EASON DIVING & MARINE CONTRACTORS, INC.

COMMERCIAL DIVING | MARINE & INDUSTRIAL TANK CLEANING

CHARLESTON, S.C. | P.O. BOX 398 - JOHNS ISLAND, S.C. 29455 | JACKSONVILLE, FLA.

(803) 722-2454

January 17, 1983

DIVERS REPORT

Service Water Intake Tunnel Inspection
V.C. Summer Nuclear Plant, Jenkinsville, S.C.

Gentlemen:

Divers began the inspection on December 18, 1982, but were unable to inspect the surfaces due to a silt deposit on the tunnel walls and floor. The silt was approximately 1/8 inch thick on the walls, and 1 inch to 2 inches thick on the floor. A much lighter version of silt deposit was encountered in the inspection of 1979. No substantial silt was on the tunnel roof. Six days (December 27, 1982 through January 4, 1983) were spent brushing the walls and vacuuming the floor utilizing diver-directed fire main eduction. The material was discharged in the service water pond next to the pumphouse. Several bags of construction related trash were removed to prevent clogging the eductor.

On January 7, 1983, the final inspection was performed with S.C.E.& G. Engineers Bob Whorton and Jeff Archie in attendance. The Diver used a S.C.E. & G. provided .015 inch feeler gauge to measure crack thickness. Larger gauges were provided but not needed. The crack patterns were so jagged that penetration was not possible. However, it is estimated that the cracks were no larger than .015 inches. An underwater T.V. system was utilized while the Diver attempted to penetrate the cracks. Mr. Whorton viewed the top-side monitor and a tape recording was made of the feeler gauge attempts.

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PDR ADOCK 05000395
Q PDR

Continued

INSPECTION PROCEDURE

Observation paths were established per sketch (1) with A, F representing the South Wall and C, D the North Wall. B is the roof and E the floor.

One station location was established at the East End (entrance) of the tunnel and designated a X (sketch 2) and increasing to X + 122 at the West End (vertical shaft).

Measuring equipment consisted of 100 foot and 50 foot tapes in each corner secured at each end. S.C.E. & G. provided feeler gauges of .015, .030 and .045 inches but only the .015 inch was necessary.

Preliminary inspection had established crack locations and the Diver, with voice communications, proceeded to the East End, North Wall (C,D) with the T.V. camera.

NOTE: ALL UNREPAIRED CRACKS WERE CONSIDERED NEW AND DOCUMENTED.

January 17, 1983

Continued

INSPECTION RESULTS
(See sketch 3 to be used with video cassette)

Total of nine (9) cracks on North Wall.

Total of eight (8) cracks on South Wall.

No cracks on the floor.

One (1) crack on each wall that runs across the roof. No other cracks on the roof.

One (1) crack on the South Wall is horizontal. All other cracks are vertical.

Seeler on old (repaired) cracks is flaking off. A sample was brought out of the tunnel and given to Mr. Whorton.

A white film is leaching from the new cracks. Mr. Whorton believed the substance to be calcium. A sample was brought out of the tunnel and given to Mr. Whorton.

An inspection of the Wing Walls revealed no new cracks.

The trap door at the tunnel entrance (east end) was secured with S.C.E. & G. provided chain and lock.

Sincerely,

Thomas D. Eason

Thomas D. Eason
President

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SUBJECT: OBSERVATION PATH LOCATIONS SKETCH 1

ORIGINATOR

DATE

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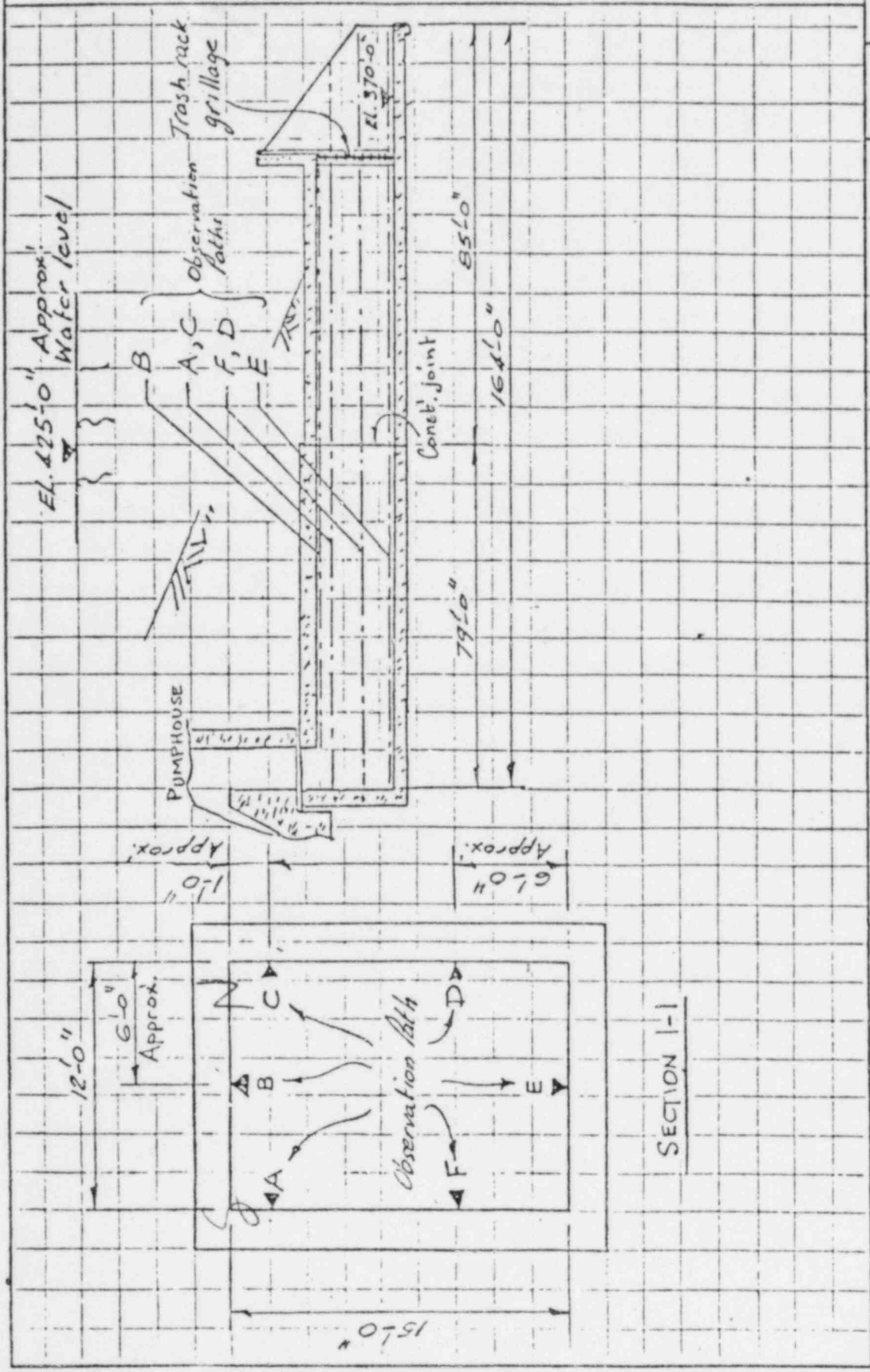

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SUBJECT STATION LOCATION MARKS - SKETCH 2

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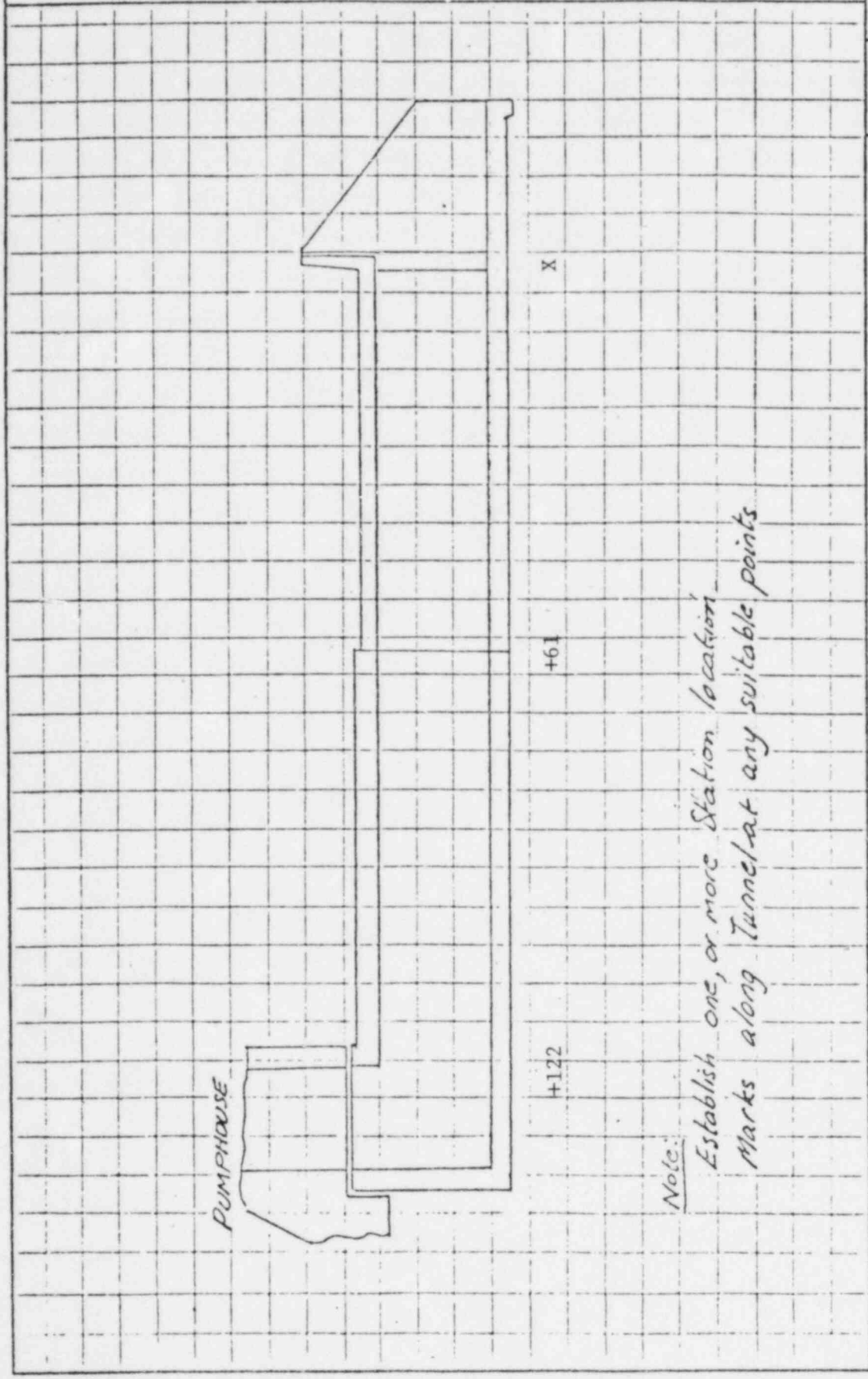

Note: Establish one, or more Station location Marks along Tunnel at any suitable points

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CRACK IDENT. No.	OBSERV. PATH	STATION IDENT.	DISTANCE FROM STATION	WIDTH OF CRACK (ins) NONE	LESS THAN 0.015	0.015 to 0.030	0.030 to 0.050	GREATER THAN 0.050	REMARKS
1	A			XX					CRACK THAT STARTS
	B			XX					15" FROM (E) ON (D)
	C	X	27'0"			XX			AND ENDS 1' FROM
	D	X	27'6"			XX			(B) ON (C).
	E			XX					
	F			XX					
2	A			XX					CRACK THAT STARTS
	B			XX					2 INCHES FROM (E)
	C			XX					ON (D) AND ENDS
	D	X	43'7"			XX			5 FEET INTO (D).
	E			XX					
	F			XX					
3	A			XX					CRACK THAT STARTS
	B			XX					3 INCHES FROM (E)
	C	X	64'0"			XX			ON (D) AND ENDS
	D	X	64'1"			XX			3 FEET 3INCHES
	E			XX					FROM (B) ON (C).
	F			XX					

SUBJECT: CRACK SURVEY DATA SHEET - SKETCH 3

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CRACK IDENT. No.	OBSERV. PATH	STATION IDENT.	DISTANCE FROM STATION	WIDTH OF CRACK (ins) NONE	LESS THAN 0.015	0.015 to 0.030	0.030 to 0.050	GREATER THAN 0.050	REMARKS
4	A			XX					CRACK THAT STARTS
	B			XX					1 FOOT 6 INCHES
	C	X	68'1"		XX				IN TO (C) AND ENDS
	D			XX					4 FEET 6 INCHES IN
	E			XX					TO (C).
	F			XX					
5	A			XX					CRACK THAT STARTS
	B			XX					2 FEET 6 INCHES
	C	X	75'0"		XX				INTO (D) AND
	D	X	76'1"		XX				CONTINUES INTO
	E			XX					(C) ENDING 2 FEET
	F			XX					3 INCHES FROM (B).
6	A			XX					CRACK THAT STARTS
	B			XX					2 FEET 6 INCHES
	C	X	81'9"		XX				FROM TOP OF (C)
	D			XX					AND ENDS AT TOP
	E			XX					OF (C).
	F			XX					

SUBJECT: CRACK SURVEY DATA SHEET - SKETCHES

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7	A	X	92'8"		XX				CRACK THAT BEGINS 1 FOOT 4 INCHES INTO (D) CONTINUES INTO (C) ACROSS (B) AND ENDS AT (A) WHERE IT JOINS AN OLD REPAIRED CRACK.
	B	X	90'0"		XX				
	C	X	89'0"		XX				
	D	X	90'6"		XX				
	E			XX					
	F			XX					
8	A			XX					CRACK THAT BEGINS 3 FEET 1 INCH INTO (C) AND ENDS 1 FOOT 8 INCHES FROM (B).
	B			XX					
	C	X	91'2"		XX				
	D			XX					
	E			XX					
	F			XX					
9	A			XX					CRACK THAT BEGINS AT (C) AND ENDS 3 FEET 6 INCHES FROM (B).
	B			XX					
	C	X	109'8"		XX				
	D			XX					
	E			XX					
	F			XX					

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CRACK IDENT. No.	OBSERV. PATH	STATION IDENT.	DISTANCE FROM STATION	WIDTH OF CRACK (ins): NONE	LESS THAN 0.015	0.015 to 0.030	0.030 to 0.050	GREATER THAN 0.050	REMARKS
10	A	X	52'0"		XX				CRACK THAT BEGINS AT (F) AND ENDS AT TOP OF (A).
	B			XX					
	C			XX					
	D			XX					
	E			XX					
	F	X	52'6"		XX				
11	A	X	71'0"		XX				CRACK THAT BEGINS 2 FEET 2 INCHES INTO (F) AND ENDS AT TOP OF (A). ABLE TO PENETRATE TOP OF (A) WITH GAUGE.
	B			XX					
	C			XX					
	D			XX					
	E			XX					
	F	X	67'9"		XX				
12	A	X	80'2"		XX				CRACK THAT BEGINS 2 FEET INTO (F) RUNS UP TO (A) ACROSS (B) AND 1 FOOT 6 INCHES DOWN INTO (C)
	B	X	80'2"		XX				
	C	X	81'5"		XX				
	D			XX					
	E			XX					
	F	X	79'2"		XX				

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CRACK IDENT. No.	OBSERV. PATH	STATION IDENT.	DISTANCE FROM STATION	WIDTH OF CRACK (ins) NONE	LESS THAN 0.015	0.015 to 0.030	0.030 to 0.050	GREATER THAN 0.050	REMARKS
13	A	X	95'5"		XX				CRACK THAT BEGINS 6 FEET 6 INCHES INTO (F) AND CONTINUES INTO (A) 2 FEET 7 INCHES.
	B			XX					
	C			XX					
	D			XX					
	E			XX					
	F	X	95'5"		XX				
14	A	X	99'0"		XX				CRACK THAT BEGINS AT TOP OF (A) AND CONTINUES DOWN 4 FEET 8 INCHES.
	B			XX					
	C			XX					
	D			XX					
	E			XX					
	F			XX					
15	A	X	108'0"		XX				CRACK BEGINS AT BOTTOM OF (F), CONTINUES THRU (A) STOPS AT (B).
	B	X	109'2"		XX				
	C			XX					
	D			XX					
	E			XX					
	F	X	107'5"		XX				

SUBJECT: CRACK SURVEY DATA SHEET - SKETCH

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SUBJECT: CRACK SURVEY DATA SHEET - SKETCH 3

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CRACK IDENT. No	OBSERV. PATH	STATION IDENT.	DISTANCE FROM STATION	WIDTH OF CRACK (ins) NONE	LESS THAN 0.015	0.015 to 0.030	0.030 to 0.050	GREATER THAN 0.050	REMARKS
16	A			XX					HORIZONTAL CRACK
	B			XX					4 FEET ABOVE (E)
	C			XX					BEGINNING AT 113'9"
	D			XX					ENDING 120'2".
	E			XX					
	F	X	113'9"	---	XX				
	A								
	B								
	C								
	D								
	E								
	F								
	A								
	B								
	C								
	D								
	E								
	F								

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