

13730
RELATED CORRESPONDENCE

'93 MAR 16 P2:07

9 March, 1993

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
NORTHEAST NUCLEAR ENERGY) Docket No. 50-336 OLA
COMPANY, et. al.) (Spent Fuel Pool Design)
)
(Millstone Nuclear Power Station,)
Unit 2))

CCMN's RESPONSE TO NRC STAFF'S
INTERROGATORIES AND
REQUEST FOR PRODUCTION OF DOCUMENTS

1. CCMN intends to call as witnesses the following persons:
 - a.) Dr. Michio Kaku
 - b.) Mary Ellen Marucci
2.
 - a.) Dr. Kaku's statement of August 24, 1992 was exhaustive in describing his background and credentials. Please refer to that document.
 - b.) Mary Ellen Marucci holds an AA degree in Environmental Science, was employed as a technician for United Aircraft Research Laboratories, a research assistant at Yale School of Medicine, a cost estimator and expeditor for metal fabrication firms, an engineering assistant for the City of New Haven, CT., and other miscellaneous positions. She serves as chief executive officer (Coordinator) of CCMN, Inc.
3. CCMN objects to this question, at least in part, because it demands information from NNECO which that company claims to have provided, but in fact is so ambiguous that to draw any firm and substantial conclusions from it is impossible. Further, CCMN knows no person directly who has the first hand experience necessary to properly answer the question. However, CCMN is aware that such persons do exist. CCMN believes Dr. Stanley Turner of Holtec Corp. to have such knowledge.
4. CCMN believes Dr. Turner to have such knowledge for the work he did. Additionally, engineers for Combustion Engineering Corp. and Northeast Utilities would probably have the required information for the work they did. To its' knowledge, CCMN does not have that information.

5. CCMN believes the same people listed in number 4 to also have this information. Additionally, Dr. Kaku may be able to elucidate on this matter when he is deposed.
6. Again those listed in number 4 should have the required information. Regarding 6b., Dr. Kaku may address the correctness of term usage when he is deposed.
7. Dr. Kaku will probably address this issue when he is deposed.
8. A listing of documents known at this time has been sent under separate cover. Other documents which might be used will be listed at the respective time.
9. Copies of documents known not to already be in the possession of the NRC and listed pursuant to number 8 have been sent under separate cover. Any other documents which might be found to be useful will be supplied as soon as possible and practical.
10. As of this point in time CCMN is unsure as to which, if any, documents it will seek to move into the record as evidence in this proceeding.
11. This question can not be answered at this time because CCMN has not yet decided which, if any, documents it will seek to move into the record as evidence in this proceeding.

Respectfully Submitted,

Mary Ellen Marucci

Mary Ellen Marucci
Coordinator, CCMN

Dated at New Haven, Connecticut
this ~~9th~~ ^{11th} day of March, 1993. ed

MEM

Attachments:

- #10. Note from T. Linton of LPDR
- #17. Phone logs for June, July, August and September 1992 of Mary Ellen Marucci as relates to Millstone 2 Spent Fuel Pool.

Subscribed and Sworn to before me, a Notary
Public, in and for County of New Haven
and State of Connecticut this 11th day of
March 1993

Mary Ellen Marucci
Notary Public
My Commission Expires Mar. 31, 1993

CCMN, Inc.

March 9, 1993

PHONELOG PERTAINING TO AMENDMENT #158.

JUNE 9, 1992 TUESDAY*****

JAY SULLIVAN 12:15-1:15

NORTHEAST UTILITIES WILL PUT ALL THE FUEL FROM ITS
REACTOR INTO THE SPENT FUEL POOL STARTING JUNE 14.
PEOPLE CONCERNED ABOUT SAFETY PROBLEMS AT THE POOL

LOW LEVEL WASTE - STEAM GENERATORS OFF SCALE

Sen Lieberman: Joyce Reschtschaffen 0-202-224-4041
Joyce away for day

Kim: intern took message about June 14 rally at NU
Scheduler Barbara Chatman will get it.
I suggested that she give message to him on floor - he is
not in, told her fax sent 1 PM on 6-8-92 but not addressed
to Joyce.

Sen. Lieberman: 2:30 Shelly 1-800-225-5605
IN got fax, Lieberman will be doing something tomorrow, will
contact me as to what he will be doing

NRC OGC: 3:08-3:24

OUT Office of General Counsel Parler: spoke to Debbie, sec: ref
to Ann Hodgkin 301-504-1587
Ann away on travel -business
ref to Ed Reis - on leave, or John Hull -away from desk
took #, Name and Org - told her I applied for hearing
under individual name since I had no time to approach board,
gave her CCMN as org. Need to know if hearing granted or
denied and how to prevent fuel movement of June 14 and

Debbie ref me to Stewart Treebee reg on fuel 504-1644 to
Sherwin Turke materials and special 504-1575

NRC 3:45-4:15

IN John Hull-he is assured by Guy Vissing that no significant
hazards, they don't have to rule

JUNE 12, 1992 FRIDAY *****

AG Kevin Mullane 4:45 PM 203-566-2026

OUT I gave him the timeframe, June 14 for a few weeks, and
told him: I WOULD CALL NRC RESIDENT TO CHECK, and again
when they move new fuel in about 2 months.
He said the only shot to stop it would be to send an
Urgent telegram for governor to petition federal court

Doc. #17

to stay the transfer of fuel from the reactor into the spent fuel pool.

W.U. SENT TELEGRAM MARKED URGENT TO GOVERNOR

JUNE 13, 1992 SATURDAY *****

AG RICHARD BLUMENTHAL 203-348-2428
OUT He claims to know nothing about it, he will call Kevin Mullane. I told Dick I thought he knew about it, since Kevin knew. BUT Kevin was on vacation when FLANIGAN RECEIVED papers on 6-6. I SUSPECT IT IS STILL ON FLANIGAN'S DESK AND DID NOT GET TO KEVIN. Yet I spoke to Kevin yesterday. HE said to send an urgent TELEGRAM to Governor TO ASK HIM TO PETITION FED. COURT FOR A STAY OF TRANSFER OF WASTE
Dick took my number and will call back. I ALSO GAVE ANOTHER # BETWEEN 7-9 PM.

EARTHVISION PAT NOWICKI

IN MESSAGE ON MACHINE THAT NRC REJECTED OUR REQUEST ON MILLSTONE 2. ALSO SHE DOES NOT KNOW WHAT ELSE TO DO, JUST GETTING STARTED. WILL BE OUT OF TOWN FOR PRESS CONFERENCE AND RALLY 6-14.
OUT SHE WILL SEND LETTER TO GOVERNOR SUPPORTING MY TELEGRAM FOR HIM TO TAKE LEGAL ACTION TO STAY TRANSFER. SHE WILL TRY TO DO IT 6-13 AND HAND DELIVER IT TO CAPITAL POLICE TODAY OR TOMORROW.

JUNE 15, 1992 MONDAY*****

NRC: 9:30 am

RETURN CALL: TO ANSWER IF DOWNLOAD HAS BEGUN? 1-442-
IN DOUG: WILL BE AT LEAST A WEEK BEFORE THEY REMOVE TOP OF REACTOR, AND SEVERAL DAYS BEFORE THEY BEGIN TO MOVE FUEL OUT INTO POOL. AT LEAST TWO WEEKS.
I ASKED SPECIFICALLY FOR # OF CONSOLIDATED CONTAINERS IN POOL AND THEIR LOCATION, AND IF BORON CARBIDE MATERIAL IN REGION C (aka REGION 2) OR IS IT DOUBLE RACKED WITH BOROFLEX. DOUG SAID WAS NOT DOUBLE RACKED HE THOUGHT. I WAS CONCERNED THAT REGION A WAS TOO DENSELY PACKED TO PREVENT HEAT OR CRITICALITY PROBLEMS WHEN THEY FILL IT WITH CORE FUEL DURING THE REPAIR. DOUG SAID THAT THE CORE FUEL WAS THE BIGGER CONCERN AND THAT NU NEEDED THE LICENSE AMENDMENT BEFORE THEY COULD MOVE THE CORE FUEL INTO THE POOL. WHEREAS RAYMOND TOLD ME THAT THE NEW FUEL WAS ADMINISTRATIVELY LIMITED BUT HE DID NOT THINK THAT THE POOL DESIGN PROBLEM WOULD LIMIT THE MOVEMENT OF THE SPENT FUEL.
I SAID THAT I FELT NU NEEDED THE NRC PERMISSION NOT TO HAVE MONITORS IN THE POOL TO ELIMINATE ANY CORPORATE LIABILITY IF A CRITICALITY SHOULD HAPPEN IN THE POOL, OR FOR ANY OTHER POOL RADIOACTIVITY ACCIDENT RESULTING FROM POOL DESIGN ERRORS, THEREBY ENSURING THAT FULL LIABILITY FALLS ON FEDERAL GOVERNMENT AND TAXPAYERS

RATHER THAN RATEPAYER OR STOCKHOLDER. CONCERN ABOUT
HEARING STATUS: 40 MILES MENTIONED, 10 MILE AND 50 MILE.
NEED TO KNOW SCENARIO FOR EVACUATION in response to
SPENT FUEL POOL ACCIDENT.

JUNE 17, 1992 WEDNESDAY *****

SENATOR LIEBERMAN:

fax PICKED UP FAX FROM TYCO'S SENT ON JUNE 10

JUNE 19, 1992 FRIDAY *****

Rosa Delauro: dropped off info on Spent fuel pool. I returned to
pick up packet at 4:30, given #202- FOR FUTURE CONTACT

JUNE 22, 1992 MONDAY *****

NRC Andra: doesn't know download, will have Doug call me
tomorrow am

JUNE 23, 1992 TUESDAY*****

NRC Andrea: Download to be late Thursday Night, June 25.

JUNE 26, 1992 FRIDAY *****

NRC BILL RAYMOND -NRC SITE INSPECTOR

IN There are 217 assemblies in core. AT FIRST HE SAID 14
FUEL ASSEMBLIES FROM CORE WOULD BE IN REGION B. (B is
for new fuel that is slightly more reactive than burned
fuel) \\\ Most of core fuel to go into REGION A = 203
assemblies. Total number to fill REGION A = 224
THEN HE SAID THAT 25 ARE TO GO INTO REGION B. 217-25
LEAVES 192 INTO REGION A
TOTAL # THAT CAN BE FIT INTO REGION A = 224

192

32 SPACES AVAILABLE

IF NOT PREVIOUS OCCUPIED. I HAD BEEN TOLD THAT 17
ASSEMBLIES OR CONSOLIDATED PACKAGES ALREADY WERE IN
PERIMETER OF REGION 1 IN MARCH. Are they now in region A,
or B or were they moved to region C, and how many of them
are CONSOLIDATED? How many contain moveable or fixed
POISONS now in region A, and how many with fixed or movable
poisons will be in region A after the full core fuel is
placed there?

... He said that sumerian and xenon content also acts as POISON.
Is this properly accounted for in the burnup charts or
is it an added factor.

.... Decrease distance or reactivity of bundle

... less than a certain value K.

I said I needed a rough curie count. He didn't know it.

He said I could get it from NU. They had an engineer that did computer control,

NU Dick Kacick:.....665-
IN Do we get neutron flux monitors in the pool? Do we get fire trucks on standby? Send copy of May 7 letter from NU to NRC also to me.

OUT He spoke to Opeka who does not feel anything extra is warranted for safety. I asked him if anyone could be at Millstone Monday for the core download who has a position of authority and has Decision Making Powers FOR NU, and not just an employee. He said he couldn't be there Monday. Since it is expected that the core fuel placement in the spent fuel pool will have just been completed, I thought it inappropriate if he really felt it was safe that he be on Monday 45 miles upwind of the plant at NU headquarters and tell me that there were many people at the plant who felt it was safe. I told him that those people were paid staff like himself who trusted the people at headquarters to have done their math right. Also they were caught up in paying their bills with their paycheck from NU and not even in a position to question NU on safety issues more obviously so since NU has recently gotten away with firing whistleblowers.

Since Rick Kacick does not know what the Configuration of the pool was when they had mathematically exceeded the safety margins for Keff, and he does not know now what the configuration of the all the fuel in the pool is prior to the full core fuel being placed in the pool, and he does not know what it will be when all the core fuel will be put into the newly partitioned region A (which is approximately half the formerly available storage space of Region 1 which was divided into regions A and B as allowed by a June 4, 1992 final decision of NRC staff by amendment #158 specifically requested by NU for Millstone II spent fuel pool because of Millstone II not meeting safety margins for Keff, and that they needed to proceed with a full core download to replace the steam generators), I asked him to send me that information and to be sure that whoever would meet me at the plant would know--especially Opeka since it was he who Kacick went with my requests and it was he who concurred with Kacick that there was no reason to have criticality monitors in the pool or to have extra precautions while the downloading and uploading was in progress and while the core fuel sat in the pool prior to uploading. I asked specifically for all of Region 1 the math equations that were used that proved the changes made the pool safer rather than more dangerous. He said distance in new fuel (Region B) area better for Keff and volume of water effective on neutron control. I said since distances same and volume same then does he mean they will increase flow of water?

I explained I had a concern about the upcoming fuel download that was not limited to criticality but also included heat and the ever increasing consequences of radioactivity being released from this pool.

I Explained using a ball on stairs or one in middle of rug on flat floor as an example of the chance (risk) of stepping on the ball may be the same but the injuries (consequences) of stepping on that ball would be very different, and that the risk may be the same but the consequences are vastly different. I feel it to be very unscientific to talk about risks divorced from the consequences, because every time fuel is added to the pool a new configuration is created with more radioactivity and reactivity increasing both the risk of an accident (chain reaction, chemical fire, etc.) and the consequences (radioactive releases, loss of containment, increasing radiation from supercriticality, gas explosion, cement over-heating and exploding leading to loss of containment and complete release of the ever increasing stored radioactivity in that pool... currently, with the core stored in the pool = to 4.3 reactors , the radioactivity can be compared to 43,000 hiroshima bombs.)

And this is the first time that the full core will be downloaded into a double racked area fully filling it.

JUNE 29, 1992 MONDAY*****

Did not go or call Kacich about Millstone
Went to jury duty. Was not called. Made many calls

JUNE 30, 1992 TUESDAY*****

Nick REYNOLDS : NU lawyer 202-371-5717
IN called with Rick Kacich on line to set up meeting with me at Millstone to talk about stuff before licensing board: 1 or 2 PM on the 15th or 10 am on the 17th.
Rick said that so far no incidents in loading core fuel into spent fuel pool. Expected to be complete 3rd or 4th of July.

JULY 1, 1992 WEDNESDAY*****

CCMN Michael Pray: 2:30 444-0664
OUT He will send the NRC his statement that he did not know before May 27 of FR. He will contact Mora Cassey on editorial paid staff of NL Day to see if she can come. His first choice is 7-17 but can make it 7-15.

US Senator Lieberman

OUT Spoke to Barbara Chatman about Lieberman attending meeting with NU lawyer and licensing director, about

the matter before the NRC licensing and Safety Board. He will be at the Democratic Convention: can he break? Also told her that the full core would be moved in on the Fourth of July, unlikely anyone would be around then. Could she let me know before the fourth?

US Senator Lieberman 4 PM 202-224-4041

IN Mary needs to fax matl from Joyce. Over 30 pages.
Call back in 30 minutes for fax #

EXPERT: Gordon Thompson:4pm. 617-491-5177

Out Concerned if we have any legal standing
Is AG involved? Will he be paid before he gets deeper into it? He will do a brief affidavit if [redacted] says it will be useful. What will [redacted] testimony [redacted] be used for?

+++July 4 thru July 10+++ LOST PHONE LOG through power loss and exceeding capacity

July 6, 1992 Monday*****

EXPERT; PROFESSOR MICHIO KAKU : taken from WP notes.

10:30-12:00.....212-560-8448

IN

1.00 = critical a human may contain a few cents,
neutron reactivity IS MEASURED IN DOLLARS AND CENTS
effective size of uranium, bigger the cross sections
changes with temperature, slow neutron 1/velocity
what decreases radioactivity by decreasing neutrons,
has a high capture reactivity, poison
more food, is cross section of uranium; water to cool,
moderate, shield. Water slows down neutron, making the
effective size of uranium greater, and increasing the
reactivity.

cockroach analogy:

poison put out to reduce size of population = boron

poison kills = boron

more food increases the next generation

more food = racks closer together/

they underestimated the effective size of uranium

function of speed of neutron/ can't eat much if running
around .. does less fissioning/

compactifying fuel or increasing their number in the
same area increases reactivity because the surface area
from which neutrons escape has decreased.

Adding more space between assemblies decreases
reactivity.

WATER:

If water level drops in pool: reduces reactivity

because of moderating influence of water
Moderation: to slow neutrons down: carbon or water is used.

Less moderation, reactivity goes down but heat generated increases, temp rises to initiate chemical reactions/ oxidation of zirconium/ metal water reaction to produce hydrogen gas (I will see if Thompson will address this issue); water over fuel in the pool, concentration too low/ if keff becomes greater than one, water levels will drop because water will boil off from heat generated by criticality/ when temp reaches 2000 large quantities of hydrogen gas will be produced increasing pressures. The pool does not have circulating water like a reactor has to cool it down neutron cross section too small
Random way to calculate any number, which particular method

How do they know what the new Keff will be after expanding the area for the new fuel and compacting the space for the old fuel? How do they know that overall keff won't be increased?

Burned fuel reactivity? Decay neutrons being added from fissioned materials/ neutron reactivity may not be less and can be more? Need a full scale three dimensional Monte Carlo.

Keff may be more positive from the compacting of the old fuel in new configuration.
SPENT FUEL storage a problem since it looks like CARLSBAD, NEW MEXICO will not be opening before 2020.

Using dry cask storage may be an alternative to prevent moderating effect of water on spent fuel but the shielding effect of the water will be absent and though a viable alternative, more dangerous.

What would happen if pool sabotaged or because of a reactor site problem the pool was unattended
Because the future holds NO FED DEPOSITORY FOR NUCLEAR WASTE UNTIL 2020, and they are allowed to COMPACTIFY, are they BUILDING NEW POOLS? Have they done a WORST CASE SCENARIO TO INCLUDE WATER LEAK, HYDROGEN GAS TO EXPLOSION, AND ENVIRONMENTAL RELEASES.

If they have not done the work, was it from lack of expertise, funding or time?

A Three dimensional MONTE CARLO analysis needs to be done for Spent Fuel Pool, THEY CAN'T BE EYEBALLING THIS. Neutron flux monitors are needed in the pool. CALCULATE what the Keff REALLY IS and what some of the WORST CASE SCENARIOS are.

?? on date?? possibly July 6TH/7TH/8TH/9TH or 10TH

NU LAWYER: NICHOLAS REYNOLDS 12:30 message left to return his call: 202-665-3298

approx 3:30 returned call. Wed. only or not until mid august, prefer that only intervenors be present.

DEP NO one available.....566-5134

asked if they had beeper log because I had changed equipment and prior to changing I had 3 alarms before 7 AM, new equipment alarming frequently. Told me to call 566-3333 and attempted but apparently failed to connect.

Emergency 566-3333 6:45 am--34cpm.....4:12PM

He was confused as to why I called there. Said to call DEP. I told him I just had. Will give duty officer message if release in region? will try to raise him on radio.

2x after 2 am and again at 6:45AM x Return Radalert 10:30am Plugged in Radiation alert at 12:30 alarming frequently during day at least 10x prior to 4pm.

John Delcore 562-3262

willing to come Weds.

tells me Sue Kinsman of Hartford Courant wants to be there.

JULY 14, 1992 Tuesday *****

CAIS: Citizens against Irresponsible Siting: Rosemary Griffiths.
739-5869

IN She is affiliated with them and received copy of draft hearing req., Affidavit and a copy of CCMN bylaws from Rita who said she was sending her own Affidavit into NRC. Rosemary can't go herself because she just got back to work. Rosemary will contact Rita Pravatis about 7-15 NU

RE: Spent fuel pool incident

Told her I had heard that only 3 feet left over fuel rods, if they didn't have the sump pump working real trouble. Actually XXX wasn't sure if he heard the specifics right. It could have been 3 feet total loss. XX can not be considered a source of information because of his need to protect his sources.

CAIS: Rita Pravatis.

IN Can make it, she sent it out to her members and had her own notarized, and sent it before Rosemary got hers, unless by mistake she didn't send it to NRC or to CCMN but to one of her own members. She changed some thing in it to include herself to be represented by CCMN and not a member and to mention her pregnancy and concerns for her developing child. RE: Accident at pool - was

she aware? Vaguely from NLDAY. I told her about sump pumps.

NU Richard Kacich 665-3298
mes to return call in afternoon when he returns:

Hartford Courant: Sue Kinsman
told her about meeting to include accident of 7-6 and though they had limited us to just a few, I would try to get her included.

DEP- Shep Linscott
didn't know about coolant water loss. If there was any he should have been notified. Since he was not, it didn't happen.

OEM-Frank Grandone
knew only of drill for 7-6 at plant. He said he doesn't receive info for levels less than Delta, because his beeper is not programmed to receive any, but it is his choice.
I asked him get it programmed because I had no way to verify if NU slipped up or if DEP slipped up without a check system.

RE: Shep of DEP
told me that they knew about loss of line 1460kv but that nothing was mentioned about coolant water loss. I told him it was in NLDAY and he said reporters don't have to check there stuff. He would have been notified if coolant water lost and since he was not notified it did not happen. I asked him for his # at home since the reporter would not be in until late afternoon for me to check with him on his sources. He would not but gave me the # of duty officer 566-3333. When I called Bob that evening he told me his source was NU and NRC. I mentioned to Bob the discrepancies between what DEP and OEM said about his reporting, and I gave Bob the duty officer # but he seemed uninterested in following up.

DEP: Shep Linscott: Cheryl took mes 1 PM 566-5134
RE: event at pool of Mill 2 on 7-6. Need to verify info on coolant loss as regards conversation of 7-7.

NU: Rick Kacich: mes 665-3298
Still at morning meeting, may be back in hour, have him call me. Pat Nowicki and Barbara Breeding, tent.; Rita Provatas, John Delcore, Michael Pray, Jay Sullivan, Mary Ellen Marucci Bob Hamilton firm.
Earthvision which I haven't heard from yet, and Barbara Breeding of CAIS

CCMN: John Delcore:
IN about others coming and Sue just being called.

told him what XXX had said XX said about water. He thinks whistleblowers are being silenced. He sent letter to Sue about discrepancies between what NU Jackson said and the fact of the 7-6 event in the pool.

DEP: left mes for duty officer
566-5134 Charlie Price is duty officer yesterday and today.
Concern about high readings yesterday.

NU: Nicholas Reynolds
To attend meeting on 7-15: Nick Reynolds will cancel meeting if I insist upon Sue Kinsman or John Delcore/ claims that John is in litigation with them and even though he is a member of CCMN he will not allow him to attend. Since John is not in litigation on the SFP I did not see how this would affect NU. Also not allowing Sue but Allowing Bob must mean that they can control Bob better? We'll see.

NU: Richard Kacich : Director of Nuclear Licensing
Mike Wilson : NU Nuclear Licensing staff, former supervisor of operator training.

Richard Gallagher: NU public relations
Nicholas Reynolds-: NU Lawyer, Winston & Strawn, 25 yr. Nuclear
Looks like no one with the power to make decisions at this meeting!

NRC ED BAKER: general inspector would inspect certain valves, etc. maybe I didn't hear him right, he's from Washington Inspectors office doing a 6 month training. Primarily on unit 1. Asked him when he sees Ken Kolazyk tomorrow to ask if Neutron Monitors in unit 1 pool. Are they there as Doug thought or are they not there. Call me by 9am or leave message. I need to know before 1 PM meeting with NU. He asked where it was being held - at simulator Building.

July 16, 1992 Thursday*****
Lost 16th through July 22 log with copy error using windows

JULY 27, 1992 Monday*****

NRC: 447-3179, 442-5357
Called NRC inspector Ed Backer about wind direction 4:30 to 5:30 PM on Sat. 25, at millstone.

566-3310 Called DEP, DAG spoke to Victor Yanessey and Lou Cartilano about wind rose for area of two plants and what form data had to be in to be compatible with DEP mainframe. \$65.00 + to get info. per site from DEP. To get fee waived must contact DiBatista

July 28, 1992 Tuesday*****
Andra of NRC called. Told her I needed wind direction and if any planned releases occurred recently. I assume there was no unplanned release or she would know and she didn't.

AUGUST*****recalled from PMSG program

Rich Kacich or Mike Wilson 665-3684, who is responsible for spent fuel pool design? Holtec

As of August 14, 1992 Millstone 1 back on

8-18-1992 Judge Smith 2.714 how to submit contentions, petition filed a petition, file a supplement that contains a list of contentions that are evidence, avoid pointless papers coming in. pre-hearing conference purpose to intervene and request hearing, serve papers on others.

1992,08-18 at 14:02 Gordon Thompson CCMN
508-693-6670 pobox 3104 Oak Bluffs MA02557 send
statement of key facts and history: unit, type, reracking I
will send weds.

1992,08-18 at 14:29 Barbara Cairns Joyce away until after
labor day, Lieberman away until session resumes

1992,08-18 at 14:38 Richard Blumenthal CCMN
566-3579 55 Elm Street Hartford, CT06106
message to Kevin Mullane re movement of fuel
*spoke to sec. Judy, no response from KM as of 9-17.

1992,08-21 Stan Turner
813-787-4625 NUSURTEC, INC,
230 Normandie Circle, Palm Harbor, FL 34683
Considers the actual runs proprietary but were available to Dr. Vernetson who is his quality Assurance person. He said that they knew how boraflex behaves under irradiation and that after a certain amount of irradiation it stops shrinking. The only area of any uncertainty has to do with surface erosion of boron. He said that (904-392-1408 Professor Vernetson) 10-12am is best time to reach Vernetson at University of Florida. - summary In house detailed criticality calculations

1992,08-22 XX
Spoke of erosion of boroflex, that CE and NU have taken boxes out and found erosion from flows and cooling. That NRC has information on boroflex.

The water as it entered the reactor vessel had 40 Feet of head and the pressure lifted the reactor head off, since it was not bolted down, and then overflowed. The water that had been inadvertently drained from spent fuel pool became mixed with primary coolant water from reactor vessel in this process.

Because of loss of power the control room had no idea that water was being drained from spent fuel pool. Their primary concern was to restore power. Only when workers in containment notified them that water was pouring out from around vessel into refueling

pool and going into saddle (6 to 8 foot depression in canal that connects the refueling pool with the reactor vessel and the spent fuel pool). As this water poured into the saddle it drained down into the lower level of containment into a sump at -22 feet. This was possible because the sump valve was still open as the saddle had been recently pumped out. The sump pump was not designed to handle this volume of flow and the water overflowed onto floor of the containment building..into refueling canal.

The valve in Spent fuel pool is usually open at the level of 3 feet from top of pool. The pool holds 40 feet of water and the assemblies are stacked vertically at bottom of pool at 0-12 feet, therefore 28 feet maximum over tops of assemblies. Usually kept at 23-26 feet over fuel assemblies, and plant specs call for ? over assemblies. If lower valve was opened suspect it would be at bottom of pool. Does not know about circulation in pool.

Stuff in pool: ICI (incore instrumentation) Shipping of modules, Testing of assemblies for helium leak- put in cask inside pool to test for helium. Cutup operations on ICI to make suitable for shipment into pieces of 6000-10000 rads.

Ventilation: it opens into Highbay area that is open to atmosphere. Pool is sealed during refueling operations only. Ventilation system is automatic to switch system to go through filters and stack if instrumentation indicates high radiation. It can be manually switched also.

Since all the fuel from the reactor vessel having just been put into the pool three days before the power loss it was still very hot. They needed to remove the fuel to replace the leaking steam generators. The new steam generators are expected to last longer than the plant is licensed to operate.

SEPTEMBER 1992 *****

1992,09-02 at 00:36 DOE -OIG Ray Madden
800-541-1625 1000 Independence Ave,SW,RM5B222 Washington,
DC20585

DOE was mentioned LTR 5/21/86 NRC from NNECO as having a fuel consolidation program which NU was considering taking part in by invitation of DOE, DOE may have ongoing full consolidation program with NNECO and others with criticality errors.

1992,09-03 at 12:07 UI, Dick Grossi
499-2000 524-1639
Dick Grossi: Rose Testa
Intervenor? just info on Seabrook property tax, and
letter to NU/ put monitors in Haddam Neck and Millstone 3 pool.

OIG:Main Office 301-492-7000

NRC: OIE 215-337-5000

1992,09-04 at 11:54 Rich Kacich His legal procedures do not allow me to approach contractors or subs. Speak to him only. I request wind, radiation releases, info on boroflex box inspections
send Inhouse documentation referred to in Holtec Benchmark Summary index

1992,09-08 13:03 Commissioner of Health
566-2038 Lois: Comm may need AG present for funding issues, David Brown, Spent fuel Pool subject of discussion

1992,09-08 at 13:22 Michio Kaku 212-650-7000
City University of New York 212-650-8448
? on region a & b in affidavit, he has April 16 without May 7 correction letter. Told him of meeting coming up with Com of health-study on sfp. DOE- fuel consolidation program

1992,09-08 at 21:19 Barbara Breeding: contaminated pool area study, TMI study to use cooling towers, seawater, cloud over, Trouble at Unit 1 sunday.
Others: Service 4 or 5 scoping meeting: 9-21/service temp storage Plume study, health studies

Message from Kemp: DOE and MRS Pacific
Nuclear, cask manufacturer rod consolidation at utility or at ultimate repository.

62 people wanted hearings on dry cask storage, Palisades Michigan
Praire Island, Minn not a NRC jurisdiction, cost PUC
Commissioner Cris Sanda. PUC permitted 17 casks, asked for 48, actually need 90. Banks of the Mississippi

State Administrative Law Judge Kline, Minnesota, April 10
said to the proponents can you give me a certain date these casks can be gone, if not then you are establishing a permanent site.
new AP600- GE 600 megawatt nukes.

1992,09-11 at 09:33 Jay Sullivan
Told Sue that Dodd and Lieberman going to write NRC NRO-James Taylor, and State Health Dept concerned but shifted it to DEP

1992,09-14 at 00:59 NRC, Andra 447-3179
Resident Inspector, RCS water, probably November move in new fuel

1992,09-15 at 12:16 Shep Linscott, 7:2am 566-5134
Asked him to find out if M2 is consolidating. He is reviewing HLW storage at CT plants. What are they planning to do at Mill2 about Keff

1992,09-16 at 15:46 Shep Linscott 566-5134
DEP HLW at Haddam Neck not racked like Millstone, no boroflex boxes, but not sure if other material being used. Had not found out if consolidation ongoing at #2. Still reviewing stuff and doesn't know if monitor needed at #2. Will find out if new fuel in pool

1992,09-16 17:33 NRC Ken Kolachick Mill 1, spent fuel pool, capacity in 1997, fuel consolidation? 2116 unconsolidated assemblies in Mill #1 pool.

1992,09-17 11:14 Richard Kacich 665-3298 away until tomorrow

1992,09-17 11:24 Mike wilson 665-3684
Left message for info on Fuel Consolidation, New Schedule for fuel movement?

1992,09-17 16:33 Rich Kacich
Currently, no out of state HLW transfer being considered, Move from Millstone 2 pool to Millstone 3 pool is being considered, would require rental of transfer cask. Dry cask storage another possibility. A non-nuclear future is not a financial alternative. Safety, variety storage options, those persuasive
Will send stuff on financial reasons to justify the non-nuclear plant closings and to keep nukes on. Also wind historical data. No monitors because cost excessive to do it right, and no other nukes presently use them therefore an uncompetitive burden for NU.

1992,09-18 15:00 DEP radiation out except for secretary
thanks to Friday schedule

DEP: Yanassey 566-3310,

1992,09-18 11:30 Jack Rambsy 301-504-1167,
NRC rtnd my call 9-14, I called ? About what?

1992,09-22 08:34 Shep Linscott. I am furious about NRC response and considering pulling out of request for hearing because no one with legal ability and expertise coming forward, if he wants DEP or State to be represented he better let them know before I pull out, otherwise that avenue is dead.

7/25/72 1172

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LPDR Program

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

'93 MAR 16 P2:06

In the Matter of)

NORTHEAST NUCLEAR ENERGY)
COMPANY, *et. al.*)

(Millstone Nuclear Power Station,)
Unit 2))

Docket No. 50-336 OLA

(Spent Fuel Pool Design)

CERTIFICATE OF SERVICE

I hereby certify that copies of "*CCMN's Response to NRC staff Interrogatories*" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, *Those indicated by an asterisk, were also sent* Attachment #17 and #10, this 11th day of March 1993:

Ivan W. Smith, Chairman*
Administrative Judges
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Office of Commission Appellate*
Adjudication
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Office of the Secretary*
Attn: Docketing and Service
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Washington, DC 20555

Mary Ellen Marucci
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Coordinator for CCMN, Inc.