What is current heat load?

04/99

Notes + background info for trip to decommissioning facilities

1. How is water made up to the SFP?

2. How are the pumps powered that cool the SFP? What kind of support systems do they have?

3. Describe the SFP cooling system that is currently being used. See #26

4. What onsite and offsite power sources are available to equipment that supports the SFP? (Ac and dc power) Do you have uninterruptable power? Is it Seismic Category I? Are they protected against missiles from tornadoes? How differs from operating unit?

5. What fire protection equipment is available? Is it Seismic Category I?

6. How is the site staffed? On nights and weekends?

7. Experience of the fuel handlers?

8. How are rounds made? How often?

9. Typical duties of fuel handlers?

10. What is proceduralized wrt the SFP? For example, if the cooling system fails, is recovery proceduralized?

11. Do you maintain electricians, mechanical, and other maintenance people on site? If not, how are they summoned and how quickly do they respond when a problem arises?

12. What is onsite EP for a decommissioned plant? Who responds and where do they respond to?

13. How many make up sources do you have? Are they Seismic Category I? What is the volumetric flow rate of the makeup sources available? Do they require power?

14. How tightly do you maintain the airtightness your building? Leave doors open? Leave hatches open?

15. Have you maintained your hvac system in the pool area in an operable condition? What is its capacity?

16. Where is the sfp control room and what is instrumented there and what is alarmed? Are there separate alarms and monitors for sfp level, temperature, and radiation levels? Do you have SFP leakage monitoring in the sfp control room? If not, where is it monitored and alarmed?

17. What has been your maintenance record for the SFP level, temperature, and radiation instruments since the plant was shut down?

18. How are these instruments powered? Safety busses?

D/103

19. Are the instruments redundant? Are they diverse?

20. Is your plant being dismantled? What effects on sfp?

21. When was the last time a heavy load was transported over the sfp? How often are heavy loads moved by crane? Over the pool? What is the expected frequency of cask movement (e.g., moves per month)? When do you expect to start/end?

22. When transporting heavy loads, does the plant use the single failure proof crane or other types of cranes? What path limits exist? How are they ~~insured~~? assured?

23. Is there a specific drop analysis?

24. What are the practical effects of making the SFP an island?

25. ~~What equipment is now used to cool the pool~~

26. ~~Is it Seismic Category I?~~

27. What do you have in the pool besides fuel? In particular is anything hanging on the side of the pool or sitting on top of the racks?

28. What would the radiation field be if the pool water level dropped? How low would the water have to drop before you worried about the radiation levels? (Consider answer to question above).

29. Have you had any drain down events (big or small) since decommissioning? Have there been any gate or gate seal leaks since decommissioning? Any transfer tube leaks? Any other leaks? Have there been any siphoning events since decommissioning?

30. What are your TS requirements for the pool and its supporting equipment?

31. Do you have any capped off lines under the pool that would provide a SFP leakage path if the lines failed?

32. Do you conform to the heavy loads program and RG-?????

33. Are transient combustibles controlled at the site, in the SFP area, and near the SFP cooling equipment?

34. Have there been switchyard or electrical problems since decommissioning?

35. What is the seismic capacity of the water source you use for makeup to the pool?

36. How do you handle pool makeup and cleanup normally and in emergencies?

37. What is the maintenance record of the system(s) used to cool and makeup to the pool?

38. What has been changed recently (last couple of years) under 50.59 in the SFP area?

39. What kind of problems has the pool and its supporting equipment suffered?

40. What kind of seals do the gates have and do the seals require support systems (e.g., air system)?

1. How is water made up to the SFP?

2. How are the pumps powered that cool the SFP? What kind of support systems do they have?

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4. What onsite and offsite power sources are available to equipment that supports the SFP? (Ac and dc power) Do you have uninterruptable power? Is it Seismic Category I? Are they protected against missiles from tornadoes? How differs from operating unit?

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39. What kind of problems has the pool and its supporting equipment suffered?

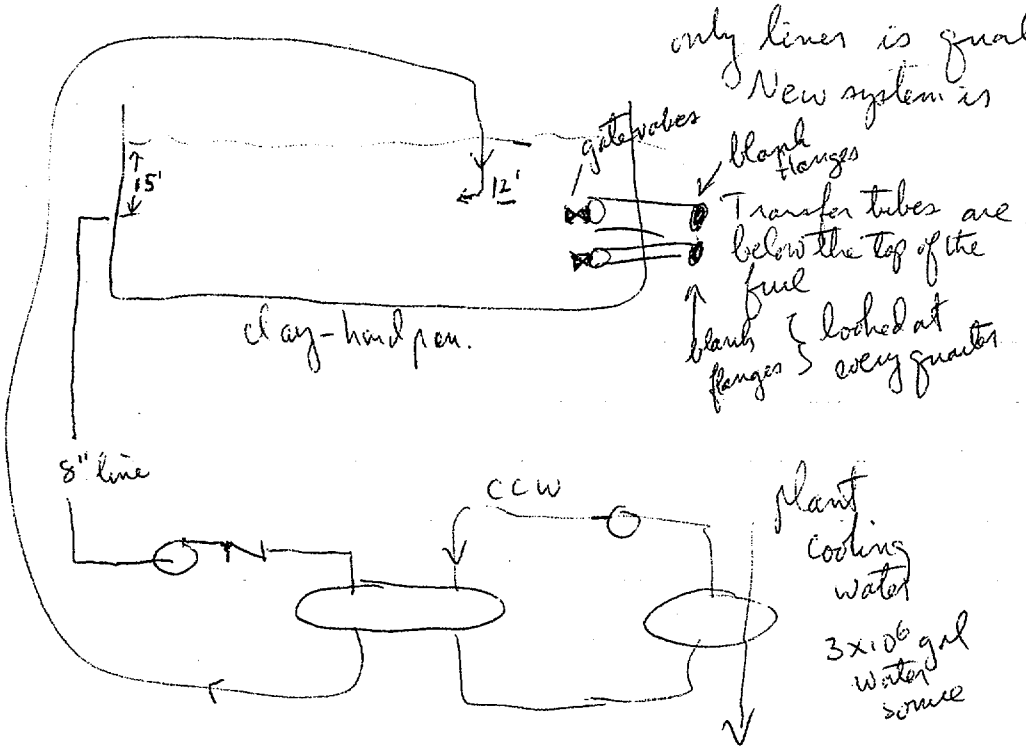
40. What kind of seals do the gates have and do the seals require support systems (e.g., air system)?

Rancho Seco (1)

4/311 Critical Area

4/19/1999

Walk in, no guards at portal; were in receiving area.
Gave me unescorted access.



only liner is qual class I
New system is Class 2 or 3

1 1/2 - 2°F heatup/day
15' down.

pool thickness = ~~1'6"~~

cask pit - 6' thick 3/16" steel.
fuel loading pit - 1' thick stainless

still use clamp syst. TS on chloride + fluorides. Runs all the time.

#1. noncondensible - demin tank. pumped.
4 sources: rinse water
Demin water
fire water
Service water

2. No backup emerg power. 40 days to reach emerg action.
No EDG backing when running. Could use DHR syst.

3. In compliance w/ dryfield plan. System operates. 1 reg + 1 diesel pumps. No Seismic cat I.

(2) 4/19/99 Rancho Seco

5. No fire prot equip in SFP building. Same when operating.

6. Certified fuel handlers
5 crews of 3.

shift sup
CR operator
aux
} certified fuel handlers.
All were at least an RO.

Scaled back INPO approved training program. Same for whatever still runs.

Training requirements just about the same. 6 days operations.
4 cycles/year - 36 days in Training per year.

10. Normal operating + casualty procedures (1 level down from EOPs)
Have annunciator procedures. Normally off computer

11. Full maint dept elect, I&C, mechanical, QA/QC, HP.

12. Still man Tech Support Center - 24 hrs/day, 365 days/yr. Shrunk counties, state + local county. Can't get offsite members now to where they would respond.

14. Maintain ⊖ pressure on building. Same as when operating.

15. Yes. Same as operating

16. Main Control room.

→

(3) 4/19/99

17. Syst just runs + runs + runs.
Area rad monitors are a problem.
ONE area rad monitor in building
Had problem w/ level alarms (floats). Putting in an ultrasonic system.
Changed out temp monitor (age - still worked).
(local temp, local SFP suction temp + decks temp)
In control room, only a temp alarm. (110°F).
Closed circuit TV monitors level in CR.
Level alarm in CR.
1 area rad monitor (operable if moving fuel)

20. SF building won't be dismantled until all fuel in dry storage.

21. Have external cask crane. Can't get over fuel. Hatch through roof limits travel.
Heavy load procedure hasn't changed. Can move things up to weight of fuel assembly.

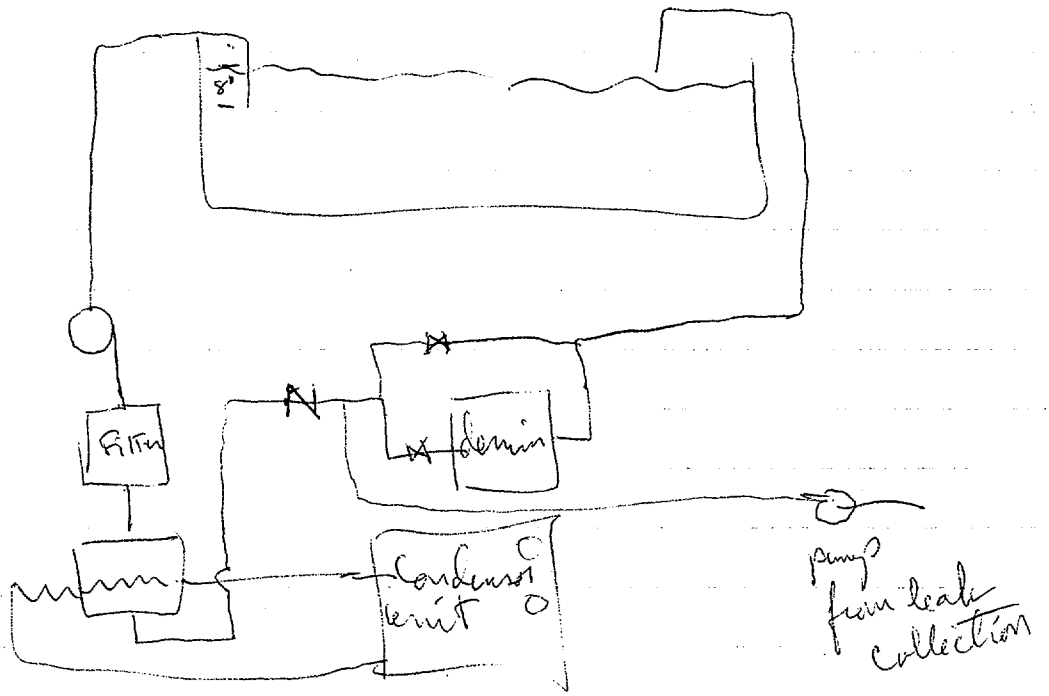
Want to load 2 canister/month.

Never moved over pool.

24. Don't need CCW or plant cooling water (once thru)
cooling by chiller
leakage goes back to pool
Will isolate + decommission old lines. Will run new syst for 6 weeks to see if new is reliable (old kept around for 6 weeks)

(4) 4/19/99 Rancho Seco

Only thing outside is condensing unit.



All annunciators on computer. Has pool temp. Hi/low level alarm doesn't work. Have TV monitor. New syst will have analog pool temp + level. Have lo-low level alarm (?)

No idea on water shielding + close.

skid + controls
Silver tank = demineralizer for skid

1 area monitor

Not sure if instrs on DC backed bus.

(5)

4/19/99 Rancho Seco

30. Rad monitor moving fuel
{37' when handling
{23' " not
140°F temp max
chemistry
heavy loads

33. fire ext along wall
Have admin plan to limit combustibles

Volume of spreader
N_2 pressurized seals
air-backed

Volume spreader ≅ $40' \times \frac{12 in}{ft} \times \frac{172 gal}{in}$ ≅ $2560

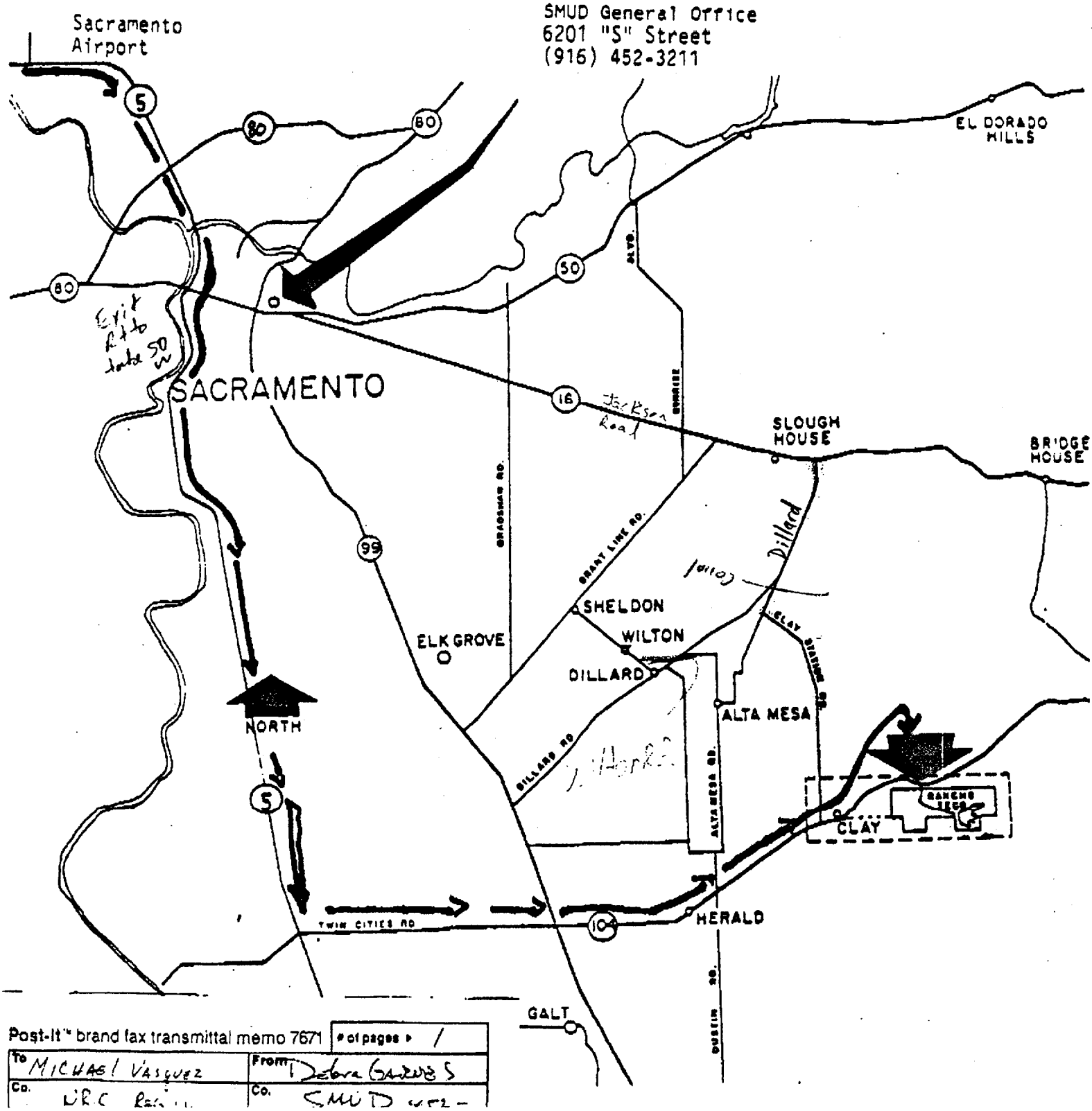
≤ 8 feet down if fill up spreader area (approx)

Jerry Dolezinski - 916-452-3211 x 4914

From Metro Airport
Take I-5 South (apprx. 30 miles)
Twin Cities Road
East on Twin Cities (apprx. 20 miles)
.. Rancho Seco
Make a right and follow access road
to the plant.

0 10
Miles

I-5 to Loutie 50: To 2nd St. Exit
turn "S" Street



Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To MICHAEL VASQUEZ	From Debra GARNES
Co. NRC Reg...	Co. SMUD ...z-

Trojan SFP (1) 4/20/99

Control room is only emergency response facility @ Trojan.

1 a) potable water → demin → SFP (pump)
b) Service water syst (river water)
c) " " " alt. pump
d. portable pump river water

3. SFP cleaning / cooling -

4. No backup power (normal). Have little generator to run skid SFP cooler.

15. Same as original. SFP vent out since no iodine.

16. camera on level.

29. plugs in old SFP line (@ 10' down) + line cut + capped

9/1:

Single ~~level~~ temp indicator
hi/low level alarm
TV monitor on pool

TS - level, temp, boron,

6. All mOps are CF Handlers

Trojan ⑦ 4/20/99

⑥ site 3 - 1 shift mgr, 2 operators
⑦. all CFH - SRO or RO
for ISFSI - have new "fuel movers"
8. 2 times/shift 12 hr shifts

10. off/normal instructions

13. volumetric flow rate - fire pump ≥ 200 gpm
all ≥ 500 gpm
normal makeup ≥ 15 gpm w/ clean water
Diesel + electric fire pump.

11. Day shift - otherwise, on-call.
12. ~~at~~ unusual event -
alert - activate to control room / pagers
16. 2 criticality monitors - alarm in CR
good condition
(SFP leakage monitored here too. Not alarmed. Look in drains on rounds.
27. safe ends
28. 5';

29. NO; no leak in trans tube
33. yes
34. no
35. 2 gas driven pumps to put hose in river
SW
fire main.
40. gates use instr air.

(B) 4/21/99

Trojan

Capped the transfer tube that goes to the pool.

30. TS on level + water chemistry 15' - 7'10" water > fuel.

31. ~~Pool~~ Temporary filter
Cooling lines mostly removed that went down into pool.

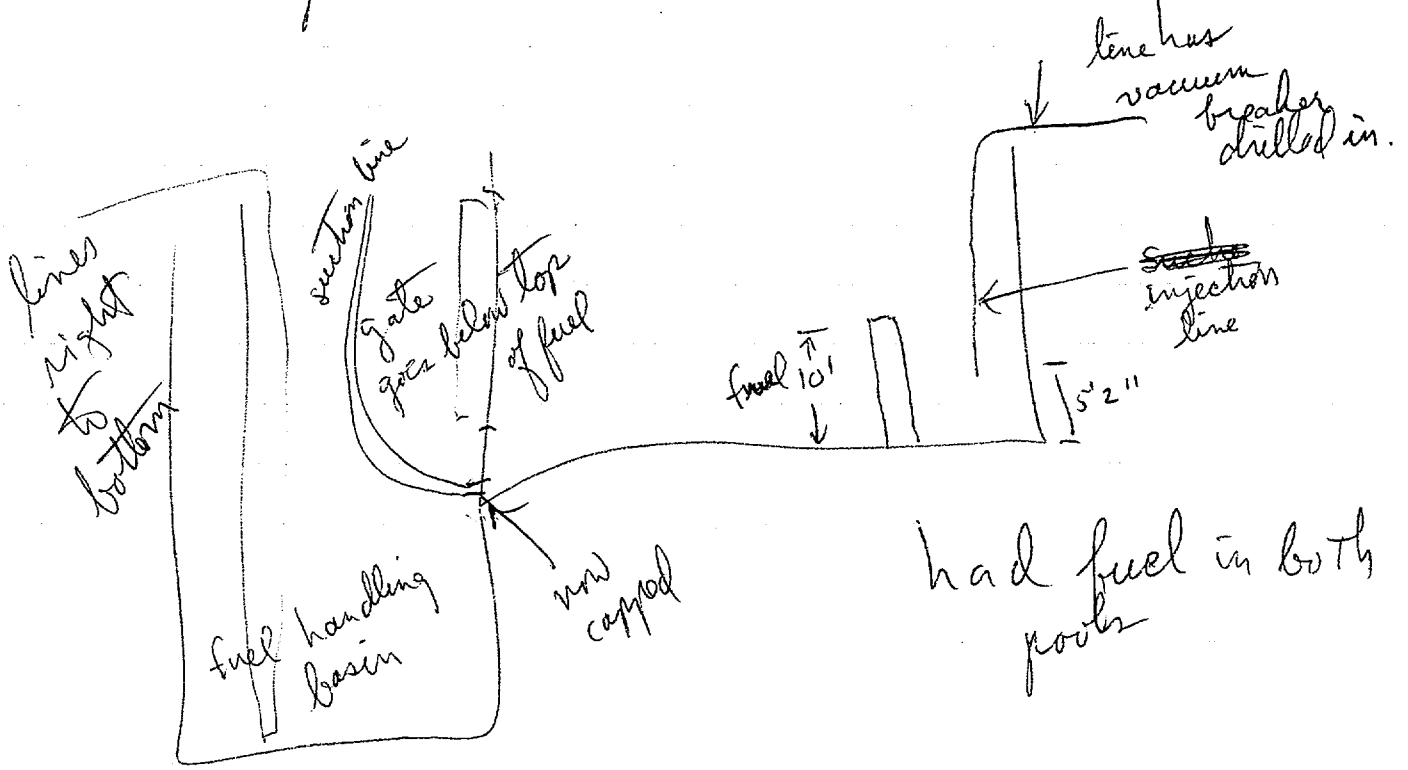
→ See drawing

Drilled in siphon holes. Now cut off (all except 1).

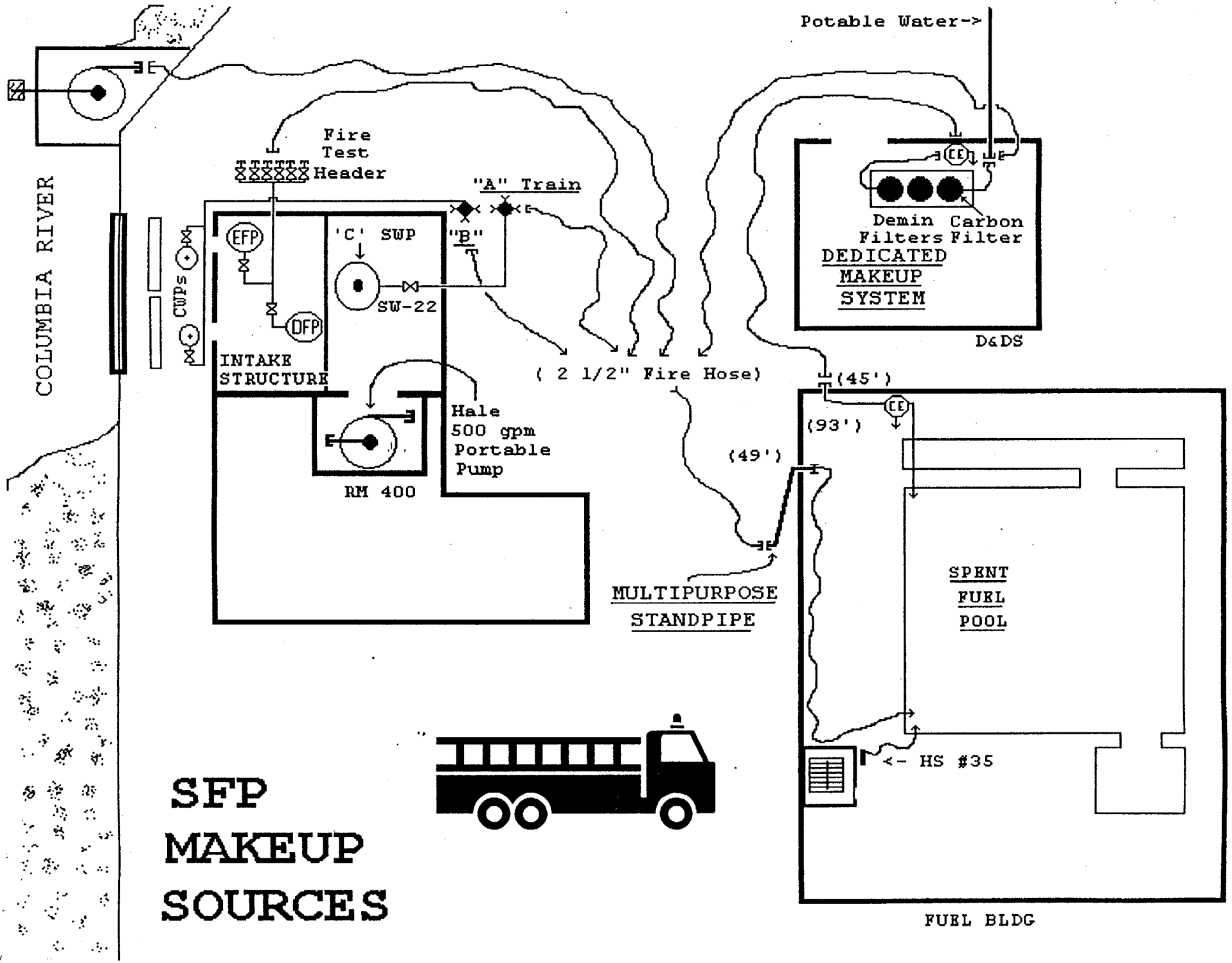
32. ?

33. Controlled

34. 2 common switch yard at site - Unit 1 off 138 KV sw. Tclyard.
Unit 1 can get power from other transformer. (Read bus transfer)
No problems



had fuel in both pools


COLUMBIA RIVER
Potable Water->
Fire
Test
Header
"A" Train
"B"
'C' SWP
SW-22
EFP
DFP
CWPs
INTAKE
STRUCTURE
Hale
500 gpm
Portable
Pump
RM 400
Demin
Filters
Carbon
Filter
DEDICATED
MAKEUP
SYSTEM
D&DS
(2 1/2" Fire Hose)
(45')
(93')
(49')
MULTIPURPOSE
STANDPIPE
SPENT
FUEL
POOL
<- HS #35
FUEL BLDG
SFP
MAKEUP
SOURCES

~~Hilton @ O'Hare 773-686-8000~~

~~Hyatt @ Woodfield~~

House of Blues 312 245 0333 D

Summerfield Suites 312 787 6000 D

~~Hotel Sofitel 800 SOFITEL~~ ~~800 233 5959~~ @ O'Hare

(630) 852-1234

Jay Fisher
~~Hengl~~

~~Hilton~~ 226-1611 3rd & ~~Stark~~ 7th
Lloyd Center S of Burnside
~~Jensen~~ ~~503 228 8000~~ N. Salmon St.
~~Marriott~~
~~Governor~~ 224 3400
~~Riverview~~ 228 3233
~~Double Tree Columbia River~~

Trojan 405 North
Exit ~~to~~ St Helens
Follow 30 N.
15 miles > St Helens

41 miles

Lower Parking Lot
Building at top of Steps - Door on LHS
Call Gary Zimmerman 8:30 AM.

TROJAN NUCLEAR PLANT
71760 COLUMBIA RIVER HWY.
RAINIER, OREGON 97048

COVER SHEET

FAX

To: Glen Kelly

From: Gary Limmerman

Subject: Figure 3.3-4

Date: 4-27-99

Pages: 2

COMMENTS:

If you have any difficulty with this transmission please contact:

Pat Schaffran
503-556-7529
Fax: 503-556-7002

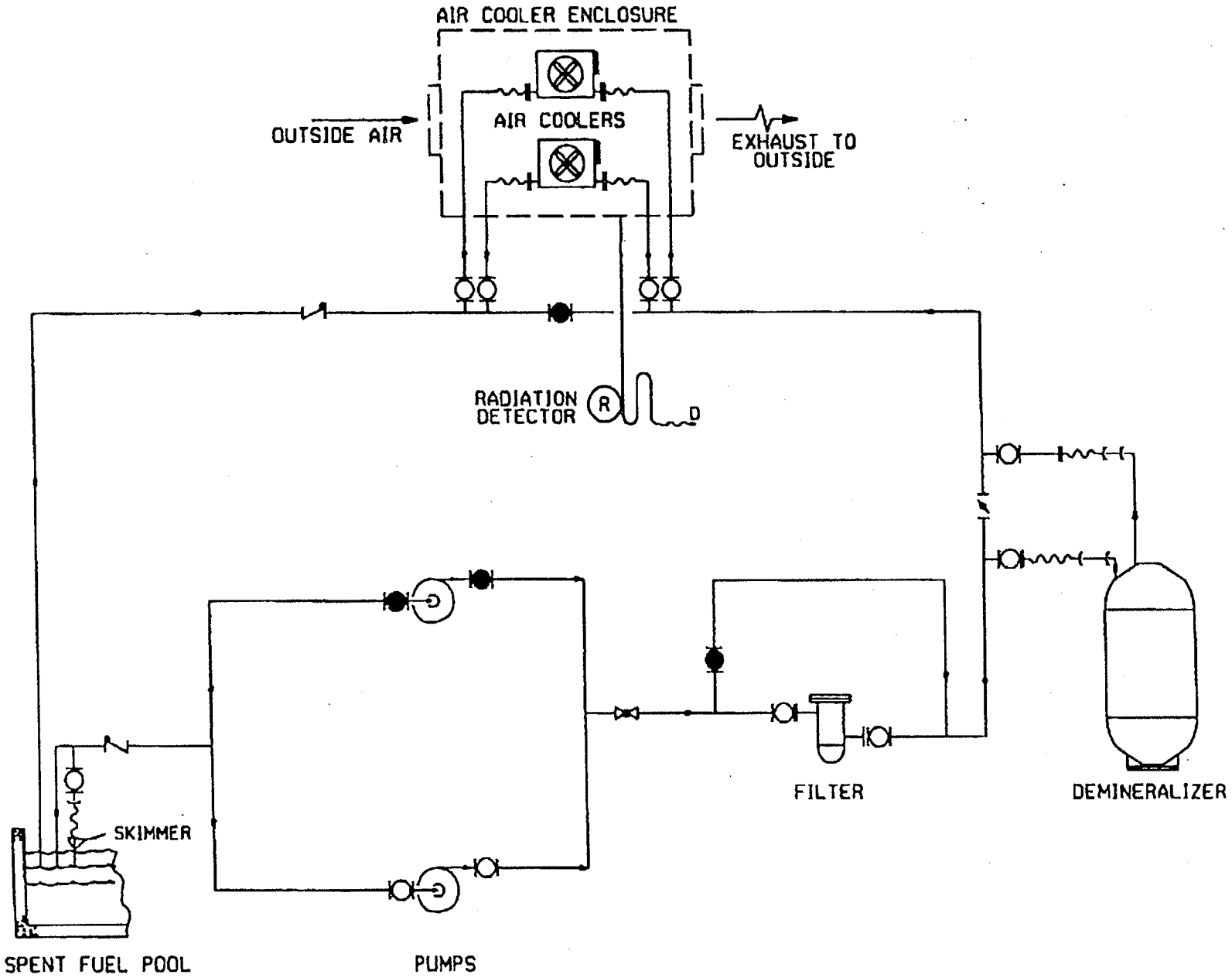


Figure 3.3-4 Modular Spent Fuel Pool Cooling and Cleanup System

Dresden 1 (1) 4/21/99

1. Clean demin (normal) pumped (low volume)
fire prot (hose) emergency - dedicated w/ staged hose.
not seismic pumped.
Dres 1 not seismic; UBC seismic 3.3% dead load
1/2

fuel pool not seismic

2. offsite

3. No cooling syst

5. still has hose station + sprinkler system

6. Certified fuel handlers
qualified Unit 1 Supervisor - NRC approved program
(bus - SRO on unit 2 or 3).

8. Unit 1 - 8 hr shift
Unit 2-3 has rounds person check ~~too~~ Unit 1 fuel pool
level 1/shift - 8 hrs; (12 hr in refueling)

10. Procedures if lose water level. DFP-0850-01
Use fire protection as energ source.
fire syst common to all 3 units - looped header

11. Dedicated maintenance 5 day work shift
on call maint

12. Have a station plan - 2 action levels for Unit 1
General Site Emerg Plan -
→ Where do they go? Go to Tech Support Center

(2) 4/21/99

13. 4,000 – 10,000 gal / month Dresden 1

14.

15. have maintained HVAC. Orig vent to atmos, now exhausts to chimney (no delay, just monitored).
HEPA filter.

16. Unit 1 controls are in Unit 2/3 Control room. Half wall removed. Separate radiation and (temp/level) alarms. Can read out area radiation (new stuff for dry cask storage) local for temp + level
)

19. 2 ARMs
1 level
1 temp pool
1 " cask pit

20. Minor

21. Never over fuel, yes over transfer pool
gates don't go over fuel.
procedurelized controls for crane &
New crane will have electrical stops.

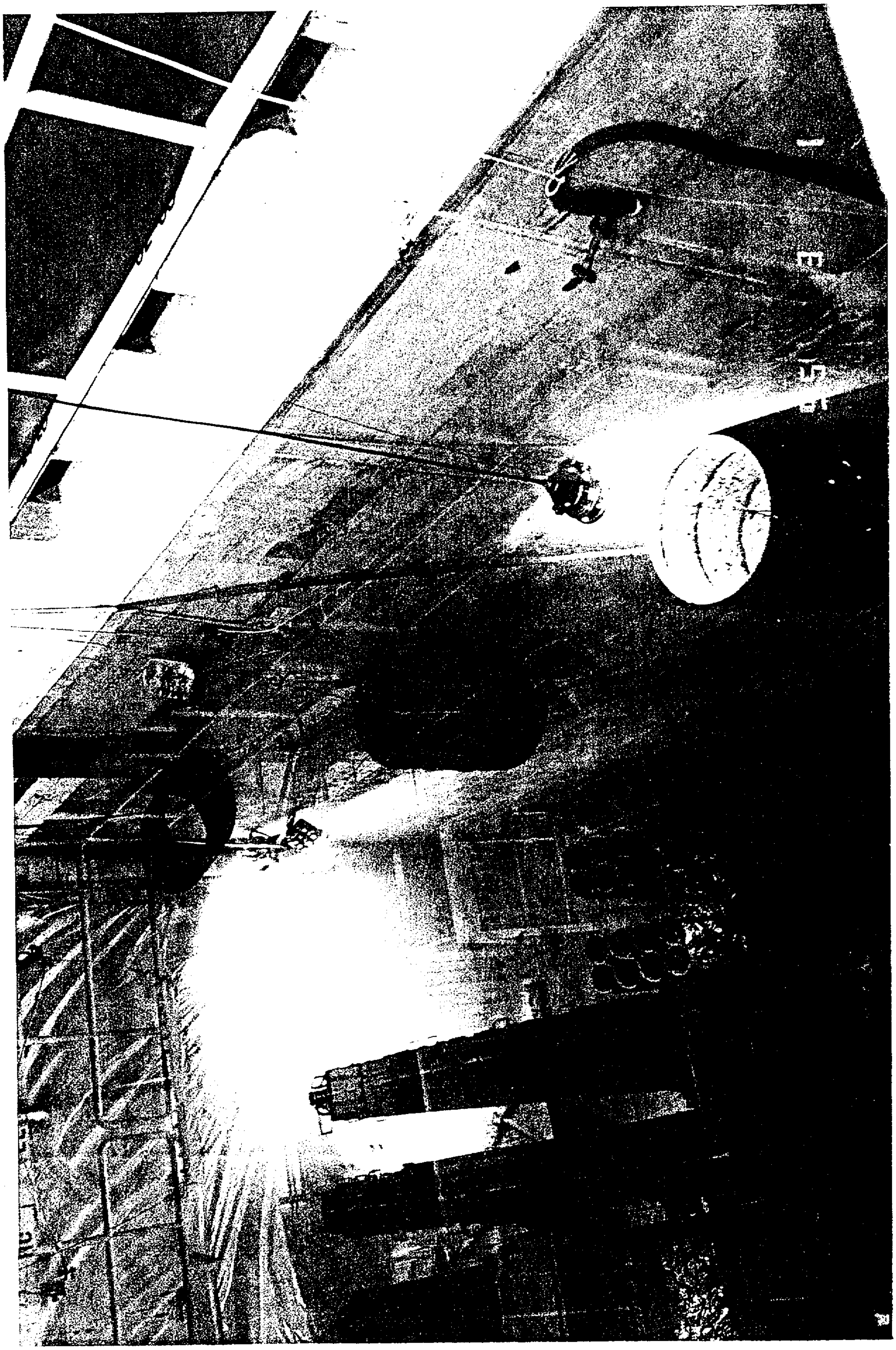
→ 27. Small components (bolts, spring clips - in buckets)

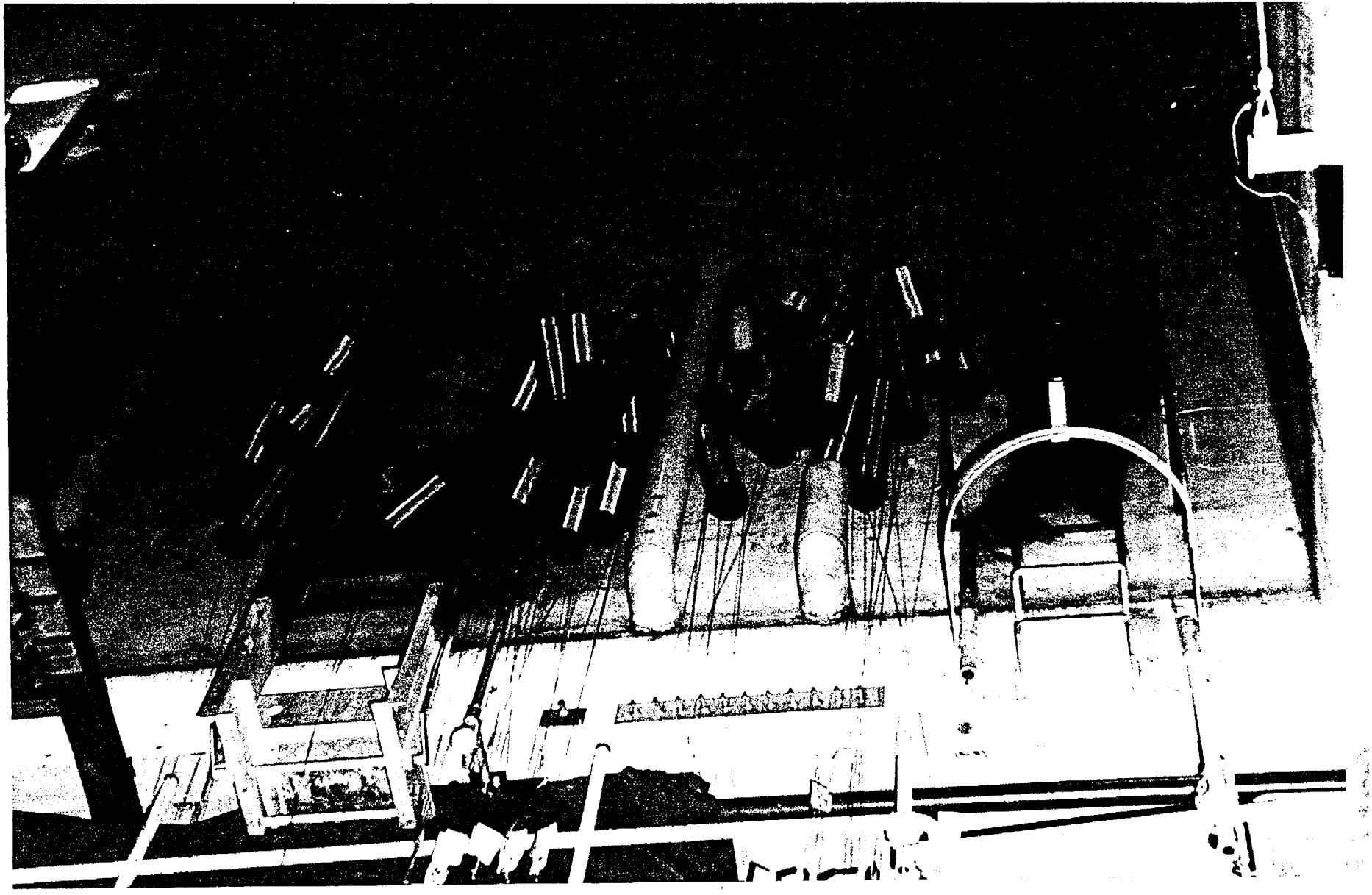
→ 28.

29. No.

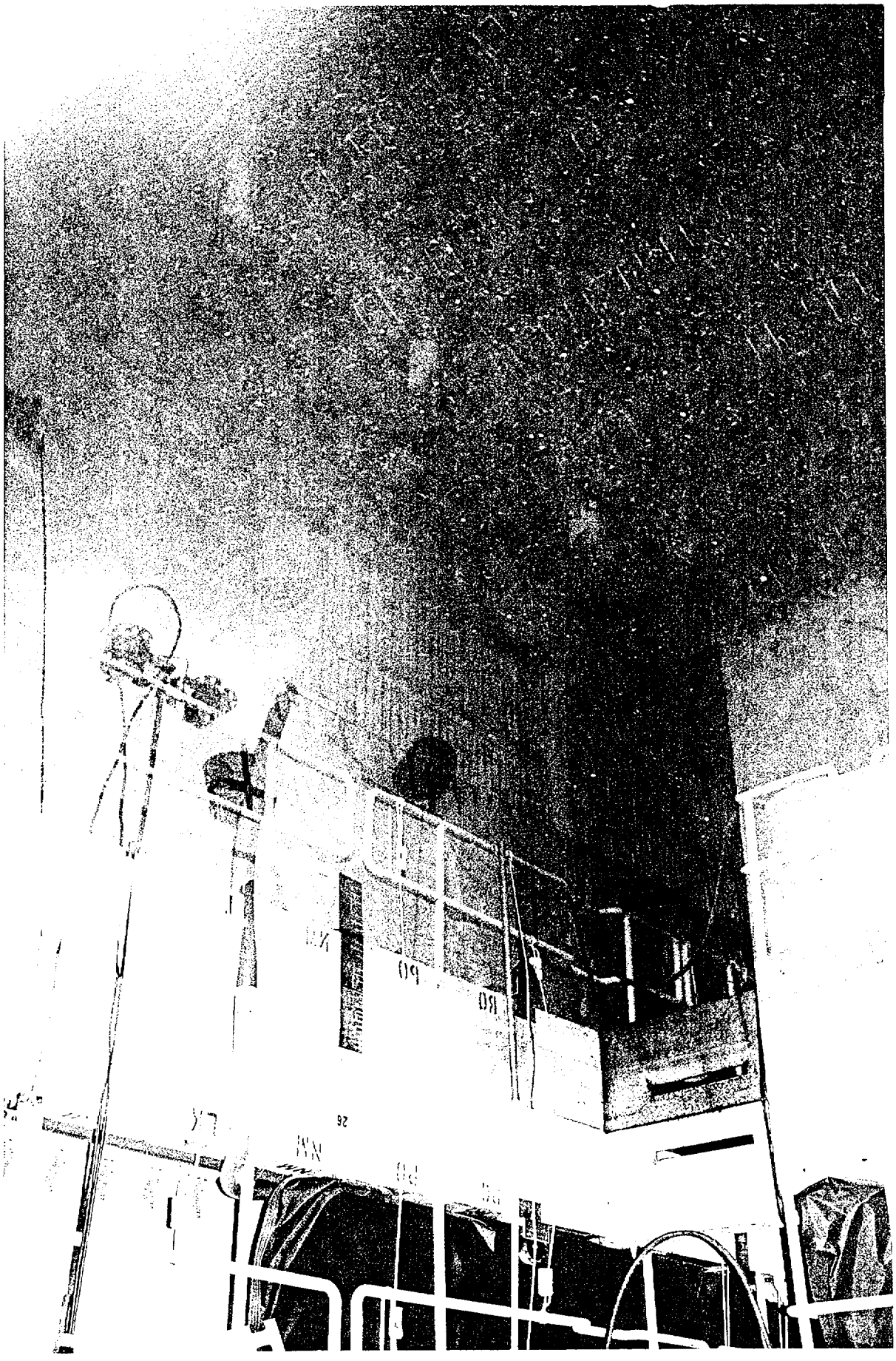
(4) Dresden 4/21/99

filters for pool cleaning

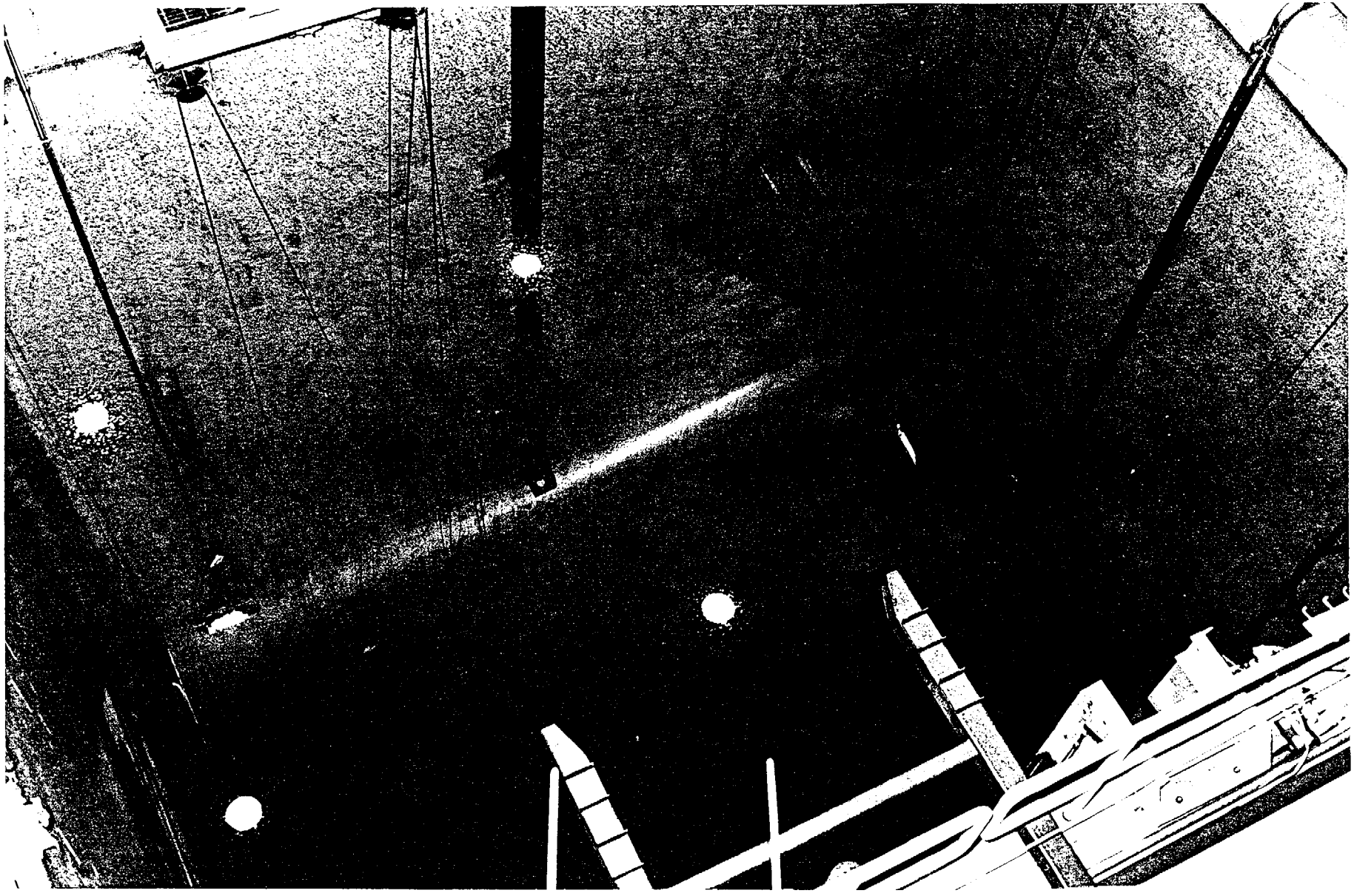




FE
DC
A



33 32
25 24
17 16
9 8



Dresden I

Figure 3.1
Fuel Handling System

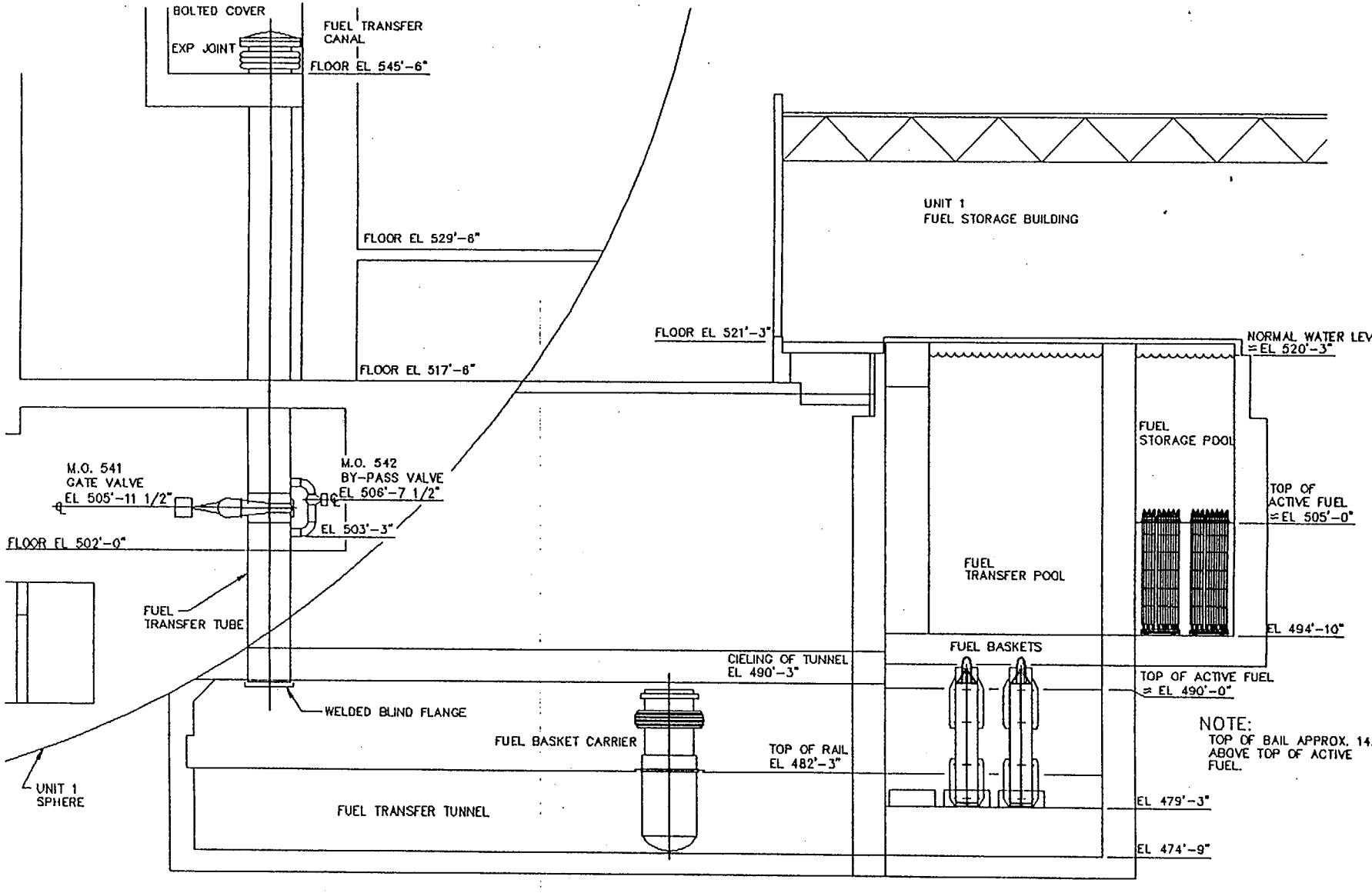
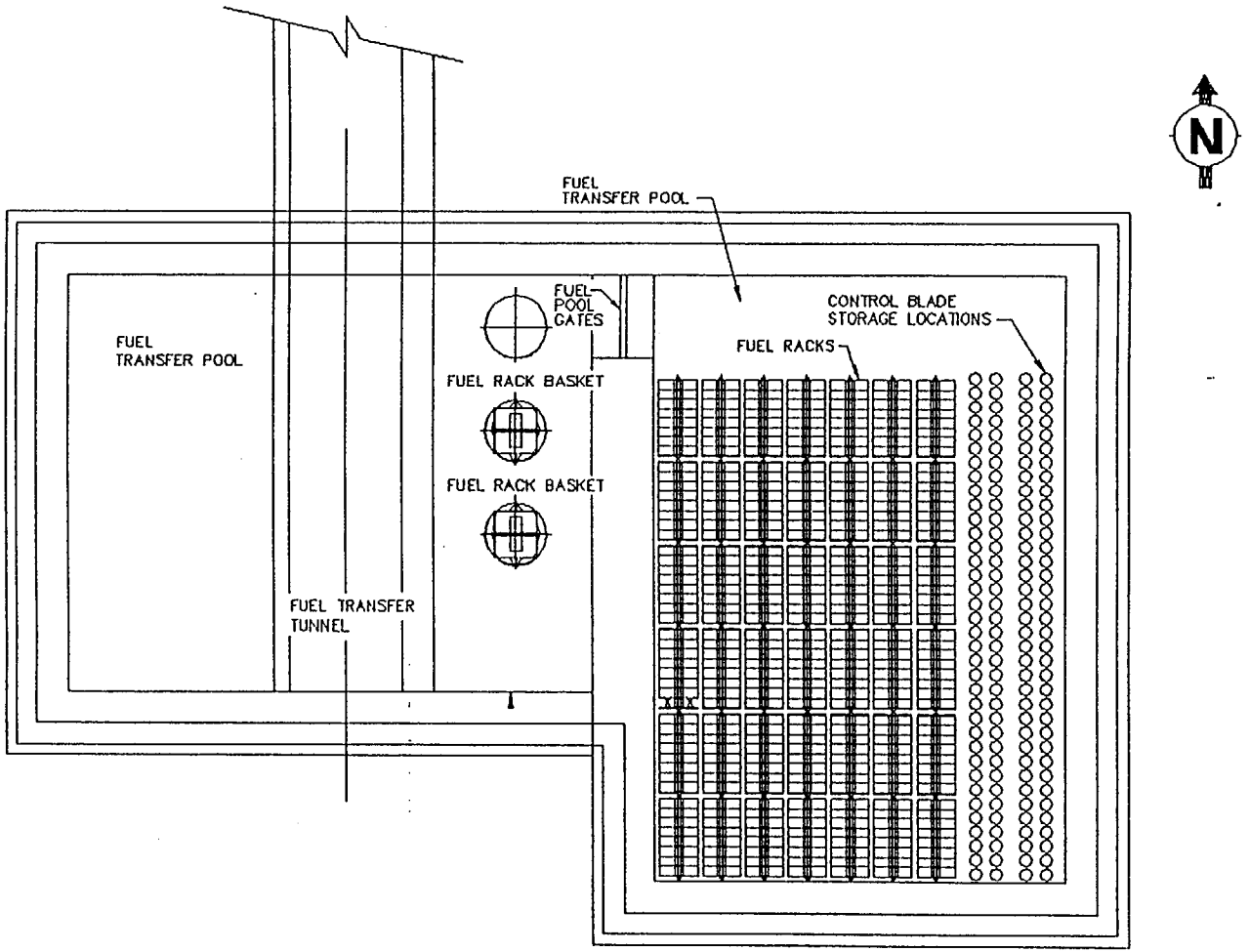


Figure 3.2
Unit 1 Fuel Storage Pool & Fuel Transfer Pool



Maine Yankee 7/22/99

Current heat load – 3M BTU/hr.
1 offsite power line
1 diesel generator

1. a) primary water pumps from primary water tank
   b) fire prot. (elect + diesel pumps)

2. pumps powered by 1 offsite line thru transformer. Have manually started DG on blocks next to 3 fan coolers which provides power to fans + pumps if offsite power is lost. Not Seismic Cat I.

3. See picture. Use old SFP cooling system pumps + heat ex. ← Figure 3.3-9 Rev 16

4. No uninterruptable power. Not missile protected.

5. Fire protection has electric + diesel driven pumps. Have dry sprinkler syst + hose stations in SF building. Maintain deluge system for X-16 transformer. Not Seismic Cat I.

6 a. shift mgr + certified fuel handler + security people. (like shift supervisor)
   actually have 3 operators now. TS requires 2.
   Most senior people.
   Have someone else who moves fuel.

→ nights + weekends

(2) 4/22/99 Maine Yankee

8.

9.

10.

11. elect, mech + I+C 8-4 pm. Same for HP. NOT there on back shift. Operators are trained in HP. SGW has its own HPs. Most were former Maine Yankee HPs.
On call.

12. Offsite EP is dismantled (as far as NRC, State has some requirements). Go to TSC + EOF locally.

(3) 4/22/99 Maine Yankee

13. Makeup sources - demin tank, fire water system from fire pond.

14. ⊖ pressure

15. Mods to system. Used to be tied into plant. Now plant is an island. Lower capacity (?)

16. SFP control room is in the gate house. Hardened, but no ventilation (recommend don't turn off ventilation; MY's opinion)

→

17. No problems

18. offsite power

19.

→ 20. yes

21. Only during reracking. OK'd by NRC.

22. Will upgrade crane to SF prof.

(4) 4/22/99 Maine Yankee

24. Can remove all the buildings + not affect SFP island.

27. Some trash in baskets. Before reracks they cleaned up the pool.

28.

29. Fuel pool level drain down 6-7" couple of months ago. Not sure what it was.

30. TS on level + boron concentration when no verification of fuel after moved fuel.

31. fuel transfer tube - valved closed + capped

32.

33. yes - control combustibles.

34. None - Are a direct connection.

35. ?

36. gates in pool

Hausner
DBE .05g
Hypothetical .1g perform intended fct.

Maine Yankee 4/22/99

1/shift, 8 hr shifts

alarms on computer screen

mockup mimic of system on screen

also 1 person has to be in control room

all certified fuel handlers are ex-SROs

CRS - former aux operators
operators

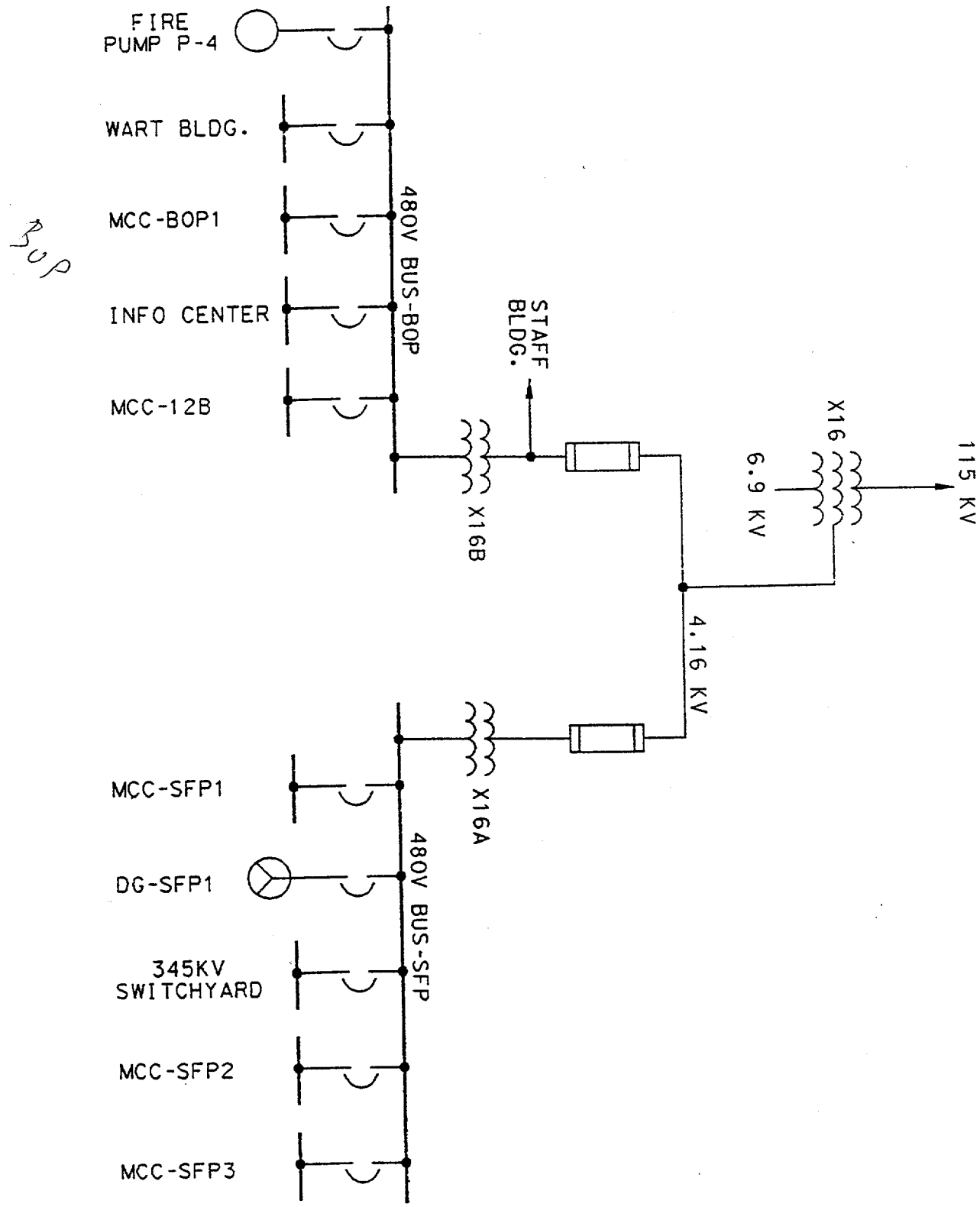
Abnormal operating procedures

Security cameras in control room.

makeup pump is local starting (150 gpm+)
fire pumps (not sure of gpm through hose) two 2 1/2" hoses
a. town water
b.

Operator says ok shielding at 2-3'

Operator calls people by memory of who is needed in the middle of the night. Security helps out. Military experience.



MAINE YANKEE ATOMIC POWER CO.	ONE LINE DIAGRAM TRANSMISSION AND UTILITY INTERCONNECTIONS WITH MAINE YANKEE	FIGURE 3.3-24

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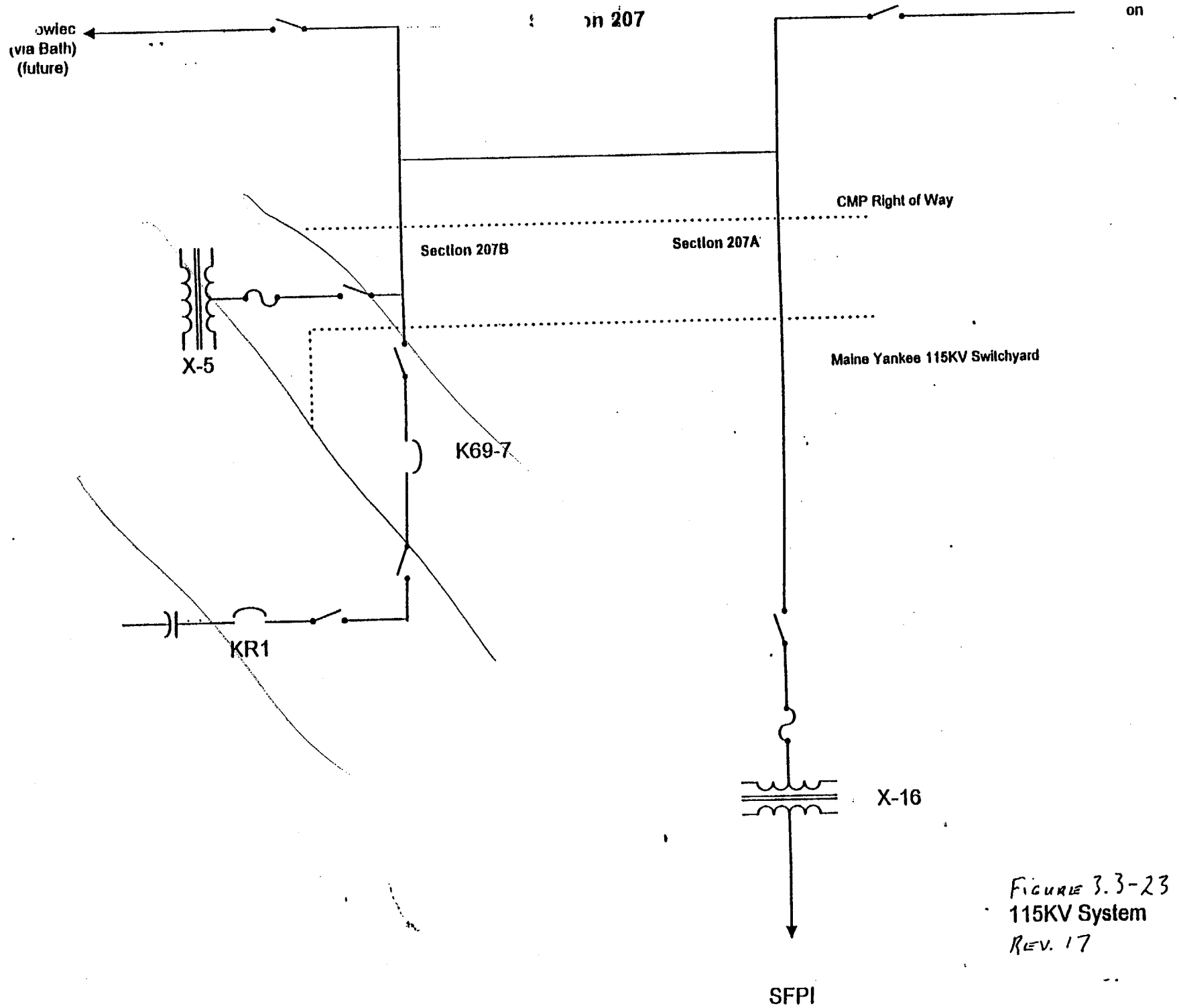


FIGURE 3.3-23
115KV System
REV. 17

FRIENDS of the COAST

OPPOSING NUCLEAR POLLUTION

Post Office Box 98, Edgecomb, Maine 04556

207-882-7801 fax 207-563-6302 e-mail - shadis@ime.net

June 5, 1998
By Fax and by Mail

Mr. Leonard J. Callan
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject(s):

A. Request For Clarification of USNRC Safety Concerns Regarding the Spent Fuel Pool at Maine Yankee Atomic Power Station.

B. Request That The Meeting to Discuss the Maine Yankee Spent Fuel Heat-up Analysis in Support of Emergency Plan and Financial Exemption Requests, Now Scheduled for June 9, in Rockville, Maryland, Be Rescheduled and Held in the Vicinity of MYAPS to Accommodate the Vital Interest of the Public.

C. Request That USNRC Not Act on Maine Yankee Atomic Power Company Applications For Emergency Plan and Financial Protection Exemptions Until Certain Design Features and Accident Scenarios are Analyzed with Respect to Current and Proposed Spent Fuel Pool Operating Conditions.

Mr. Callan,

The following requests are tendered on behalf of Friends of the Coast- Opposing Nuclear Pollution, which is a non-profit organization incorporated in the State of Maine. Friends of the Coast has actively investigated and advocated nuclear safety at Maine Yankee Atomic Power Station (MYAPS), and generically, since April, 1995.

A. Request For Clarification of USNRC Safety Concerns Regarding the Spent Fuel Pool at Maine Yankee Atomic Power Station.

I serve as Friends of the Coast Representative to the MYAPC Community Advisory Panel (CAP) on Decommissioning. At a recent meeting, I was disturbed to hear Michael Meisner, President of MYAPC, explain that NRC's apparent renewed interest in Generic Issue 82 and NUREG 1453 " Spent Fuel Cladding Fire Scenario" was not a serious effort to address a potential safety issue. Rather he told our CAP, news media, state officials, and public attendees that, "...(It) is just a bureaucratic thing."

Is it?

Mr. Meisner stated that a spent fuel cladding fire at MYAPS is simply impossible.

Is it?

If it is impossible, what is the justification for NRC's insistence that insurance and emergency response apparatus at MYAPS not be reduced in accord with the facility's de-fueled condition?

Is it now NRC's position that additional analysis is required to determine the means of propagation, likelihood, or consequences of a cladding fire, criticality accident, or other scenario for radiation releases?

Are consequences of a spent fuel pool (SFP) accident now considered by NRC to be worse than previously estimated?

Are any of the above concerns currently under examination at NRC?

Mr. Meisner further stated that USNRC's sole motivation, in not accepting MYAPC's spent fuel heat-up analysis, and in not moving on accepting MYAPC's emergency plan and financial protection exemption requests, was an attempt to force utilities, like MYAPC to employ an untested heat-up computer-modeling code. Mr. Uldis Vanags, State of Maine Nuclear Safety Advisor, concurred, offering that he had confirmed Mr. Meisner's assertion by means of a phone call to Battelle Labs.

Are these gentlemen correct?

B. Request That the Meeting to Discuss the Maine Yankee Spent Fuel Heat-up Analysis in Support of Emergency Plan and Financial Exemption Requests, Now Scheduled for June 9, in Rockville, Maryland, Be Rescheduled and Held in the Vicinity of MYAPS to Accommodate the Vital Interest of the Public.

Friends of the Coast, which is on the mailing list for MYAPC, did not receive notice of this meeting until Monday, June 1st. This lack of proper notice complicates the hardship of distance. Interested citizenry and non-profit organizations do not have the financial resources that permit utilities to pay premium airfare, that is, twice the advance-notice airfare, in order to meet extemporaneous scheduling. The work schedules of interested citizens are not nearly so flexible as the schedules of corporate executives nor are the pockets of working people quite so deep as those of electric utilities.

Friends of the Coast has raised this issue with USNRC in the occasion of past meetings. It is ludicrous to say meetings are, "Open to the Public", pursuant to " Commission Policy on Staff Meetings Open to the Public",59 Federal Register 48344, 9/20/94, if those meetings are not adequately noticed to the public and are so removed from the effected public as to present an unaffordable opportunity to attend.

USNRC has defended this practice in the past by claiming that the agency has its technical expertise on the premises should technical questions arise. Our experience of several meetings at Region I headquarters, and our interview of Washington-based persons who have attended a score of meetings in Rockville, is that this practice appears not to be a necessity, for no technical experts have been called in during any of the meetings. I note that the list of Participants for the June 9th meeting includes three persons, Seymour Weiss, Michael Masnik, and Michael Webb, who have traveled to Maine, more than once, for public relations events. They would, surely, not be loathe to do so at the onset of our summer tourist season.

I am, as an aside, somewhat distressed to see that only one potential expert in spent fuel pool and fuel heat-up analysis has been designated to take part in the meeting on behalf of NRC. One can only hope that individual will be supplemented for a thorough and in-depth analysis of the MYAPS SFP situation.

Of course, a meeting, which is truly open to the public, would give those of us who have a vital interest an opportunity to learn about the issue, and gauge the quality of discourse for ourselves.

C. Request That USNRC Not Act on Maine Yankee Atomic Power Company Requests For Emergency Plan and Financial Protection Exemptions Until Certain Design Features and Accident Scenarios are Analyzed with Respect to Current and Proposed Spent Fuel Pool Operating Conditions.

If a spent fuel cladding fire is even a remote possibility, has NRC reviewed MYAPS accident scenarios and/or conditions particular to MYAPS to determine possibilities,

(e.g., accident precursors, accident scenarios, and bounding events) not previously considered?

Has NRC determined that there are no unanalyzed conditions or scenarios, which may contribute to the probabilities or consequences of an accident or act of sabotage?

NUREG 1453 states that the likelihood of a SFP loss of water accident at a PWR, such as MYAPS, is less than that for a BWR because PWR SFP's are generally bedded on rock or firmly bedded in the earth. **The MYAPS SFP, however, shares one pool wall with the basement of the primary auxiliary building (PAB)**

- Has NRC, in reviewing drain down potential, factored in that the SFP at MYAPS has one long pool wall placed against, or sharing a basement wall, with the basement of the PAB?

- Has NRC ascertained the drain down rate through a pool liner and SFP/PBA basement wall failure?

- Has NRC ascertained the volume and elevation of the PAB basement to determine drain down potential?

- Has NRC ascertained the number, flow rates, and isolation potential of drains in the PAB basement?

- Has NRC calculated the potential impact of a heavy load drop, from the upper levels of the PAB, on the PAB/SFP wall, pool liner, and spent fuel? Only a sheet metal wall separates the two adjoining spaces.

As part of NRC mandated, "Individual Plant Examination for Severe Accident Vulnerability", **MYAPC was asked to analyze the effect of the collapse of the south wall of the SFP building. Apparently this masonry wall is <u>not</u> seismically qualified.** MYAPC's analysis on potential fuel damage and heating was evidently prepared by Yankee Atomic Electric Company/ Yankee Nuclear Services Division and checked by NRC staff, A.Thadani and Patrick Sears. **Given YAEC/YNSD's notoriously poor performance in heat load/transfer calculations** [MYAPS Emergency Core Cooling System RELAP5YA Application, High Energy Line Break Analysis, and Atmospheric Steam Dump Valve Sizing] **during Mr. Sears tenure as Project Manager, shouldn't the south wall collapse analysis, which largely concerns heat transfer, be re-examined at this juncture?**

In the MYAPC analysis of the south wall collapse, it is assumed that the masonry wall falls as a unit, lying flat on the fuel as a broken sheet of rubble. In that situation, MYAPC assumes fuel, end to end (vertical), compacting of less than two inches. This plus uniformly broken rubble permits intact spent fuel assembly end-caps to

provide adequate cooling through side vents (just under the sturdy caps). An examination of the south wall and comparison with the rubble of recently demolished masonry commercial buildings in a nearby city, was evidence to Friends of the Coast that different scenario was just as likely. Rather than the wall falling as a single flat sheet with base and peak reaching the horizontal at, more or less, the same time, a more common collapse separates top and bottom (approximate)"halves" while the wall is still close to vertical. If the wall buckles inward, the top " half" remains close to vertical until impact, landing on its edge with concentrated force distributed over fewer spent fuel assemblies. It deposits its rubble in a mound rather than a sheet. And, unlike a flat sheet fall, a horizontal midline buckling seems to result in rubble that includes both large sections and small pieces.

- Has NRC considered the compound effect if the masonry wall were dropped in the SFP by a seismic event, which also violated the integrity of the shared SFP/PAB basement wall?

Following the MYAPS IPE analysis, MYAPC volunteered to offset concerns about the impact of a south wall collapse on the spent fuel crane. The company set an administrative limit requiring the crane not be left unattended at the south end of the building when spent fuel of less than 180 days decay was present. Since MYAPC has declared their limiting SFP accident scenario to be the dropping and rupture of one spent fuel assembly, one is hard pressed to imagine what fanciful postulated trajectory of a one hundred ton crane would yield less damage. Even so, we have observed the crane parked against the south wall of the spent fuel pool. Engaging the President of the company on the subject, while we toured the SFP building, and the Vice-President a short while later, confirmed they had no at-hand knowledge of the self-imposed restriction.

- Prior to accepting MYAPS south wall collapse analysis and bounding accident definition and analysis, will NRC review and independently verify the licensee's assumptions and conclusions?

- In re-examining the potential and consequences of SFP accident and release scenarios, will NRC take into account the number of <u>deteriorated</u> and <u>damaged</u> spent fuel assemblies stored in the MYAPS SFP?

In 1994, a pipe, connected to the SFP at Dresden Unit 1, froze and burst leading to a drain-down of over 55,000 gallons of SFP coolant. Arguments about heat loads and cladding fire potential aside, a clear hazard exists in deep drain downs of personnel exposures to high radiation fields. Protracted sub-zero temperatures are common to the MYAPS site. In various sections of the facility over the years

MYAPS has experienced ice-blocked vents, frozen pipes, valves, equipment pads and paving shifted or broken by freeze/thaw cycles, and sub-freezing pump house temperatures.

- Prior to severing and isolating SFP coolant piping to establish the licensee's " nuclear island", was analysis submitted and verified that would take into account the damage freezing might do to any of the truncated and/or sealed-off components [eg. valves, piping, caps, drains, blind flanges, etc] ?

In support of its De-fueled Emergency Plan and 10CFR50.54(q) Exemption Request, the licensee addresses the hazard of aircraft accidents involving the SFP by identifying nearby Wiscasset Airport as a facility, which handles only light aircraft. What is fact, and an issued raised at the NRC's Public MYAPS Post -Shutdown Decommissioning Activities Plan (PSDAR) Meeting, held in Wiscasset, Maine on November 7, 1997, is that P-3 Orion patrol craft from Brunswick Naval Air Station, routinely fly near the plant at very low altitudes. This patrol craft, when fully loaded, weighs in excess of 60,000 pounds, and can be equipped with air-to-sea, possibly nuclear-tipped, missiles. In addition, low altitude military air exercises have taken place along the Maine coast involving B-52 aircraft and jet re-fueling tanker aircraft. These aircraft have been observed flying the approximate course of the Sheepscot River, very near to, if not directly, over MYAPS. Removal of surrounding structures as per the MYAPS PSDAR will render to SFP Building more vulnerable to aircraft impact.

- What actions has NRC undertaken to date to address the aircraft concerns raised at the MYAPS PSDAR meeting?

- Will NRC require and verify analysis of potential aircraft accidents involving the MYAPS SFP?

In isolating the SFP to facilitate decommissioning activities, the licensee has built an open-sided platform to house a bank of radiators and electric fans next to the SFP building. This arrangement is supplemented by a trailer mounted back-up generator, which is partially supported by wheels and partially supported by what appears to be a cribwork of wooden blocking.

- Has NRC verified that this SFP cooling system is seismically qualified?

- Has NRC verified that this system is bounded by MYAPS IPE for Severe Accident Vulnerabilities? For example, how would the radiators, fans, and trailer fare in a tornado? Could the trailer become a wind-driven missile?

how much does it weigh?

We are sensitive to the licensee's financial interest in securing a speedy resolution to safety issues regarding the SFP.

We are also sensitive to the fact that the SFP is now the only MYAPS source to present immediate and significant risk of catastrophic off-site radiation release.

Weighing the two, we are certain you will agree, proves no contest. The licensee claims that MYAPC simply cannot afford the personnel required to maintain full emergency response capability. This is, at best, disingenuous. MYAPC's owner-companies are entitled to recover legitimate costs through their appropriate state utility regulators. Thus it is more a question if the public can afford an extra measure of protection in a matter where the consequences of error can be so grave.

If the NRC cannot agree to postpone and make the June 9th Public Meeting accessible, then we ask that :

1. A video tape be made of the meeting, and a duplicate of that tape be provided to us together with any written materials generated for, or by, the meeting.

2. A second meeting be scheduled in the plant vicinity with adequate public notice to review the content of the first meeting, and to address new issues relevant to SFP hazards consideration.

Please forgive the last-minute character of this letter. It is prepared in haste for reasons obvious from our comments on adequate notice.

Thank you for your attention.

Sincerely,

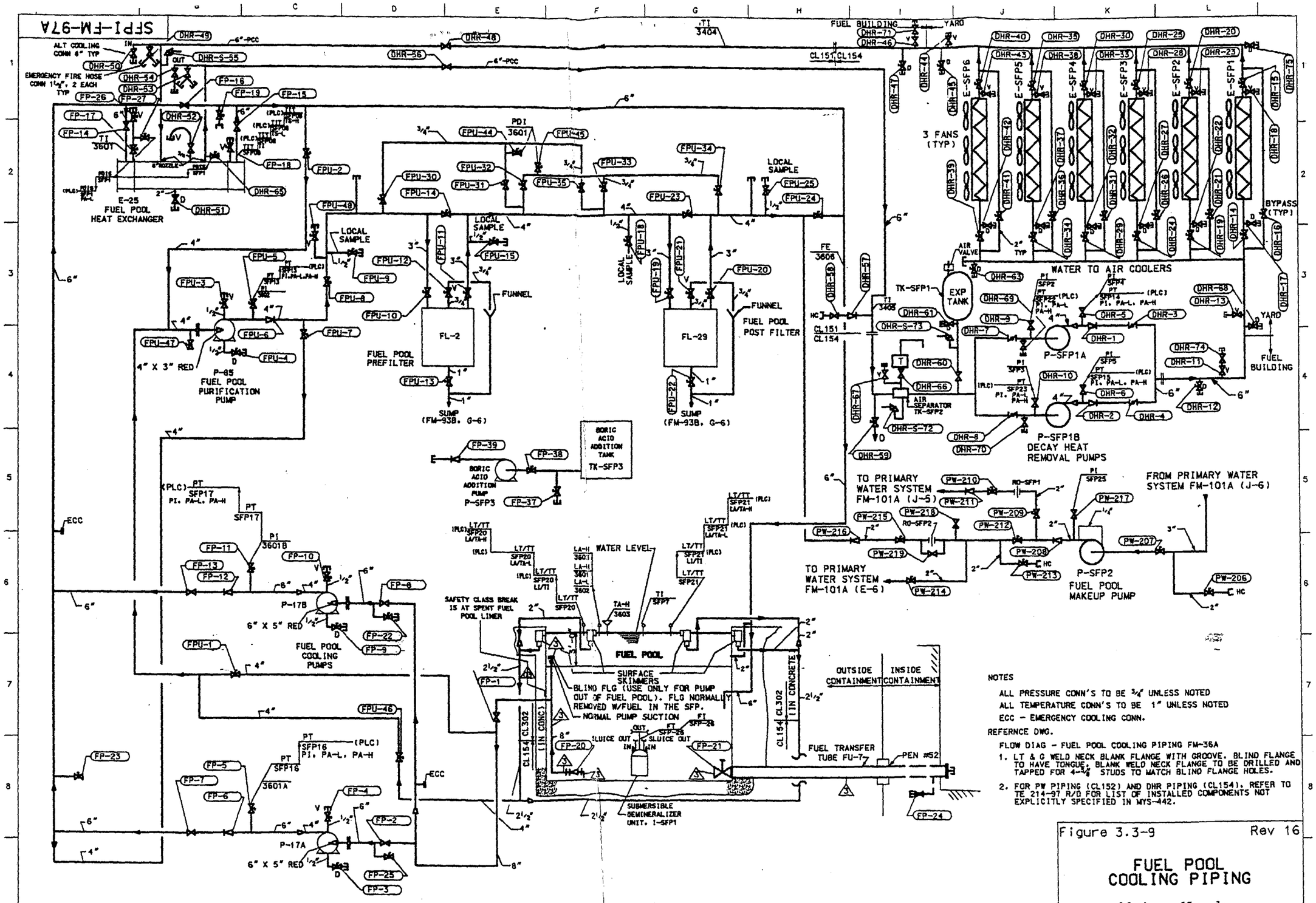
Raymond Shadis
Friends of the Coast

Copies:
NRC Commissioners
Senator Olympia Snowe
Representative Tom Allen
NRC, Seymour Weiss
NRC/OIG George Mulley

References

(a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC Generic Issue Letter 82
(c) MYAPS Final Safety Analysis Volume II, Part 14 at14.16 - 14.17.3, Fuel Handling Incident
(d) USNRC IE Bulletin No. 80-11 - Masonry Wall Design
(e) MYAPC Letter to USNRC dated January 25, 1985, Maine Yankee Masonry Wall Design – IE Bulletin 85-11 (MN-85-15)
(f) USNRC Letter to MYAPC, dated November 8, 1985 (NMY 85-180)
(g) MYAPC Letter to USNRC, Resolution of Concerns Regarding Spent Fuel Pool Wall, dated December 11, 1985
(h) USNRC Trip Report, Visit to Framingham, Ma. To Examine Plant Spent Fuel Pool Masonry Wall Failure Consequence Analysis. Conclusions Listed. , A Thadani, P.Sears, dated January 7, 1987
(i) USNRC Issued Bulletin 94-01, Potential Fuel Pool Drain-down Caused By Inadequate Maintenance Practices at Dresden Unit1, dated April 14, 1994
(j) NUREG-1353 - Regulatory Analysis for the Resolution of Generic Issue 82, " Beyond Design Basis Accidents in Spent Fuel Pools"
(k) Letter to USNRC from MYAPC, Defueled Emergency Plan and 10CFR50.54(q)Exemption Request, Dated November 6, 1997
(l) Letter to USNRC from MYAPC, Claim of Back-fit – " Generic Issue 82, Beyond Design Basis Accidents in Spent Fuel Pools" dated-February17, 1998
(m) Letter to MYAPC from USNRC, Request for Additional Information for Exemption from Financial Protection Requirement Limits, dated- April 9, 1998
(n)Letter to MYAPC from USNRC, Determination Concerning Maine Yankee Atomic Power Company Claim of Back-fit Regarding Beyond Design Basis Accidents in Spent Fuel Pools, dated April 21, 1998
(o) Letter to USNRC from MYAPC, Appeal of Determination Concerning Maine Yankee Atomic Power Company Claim of Back-fit Regarding Beyond Design Basis Accidents in Spent Fuel Pools (Generic Issue 82), dated May 6, 1998
(p) USNRC Memorandum to Seymour H. Weiss from Michael K. Webb, Maine Yankee Spent Fuel Heat-up Analysis, dated May 26, 1998

SFPI-FM-97A



NOTES

ALL PRESSURE CONN'S TO BE ¾" UNLESS NOTED

ALL TEMPERATURE CONN'S TO BE 1" UNLESS NOTED

ECC – EMERGENCY COOLING CONN.

REFERNCE DWG.

FLOW DIAG – FUEL POOL COOLING PIPING FM-36A

1. LT & G WELD NECK BLANK FLANGE WITH GROOVE. BLIND FLANGE TO HAVE TONGUE. BLANK WELD NECK FLANGE TO BE DRILLED AND TAPPED FOR 4–⅝" STUDS TO MATCH BLIND FLANGE HOLES.
2. FOR PW PIPING (CL152) AND DHR PIPING (CL154), REFER TO TE 214-97 R/D FOR LIST OF INSTALLED COMPONENTS NOT EXPLICITLY SPECIFIED IN MYS-442.

Figure 3.3-9 Rev 16

FUEL POOL COOLING PIPING

Maine Yankee

RELIABLE ELECTRICITY FOR MAINE SINCE 1972

04/22/99

PRIMARY COOLING

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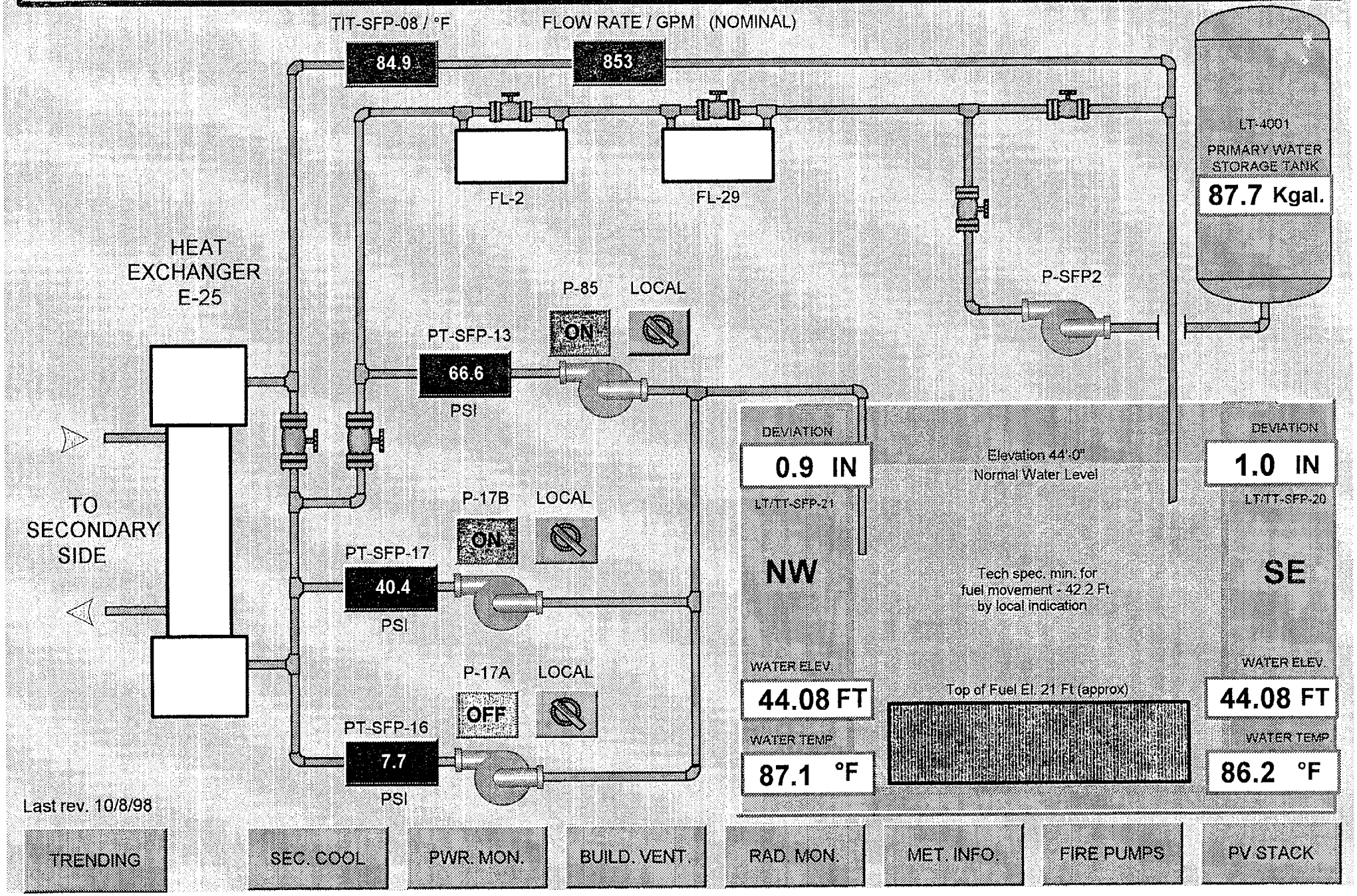

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04/22/99

BUS - SFP1 480 VOLT LOAD

11:33:52

INSTRUMENT TAG	GB-SFP-01	GB-SFP-02	GB-BOP-01
SOURCE	SFPI	EDG	BOP
VOLTAGE PHASE A TO B	493 VOLTS	0 VOLTS	495 VOLTS
VOLTAGE PHASE B TO C	496 VOLTS	0 VOLTS	494 VOLTS
VOLTAGE PHASE C TO A	493 VOLTS	0 VOLTS	495 VOLTS
CURRENT PHASE A	412 AMPS	0 AMPS	280 AMPS
CURRENT PHASE B	354 AMPS	0 AMPS	273 AMPS
CURRENT PHASE C	371 AMPS	0 AMPS	294 AMPS
ACTIVE POWER PHASE A KW	100	0	67
ACTIVE POWER PHASE B KW	83	0	62
ACTIVE POWER PHASE C KW	95	0	68
TOTAL POWER FACTOR	0.858	0.000	0.810
TOTAL KWH	18679	0	11025
LINE FREQUENCY	60 HZ	0.0 HZ	60 HZ
X-16 INTERNAL TEMPERATURE	101.6°F		

Last rev. 10/8/98

TRENDING | PRI. COOL | SEC. COOL | BUILD. VENT. | RAD. MON. | MET. INFO. | FIRE PUMPS | PV STACK

04/22/99

SECONDARY COOLING

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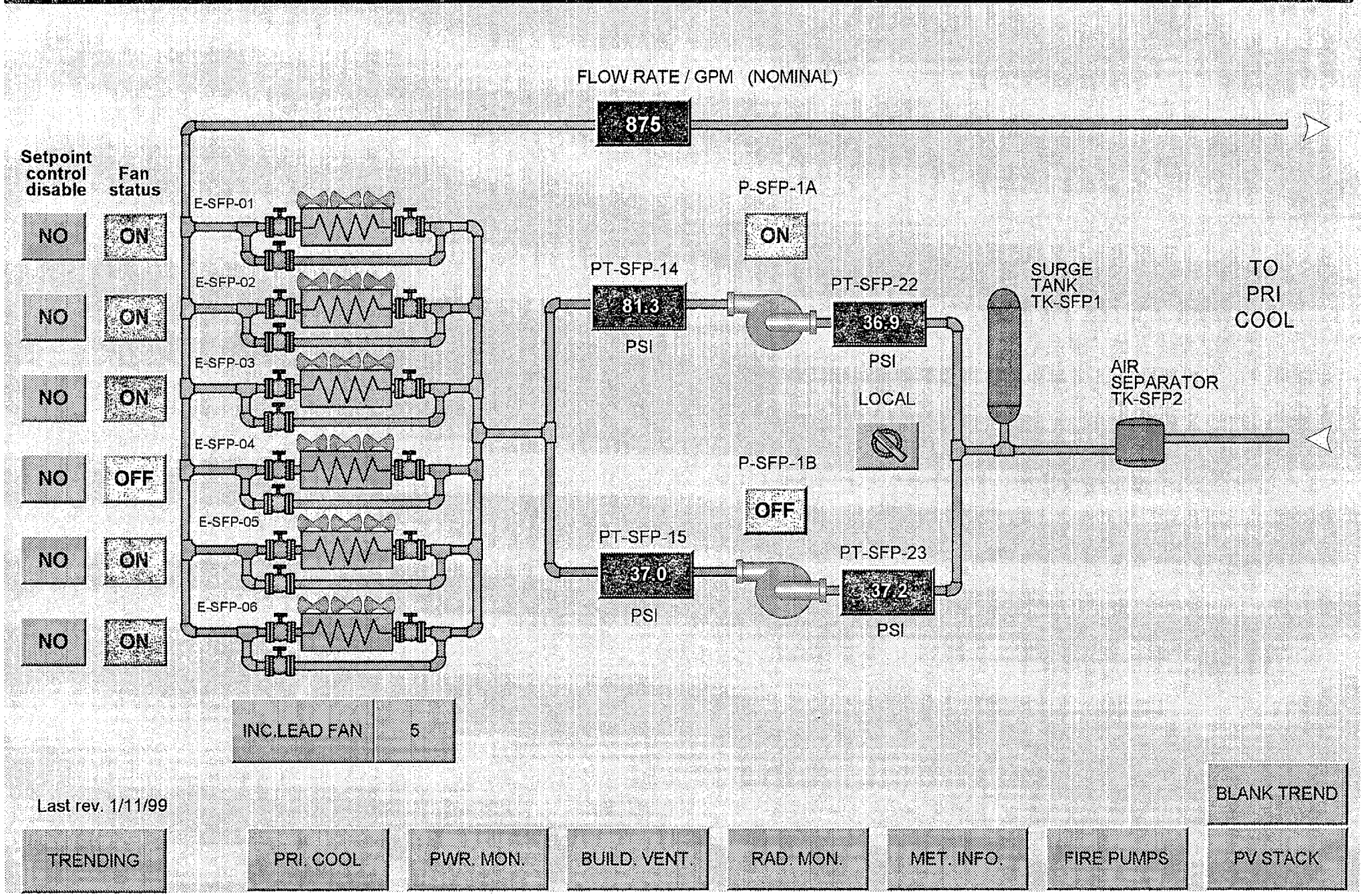

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BUILDING VENTILATION

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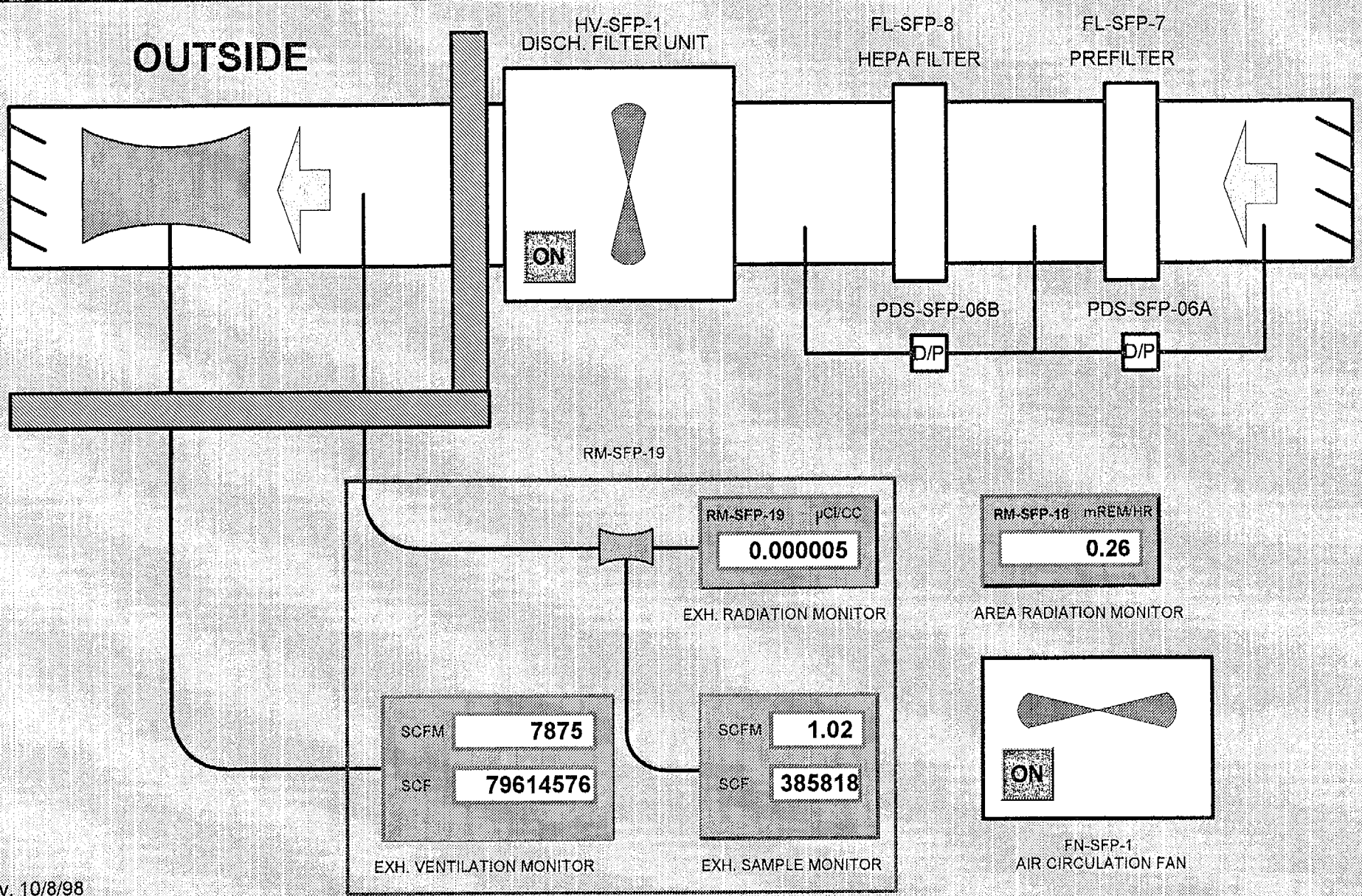

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RADIATION MONITOR

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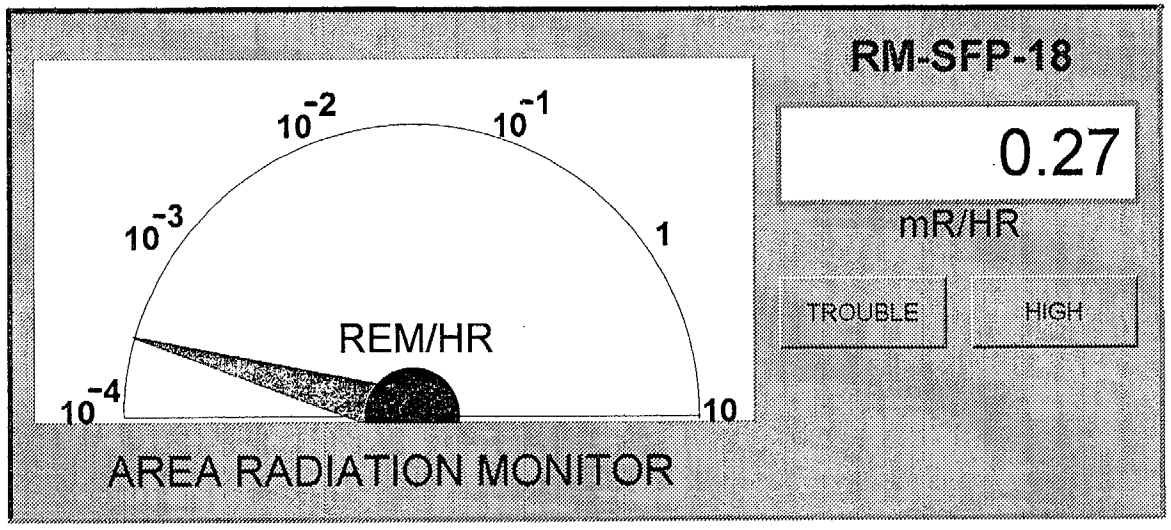

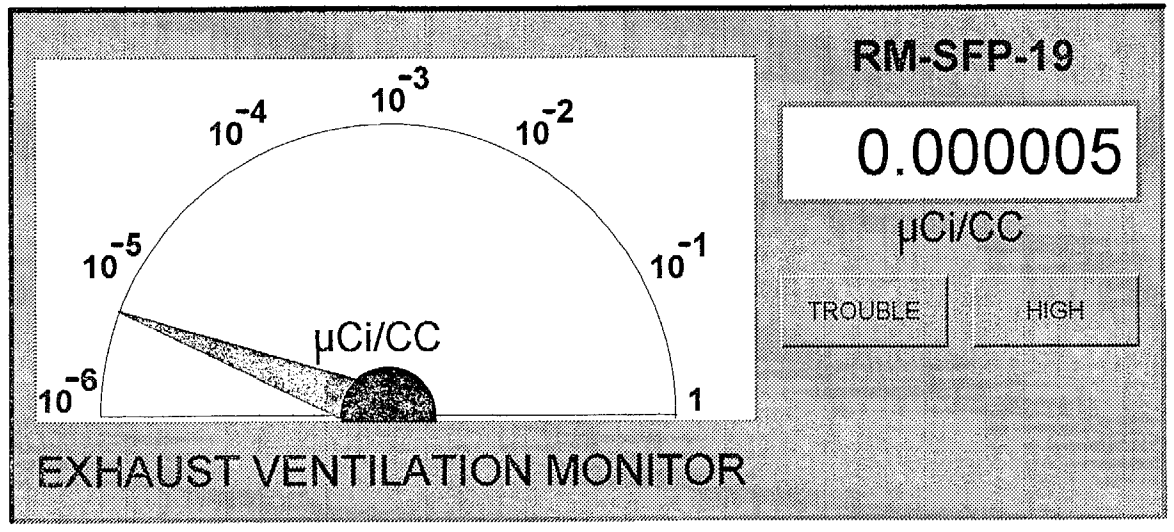

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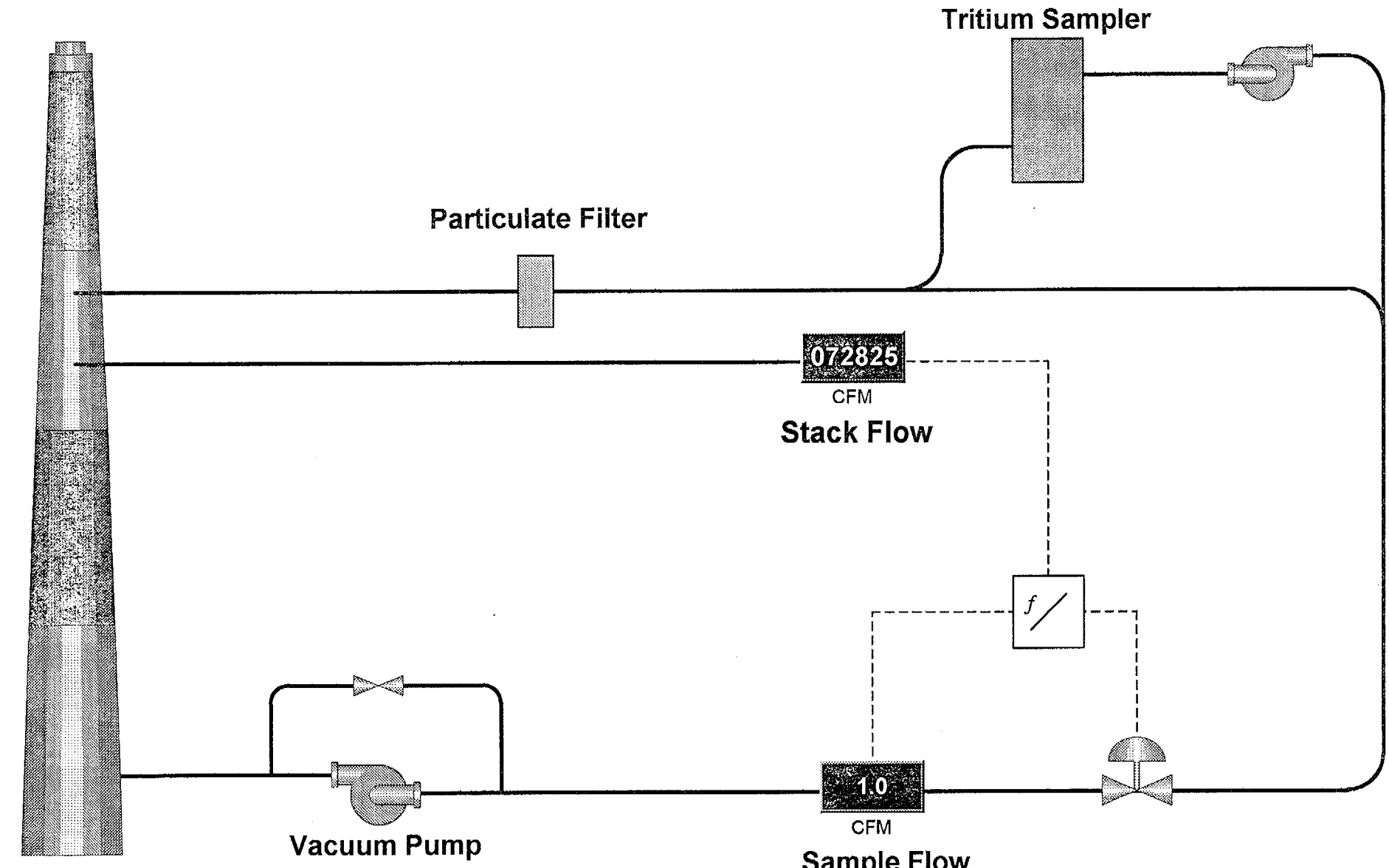

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LOWER WIND SPEED	0 to 50 mph	INSTANTANEOUS	3.9
		15 - MIN. AVG.	3.3
UPPER WIND DIRECTION	0 to 360°	INSTANTANEOUS	147.0
		15 - MIN. AVG.	156.2
		15 - MIN. STD DEV.	26.8
LOWER WIND DIRECTION	0 to 360°	INSTANTANEOUS	147.0
		15 - MIN. AVG.	166.2
		15 - MIN. STD DEV.	26.4
AMBIENT TEMPERATURE	-20 to +120°F	INSTANTANEOUS	59.2
		15 - MIN. AVG.	59.1
DELTA TEMPERATURE	-8 to +20 °F	INSTANTANEOUS	3.92
		15 - MIN. AVG.	4.77
		15 - MIN. STABILITY	G
0" - 1" PRECIPITATION	0 to 1 Inches	INSTANTANEOUS	0.06
Last rev. 10/8/98		15 - MIN. TOTAL.	0.00

TRENDING PRI. COOL SEC. COOL PWR. MON. BUILD. VENT. RAD. MON. FIRE PUMPS PV STACK

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FIRE WATER & FILL SYSTEM

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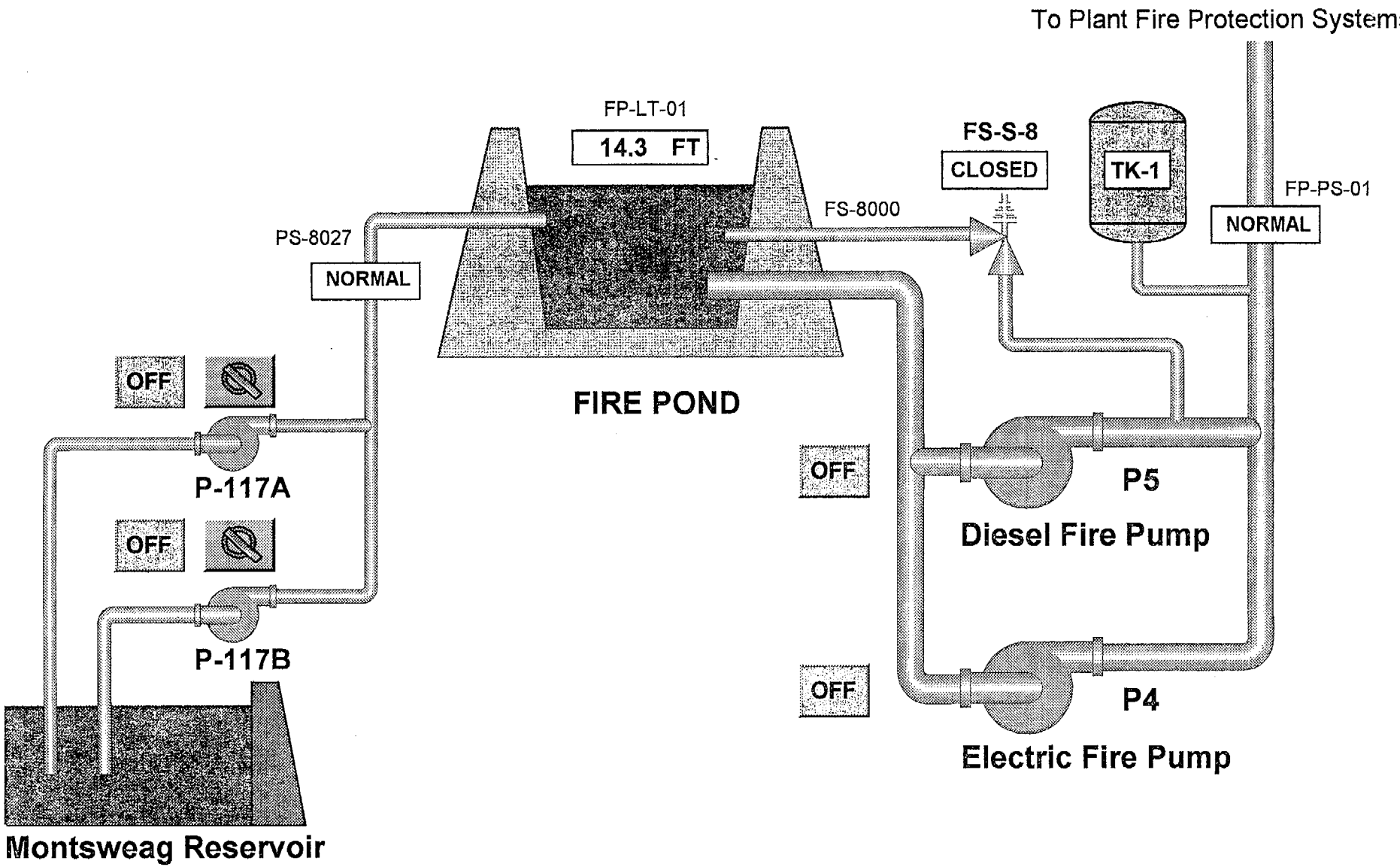

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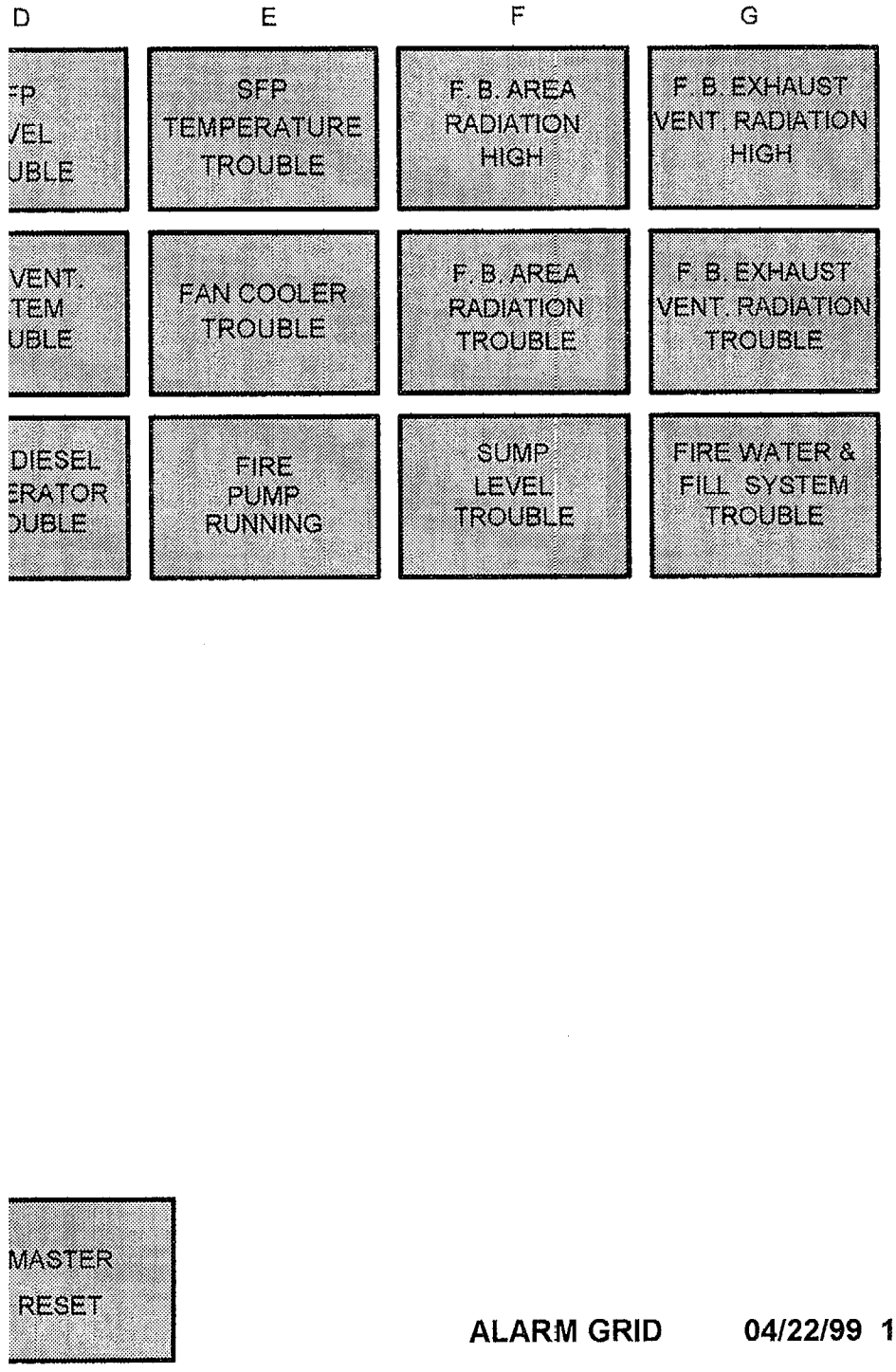
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ERATOR
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04/22/99 11:55:55

04/22/99

ALARM SETPOINTS

12:04:37

	DB	LOW/LOW	LOW	HIGH	HIGH/HIGH	
SPENT FUEL POOL LEVEL A & B	0.5	-15.0	-12.0	12.0	14.0	IN.
SPENT FUEL POOL TEMPERATURE A & B	1.5	60.0	72.0	110.0	130.0	◦ F
PRIMARY WATER STORAGE LEVEL	4.0	14.0	47.0	97.0	98.0	% of Full
P-85 PUMP DISCHARGE PRESSURE	1.0		20.0	80.0		PSIG
P-17 (A/B) PUMP DISCHARGE PRESSURE	1.0		25.0	43.0		PSIG
P-SFP-1 (A/B) PUMP DISCHARGE PRESSURE	1.0		68.0	98.0		PSIG
P-SFP-1 (A/B) PUMP SUCTION PRESSURE	1.0		30.0	50.0		PSIG
P-SFP-1 (A/B) SUCTION PRESSURE TRIP	1.0		5.0			PSIG
TRANSFORMER X-16 WINDING TEMPERATURE	2.0			180.0		◦ F

FAN SETPOINTS

TIT-SFP-08 DEADBAND 2.0

A 72.0 B 81.0 ° F

CURRENT LEAD FAN

C 75.0 D 84.0 ° F

INCREMENT LEAD FAN

5

E 78.0 F 87.0 ° F

FAN 1 FAN 2 FAN 3 FAN 4 FAN 5 FAN 6

TIT-SFP-08 ACTUAL 85.1 ° F

RETURN

Last rev. 10/5/98

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