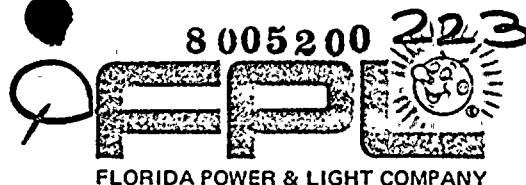


MEMRO REC



MAY 2 AM : 01

April 30, 1980
L-80-131*Central File*
50-389

Mr. James P. O'Reilly, Director, Region II
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

AO/2

Dear Mr. O'Reilly:

Re: RII:JPO
50-389
IE Bulletin 80-03

FPL has reviewed the design of all systems that contain low pressure or holdup tanks that can be valved to contain primary system water. We considered a tank acceptable if it met one of the following criteria:

- (a) non-isolable vent.
- (b) design specification of one atmosphere (15 psig) external pressure.
- (c) installed in a system such that superheated or saturated condensables cannot enter the tank nor can a significant pumped vacuum be drawn.

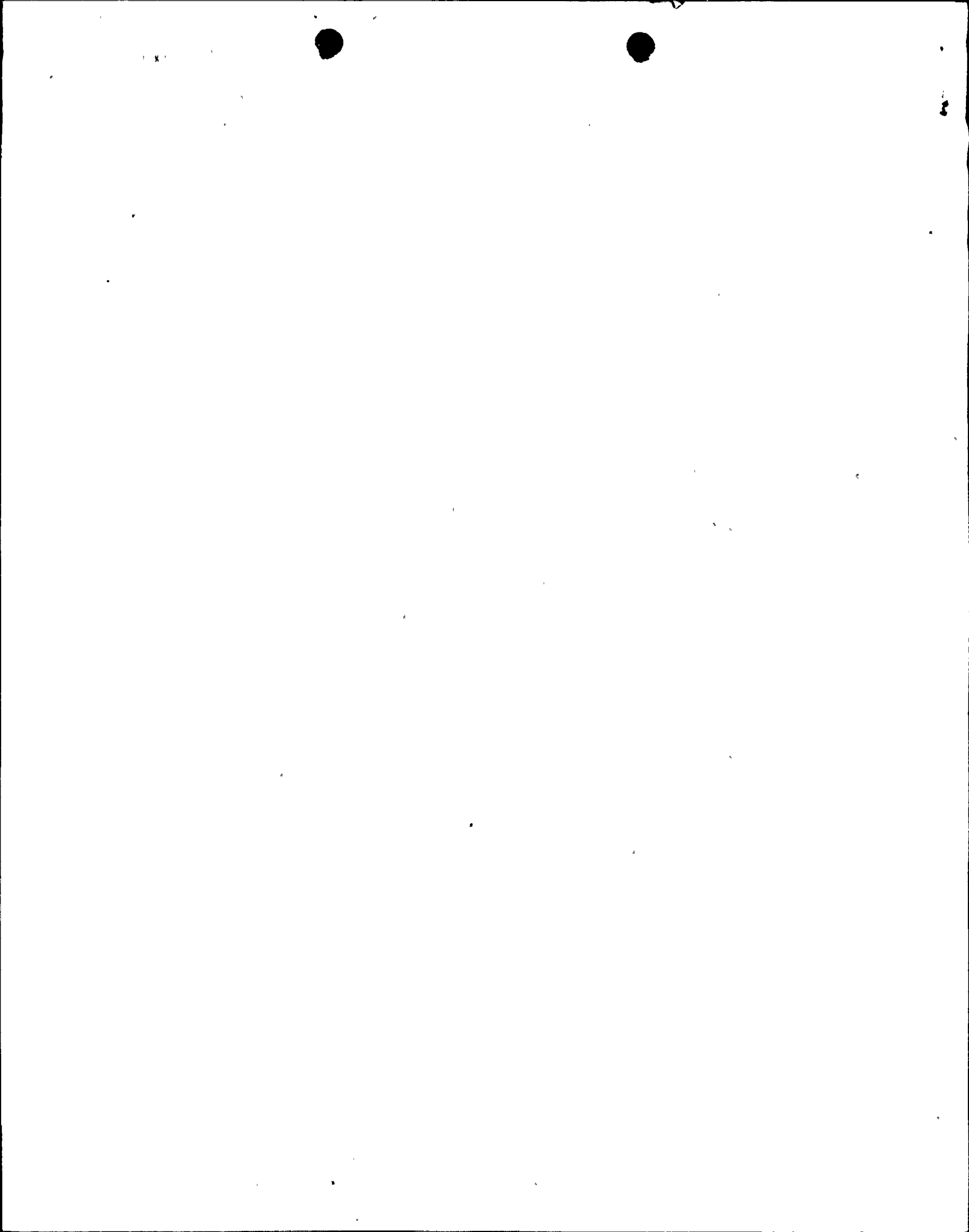
The table in Attachment I summarizes the results of this survey. Note that all tanks with the exception of the holdup tanks can be dismissed for reasons of meeting at least one of the preceding criteria.

The holdup tanks can receive high temperature condensable gases from numerous relief valves. Vacuum damage might result from the condensation of these gases if the tank were completely isolated. In addition vacuum damage might result from pumping out a tank (or tanks) with the holdup drain or holdup recirculation pumps under conditions of complete isolation. Since the tanks are approximately 56 feet tall, the tank internal pressure could drop to the saturation pressure of the liquid being pumped (e.g. 1.5" Hg for water at 92°F) well before a full tank would be emptied or a pump would lose suction.

Protection against holdup tank vacuum damage is provided by the regulated nitrogen overpressure applied through the common relief valve header. The capacity of this valve (16 SCFM) is greater than the volumetric discharge rate through any discharge path.

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Tank nitrogen overpressure is maintained via individual lines from the relief valve header to each of the tanks. Each of these lines contains a single, locked open, manual diaphragm valve. In addition, the tank upper heads are interconnected via the header line to that regulator discharging to the gas collection header. Each tank is connected to this header by a second individual line containing a single normally open valve.

~~Each holdup tank is provided with individual high and low pressure annunciation via four pressure switches. These annunciators will alarm at internal pressures lower than 1/2 psig. This setpoint provides adequate time for the operator to restore isolated nitrogen overpressure or stop the drain pumps before vacuum damage could occur.~~

In order for holdup tank vacuum damage to occur, there would have to be either inadvertant closure of both the normally open and the locked open valves in the lines to the nitrogen overpressure together with an extended failure to respond to the isolated tank low pressure annunciation or, in the case of interruption of the nitrogen overpressure supply from the supply header, an extended failure to respond to an annunciation of low pressure in all four holdup tanks. FPL believes these combinations of errors are too improbable for further consideration.

Therefore, FPL considers all systems reviewed in response to this Bulletin to have acceptable vacuum protection.

Very truly yours,



RE
Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/JRP/ah

Attachments

cc: Harold F. Reis, Esquire

ATTACHMENT I

ST. LUCIE UNIT'2 REVIEW OF LOW PRESSURE OR HOLD UP TANKS

SYSTEM	COMPONENT (TANK)	NON ISOL. VENT YES/NO	DES. PRESS INT/EXT (PSIG)	SAT'D CONDESABLES INPUT - YES/NO	PUMPED VACUUM YES/NO	ACTION
RCS	QUENCH	NO	100/15	-	-	DISMISS
CVCS	VOL. CONTROL	NO	75/15	-	-	DISMISS
"	CHEM. ADDN.	YES	-	-	-	DISMISS
"	B.A. BATCH.	YES	-	-	-	DISMISS
"	B.A. MAKEUP	YES	-	-	-	DISMISS
WMS	REAC. DRAIN	NO	25/15	-	-	DISMISS
"	FLASH	NO	70/15	-	-	DISMISS
"	HOLD UP.	NO	10/2	YES	YES	EVALUATE
"	EQUIP. DR.	YES	-	-	-	DISMISS
"	CHEM DR.	YES	-	-	-	DISMISS
"	L'DRY dr.	YES	-	-	-	DISMISS
"	SPENT RES.	NO	50/0 (1)	-	-	DISMISS (1)
"	WASTE COND.	YES	-	-	-	DISMISS
"	GAS SURGE	NO	40/0	NO	NO	DISMISS
"	GAS DECAY	NO	190/0	NO	NO	DISMISS

ATTACHMENT I - CON'T

ST. LUCIE UNIT 2 REVIEW OF LOW PRESSURE OR HOLD UP TANKS

SYSTEM	COMPONENT (TANK)	NON INSOL. VENT YES/NO	DES. PRESS INT/EXT (PSIG)	SAT'D CONDESABLES INPUT - YES/NO	PUMPED VACUUM YES/NO	ACTION
"	B.A. COND.	YES	-	-	-	DISMISS
"	B.A. COND.	YES	-	-	-	DISMISS
"	RES. ADDN.	YES	-	-	-	DISMISS
SIS	REFUELING WATER	YES	-	-	-	DISMISS

- (1) ACTUAL WALL THICKNESS OF .354 IN. USED ON THIS SPENT RESIGN TANK (8 FEET DIA.) IS GOOD FOR EXTERNAL PRESSURE OF 20 PSIG PER ASME SECTION III, CLASS 3.