

UT Erosion/Corrosion Examination



Site/Unit: IP2 / 2 Procedure: CEP-NDE-0505 Outage No.: N/A
 Summary No.: 22MT Moat Procedure Rev.: 4 Report No.: IP2-UT-12-030
 Workscope: BOP Work Order No.: 00315720-09 Page: 1 of 7

Code: ANSI B.31.1, 1955 Edition Cat./Item: N/A Location: IP1 - Utility Tunnel

Drawing No.: 9321-2236 Description: Characterize areas of degraded pipe coating in the 22MT Moat

System ID: Service Water, Fire Protection & City Water

Component ID: SW line 463, FP & CW line 1502 piping Size/Length: 8" Sch 40 Thickness/Diameter: .322"

Limitations: Rough surface Component File No.: SW463, FP, CW1502 Start Time: 1335 Finish Time: 1450

Calibration Information		Partitioning Information		Component Information	
Calibration Thickness (In)	Calibration Times / Initials	Component	Begin/Col/Row	Ending/Col/Row	Component Geometry
0.100"	N/A	M. UPST Ext.	N/A		8"
0.200"	N/A	Main UPST.	N/A		Grid Size: 2" x 2"
0.300"	N/A	Main	A 01	E 10	Max. Thickness: 0.347"
0.400"	N/A	Main DNST.	N/A		Min. Thickness: 0.285"
0.500"	N/A	M. DNST Ext.	N/A		Nominal Thickness: 0.322"
		Branch	N/A		Min. Thickness Location: CW line - C 08
		Branch Ext.	N/A		Max. Thickness Location: CW line - A 10

Instrument: Transducer:
 Manufacturer: Panametrics Reference/Simulator Block: Temp. Tool:
 Model: 37-DL Plus Manufacturer: Control Co., Inc
 Serial No.: 031110106 Serial No.: 99-7436 Manufacturer: Control Co., Inc
 Gain: 50 dB Size: 0.283" Type: C/S 0.04"-0.5" Serial No.: QS-83
 Range: 1.0" Model: D798 Ref./Simulator Block Temp.: 95 °F Couplant: Ultragel II
 # of Elements: Dual Material/Component Temp.: 81 °F Batch No.: 09325

Comments/Obstructions: Coating and scale were removed prior to this examination. Grid point and scan readings taken.
 Results: Accept Reject Info Tmin = 0.281" (87.5% of nominal thickness). Reference CR-IP2-2012-05324.

Examiner	Level	III EOI	Signature	Date	Reviewer	Signature	Date
Allen, Robert E.				8/28/2012	N/A		
N/A					Robert Herrmann	Robert Herrmann	8-29-12
Other					ANII Review		
N/A					N/A		



Supplemental Report

Report No.: IP2-UT-12-030

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Summary No.: 22MT Moat

Examiner: Allen, Robert E. *[Signature]*

Examiner: N/A

Other: N/A

Level: III EOI

Level: N/A

Level: N/A

Reviewer: N/A

Site Review: R. Herrmann

ANII Review: N/A

Date:

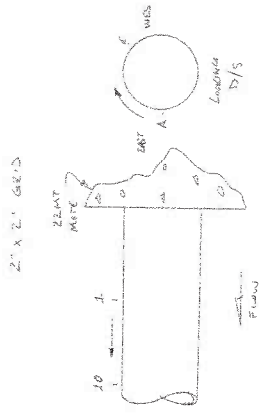
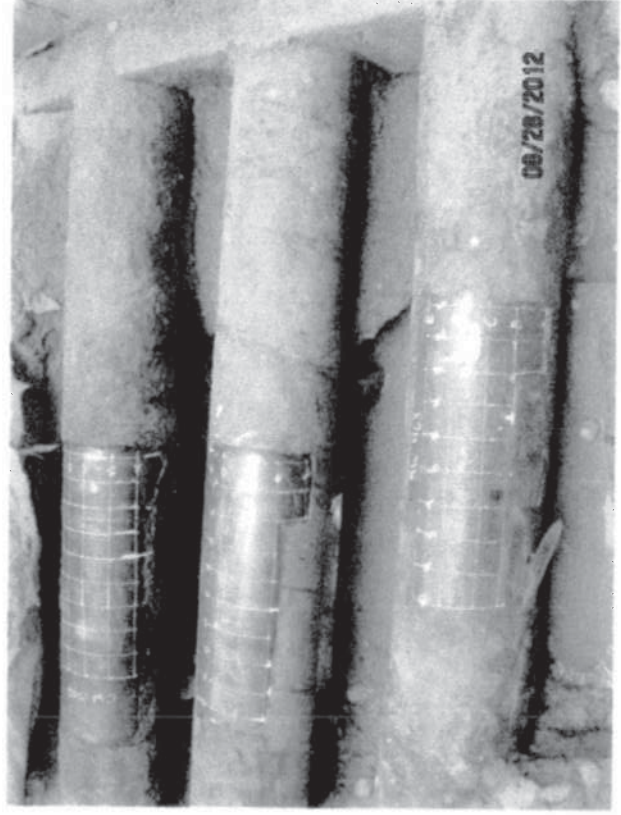
Date: 6-29-12

Date:

Comments: The picture left below shows the areas examined on each of the (3) pipes inside the 22MT Moat at the North wall. The sketch right below shows the grid layout used for each pipe examination. A portion column "A" was obstructed on the SW and FP lines due to the coating not removed as it was not degraded at those locations. The areas examined were representative of the worst case of coating degradation on each line exposed within the Moat excavation.

Sketch or Photo: \\Client\Y\$\Ideal Ver 8\Ideal_Server\Ideal_IP2\Graphics-Pictures\22MT Moat\SW_FP_CW.JPG

\\Client\Y\$\Ideal Ver 8\Ideal_Server\Ideal_IP2\Graphics-Pictures\22MT Moat\Grid layout.TIF





Supplemental Report

Report No.: IP2-UT-12-030
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Summary No.: 22MT Moat

Examiner: Allen, Robert E. *[Signature]* Level: III EOI Reviewer: *N/A* Date: _____

Examiner: N/A Level: N/A Site Review: *R. HERRMANN R. Herrmann* Date: *8-29-12*

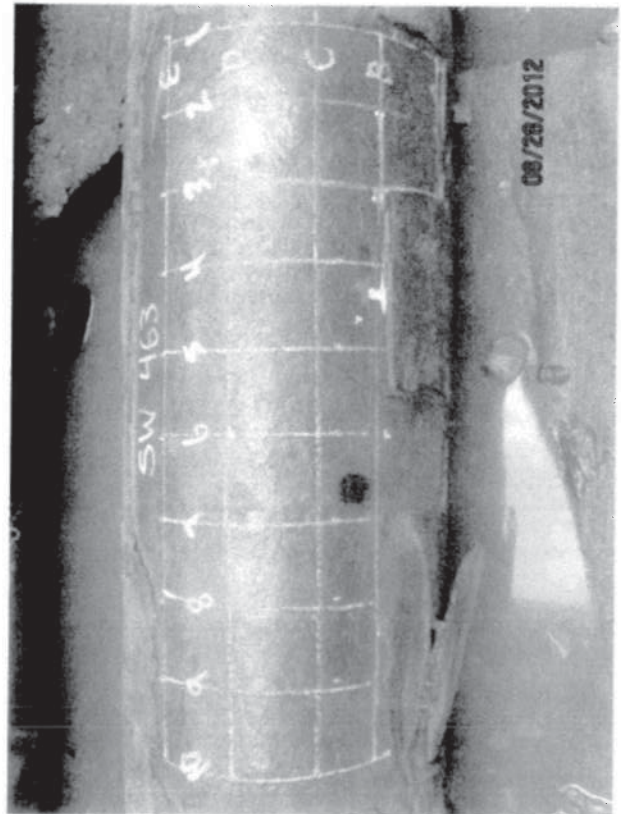
Other: N/A Level: N/A ANII Review: *N/A* Date: _____

Comments: The photo left below shows the Service Water line 463. The photo right below shows the Fire Protection line.

(2) areas on the FP line were found more deeply corroded that did not line up at grid point locations and were scanned to determine the minimum thickness between the grid points, as follows:

- A1-A2-B1-B2 = 0.299"
- A2-A3-B2-B3 = 0.298"
- A4-D5-E4-E5 = 0.322"
- D5-D6-E5-E6 = 0.317"
- D6-D7-E6-E7 = 0.328"

Sketch or Photo: \\Client\Y\$\Ideal Ver 8\Ideal_Server\Ideal_IP2\Graphics-Pictures\22MT Moat\SW463.JPG



\\Client\Y\$\Ideal Ver 8\Ideal_Server\Ideal_IP2\Graphics-Pictures\22MT Moat\FP.JPG





Supplemental Report

Report No.: IP2-UT-12-030
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Summary No.: 22MT Moat

Examiner: Allen, Robert E. Reviewer: NA Date: _____

Examiner: N/A Site Review: R. HERRMANN R. HERRMANN Date: 8-29-12

Other: N/A ANII Review: N/A Date: _____

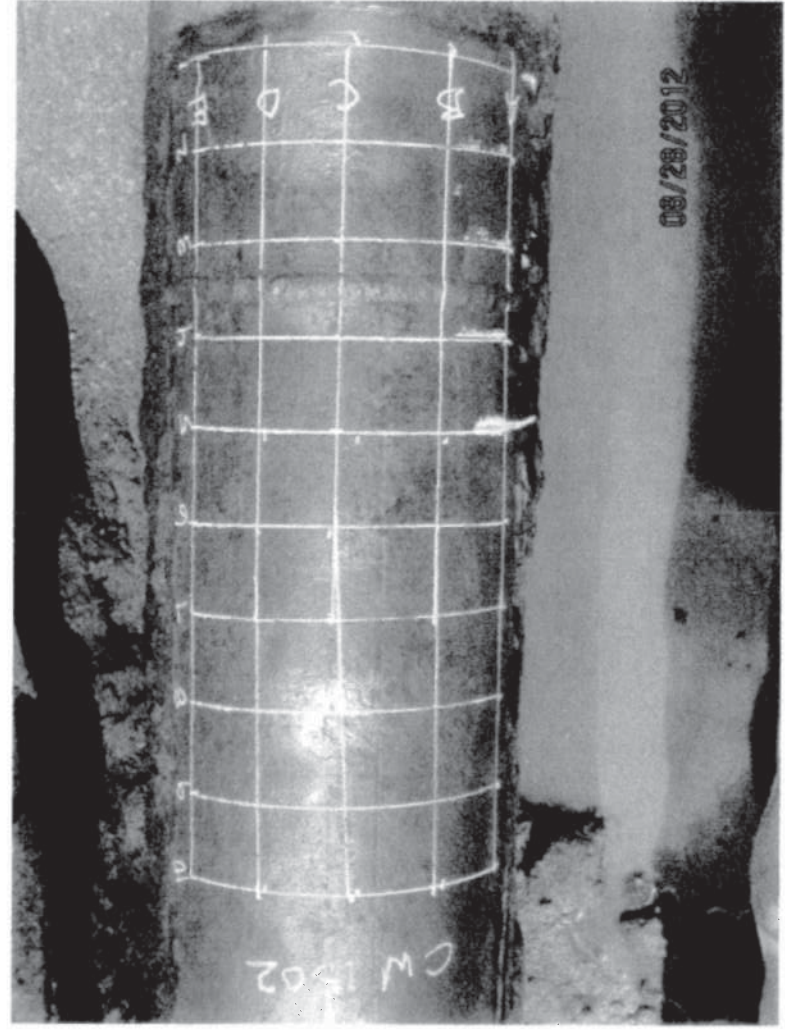
Level: III EOI Reviewer: _____

Level: N/A Site Review: _____

Level: N/A ANII Review: _____

Comments: The photo below shows the City Water line 1502.

Sketch or Photo: \\Client\Y\$\Ideal\Ver 8\Ideal_Server\Ideaal_IP2\Graphics-Pictures\22MT Moat\CW1502.JPG



COLOR CODED DATA GRID

SW Line 463 / 22MT Moat

The Survey Name:	SW463	Survey Date:	8/28/2012 3:15:38 PM
Survey Description:	E/C	Survey Mode:	THICKNESS
Survey Type:	2D GRID	Erase Protection:	FALSE
Location Note:	IP2	Inspector ID:	REA <i>[Signature]</i>
Report No.:	IP2-UT-12-030	Reviewer:	<i>R. HERRMANN 8-29-12</i>
Obstructions:	A4 - A10 due to coating		

	A	B	C	D	E	Min	Max	Avg
01	0.316	0.323	0.312	0.325	0.326	0.312	0.326	0.320
02	0.310	0.317	0.331	0.328	0.310	0.310	0.331	0.319
03	0.319	0.325	0.323	0.327	0.308	0.308	0.327	0.320
04	0.000	0.331	0.338	0.322	0.330	0.322	0.338	0.330
05	0.000	0.329	0.325	0.329	0.334	0.325	0.334	0.329
06	0.000	0.333	0.327	0.328	0.337	0.327	0.337	0.331
07	0.000	0.331	0.329	0.346	0.324	0.324	0.346	0.333
08	0.000	0.334	0.324	0.335	0.341	0.324	0.341	0.334
09	0.000	0.335	0.339	0.324	0.339	0.324	0.339	0.334
10	0.000	0.342	0.334	0.341	0.325	0.325	0.342	0.336
Min	0.310	0.317	0.312	0.322	0.308			
Max	0.319	0.342	0.339	0.346	0.341			
Avg	0.315	0.330	0.328	0.331	0.327			

Color Legend:

Under Range	0.282 - 0.362	0.201 - 0.281	0.101 - 0.200	0.000 - 0.100	Under Range
Not Used	Not Used	Not Used	Not Used	Not Used	Row or Column Statistics

Total Statistics:

Maximum	0.346
Minimum	0.308
Average	0.328

COLOR CODED DATA GRID

FP / 22MT Moat

The Survey Name:	FP	Survey Date:	8/28/2012 3:13:53 PM
Survey Description:	E/C	Survey Mode:	THICKNESS
Survey Type:	2D GRID	Erase Protection:	FALSE
Location Note:	IP2	Inspector ID:	<i>R. Herrmann</i>
Report No.:	IP2-UT-12-030	Reviewer:	<i>R. HERRMANN 8-29-12</i>
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Obstructions:	A4 - A10 due to coating		

	A	B	C	D	E	Min	Max	Avg
01	0.318	0.331	0.330	0.333	0.330	0.318	0.333	0.328
02	0.313	0.329	0.330	0.339	0.330	0.313	0.339	0.328
03	0.321	0.330	0.334	0.324	0.329	0.321	0.334	0.328
04	0.000	0.334	0.334	0.342	0.328	0.328	0.342	0.335
05	0.000	0.332	0.335	0.339	0.329	0.329	0.339	0.334
06	0.000	0.334	0.335	0.338	0.331	0.331	0.338	0.335
07	0.000	0.338	0.338	0.342	0.332	0.332	0.342	0.338
08	0.000	0.342	0.339	0.341	0.331	0.331	0.342	0.338
09	0.000	0.340	0.338	0.328	0.331	0.328	0.340	0.334
10	0.000	0.339	0.338	0.335	0.326	0.326	0.339	0.335
Min	0.313	0.329	0.330	0.324	0.326			
Max	0.321	0.342	0.339	0.342	0.332			
Avg	0.317	0.335	0.335	0.336	0.330			

Color Legend:

0.000 - 0.100	Under Range
0.101 - 0.200	0.100
0.201 - 0.281	0.200
0.282 - 0.362	0.281
Not Used	0.362
Not Used	0.281
Not Used	0.200
Not Used	0.100
Not Used	0.000
Under Range	Row or Column Statistics

Total Statistics:

Maximum	0.342
Minimum	0.313
Average	0.333

COLOR CODED DATA GRID

CW Line 1502 / 22MT Moat

The Survey Name:	CW1502	Survey Date:	8/28/2012 3:14:58 PM
Survey Description:	E/C	Survey Mode:	THICKNESS
Survey Type:	2D GRID	Erase Protection:	FALSE
Location Note:	IP2	Inspector ID:	<i>[Signature]</i>
Report No.:	IP2-UT-12-030	Reviewer:	<i>R. HERRMANN 8-29-12</i>
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	A	B	C	D	E	Min	Max	Avg
01	0.318	0.313	0.322	0.330	0.317	0.313	0.330	0.320
02	0.316	0.319	0.323	0.322	0.316	0.316	0.323	0.319
03	0.322	0.324	0.325	0.331	0.320	0.320	0.331	0.324
04	0.341	0.330	0.327	0.317	0.328	0.317	0.341	0.329
05	0.346	0.327	0.328	0.320	0.318	0.318	0.346	0.328
06	0.343	0.340	0.320	0.315	0.307	0.307	0.343	0.325
07	0.344	0.328	0.320	0.318	0.300	0.300	0.344	0.322
08	0.344	0.320	0.285	0.314	0.314	0.285	0.344	0.315
09	0.339	0.329	0.331	0.307	0.300	0.300	0.339	0.321
10	0.347	0.334	0.331	0.318	0.303	0.303	0.347	0.327
Min	0.316	0.313	0.285	0.307	0.300			
Max	0.347	0.340	0.331	0.331	0.328			
Avg	0.336	0.326	0.321	0.319	0.312			

Color Legend:

Over Range	0.282 - 0.362	0.201 - 0.281	0.101 - 0.200	0.000 - 0.100	Under Range
Not Used	Not Used	Not Used	Not Used	Not Used	Row or Column Statistics

Total Statistics:

Maximum	0.347
Minimum	0.285
Average	0.323