravenna Army	Load Line 2	310	North	51.99	8"	001
13	08/06/2001	Ravenna Army	Load Line 2	310	South	51.1	8"	001
14	08/06/2001	Ravenna Army	Load Line 2	IN C4	West	7.95	12"	001
15	08/06/2001	Ravenna Army	Load Line 2	IN C4	south	9.05	10"	001
16	08/06/2001	Ravenna Army	Load Line 2	307	North	51.79	8"	001
17	08/06/2001	Ravenna Army	Load Line 2	307	South	51.89	8"	001
18	08/06/2001	Ravenna Army	Load Line 2	D.A. 17	North	5	8"	001
19	08/06/2001	Ravenna Army	Load Line 2	D.A. 17	South	8	8"	001
20	08/06/2001	Ravenna Army	Load Line 2	D.A. 12	North	52.09	15"	001
21	08/06/2001	Ravenna Army	Load Line 2	D.A. 12	South	52.49	12"	001
22	08/06/2001	Ravenna Army	Load Line 2	D.A. 12	West	52.89	24"	001
23	08/06/2001	Ravenna Army	Load Line 2	D.A. 20	North	51.2	12"	001
24	08/06/2001	Ravenna Army	Load Line 2	D.A. 20	South	15.81	12"	001
						931.56 FT		

N-4



INSPECTION REPORT

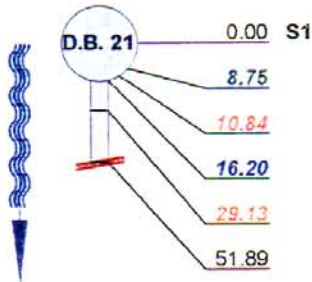
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 2	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 620

CITY: Ravenna	MAP #1:	TVD LGTH: 51.89 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 21
LOCALE: EASEMENT	TAPE #: 001	MH: North
INSPECT REASON: OTHER	PIPE SIZE: 15"	JT LGTH:
SECTION TYPE: STORMWATER	MATERIAL: VCP	
AREA:	LINING:	
	RSRVD:	

REMARK:

1:1000 POSITION

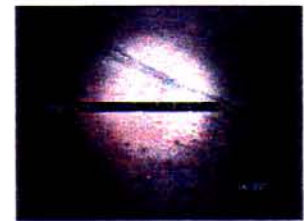
OBSERVATION



inspection begins at upstream manhole, START
camera under water
debris Piece of Broken Pipe
Longitudinal Crack, at 10 o'clock
debris Heavy!!!!!!
 inspection abandoned, END Seen Enough!



10.84 FT //



16.2 FT //



TELEVAC ENVIRONMENTAL
 7611 EASY ST
 MASON OH, 45040
 Tel: (513) 398-4521, Fax: (513) 398-5628

INSPECTION REPORT

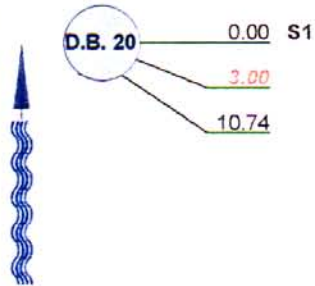
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 3	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

CITY: Ravenna	MAP #1:	TVD LGTH: 10.74 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 20
LOCALE: EASEMENT	TAPE #: 001	MH: South
INSPECT REASON: OTHER	PIPE SIZE: 15"	JT LGTH:
SECTION TYPE: STORMWATER	MATERIAL: VCP	
AREA:	LINING:	
	RSRVD:	

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
debris Heavy!!!!
 camera blocked, inspection abandoned, END Debris is ti
 Heavy!!!!!!!



3 FT //



10.74 FT //



INSPECTION REPORT

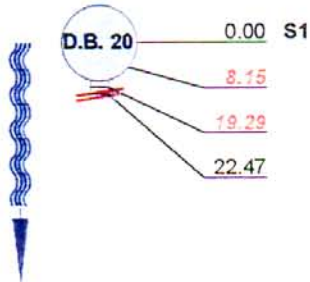
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 4	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 810

CITY: Ravenna	MAP #1:	TV'D LGTH: 22.47 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 20
LOCALE: EASEMENT	TAPE #: 001	MH: North
INSPECT REASON: OTHER	PIPE SIZE: 15"	
SECTION TYPE: STORMWATER	MATERIAL: VCP	JT LGTH:
AREA:	LINING:	
	RSRVD:	

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

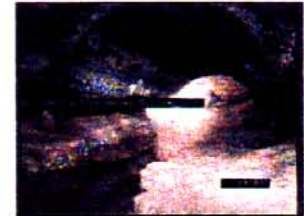
debris

obstruction Heavy Build-up!!!!

camera blocked, inspection abandoned, END Debris too Heavy!!!!!!!



8.15 FT //



19.29 FT //



22.47 FT //



INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 5	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 620

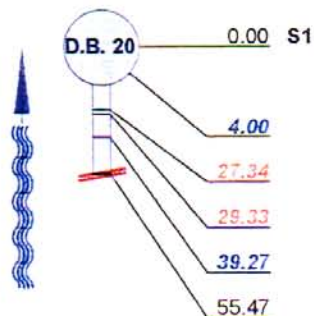
CITY: Ravenna	MAP #1:	TVD LGTH: 55.47 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 20
LOCALE: EASEMENT	TAPE #: 001	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

Longitudinal Crack, at 03 o'clock

debris

debris

Longitudinal Crack, at 02 o'clock

inspection abandoned, END Seen Enough



4 FT //



27.34 FT //



29.33 FT //



39.27 FT //



55.47 FT //



INSPECTION REPORT

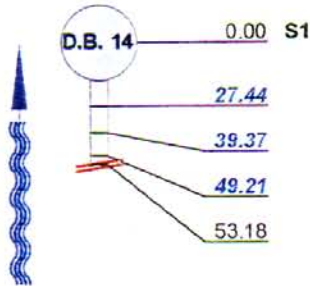
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 6	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV'D LGTH: 53.18 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 14
LOCALE: EASEMENT	TAPE #: 001	MH: South
INSPECT REASON: OTHER	PIPE SIZE: 15"	JT LGTH:
SECTION TYPE: STORMWATER	MATERIAL: VCP	
AREA:	LINING:	
	RSRVD:	

REMARK:

1:1000 POSITION

OBSERVATION



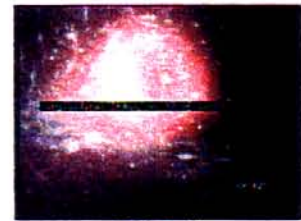
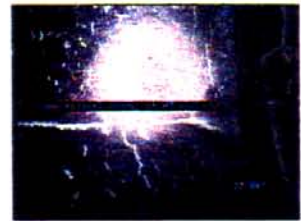
inspection begins at downstream manhole, START

Longitudinal Crack, at 03 o'clock

Longitudinal Crack, at 02 o'clock

Longitudinal Crack, at 10 o'clock

inspection abandoned, END Seen Enough!!!!





INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 7	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

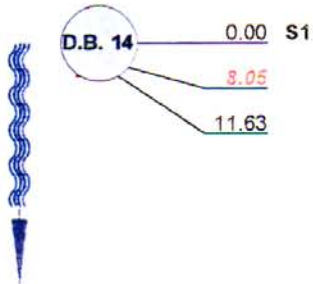
CITY: Ravenna	MAP #1:	TVD LGTH: 11.63 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 14
LOCALE: EASEMENT	TAPE #: 001	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 15"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

debris Heavy!!!!

camera blocked, inspection abandoned, END Debris too heavy!!!!!!





INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 8	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

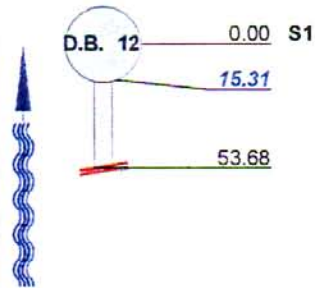
CITY: Ravenna	MAP #1:	TV'D LGTH: 53.68 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 12
LOCALE: EASEMENT	TAPE #: 001	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 24"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

Longitudinal Crack, at 02 o'clock

inspection abandoned, END Seen Enough





INSPECTION REPORT

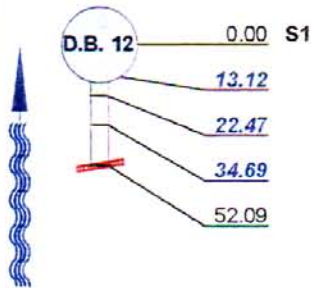
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 9	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV'D LGTH: 52.09 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 12
LOCALE: EASEMENT	TAPE #: 001	MH: North
INSPECT REASON: OTHER	PIPE SIZE: 15"	
SECTION TYPE: STORMWATER	MATERIAL: VCP	JT LGTH:
AREA:	LINING:	
	RSRVD:	

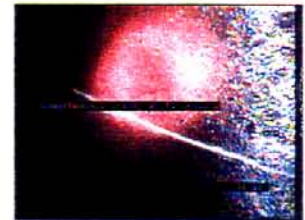
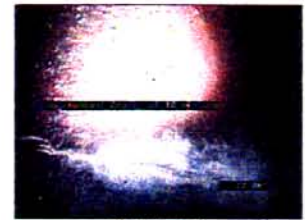
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
Longitudinal Crack, at 10 o'clock
Longitudinal Crack, at 10 o'clock
Longitudinal Crack, at 12 o'clock
 inspection abandoned, END Seen Enough





INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 10	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

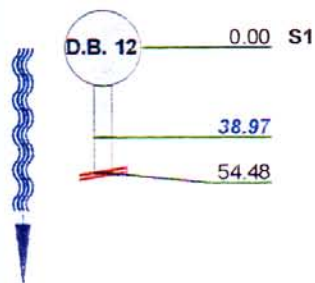
CITY: Ravenna	MAP #1:	TV'D LGTH: 54.48 FT
STREET: Load Line 2 Bldg. 802	MAP #2:	MH: D.B. 12
LOCALE: EASEMENT	TAPE #: 001	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 30"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

Longitudinal Crack, at 09 o'clock

inspection abandoned, END Seen Enough!!!



38.97 FT //



INSPECTION REPORT

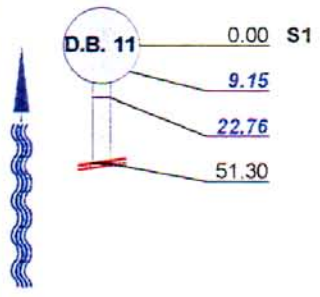
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 11	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV/D LGTH: 51.3 FT
STREET: Load Line 2	MAP #2:	MH: D.B. 11
LOCALE: EASEMENT	TAPE #: 001	MH: East

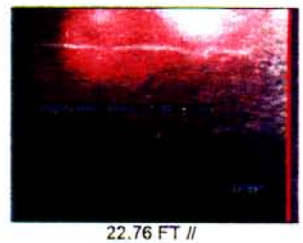
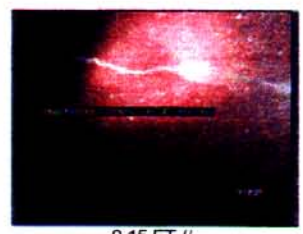
INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION	OBSERVATION
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inspection begins at downstream manhole, START
Longitudinal Crack, at 03 o'clock
Longitudinal Crack, at 02 o'clock
 inspection abandoned, END Seen Enough!!!





INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 12	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 210

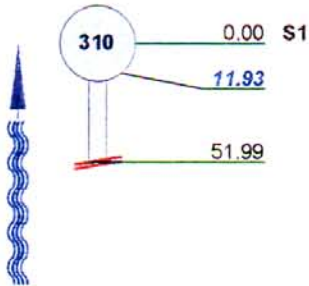
CITY: Ravenna	MAP #1:	TV/D LGTH: 51.99 FT
STREET: Load Line 2	MAP #2:	MH: 310
LOCALE: EASEMENT	TAPE #: 001	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

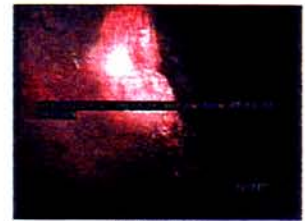
1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
scale/mineral deposits medium from 09 to 10 o'clock

inspection abandoned, END Seen Enough!!!!!!



11.93 FT //



INSPECTION REPORT

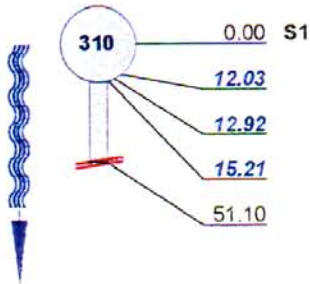
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 13	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 630

CITY: Ravenna	MAP #1:	TV'D LGTH: 51.1 FT
STREET: Load Line 2	MAP #2:	MH: 310
LOCALE: EASEMENT	TAPE #: 001	MH: South
INSPECT REASON: OTHER	PIPE SIZE: 8"	
SECTION TYPE: STORMWATER	MATERIAL: VCP	JT LGTH:
AREA:	LINING:	
	RSRVD:	

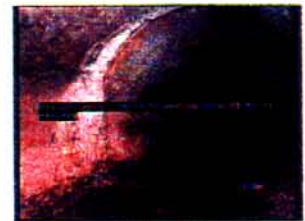
REMARK:

1:1000 POSITION

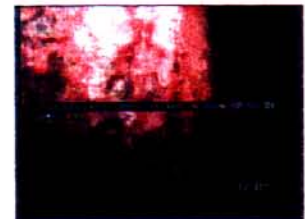
OBSERVATION



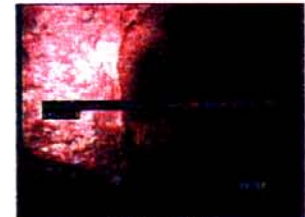
inspection begins at upstream manhole, START
scale/mineral deposits medium from 08 to 11 o'clock
scale/mineral deposits medium from 08 to 09 o'clock
scale/mineral deposits medium from 07 to 11 o'clock
 inspection abandoned, END Seen Enough!!!!



12.03 FT //



12.92 FT //



15.21 FT //



INSPECTION REPORT

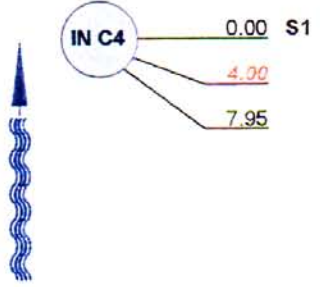
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 14	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

CITY: Ravenna	MAP #1:	TV'D LGTH: 7.95 FT
STREET: Load Line 2	MAP #2:	MH: IN C4
LOCALE: EASEMENT	TAPE #: 001	MH: West
INSPECT REASON: OTHER	PIPE SIZE: 12"	PIPE MATERIAL: VCP
SECTION TYPE: STORMWATER	LINING:	JT LGTH:
AREA:	RSRVD:	

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
debris Heavy!!!!
 camera blocked, inspection abandoned, END too heavy to pass!!!!



4 FT //



7.95 FT //



INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 15	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

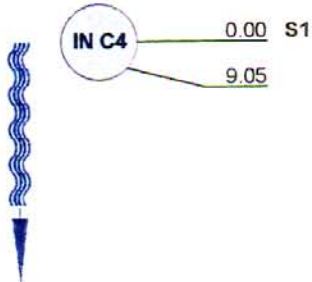
CITY: Ravenna	MAP #1:	TV'D LGTH: 9.05 FT
STREET: Load Line 2	MAP #2:	MH: IN C4
LOCALE: EASEMENT	TAPE #: 001	MH: south

INSPECT REASON: OTHER	PIPE SIZE: 10"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

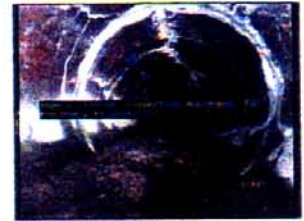
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
 camera blocked, inspection abandoned, END too heavy to pass!!!!



9.05 FT //



INSPECTION REPORT

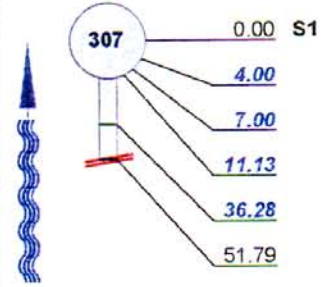
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 16	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 840

CITY: Ravenna	MAP #1:	TV/D LGTH: 51.79 FT
STREET: Load Line 2	MAP #2:	MH: 307
LOCALE: EASEMENT	TAPE #: 001	MH: North
INSPECT REASON: OTHER	PIPE SIZE: 8"	PIPE MATERIAL: VCP
SECTION TYPE: STORMWATER	LINING:	JT LGTH:
AREA:	RSRVD:	

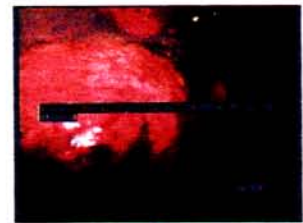
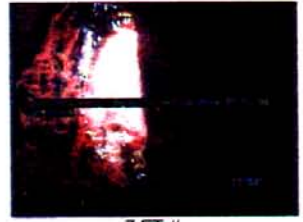
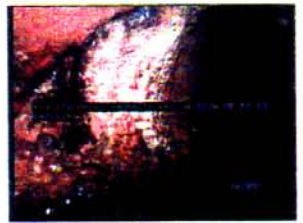
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
scale/mineral deposits medium from 08 to 10 o'clock
scale/mineral deposits medium from 07 to 04 o'clock
scale/mineral deposits medium from 08 to 10 o'clock
scale/mineral deposits medium from 07 to 10 o'clock
 inspection abandoned, END Seen Enough!!!!





INSPECTION REPORT

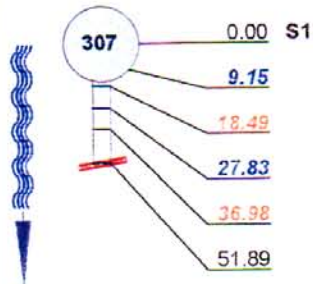
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 17	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 770

CITY: Ravenna	MAP #1:	TV'D LGTH: 51.89 FT
STREET: Load Line 2	MAP #2:	MH: 307
LOCALE: EASEMENT	TAPE #: 001	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

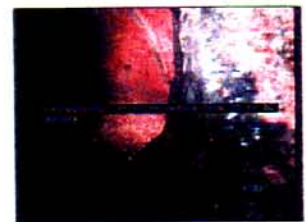
REMARK:

1:1000 POSITION

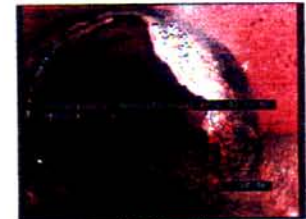


OBSERVATION

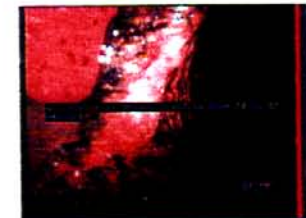
inspection begins at upstream manhole, START
scale/mineral deposits medium from 02 to 04 o'clock
scale/mineral deposits heavy from 02 to 05 o'clock
scale/mineral deposits medium from 10 to 07 o'clock
Infiltration Dripping at 12 o'clock
 inspection abandoned, END Seen Enough



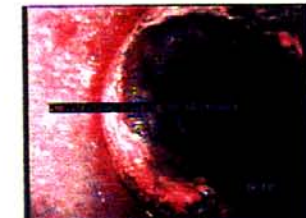
9.15 FT //



18.49 FT //



27.83 FT //



36.98 FT //



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INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 18	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV/D LGTH: 5 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 17
LOCALE: EASEMENT	TAPE #: 001	MH: North
INSPECT REASON: OTHER	PIPE SIZE: 8"	MATERIAL: VCP JT LGTH:
SECTION TYPE: STORMWATER	LINING:	RSRVD:
AREA:		

REMARK:

1:1000 POSITION

OBSERVATION



0.00 S1

inspection begins at downstream manhole, START



5 FT //



INSPECTION REPORT

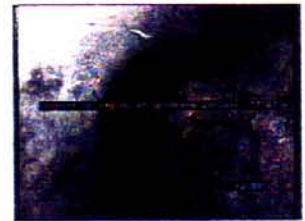
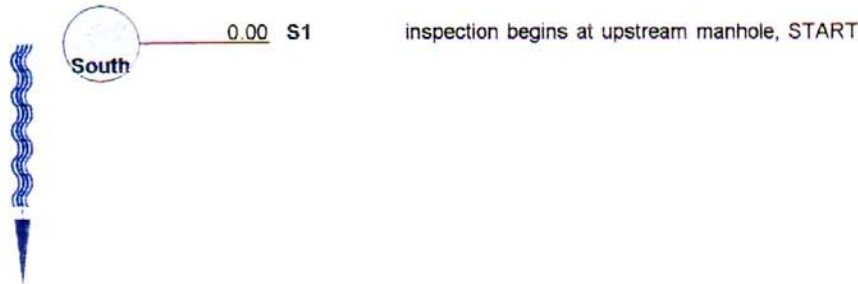
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 19	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV D LGTH: 0 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 17
LOCALE: EASEMENT	TAPE #: 001	MH: South
INSPECT REASON: OTHER	PIPE SIZE: 8"	VCP JT LGTH:
SECTION TYPE: STORMWATER	MATERIAL:	
AREA:	RSRVD:	

REMARK:

1:1000 POSITION

OBSERVATION



8 FT //



INSPECTION REPORT

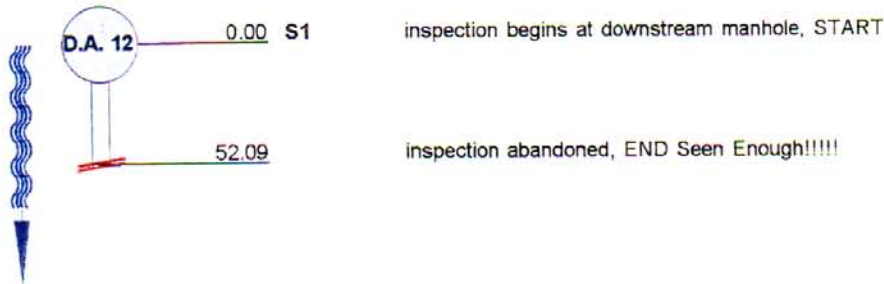
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 20	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

CITY: Ravenna	MAP #1:	TV'D LGTH: 52.09 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 12
LOCALE: EASEMENT	TAPE #: 001	MH: North
INSPECT REASON: OTHER	PIPE SIZE: 15"	MATERIAL: VCP JT LGTH:
SECTION TYPE: STORMWATER	LINING:	RSRVD:
AREA:		

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

inspection abandoned, END Seen Enough!!!!



INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 21	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

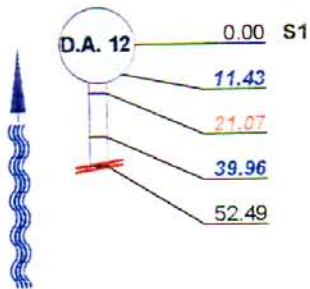
CITY: Ravenna	MAP #1:	TV/D LGTH: 52.49 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 12
LOCALE: EASEMENT	TAPE #: 001	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	RSRVD:

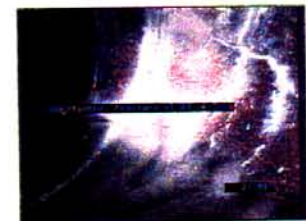
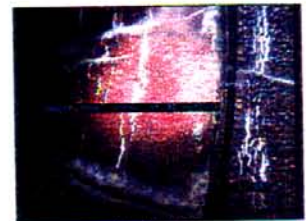
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
Longitudinal Crack, at 02 o'clock
Longitudinal Fracture at 03 o'clock
Longitudinal Crack, at 09 o'clock
 inspection abandoned, END Seen Enough!





INSPECTION REPORT

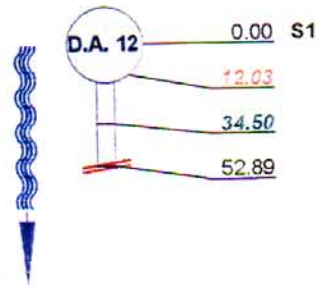
DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 22	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 440

CITY: Ravenna	MAP #1:	TVD LGTH: 52.89 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 12
LOCALE: EASEMENT	TAPE #: 001	MH: West

INSPECT REASON: OTHER	PIPE SIZE: 24"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION



OBSERVATION

inspection begins at upstream manhole, START metal in mouth of pipe
debris

roots light

inspection abandoned, END Seen Enough





INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 23	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

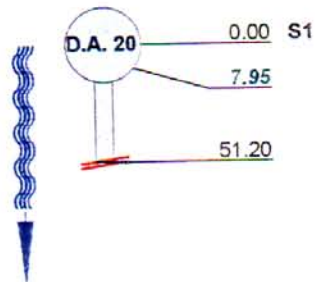
CITY: Ravenna	MAP #1:	TV'D LGTH: 51.2 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 20
LOCALE: EASEMENT	TAPE #: 001	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

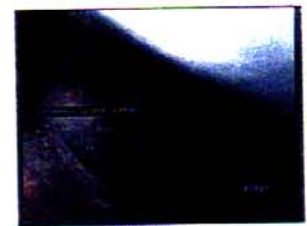
1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
camera under water

inspection abandoned, END Seen Enough water



7.95 FT //



INSPECTION REPORT

DATE: 08/06/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 24	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

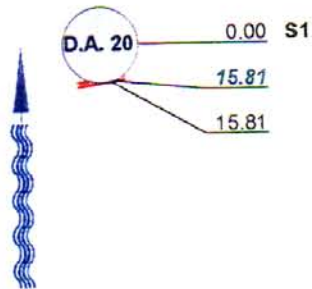
CITY: Ravenna	MAP #1:	TV/D LGTH: 15.81 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 20
LOCALE: EASEMENT	TAPE #: 001	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 12"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION

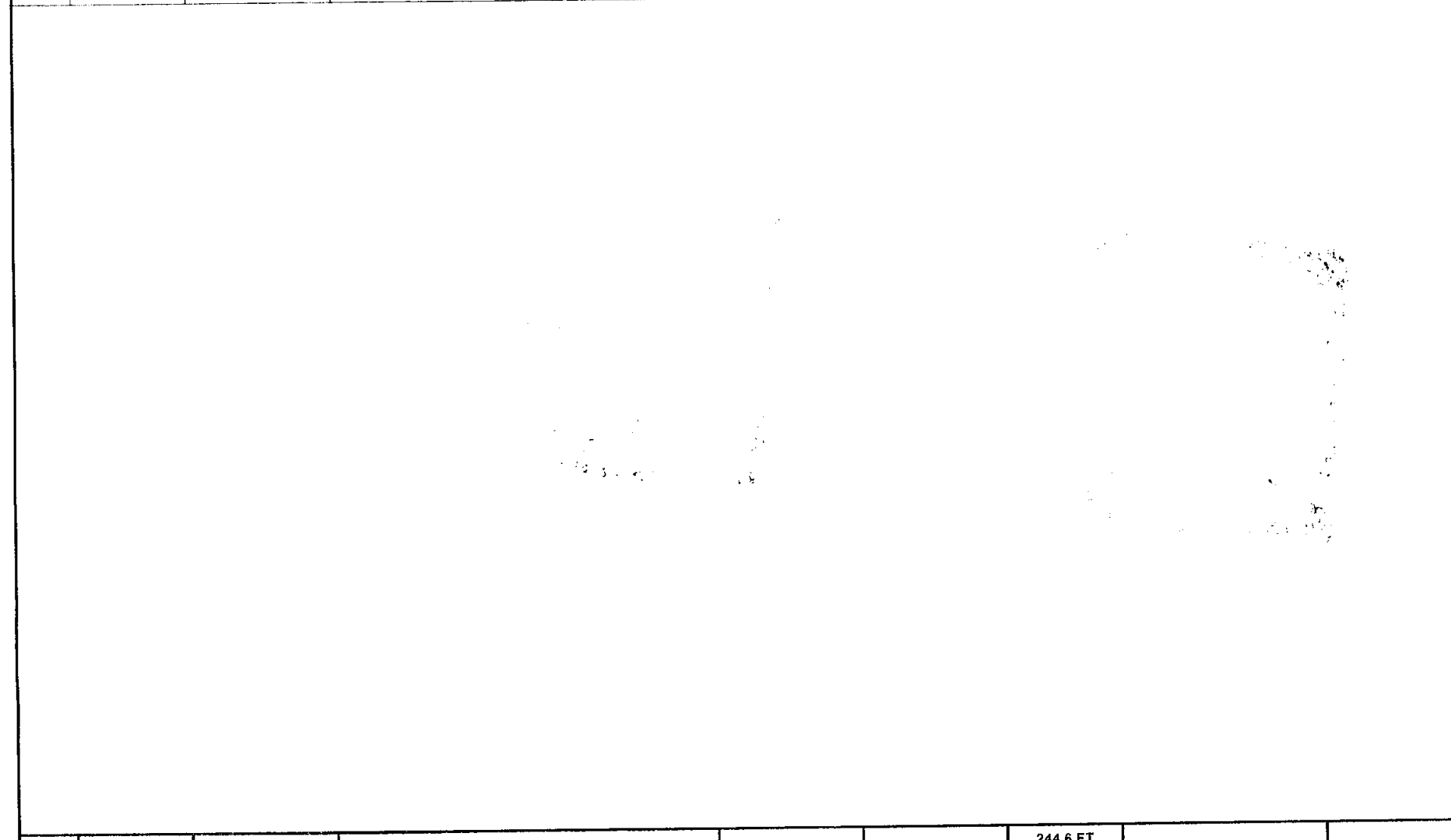


inspection begins at downstream manhole, START
camera under water
 camera blocked, inspection abandoned, END too much debris
 and water to see anything!!!!!!



15.81 FT //

	DATE	AREA	STREET	FROM MANHOLE	TO MANHOLE	SECTION	PIPE SIZE	TAPE #
1	08/07/2001	Ravenna Army	Load Line 2	305	North	51.69	8"	001
2	08/07/2001	Ravenna Army	Load Line 2	305	South	52.49	8"	001
3	08/07/2001	Ravenna Army	Load Line 2	302	North	32.81	8"	001
4	08/07/2001	Ravenna Army	Load Line 2	302	South	32.21	8"	001
5	08/07/2001	Ravenna Army	Load Line 2	337	North	51.99	8"	001
6	08/07/2001	Ravenna Army	Load Line 2	337	West	15.31	8"	001
7	08/07/2001	Ravenna Army	Load Line 2	Ejec. Stat	East	8.1	8"	001



244.6 FT

N-28



INSPECTION REPORT

DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 25	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 2170

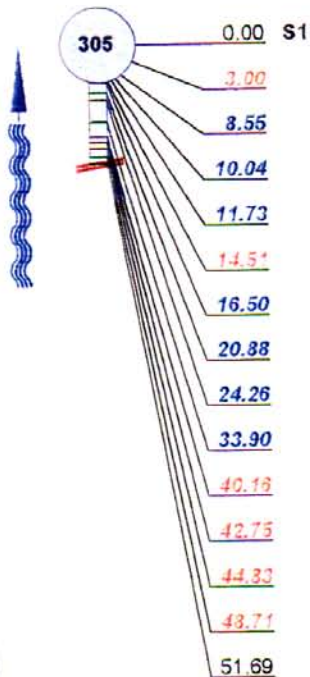
CITY: Ravenna	MAP #1:	TVD LGTH: 51.69 FT
STREET: Load Line 2	MAP #2:	MH: 305
LOCALE: EASEMENT	TAPE #: 001	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 8"	MATERIAL: VCP	JT LGTH:
SECTION TYPE: STORMWATER	LINING:	RSRVD:	
AREA:			

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
Infiltration Dripping at 02 o'clock
scale/mineral deposits medium from 08 to 10 o'clock
scale/mineral deposits medium from 03 to 05 o'clock
scale/mineral deposits medium from 08 to 10 o'clock
Infiltration Dripping at 09 o'clock
scale/mineral deposits medium from 08 to 10 o'clock
scale/mineral deposits medium from 09 to 10 o'clock
scale/mineral deposits medium from 03 to 04 o'clock
scale/mineral deposits medium from 08 to 10 o'clock
scale/mineral deposits heavy from 09 to 11 o'clock
scale/mineral deposits heavy from 07 to 10 o'clock
scale/mineral deposits heavy from 02 to 05 o'clock
scale/mineral deposits heavy from 08 to 10 o'clock
 inspection abandoned, END Seen Enough!!!



8.55 FT //



10.04 FT //



11.73 FT //



14.51 FT //



INSPECTION REPORT

DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 26	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 850

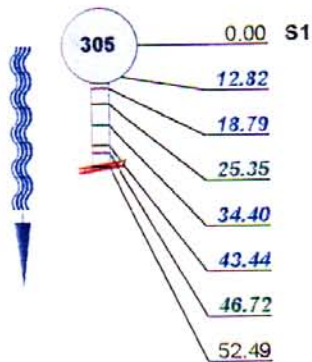
CITY: Ravenna	MAP #1:	TVD LGTH: 52.49 FT
STREET: Load Line 2	MAP #2:	MH: 305
LOCALE: EASEMENT	TAPE #: 001	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

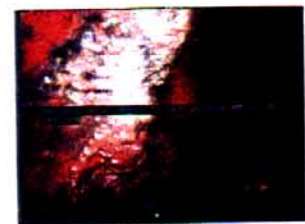
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
scale/mineral deposits medium from 08 to 10 o'clock
scale/mineral deposits medium from 03 to 04 o'clock
scale/mineral deposits light from 03 to 05 o'clock
scale/mineral deposits medium from 01 to 03 o'clock
Circumferential Crack, from 10 to 11 o'clock
scale/mineral deposits light from 08 to 09 o'clock
 inspection abandoned, END Seen Enough!!!!



12.82 FT //



18.79 FT //



25.35 FT //



34.4 FT //



INSPECTION REPORT

DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 27	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

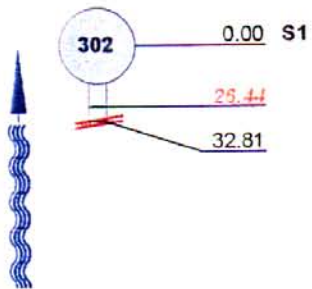
CITY: Ravenna	MAP #1:	TV/D LGTH: 32.81 FT
STREET: Load Line 2	MAP #2:	MH: 302
LOCALE: EASEMENT	TAPE #: 001	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

debris

camera blocked, inspection abandoned, END Debris too heavy to pass



26.44 FT //



INSPECTION REPORT

DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 28	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 620

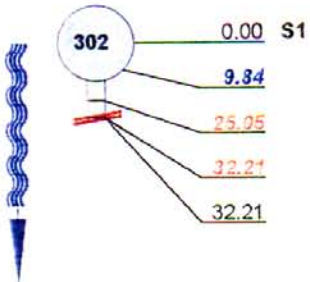
CITY: Ravenna	MAP #1:	TVD LGTH: 32.21 FT
STREET: Load Line 2	MAP #2:	MH: 302
LOCALE: EASEMENT	TAPE #: 001	MH: South

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



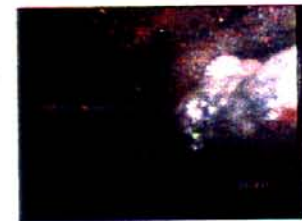
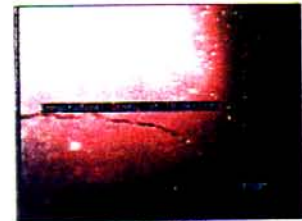
inspection begins at upstream manhole, START

Longitudinal Crack, at 10 o'clock

debris Heavy!!!!!!

debris Heavy!!!!!!

camera blocked, inspection abandoned, END Debris too heavy!!!!!!





INSPECTION REPORT

DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 29	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 150

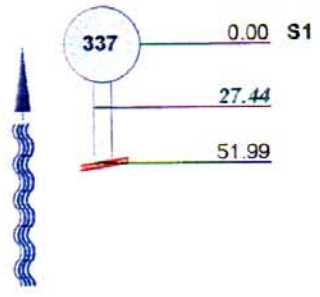
CITY: Ravenna	MAP #1:	TV'D LGTH: 51.99 FT
STREET: Load Line 2	MAP #2:	MH: 337
LOCALE: EASEMENT	TAPE #: 001	MH: North

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START

separated joint slight

inspection abandoned, END Seen Enough



27.44 FT //



INSPECTION REPORT

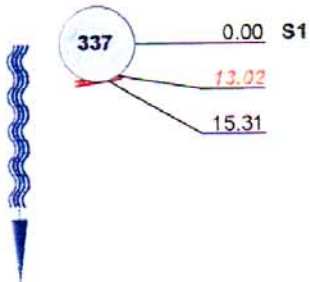
DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 30	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

CITY: Ravenna	MAP #1:	TV'D LGTH: 15.31 FT
STREET: Load Line 2	MAP #2:	MH: 337
LOCALE: EASEMENT	TAPE #: 001	MH: West
INSPECT REASON: OTHER	PIPE SIZE: 8"	MATERIAL: VCP JT LGTH:
SECTION TYPE: STORMWATER	LINING:	RSRVD:
AREA:		

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START
debris
 inspection abandoned



13.02 FT //



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INSPECTION REPORT

DATE: 08/07/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 31	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

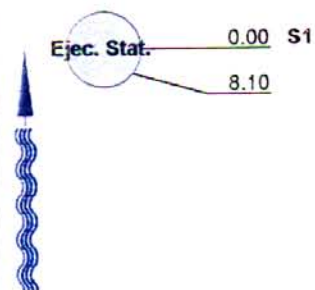
CITY: Ravenna	MAP #1:	TV/D LGTH: 8.1 FT
STREET: Load Line 2	MAP #2:	MH: Ejec. Stat.
LOCALE: EASEMENT	TAPE #: 001	MH: East

INSPECT REASON: OTHER	PIPE SIZE: 8"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA:	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at downstream manhole, START
 camera blocked, inspection abandoned, END Too merky to see anything!!!!!!



INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 67	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

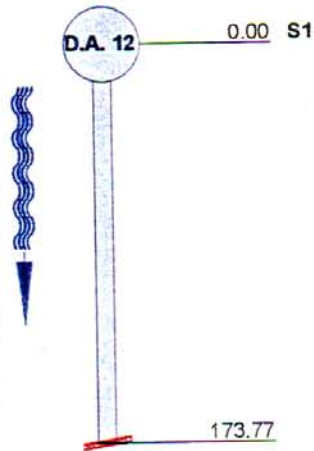
CITY: Ravenna	MAP #1:	TVD LGTH: 173.77 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 12
LOCALE: EASEMENT	TAPE #: 004	MH: B-3

INSPECT REASON: OTHER	PIPE SIZE: 15"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

inspection abandoned, END Could not pass big rocks!!!!



173.77 FT //



INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 68	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

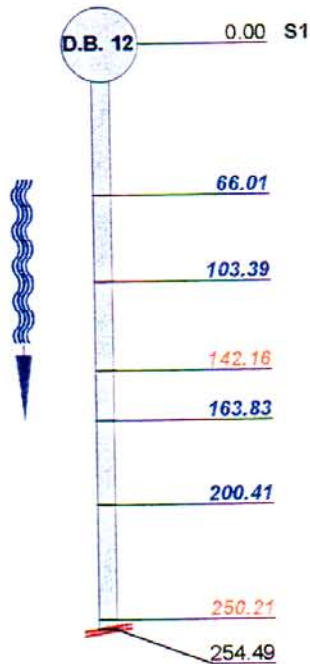
CITY: Ravenna	MAP #1:	TVD LGTH: 254.49 FT
STREET: Load Line 2	MAP #2:	MH: D.B. 12
LOCALE: EASEMENT	TAPE #: 004	MH: B-3

INSPECT REASON: OTHER	PIPE SIZE: 24"	JT LGTH:
SECTION TYPE: STORMWATER	MATERIAL: VCP	
AREA: Ravenna Army Ammunition Plant	LINING:	
	RSRVD:	

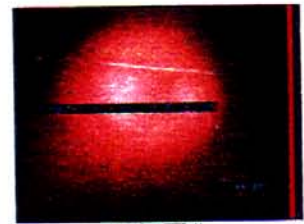
REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START



66.01 FT //

Longitudinal Crack, at 09 o'clock



103.39 FT //

Longitudinal Crack, at 04 o'clock

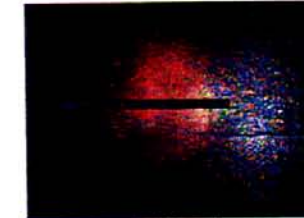
Longitudinal Fracture at 06 o'clock



142.16 FT //

Longitudinal Crack, at 12 o'clock

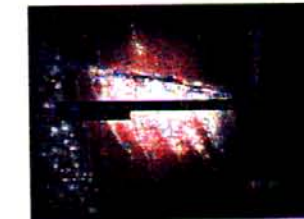
Longitudinal Crack, at 10 o'clock w/infiltration



163.83 FT //

debris

camera blocked, inspection abandoned, END Blocked by debris!!!!



200.41 FT //

	DATE	AREA	STREET	FROM MANHOLE	TO MANHOLE	SECTION	PIPE SIZE	TAPE #
1	08/09/2001	Ravenna Army	Load Line 4	GA 17	East	51.39	12"	003
2	08/09/2001	Ravenna Army	Load Line 4	GA 17	West	51.69	12"	003
3	08/09/2001	Ravenna Army	Load Line 4	GA 17	North	28.93	18"	003
4	08/09/2001	Ravenna Army	Load Line 4	GA 17	South	50.4	18"	003
5	08/09/2001	Ravenna Army	Load Line 4	Mh 10	South	174.76	18"	003
6	08/09/2001	Ravenna Army	Load Line 4	MH 9	South	104.28	18"	003
7	08/09/2001	Ravenna Army	Load Line 4	MH 15	West	175.56	24"	003
8	08/09/2001	Ravenna Army	Load Line 4	MH 11	5	66.5	24"	003
9	08/09/2001	Ravenna Army	Load Line 4	5	7	14.91	24"	003
10	08/09/2001	Ravenna Army	Load Line 4	11	12	100.4	24"	003
11	08/09/2001	Ravenna Army	Load Line 2	D.A. 12	B-3	173.77	15"	004
12	08/09/2001	Ravenna Army	Load Line 2	D.B. 12	B-3	254.49	24"	004
13	08/09/2001	Ravenna Army	Load Line 3	E.H. 5	E.H. 4	117.7	12"	005
14	08/09/2001	Ravenna Army	Load Line 3	E.H. 4	E.H. 3	102.59	12"	005
15	08/09/2001	Ravenna Army	Load Line 3	E.H. 5	E.H. 6	102.79	12"	005
18	08/09/2001	Ravenna Army	Load Line 3	E.H. 6	E.H.7	2.88	12"	005
17	08/09/2001	Ravenna Army	Load Line 3	409	West	46.03	10"	005
18	08/09/2001	Ravenna Army	Load Line 3	409	East	13.72	10"	005
19	08/09/2001	Ravenna Army	Load Line 4	W6	W5	213.33	8"	003
20	08/09/2001	Ravenna Army	Load Line 4	W5	W4	30.52	8"	003
21	08/09/2001	Ravenna Army	Load Line 4	W3-1	North	4	8"	003
22	08/09/2001	Ravenna Army	Load Line 4	E4	Southwest	144.54	8"	003
23	08/09/2001	Ravenna Army	Load Line 4	E4	North	113.03	8"	003
						2138.21 FT		

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INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 67	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 0

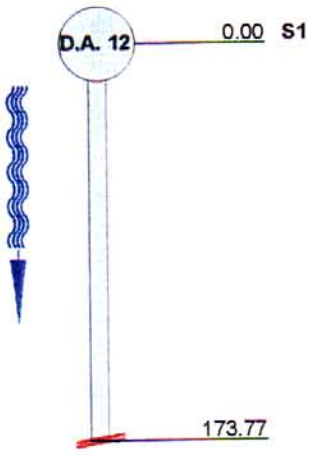
CITY: Ravenna	MAP #1:	TV'D LGTH: 173.77 FT
STREET: Load Line 2	MAP #2:	MH: D.A. 12
LOCALE: EASEMENT	TAPE #: 004	MH: B-3

INSPECT REASON: OTHER	PIPE SIZE: 16"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

inspection abandoned, END Could not pass big rocks!!!!





INSPECTION REPORT

DATE: 08/09/2001	work order:	WEATHER: SUNNY, DRY	OPERATOR: P.KELLUM	SECTION NR: 68	SECTION NAME:
PRESENT:	VEHICLE: 811	CAMERA: PAN/TILT	PRESET:	CLEANED: NO	RATE: 310

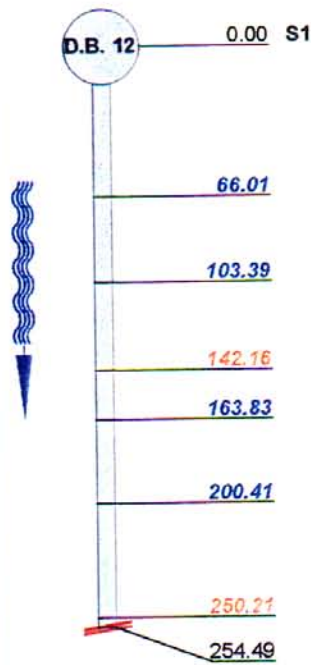
CITY: Ravenna	MAP #1:	TVD LGTH: 254.49 FT
STREET: Load Line 2	MAP #2:	MH: D.B. 12
LOCALE: EASEMENT	TAPE #: 004	MH: B-3

INSPECT REASON: OTHER	PIPE SIZE: 24"
SECTION TYPE: STORMWATER	MATERIAL: VCP JT LGTH:
AREA: Ravenna Army Ammunition Plant	LINING:
	RSRVD:

REMARK:

1:1000 POSITION

OBSERVATION



inspection begins at upstream manhole, START

Longitudinal Crack, at 09 o'clock

Longitudinal Crack, at 04 o'clock

Longitudinal Fracture at 06 o'clock

Longitudinal Crack, at 12 o'clock

Longitudinal Crack, at 10 o'clock w/infiltration

debris

camera blocked, inspection abandoned, END Blocked by debris!!!!



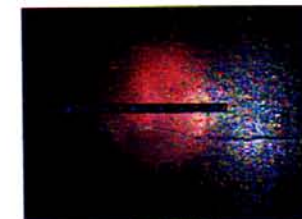
66.01 FT //



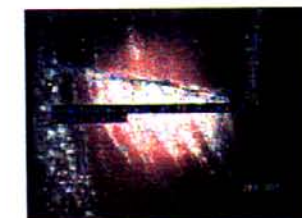
103.39 FT //



142.16 FT //



163.83 FT //



200.41 FT //