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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

May 10, 1984¹
DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Glenn O. Bright
Dr. James H. Carpenter
James L. Kelley, Chairman

84 MAY 14 AIO:14

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

In the Matter of

CAROLINA POWER AND LIGHT CO. et al.
(Shearon Harris Nuclear Power Plant,
Unit 1)

Docket 50-400 OL

ASLBP No. 82-468-01
OL

Wells Eddleman's Response on Emergency Planning Contentions

The Board orally ordered filing of this response at the special prehearing conference May 2, 1984.¹

The Board had produced a partial list of contentions they wanted to be addressed, and suggested (as I recall; transcript not yet here) that I address the kinds of concerns raised with respect to other parties' contentions. Among these were referencing the plan, citing a rule or requirement, and not challenging NRC rules.

The Board's list of contentions was : Revised 2, 57-C-10, 57-C-13, 57-C-16, 30 & 30A, 214, 218, 219 and 222. Those are addressed first here. The Board indicated as I recall that it had not gone through all of my contentions in making the list. Since Applicants' responses often go to the merits, I have not addressed this specifically under the contentions. I think their improper arguments are obvious enough, and it will save time and paper to not comment on each instance.

¹Judge Kelley orally granted a 24-hour extension on the filing deadline for use if necessary (granted May 10, 1984).

Contention 2

Revised contention 2 concerns failure of the plan to require the continuous assessment of protective actions in a timely manner. Such failure violates 10 CFR 50.47(b)(4) and (9) in that the assessment systems aren't required to operate when radiation has been released to the environment (b)(9), and the basis for not requiring such assessment be in place (b)(4) is missing from the plan sections cited, and as far as I know, from the whole plan. This also violates 10 CFR 50.47(a)(1) because, unless assessment of what to do in an emergency is required to begin at radiation release to the environment, there cannot be assurance that adequate protective measures will be taken.

The argument that this can be optional and not in the plan is ridiculous. The plan must meet the requirements of 10 CFR 50.47 and the implementation guidelines of NUREG-0654. It is simple common sense that if assessment is delayed as long as the plan now allows it to be, the protective action may well not be timely or adequate. The worst case, with all the radiation barriers down and the last one failing BEFORE ASSESSMENT IS REQUIRED TO BEGIN (pt.1 pp 32-33 as cited in the contention) should make this clear.

If an action is required by 10 CFR 50.47, it cannot be made optional in the plan, but should be explicitly required.

Contention 57-C-10

This contention concerns ground level plumes, e.g. of the sort that occurred at the Ginna accident and which Applicants postulate in their meteorology of plume radiation doses (cf. Eddleman 80 and McFeaters affidavit for Applicants on summary disposition thereof).

10 CFR 50.47(b)(10) requires a range of protective actions in the plan, and 10 CFR 50.47(a)(1) requires such actions to be adequate, with reasonable assurance that they "can and will be taken " in an emergency.

NUREG-0654, section II.I.10 (p.58) establishes that each organization (involved in the emergency response) shall establish means for relating various measured parameters to dose rates. Surely the plume being on the ground is a parameter that affects dose rates (especially to sheltered populations in the path of the plume). Section II.I.8, *ibid*, same page, requires the ability in each organization to make "rapid assessments of the actual ... locations ... of radiological hazards" (emphasis original) so they should know if the plume is on the ground.

Section II.MD.4, *ibid*. p.42, requires actions consistent with "local offsite conditions^{...} at the time of the emergency" A plume on the ground could require evacuation where the same or a similar plume aloft might leave sheltering the best response.

NUREG-0654, II.J.7 (p.60) requires each licensee to establish a mechanism to recommend appropriate protective actions, but without reasonable assessment of sheltering effectiveness, it cannot be said that the recommendations are appropriate.

NUREG-0654, II.J.10.m, p.64, states "The basis for the choice of recommended protective actions from the plume exposure pathway during emergency conditions:

This shall include expected local protection afforded in residential units or other shelter for direct and inhalation exposure ..." (emphasis added). Clearly, a plume on the ground is a greater inhalation hazard. Note that this action (including sheltering effectiveness information) is one required for plans (NUREG-0654, item II.10, p.60⁶): "The organization's plans ~~for~~ to implement protective measures for the plume exposure pathway shall include (emphasis added). A plan that does not meet these clear requirements is obviously challengeable. There does not appear to be specific analysis of sheltering in the plan. Applicants (resp at 30-31) claim non-site-specific documents are OK for this. But NUREG-0654 p64 n.2 only says they "may be considered". They clearly do not address the

"local protection" required to be assessed under NUREG-0654 II.J.10x.m.

/Contention 57-C-13

This contention concerns the lack of specifics on protection factors and the "best protection factor" in the plan.

10 CFR 50.47(b)(10) requires a range of protective actions, but these cannot be appropriate (as required by 10 CFR 50.47(a)(1)) unless their effects and feasibility are accurately known.

Concerning the choice of recommended protective actions, NUREG-0654 says (II.J.10.m, p.64) that the basis of the choice of recommended protective actions from the plume EPZ during emergency conditions: "...shall include expected local protection afforded in residential units or other shelter for direct and inhalation exposure, as well as evacuation time estimates." This is required to be included in the plan (NUREG-0654, II.10, p.61 "organization's plans shall include" items listed below, including item m. Emphasis added in both quotes).

That's about as definite a requirement as can be. Again, the footnote on p.64 saying that some documents may be ~~xxxx~~ considered, does nothing to release the planners from these clear requirements for knowing the expected local protection in shelters and residential units for both direct and inhalation radiation exposure.

The Staff's discussion of this contention (p.37 their response) indicates they either haven't read the contention or deliberately misread it. Applicants, pp 30-31, fail to address the requirement for local protection, and the requirement that the basis be included in the plan. It's not inclusion in the plan to reference a document; NUREG-0654 does not say that the use of these documents is presumed adequate for local sheltering effectiveness evaluation. Indeed, plan Pt. 1 p.40 item 6.c says EPA info will be used "to the extent parameters are not". This contention is quite specific and even says what needs to be done (determine highest protection factor areas in advance).

Contention 57-C-16

This contention concerns appropriate protection in severe accidents. While the correction factor for Harris from NUREG-CR-2239 may not be exactly right, it would have to be off by a factor of nearly 300 for Harris to bring the expected deaths below a number that rounds off to 1; It would have to be off by a factor of 700 to be sure that the worst case deaths would drop below 1 (690/700 is less than one). Harris area rainfall is not that different from that around Indian Point, though this is a warmer climate.

The key point, however, is that the plan does not have an appropriate provision of set of plans to adequately protect people from severe accidents even in an average case (per NUREG-CR-2239). It's hard to give a specific cite to something that is not in the plan, but the range of protective actions ^{10 CFR 50.47(b)(9)} does not comply with 10 CFR 50.47(a)(1) if it leaves a reasonable chance of killing people. See NUREG-0654, Item II.I.8, p.58, requiring rapid (sic) assessment of the severity of an accident.

The plan, Pt. 1 pp 38-40 (referenced in Annex H to -0654 II.I.8) doesn't give any special attention to severe accidents; nor can I find any detailed provisions that would be workable (from the info stated) elsewhere in the plan to handle such accidents.

Pt. 1 p.38 does give minimum sampling times of 5 minutes, plus computer time or calculating time (see item 6, plan pt. 1 p.40) plus you'd have to add in notification time. Without knowing the sheltering effectiveness in advance, it might be too late to evacuate (due to delays e.g. as cited above) and still sheltering would not adequately protect people. The plan needs to deal with this problem, not duck it. Maybe some other means might provide appropriate protection under these conditions, but it's not in the plan (as required by NUREG-0654 Part II.J.10 as cited above)(see C-13 and C-10)

Contentions 30 and 30A

These contentions concern radioprotective drugs like potassium iodide that can be given to avoid ingestion of radioactive iodine. Concerning #30, Applicants (resp at 31-33) argue a lot. But the plan needs detail -- how many people will need KI, and who is available to distribute it and how will they get where they are going -- planned out in advance. As noted in above responses. NUREG-0654 II.J.10 says these things (including II.J.10.e re radioprotective drugs) must be in the plan. "To be determined by ____" is not having it in the plan (quantities of drugs, e.g., vs. Apps response at 33). NUREG-0654 II.J.10.e requires means to administer the drugs as well, but the plan doesn't say how many people will be available to deliver the drugs, how long it will take them to do it, how long it will take to administer the drugs, or who are the backup personnel (and how many are available) to do these things if the primary personnel aren't available. The "plan" on these issues is just a sketch.

The description in the plan (cited in the contention, Pt 1 pp 49- does not comply with 10 CFR 50.47(b)(1) which requires that each organization assigned primary emergency responsibilities (such as for radioprotective drugs) have "the staff to respond and to augment its initial response on a continuous basis". The plan must be detailed enough to demonstrate that this can be done, or 10 CFR 50.47(a)(1) is not satisfied, i.e. there isn't reasonable assurance the plan can and will work. This requirement applies to all requirements of the plan. So does 10 CFR 50.47(b)(3)'s requirement for effectively using assistance resources. Again, the plan must show this can and will be done" 50.47(a)(1).

Contention 30A points out that other persons whose immediate evacuation may be infeasible, other than emergency personnel or nursing home patients (or, including them -- the plan gives no specifics only generalities about who can't be evacuated). For persons who

are not emergency workers or bedridden, the plan gives no means of distributing KI to them, either. NUREG-0654 II.J.10.3e (p.63) does not limit the use of KI to emergency workers and the institutionalized, but says plans must particularly cover them (cf. Contention 30, above). Contention 30A regards the lack of planning for giving KI to others, which is clearly allowed by NUREG-0654. Common sense says that if radioiodines are released, KI can be of help to other persons.

The above arguments are also applicable to contentions 238 and 239. As to delivery of drugs, Applicants attack the merits. The plan contains no time study for distribution of KI, but the effectiveness of KI as a protective action under 10 CFR 50.47(a)(1) and (b)(10). Informed consent is necessary for administration of drugs (contention 239) and KI does have risks. The correct time to obtain this informed consent from nursing home patients and others (including emergency workers and institutionalized persons) is clearly before the accident hits. This is just good sense.

Applicants claim (resp at 35) that staging areas are set up for KI distribution, but the actual plan, e.g. Pt 3 pp 26-27, contains no such information, only a storage site at the Harnett Co. Health Dept (not specified where in the health Dept) and standard authorization to distribute KI. The plan simply doesn't have the detail to show the KI distribution would be made where appropriate or that such distribution (and administration) would or could be made timely enough to be effective.

Contention 214. This is another shielding contention. The basis for requiring shielding analysis under 10 CFR 50.47 and NUREG-0654 (particularly the part re II.J.10.m, p.64 thereof, cited in the contention) are discussed above re 57-C-10,13 and 16, pp2 thru 5,

Supra.

Although Applicants frequently say in their Response that I haven't told them what they should have done or what should be in the plan, here I do, highly specifically.

The IAEA items 3.12 and 3.13 simply require the kind of basic survey or determination of shielding effectiveness of buildings near Harris that is necessary to know the local protection factors required by NUREG-0654 section II.J.10 ("plans ... shall include") and II.J.10.m. To not do so is irresponsible and violates 10 CFR 50.47(b)(10) which requires a way to choose appropriate protective action. If you don't know sheltering's effectiveness, how can you accurately choose for or against it? Such noncompliance also violates 10 CFR 50.47(a)(1) which requires reasonable assurance that appropriate protective action can and will be taken. This contention could be consolidated with ~~§~~ 57-C-10,13 and 16 (or parts thereof) and other parties' contentions.

Contention 218

This contention alleges a failure to make individualized evacuation time estimates for each special facility (part A), and not providing individualized shutdown times for industries (Part B) The HMM NETVAC study ~~exists~~ claims to have made an overall estimate of evacuation times using a computer and input data on facilities, but it does not generate evacuation times for each facility, nor does it consider "means of mobilization of equipment and manpower (sic) to aid in evacuation, and the needs for designated employees or staff to delay their evacuation in order to shut down industrial facilities" NUREG-0654 Appendix 4, pp 4-9/4-10.

The HMM Study describes the NETVAC code (section 2.2, pp2-3 thru 2-6 and the following figure on the page after 2-6), but it does not address these matters cited from NUREG-0654 above.

I can find not discussion of them in the HMM report that shows how (or even if) they were used in the study or the NETVAC inputs.

The plan is no more adequate on these matters. E.g. at pt.1 p.47 item 4.b it says patients are transported by private ambulances etc but does not discuss mobilization times, numbers, personnel for driving them, ~~or~~ or how long it will take to evacuate all the patients. Dr. Wilson has an ambulance contention that this one could be consolidated with.

Contention 219: The actual experience at TMI was that parents came to schools to get their children. The plan has a small number of traffic control points in all counties other than Wake (see Table 8-2 of HMM study: maximum of 6 in counties other than Wake. Note "a" says that an average of one person and one vehicle will be at each control point. Yet it is clear from the map that the zones K,L,M and N in Chatham County have far more than 6 intersections to control, so it can't be assumed with any sureness that the evacuation routes will be followed. (Map, HMM Fig 5-1).

Moreover, consider e.g. an auto owner who has gone shopping, e.g. in Apex, or Fuquay-Varina, but who has a home with small children present (or relative present who can't transport themselves) elsewhere in the EPXZ. This person won't start evacuation from a place of residence, but will have to go there first, perhaps against the main flow of traffic (which can cause problems where traffic evacuating turns left, e.g.). Both Apex and Fuquay-Varina are towns with significant numbers of stores catering to local farm(and other)people. This transient population isn't accurately considered in daytime 8am or 4 pm evacuation timing. Even the HMM study, sec. 3-3, assumes parents will go to day care centers, ~~not homes~~, to get kids there. This contention, re schools and child pickup, could be consolidated with the similar joint contention. The evacuation start points could be consolidated with other contentions criticizing the evacuation time study.

Contention 222. The best I can do for basis here is to enclose the Raleigh Times front page article of 4-26-84 (after these contentions were filed) which quotes Wake schools transportation director Donald G. Cotton, "The two major problems in transportation are the quantity and quality of the drivers and the quality of the maintenance" and describes aging, tardy buses as a ~~xx~~ "tough problem" in the subheadline. At p.3A, this article continues by saying that working buses have had to double-up or even triple-up on some routes.

As to the first part, about the HMM study not discussing other facilities highly individualized means of transportation or availability of transportation resources, I can't find it either in the NETVAC model (HMM section 2, pp 22-³~~2~~ thru 2-6) or in HMM section 3. There just isn't a highly individualized discussion of transport in it, which is no wonder since NETVAC is a standard model from its own description.

NUREG-0654, App.4, II.c on page 4-3, says "the means of transportation are also highly individualized and shall be described" and "Schools shall be included in this segment". Applicants cite the HMM study, section 3.3 against this. It's only a page long and does not describe highly individualized transportation for each facility, by a long shot. It says "if"this"but if"that", which is appropriate for discussing backup, but the adequacy of numbers of vehicles to evacuate these special facilities is never discussed. The availability of vehicles isn't discussed. Means of transportation I presume means working means, not broken down or unavailable vehicles. This description must be highly individualized, and the HMM discussion is very generalized. It does not evaluate numbers or availability of backup drivers and buses to specific schools or say how long they would take to get to the schools.

WARM

Sunny Friday with high in mid 80s. Low tonight in mid 50s. Details, page 3A.

THE RALEIGH TIMES



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46 Pages

25c

Behind-time

EVA C

Aging, tardy buses add tough problem to Wake schools' education effort

By WILLIAM COHAN
Times staff writer

On any given day at Ligon Middle School, as many as 30 students miss all or part of their first-period elective class.

While for most Ligon students school begins at 8 o'clock, it is not uncommon for students to stream in 30 to 45 minutes later.

"Why are you so late?" Ligon science teacher Gayle M. Owens asked tardy students recently. "Did your bus just get here?"

Invariably, the students answer "yes," the bus had just arrived.

Late buses, a chronic problem

at Ligon, a gifted and talented magnet school, result from several factors ranging from broken transmissions and bus drivers who oversleep, school officials say. Some buses are chronically late at other schools, too, such as West Millbrook, Garner High and Enloe High.

"I'm sure late buses are a problem educationally," said Donald G. Cotton, transportation director. "But more particularly, it is a maintenance and personnel problem. Our solution would be to have a large and better equipped maintenance facility and to have more people. The two major prob-

lems in transportation are the quantity and quality of the drivers and the quality of the maintenance."

To try to correct the problem, Cotton has asked for 50 new school buses, school officials have put construction of a new bus maintenance garage as a top priority and a campaign to eliminate drivers who oversleep is under way.

To illustrate the growing problem, Cotton said that yesterday 59 of 675 school buses, or 8.8 percent of the fleet, were in the shop for repairs. In fact, the percentage of buses needing repairs each day has crept upward to about 7

percent, from about 5 percent, in previous months. As a result, about 12 additional buses need repairs daily.

"Since the first of the year, this has been a tremendous problem for area supervisors who have to look at the number of routes that have to be covered," Cotton said. "I understand that parents are upset, and rightly so."

What's more, Wake's fleet is rapidly aging. Some 75 of the school buses are 12 years old or older, according to Carlis D. Hicks, associate superintendent for administrative services. Hicks said that any 10-year-old bus with

60,000 miles should be considered for replacement. "About one-third of our fleet is in that category," he said.

Bus replacement is the state's responsibility. Any bus 12 years old or older should be replaced, according to state law.

That does not always happen. For instance, 33 replacement buses earmarked for Wake County for this school year were never delivered. Hicks said those buses are now expected in June. Hicks also said 20 new vans will be purchased to transport handicapped children.

Cotton also has requested that

50 new buses be purchased from the schools' capital fund. Hicks declined to say, though, whether he has included that figure in the actual budget request.

At least one of Cotton's transportation priorities, though, has won the recommendation of top school officials: a new \$2.5 million bus service garage. Wake schools Supt. Walter L. Marks' \$75 million schools facilities request document lists the garage as a top priority, although the Wake commissioners still must approve funding.

See LATE, page 3-A

Local data

High temperature yesterday 83 (28c)
 Low temperature yesterday 38 (3c)
 Mean temperature yesterday .. 61 (16c)
 Variation from norm -1 (-1c)
 Low this morning 48 (9c)

RECORDS FOR APRIL 26

Highest temperature 91 (33c) 1960
 Lowest temperature 37 (3c) 1981

HEATING DEGREE DAYS

RELATIONSHIP OF MEAN TEMPERATURE
 TO 45 DEGREES FAHRENHEIT

Yesterday 4 Season total 3704

PRECIPITATION

24 hours to midnight 0
 Total this month 4.35
 Variation from norm +1.94
 Total this year 20.33
 Variation from norm +7.25

SUNSET

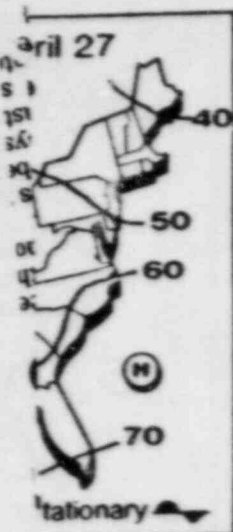
Today 6:58 Tomorrow 5:28

LAKES (feet above sea level Wednesday)

Falls 251.2 Jordan 217.6 Kerr 308.9

NOAA WEATHER RADIO

157.55 MHz



157.55 MHz

Mild weather is

Late buses a problem at schools

Continued from page 1-A

Hicks also is working on ways to replace sleepy or irresponsible bus drivers. Chief among them is a proposal to pay bus drivers an unspecified amount as a supplement to, as Cotton put it, "recruit and retain" the best drivers.

The bus-related confusion has taken its toll on some schools. For instance, yesterday 11 Garner High buses were in the shop. But out of the 11 spare replacement

buses, five also broke down. That left the six working buses to double-up, even triple-up, on some routes, Cotton said.

Meanwhile, at Ligon, the school day has been designed to match the peculiarities of the bus schedule. Bus supervisor Eddie Clinton said he tries to anticipate the afternoon before which buses are likely to be broken down in the morning. That way, the troubled buses don't meet the same students every day. This practice

also distributes lateness evenly.

Also, the uncertain transportation schedule has forced principal Susie VanDeVeer to make first period an elective, saving daily announcements and the basics for second period.

"I have tried to get it corrected, surely," Mrs. VanDeVeer said, "but that's why we moved basics to second period, because we do know some youngsters are going to be late."

Fast-moving turtle rewrites old story

"Hey, what's that?" one of the

THE RALEIGH TIMES

(USPS 454-6600)

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Applicants cite the plan, sections IVK.E.4.d and f of part 1 (p.47) but it's just a generality, not saying how many backup ^v vehicles are available, when, from what locations, or what "other available transportation" is. A plan has to have enough specifics to show it can and will work, or it doesn't comply with 10 CFR 50.47 (a)(1). This plan, re transport from schools and special facilities, does not do that. *Even HMM §6 re buses gives no numbers of buses or backups*

This contention, re schools, could go into the EPJ school contention. Re other special facilities, it could be consolidated with nursing home contentions or Dr. Wilson's transport-of-non-ambulatory persons contention.

This completes the Board's list.

The Board also asked me to find a reference requiring planning beyond the 10-mile EPZ. I was incorrect. The correct ^{statement} ~~source~~ from NUREG-0654 item D.2.d on page 12, is that detailed planning within the 10 mile EPZ would provide adequate basis to expand efforts if that proved necessary. This plan doesn't do that because its planning inside the 10 mile EPZ is not detailed; for specifics, take a look at the discussion of contentions above, for example.

Re contentions 100, 100 B and 210 (re-entry/recovery) 10 CFR 50.47(b)(13) requires general planning for this. These plans must be "developed" (ibid). But the plan, as cited in contention 210, is virtually nonexistent on these points. NUREG-0654, p.70, the II.10.M items, ^{some} do not appear to be meaningfully addressed in the plan, section IV.H. in part 1, pp 61-62. Particularly item 1 regarding general plans for re-entry and recovery, and item 3 concerning recovery operations and changes in organizations, do not appear to be covered. Where the plan is so general as to ^{this one-page "plan"} not meet 50.47(b)(13)'s requirements for "developed" general plans. it would surely

Re contentions 57-C-⁷~~8~~, 57-C-⁶~~8~~, ~~117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000~~ and perhaps ~~see~~ *others*

To the extent these contentions cover medical facilities, they'll probably get clobbered under the San Onofre decision. But I cannot withdraw them in good conscience, as I believe medical facilities need to be able to fulfill their functions, not just be listed. I hope it will not be too much work to handle these contentions.

Re Contention 221: NUREG-0654, Appendix 4, page 4-10, requires consideration ~~in~~ "shall be given to the impact of peak populations including behavioral aspects". The description of NETVAC ^{see also 6.3.1} and chapter 6, e.g. 6.2.2, 6.2.3, 6.2.4 (HMM pp 2-3/2-6) and HMM chapter 3 do not appear to account for behavioral aspects unique to ~~our~~ typical of peak populations. As noted above (HMM figure 8-2) traffic control is minimal outside Wake County (maximum of 6 control points per county except Wake), so Applicants' view (resp at 49) is wrong as well as going to the merits. The impact of human behavior under some degree of stress (as the contention says) just isn't in these blithe guesstimates.

I reiterate that the HMM ~~a~~ study isn't IN the plan, which is required by NUREG-0654, but that's probably moot by now.

Re contention 245, the study cited would be basis; the use of volunteers in rescue squads, school teachers, bus drivers, and so on is pervasive in the plan and shouldn't have to be cited all that specifically. The plan simply fails to address how many people will show up to do their jobs. This contention is a candidate for consolidation with others on the same point.

Re Contention 241 (schools as hosts for evacuated populations) NUREG-0654, II.A.2.e.3 on page 32 requires written agreements with organizations ~~in~~ which have roles in the plan, and requires their signatures. There are no signatures in the plan now, and I question whether school boards will knowingly sign a document requiring (or which could require) their schools to allow radioactive decontamination

at their sites/ (the cross reference on this from II.J.10.h, p.63, is to item K.8 which does not exist. However, it is clear that contaminated evacuees could reach a host site and would logically be best decontaminated there. This is exactly the issue I'm raising. Having radioactive material around a school where young persons (more sensitive to radiation than the general population) might be exposed, makes no sense. Yet it would follow from this plan.

See e.g. II.10.5.12 on p.65 - Monitoring of evacuees arriving at shelters 12
Re contention 240, the plan does say decontamination would be set up at appropriate points, but it doesn't pre-plan for likely sites or detail how this would be done. E.g. the main decon method I know is just washing, with lots of water, scrubbing, maybe ~~hair~~ haircutting or shaving in addition. Where are the water supplies? What are the decon methods? The plan doesn't give enough information to be workable under 10 CFR 50.47(b)(10) (range of actions) and (a)(1)(assurance of workability).

Re contention 239, it is discussed above with 30 and 30A. Here I'd only add that the plan, pt 1 p.47, etc as cited in 238 directly above it) is what is referenced.

238 is quite specific about the problem. Use of KI is recommended by authorities such as TVA, for the general public around nuclear plants (e.g. Sequoyah).

237 is a candidate for consolidation. The pickup points are not specified, the vehicles to be used for pickup are generally described only, and the estimate of evacuation for non-auto-owning populations must also take into account stress effects (behavioral aspects) and peak demand on transportation (NUREG-0654, App 4, pp 9-10; see HMM study, section 6.2.1 2d paragraph or thereabouts for some handwaving that doesn't consider these factors in any sensibly detailed way.

*shelters 12
require
w/h
now
they
also
must
bring
radioactive
material
in & go
undetected
for
hours.*

Contention 236 on the mobility impaired, is specific. Applicants appear to think a transport resource is "designated" by a generality like "local rescue squads or ambulance services will transport the patients". Wrong. Which vehicles will go where? When are these ~~next~~ vehicles available? What's their backup? The measures have to work, 10 CFR 50.47(e)(1), or be reasonably assured to work. You can't get such assurance from the plan's generalities. Ditto for #235. (These were separated due to the 100 word rule, and might be consolidated with Dr. Wilson's contention on ambulance transport).

Contentions 233 and 234 should be read as saying the plan is inadequate because it doesn't require the assessments they talk about at early enough times to make evacuation workable. This involves 10 CFR 50.47(b)(10) in addition to the cites in the contentions. These might be consolidated with similar contentions discussed above. The plan cites are adequate as are the rules cites and 0654 cites.

The communication criteria relevant to contentions 232 and 231 are in NUREG-0654 II.F (ref 10 CFR 50.47(b)(6) same language): provisions (must) exist for prompt communications among ~~between~~ principal response organizations (including schools) and to emergency personnel (e.g. bus drivers) and to the public. (emph. added) The plan, pt. 1 pp 74-75, identifies commercial telephone as the main communication with state & local govt agencies (e.g. schools) with 2 way radio as backup and state patrol cars as backup to that, but there aren't enough state police cars to reach each school bus (if there are 100 involved as Applicants allege), and the buses don't have radios. The plan, ptl p.47, says school buses or other transport will be used but doesn't seem to say how this transport will be notified to begin evacuation school children.

I recommend 57-C-4 & 5, 117, 117A and 118 also, but this is enough writing, I'm tired and maybe sick again. *W.D. Edleman*