From: Joyce, Ryan M.
To: Hall, Randy
Cc: Burns, Pamela Diane
Subject: [External_Sender] Hatch alternative for plant service water leak
Date: Friday, May 18, 2018 7:23:23 AM
Attachments: Scanned from a Xerox Multifunction Device.pdf
H11142 PSW Leak Location.pdf
BM11021 Sheet 9 Mark Up - Intake Structure Sump Pump Capacity.pdf

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Randy – please see answers below. Thanks.

1. Provide a drawing showing the location of the leak with respect to the elbow. Attached (H11142 mark up)

2. Provide a thickness map showing the wall thickness in the vicinity of the leaking location. Attached (scanned document)

3. Provide the minimum wall thickness calculated as part of the licensee evaluation in accordance with Code Case N-513-4 T_{min} = 0.130”

4. Section 5 of the licensee’s May 17, 2018 letter states “For a leaking flaw, the allowable leakage rate will be determined by dividing the critical leakage rate by a safety factor of four (4).” Provide the allowable leakage rate for the degraded elbow described in the proposed alternative and discuss how the critical leakage rate was determined. There is approximately 4000 gpm of margin in the PSW system but the two sump pumps for the area can only remove 80 gpm total (Reference BM11021 Sheet 9 – Attached). This makes the critical leakage rate 80 gpm and an allowable leakage rate of 20 gpm when the safety factor of four (4) is applied.

5. Section 5 of the Code Case provides provisions for augmented examinations. Discuss how the proposed alternative satisfies Section 5 of the code case. Section 5 of the Code Case requires 5 sample locations within 30 days and repeat the process within 15 days if an additional flaw is located. This requirement will be specifically addressed in Compensatory Action Number 3 of the PDO.

6. Verify that the implementation of the proposed alternative will comply with Code Case N-513-4 in its entirety, in addition to the licensee’s proposed allowable leakage rate. SNC confirms that the proposed alternative will comply with Code Case N-513-4 in its entirely.

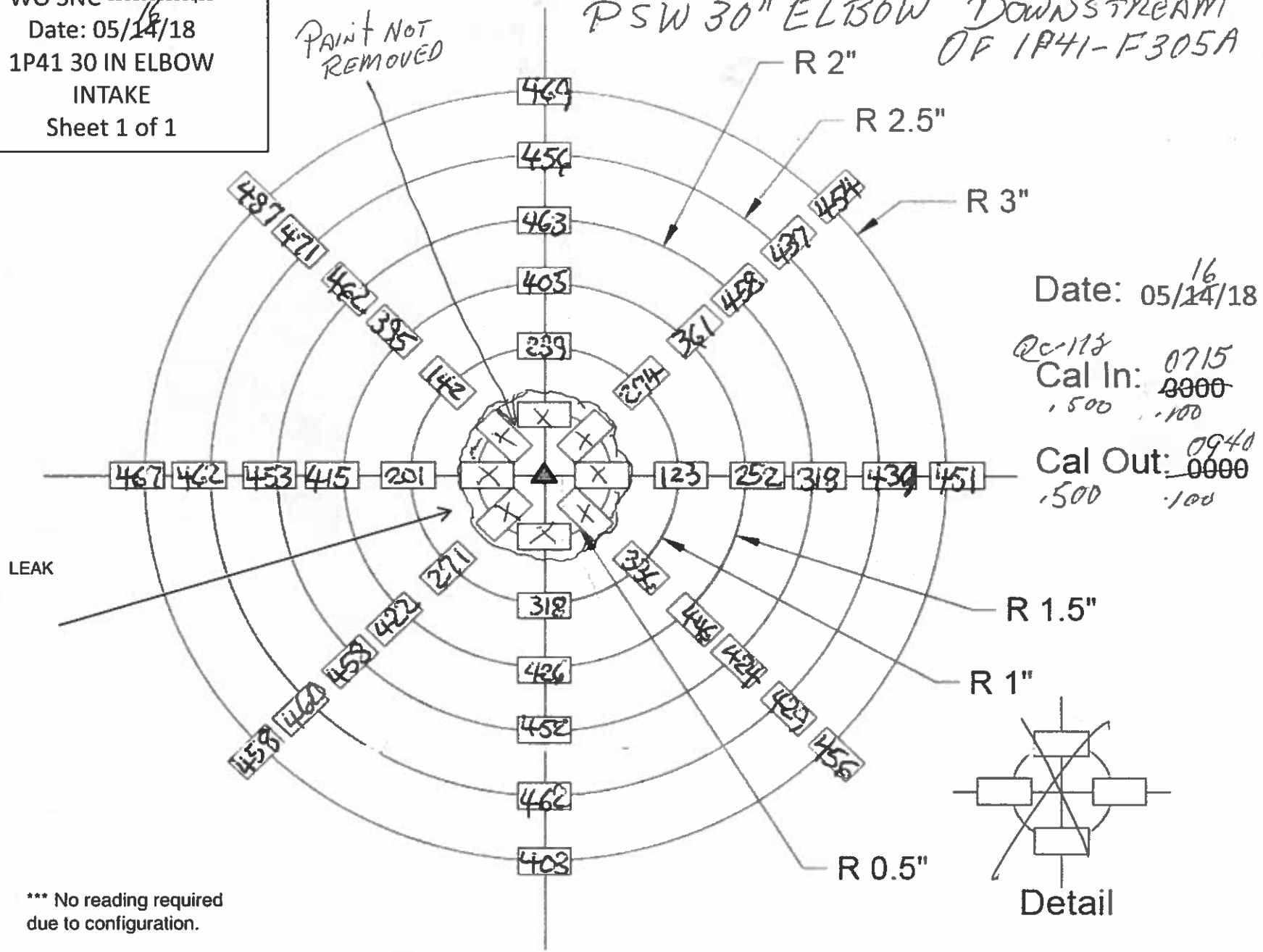
7. Section 6 of the proposed alternative states, in part, “The repair will be implemented no later than the end of the next Hatch Unit 1 refueling outage or before exceeding the temporary acceptance criteria of Code Case N-513-4, whichever comes first.” Section 5 of the proposed alternative states that the licensee will determine an allowable leakage rate. Verify that the allowable leakage rate will not be exceeded prior to system shutdown to perform a repair. The current leakage rate is 3 gpm which, based on Q=Cf*Ao*sqrt(2*(P2-P1)/p) from Crane Technical Paper 410, equates to a hole in the pipe of approximately 1/8”. Using the same equation, the hole in the pipe would have to increase to approximately 5/16” to reach the allowable leakage rate of 20 gpm. SNC is in the process of determining the flaw growth rate to reach 5/16”. If the flaw growth rate from 1/8” to 5/16” is greater than 20 months, then it will be acceptable to make the repair during the next refueling outage.

Thanks,

Ryan
(205) 992-6468 (work)

WO SNC ~~945584~~ 16
Date: 05/~~14~~/18
1P41 30 IN ELBOW
INTAKE
Sheet 1 of 1

UT THICKNESS MEASUREMENTS
PSW 30" ELBOW DOWNSTREAM OF 1P41-F305A



*** No reading required due to configuration.

REQUISITION	REVISION NO	REVISION CHANGE	MK.	TOTAL REQUIRED	QUALITY ASSURANCE	DESCRIPTION	CATALOG OR DWG NO	REMARKS	DRAWING NUMBER
37566-SS			SP-1	2	N	1¼" Vertical duplex, heavy duty sump pump, 50 GPM capacity @ 40ft. TDH flanged discharge complete with 2H.P. 208 volt., 3 phase, 60 cycle A-C motor furnished with flexible coupling on a common 52" sq base plate with manhole cover, control plate, float, float control assembly, float switch and high level alarm switch and alternator. Pump materials of construction casing-cast iron, impeller-cast iron, shaft-stainless steel, column-black pipe, bearings-carba lube. Sump depth is 12'-0".	Crane Deming Fig. 4511 Size 1¼S (SX-15925)	Control Bldg. Sump Z45C001 A&B	H-11090
48443-SS			SP-2	12	N	1½" vertical sump pump 40 GPM capacity @ 40 ft. TDH, screwed discharge, pump to be complete with 1 HP 200 volt, 3 phase, 60 cycle A.C. motor furnished with flexible coupling, control float assembly, float switch and high level alarm switch. Pumps to be mounted on floor of 2'-0" deep sump.	Crane-Deming Fig. 4508 Type B Unit #6J (SX-11842)	8 Cond. Backwash Sump G11C050 River Intake Structure Sump X45C001A&B S.W.Valve Box Sump X45C002 A+B 2X45-C002 A+B Radwaste Valve Box Sump X45C003 Circ. Water Intake Structure Sump W21C001A-D	H-11071 H-11342 H-11342 H-11342
48469-SS			SP-3	2	N	1½" Automatic Heavy Duty Submersible Sump Pump, with 1 H.P. Motor Suitable for Operation on 208 Volts.	Fairbanks Morse Inc. Model No. CD-1058	Control Bldg Elevator Sump Pump Z45-C005 River Discharge Metering Box Y21-C001	H-11342 H-11342
48450-SS			SA-1	4	N	High Water alarm switches for operating remote alarm, for 120 volt 5 Amp 60 cycle service.	Square "D" Fig. 9018 BSW-9 (SX-11857)	T. B. Sump (2)G11-M100A,B Control Bld. Sump (2)Z45-M001A,B	H-11090 H-11090
48693-SS			HCP	1	N	Horizontal centrifugal pump, 1750 rpm, 400 gpm @ 83 ft. TDH, 15 HP motor, 550 VAC. 3 phase, 60 Hz.	Ingersall-Rand No. 4x3x10HC	Circ. Water Disc. in Chlorination Sys. MPL No. W33-0001	H-11039

FOR REFERENCE ONLY
REV. 9 DATE 6/6/8?
THIS IS A CAT. IV DRAWING
AND IS NOT MAINTAINED.
SEE A-43102: LETTER LOG
SS-GP-9-4-741 HATCH

REVISIONS
Rev. 0. Issued for approval and construction SSV 4-20-72
REV 8: CHANGED MPL NOS. PER ABN 85-654 PST W.P. HB 7-15-86

Listed SSV	App
Typed pr	App
Checked JHK	App
Passed	App

SOUTHERN SERVICES INC., FOR
GEORGIA POWER COMPANY
BILL OF MATERIAL FOR
PLANT HATCH UNIT NO. 1

Applies to Drawings: MISC. EQUIPMENT FOR PIPING INSTALLATION
Date 4-20-72

Total Number of Sheets For
DRAWING NO.
LOCATION 10-502
SHEET 9
BM- 11021