UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of   )
)
PUBLIC SERVICE ELECTRIC &)   Docket No. 50-272
 GAS COMPANY   )   Proposed Issuance of Amendment
)   to Facility Operating License
(Salem Nuclear Generating)   No. DPR-70
 Station, Unit No. 1)   )

NRC STAFF TRANSCRIPT CORRECTIONS

In response to the Board's request that parties submit transcript corrections,
Staff counsel and witnesses have reviewed the transcript. Punctuation and
typographical errors, for the most part, have been ignored except where their
correction is necessary to clarify the meaning of the affected statement.
Following are the Staff's corrections:

4/28/80 p. 1361, line 3, change "At his point" to "At this point".

     p. 1361, line 4, change "court" to "board".

     p. 1361, lines 10-12, delete "or has the Board simply not yet ruled
                  on whether it is a Class 9 accident or has
                  the Board simply not yet ruled on whether
                  it is a Class 9 accident".

     p. 1361, lines 22-24, delete "we are speaking of. Whether we are
                  speaking of the difference in consequences
                  or the consequences".

     p. 1362, line 12, change "Mr. Moore" to "Chairman".

     p. 1362, line 14, change "problem in that" to "problem is that".

     p. 1364, line 6, change "that in that" to "that is that".

     p. 1373, line 8, change "Mr. Moore" to "Ms. Moore".

     p. 1373, lines 13-14, insert the words "is not" between "that" and
                  "an objection".

p. 1373, line 18, insert "it" between "that it" and "our case".

p. 1373, line 21, delete the word "be" before "bring up".

p. 1384, line 7, change "Licensing" to "Licensee".

p. 1385, line 3, change "Al" to "Allan S.".

p. 1385, line 20, change "Wlater" to "Walter".

p. 1386, line 7, change "SSP" to "SFP".

p. 1386, line 8, change "to insert the word" to "to insert a word".

p. 1388, line 5, insert the words "a document" between "you" and "entitled".

p. 1388, line 6, change "Dr. Allen F. Benjamin" to "Dr. Allan S. Benjamin".

p. 1389, line 13, change "Allen" to "Allan".

p. 1390, line 5, change "to due with" to "to do with".

p. 1390, line 6, change "grain" to "drained".

p. 1390, lines 9-10, change "Sandia Laboratories on subject of" to "Sandia Laboratories on the subject of".

p. 1390, line 17, change "whether as as zirconium fire" to "whether a zirconium fire".

p. 1390, line 18, change "without; do you agree" to "without water. Do you agree".

p. 1390, line 23, delete "BY MS. MOORE:".

p. 1390, line 24, change "A" to "DR. BENJAMIN:".

p. 1390, line 25, change "before" to "for".

p. 1391, lines 10-11, change "the past week. The oxiadation" to "the past week on the oxidation".

p. 1391, line 17, change "--that that possibility" to "--that that the possibility".

p. 1391, line 21, change "that I do not believe" to "that is I do not believe".

p. 1391, line 22, delete "(?)".

p. 1392, line 4, change "is that his statement" to "is in his statement".

p. 1392, line 10, change "and melts, but mainly," to "and melts. But mainly,".

p. 1392, line 11, change "present time. I do not think" to "present time is that I do not think".

p. 1392, line 12, change "of an oxidation of thermol oxidation can be ruled out." to "of Zirconium oxidation can be ruled out."

p. 1393, line 11, change "of fuel assembly" to "from fuel assembly".

p. 1393, line 12, change "presitent" to "precedent".

p. 1393, line 13, change "at Betus (?)" to "at the Bettis". (Note: Wherever this word is used in the transcript, the correct spelling is "Bettis.")

p. 1393, line 20, change "ARGON" to "ARGONNE".

p. 1393, line 24, change "wells" to "rods".

p. 1393, line 25, change "That any burning of" to "That any burning or".

p. 1394, line 2, change "illuminonisty" to "luminosity" and "fuel cans" to "fuel rods".

p. 1394, line 10, change "namely oil. In his opinion" to "namely oil. His opinion".

p. 1397, line 14, put a period after the word "elements".

p. 1398, line 7, change "zircoloy class." to "zircaloy cladding." (Note: Wherever this word is used in the transcript, the correct spelling is "zircaloy.")

p. 1398, line 24, insert the word "are" between "temperatures" and "predicted".

p. 1399, line 7, change "my" to "may".

p. 1399, line 14, insert the word "in" between "as" and "any".

p. 1400, line 12, change "A&S" to "ANS".

p. 1403, line 12, change "deprivation" to "deflagration".

p. 1403, line 16, insert the word "thing" between "don't" and "it's".

p. 1403, line 21, change "the tend to leak when pressure" to "they tend to leak when the pressure".

p. 1404, line 7, insert the word "the" between "If" and "ventilation".

p. 1404, line 9, change "disbursal" to "dispersal".

p. 1405, line 9, change "Here's" to "His".

p. 1406, line 22, change "LAMB" to "BENJAMIN".

p. 1407, line 3, insert the word "a" between "provide" and "down-comer".

p. 1407, change "LAMB" to "BENJAMIN" and "BENJAMIN" to "LAMB" on entire page.

p. 1409, line 18, insert "--" between "add to what" and "I agree".

p. 1409, line 21, insert a period after the words "alluded to".

p. 1410, line 3, insert the word "answers" between "exact" and "for".

p. 1410, line 9, change "Without" to "With".

p. 1410, line 14, change "Zirconium on experiments" to "Zirconium and experiments".

p. 1410, line 19, insert a period after the word "elements".

p. 1411, line 5, change "insulatin air" to "insulation".

p. 1411, line 7, change the line to read "diffusion of oxygen through the Zirconium oxide layer and so forth."

p. 1412, line 2, change "But I believe I could" to "But I believe it could".

p. 1412, line 15, change "number" to "amount". Delete the word "I" at the end of the line.

p. 1414, line 2, add the words "to conduct" between "difficult" and "the heat".

p. 1418, line 16, add the word "of" to the end of the line.

p. 1419, line 9, change "factors" to "releases".

p. 1419, line 11, change "damage" to "damaged".

p. 1420, line 5, change "oil" to "old".

p. 1419, line 7, change "Mr." to "Dr." (Note: Wherever the words "Mr. Benjamin" appear, it should be changed to "Dr. Benjamin".

p. 1420, line 9, change "then" to "than".

p. 1420, line 15, insert a period between the words "assembly" and "If".

p. 1423, line 5, change "great" to "greater".

p. 1424, line 7, change "cladd" to "clad".

p. 1424, line 9, the line should read "temperature, mainly because of the fact that the high temperature".

p. 1424, line 12, change "cladd" to "clad".

p. 1424, line 17, change "eighter" to "either".

p. 1429, line 1, change "postulating" to "postulated".

p. 1429, line 8, delete the word "done" between the words "have" and "given".

p. 1429, line 9, add the word "a" to the end of the line.

p. 1429, line 10, delete the word "that" between the words "addition" and "we".

p. 1429, line 12, delete the word "If" at the end of the line.

p. 1429, line 13, change "those" to "Those".

p. 1430, line 1, change "and or else very close enough" to "or else close enough".

p. 1430, line 7, change the word "all" to "hole".

p. 1430, line 8, change "is in effect" to "is not effective".

p. 1430, line 11, change "since geometry is in one of long" to "since the geometry is one of long".

p. 1430, line 12, insert a period between "spacings" and "So."

p. 1430, line 13, insert the word "a" between "in" and "situation".

p. 1430, line 14, insert a period between "sustained" and "However".

p. 1430, line 15, change "client is likely" to "clad".

p. 1430, lines 16-17, insert a period between "cladding" and "So".

p. 1431, line 10, change "dutires" to "duties".

p. 1431, line 12, change "called the steam" to "called a steam".

p. 1431, line 14, insert the word "a" between "in" and "large".

p. 1431, line 15, change "seentially a situation" to "essentially
              in a situation".

p. 1431, line 18, insert a period between "pool" and "That".

p. 1431, line 21, insert the word "a" between "called" and "steam".

p. 1431, line 24, delete the words "running down" at the end of
              the line.

p. 1431, line 1, insert the words "running down" between "material"
              and "into".

p. 1432, line 2, delete the word "think" between "don't" and "know".

p. 1432, line 8, change "areas that he postulated" to "areas. He
              postulated".

p. 1432, line 10, change "explosion, twenty percent" to "explosion.
              Twenty percent".

p. 1432, line 12, change "energy and steam explosion" to"energy.
              Steam explosion".

p. 1432, line 18, change "Hydrogen, of course" to "Hydrogen. Of
              course".

p. 1432, line 20, insert the word "is" between the words "it"
              and "not".

4/29/80   p. 1437, line 6, change "thermo" to "thermal".

p. 1437, line 10 , change "offered" to "performed".

p. 1437, line 13, change "is" to "in".

p. 1438, lines 23 and 24, change "element" to "elements".

p. 1438, line 25, change "and" to "in".

p. 1439, line 2, change "thermo" to "thermal".

p. 1441, line 3, change "that" to "where".

p. 1443, line 8, add the word "been" after "has" at the end of the line.

p. 1445, line 21, add the word "but" after "fuel,".

p. 1446, line 16, change "play" to "plate".

p. 1451, line 10, change "plane" to "plain".

p. 1451, line 15, change "he transferred" to "heat transferred".

p. 1451, line 19, change "with" to "when".

p. 1451, lines 19, 20, 23, change "WDT" to "DWDT".

p. 1452, line 6, change "R1400" to "WASH-1400".

p. 1452, line 8, change "at N129" to "(I-129)".

p. 1452, line 10, change "yeal-old" to "year-old".

p. 1452, line 23, change "disbursed" to "dispersed" and "predated" to "predicated".

p. 1453, line 14, change "analysis at that time" to "analysis at this time".

p. 1454, line 7, change "subject heat transfer of" to "subject of heat transfer,".

p. 1454, line 13, change "loss or accident" to "loss of water accident".

p. 1457, line 4, change "eroding" to "storage".

p. 1458, line 17, change "A" to "DR. BENJAMIN".

p. 1459, line 1, change "conductive" to "convective".

p. 1459, lines 2 and 3, delete.

p. 1459, line 7, change "A" to "MR. PASEDAG".

p. 1459, between line 13 and 14, change "size of the" to "seismic".

p. 1459, line 7, change "A" to "MR. PASEDAG".

p. 1459, line 23, change "flip" to "foot" and "A Lab" to "ALAB-".

p. 1461, line 23, change "leaker" to "leakage".

p. 1462, lines 17 and 18, change "refuel" to "refill".

p. 1463, line 15, change "feeded" to "fitted".

p. 1463, line 23, change "cast" to "cask".

p. 1466, line 11, change "beyond" to "behind".

p. 1467, line 11, change "flush" to "flesh".

p. 1469, line 16, change "in" to "and".

p. 1470, line 8, change "rool" to "room".

p. 1472, line 9, change "conductive" to "convective".

p. 1474, line 2, change "in our service" to "and large surface".

p. 1474, line 7, change "propogate" to "sustain".

p. 1474, line 10, add "during our calculations" after "rods".

p. 1475, line 22, add "for these decay times" after "occur".

p. 1476, line 18, add "oxide" after "Zirconium".

p. 1476, line 20, change "spent fuel" to "fission products".

p. 1477, line 4, change "GAP" to "of gap".

p. 1479, line 14, add "by" after "mechanism" and change "lodge" to "rods".

p. 1479, line 15, add "to" before "900".

p. 1479, line 22, change "cams" to "cans".

p. 1481, lines 3 and 4, add "a" before "mitigating" and change "the fact" to "factor".

p. 1481, line 14, delete "outward".

p. 1481, l. 15, change "and is not" to "than is".

p. 1481, line 17, add "to occur" before "simply".

p. 1481, line 20, change "this fuel container" to "the steel containers".

p. 1483, lines 5 and 6, change "dualable" to "doable".

p. 1485, line 10, change "aggressed" to "addressed".

p. 1485, line 12, change "amounts you produced would" to "amounts of heat you produce with".

p. 1488, line 19, change "were to" to "would".

p. 1488, line 21, add "stochastic" before "process".

p. 1489, line 13, add "of whether propagation of" before "clad".

p. 1490, line 2, delete "temperature".

p. 1490, line 6, change "may imply" to "does not imply".

p. 1490, line 9, change "K heat is in" to "decay heat, which is in".

p. 1490, lines 10 and 11, change to read "the spent fuel element. It would be this region or somewhat above that region in fact that would most".

p. 1497, line 4, change "which" to "and".

p. 1497, line 19, change "rods" to "racks".

p. 1501, line 12, change "Dr. Wetterhahn" to "Dr. Benjamin".

p. 1521, line 23, delete "not".

p. 1522, line 3, add "look" between "would" and "like".

p. 1528, line 4, change "AC" to "AEC".

p. 1537, line 15, add "fire" after "zirconium".

p. 1537, line 22, change "oxide" to "oxidize".

p. 1544, line 1, change "be concerned" to "be a concern".

p. 1550, line 5, change "it would not be oblication" to "there would not be a propagation".

p. 1550, line 7, change "bins" to "pins".

p. 1550, line 19, change "fire to burning or to propaga-" to "fire or burning to propaga-".

p. 1550, line 20, change "oxidation of propagation" to "oxidation or propagation".

p. 1551, line 22, change "wave" to "away".

p. 1552, line 1, change "weight law" to "rate law".

p. 1552, line 4, change "the same way" to "a simplified way".

p. 1552, line 6, change "another and to account for" to "another, and I would account for".

p. 1555, line 1, add "of Zirconium." at the beginning of the line.

p. 1555, line 17, change "modeling would do" to "modeling or do".

p. 1560, lines 11, 12 and 21, change "weight" to "rate".

p. 1561, line 4, change "subtrofusion" to "diffusion limited".

p. 1561, line 7, change "last" to "loss".

p. 1564, lines 14 and 15, change "scrap metals," to "metal scraps,".

p. 1564, line 17, change "overheated" to "was expended".

p. 1567, line 21 and 22, change "and finally divide as" to "to finely divide".

p. 1569, line 8 and 9, beginning with the word "Do" and the rest of the sentence is a question, and not part of the preceding answer, posed by Chairman Milhollin.

p. 1569, line 13, delete "BY VALORE:"

p. 1569, line 14, the sentence should begin with "A" as it is an answer.

p. 1569, line 17, change "Still" at the end of the line to "Until".

p. 1570, line 2, change "and" to "in".

p. 1570, line 5, change "fall down below" to "boil down".

p. 1571, lines 7 and 8, change to read "A   Well, your question
gets back to propagation of fires across
the spent fuel pool. Notice I said that".

p. 1571, line 10, change "Zircolion" to "Zircaloy".

p. 1573, line 3, change "Q" to "A".

p. 1573, line 5, change "A" to "Q".

p. 1582, line 8, change to read "does not -- or even any one piece
of information with a".

p. 1585, line 7, change "A" to "MR. PASEDAG:".

p. 1586, line 7, change "oil" to "pool".

p. 1588, line 6, change "boards" to "Board is" (twice).

p. 1595, line 21, change "?" to "others were".

p. 1595, line 24, change "had turned" to "burned".

p. 1595, line 25, change "That it produced vapor" to "That is, it
did not produce vapor".

p. 1597, line 5, change "There would be fore two reasons" to "That
would be for two reasons".

p. 1597, line 6, change "two" to "three" at the end of the line.

p. 1597, line 24, delete "in our -- he recorded".

p. 1597, line 25, change "and" to "He" (starting new sentence).

p. 1601, line 11, change "sight" to "site".

p. 1601, line 12, change "actuary" to "estuary".

p. 1601, line 25, change "side" to "site".

p. 1603, lines 7 and 15, change "sight" to "site".

p. 1603, lines 7, 16 and 19, change "asstuary" to "estuary".

p. 1603, line 16, change "as soon" to "which is assumed".

p. 1603, line 21, change "conservation" to "conservative".

p. 1604, line 25, change "sizemic" to "seismic".

p. 1605, line 10, change "sizemic" to "seismic".

p. 1605, line 15, change "Zubans" to "Zudans".

p. 1612, line 4, change "WASH 14" to "WASH-1400".

4/30/80   p. 1631, line 4, change "ten over minus" to "ten to the minus".

p. 1631, line 7, change "10 over -4" to "10 to the -4".

p. 1631, line 12, the line should read "is quite a little
bit more than the air in the fuel building."

p. 1631, line 17, change the word "only" to "all of".

p. 1632, line 9, change "which would" to "whichever would".

p. 1632, line 14, add the word "say" to the beginning of the line.

p. 1632, line 17, change "incidence" to "incident".

p. 1632, line 22, delete the word "rack".

p. 1636, line 4, add the word "the" between "that" and "volatility".

p. 1636, line 14, change "retained in the various" to "retained on
the various".

p. 1636, line 25, change "that would only" to "that we only".

p. 1638, line 8, delete the comma after "I don't" and insert "--".
Add "--" at the end of the line.

p. 1638, line 9, delete the word "eh,".

p. 1638, line 24, change "is my interpretation" to "in my interpretation".

p. 1646, line 3, change "Strontium fuel to fuel matrix which" to
"Strontium through the fuel matrix which".

p. 1646, line 8, insert the word "it" between "remove" and "from".

p. 1646, line 23, the last word in the line should be "If" not "I".

p. 1646, line 25, delete the first word "based,".

p. 1647, line 6, delete "of" between the words "conditions" and "that".

p. 1647, line 7, delete the first word "data".

p. 1657, line 4, first word should be "intending" instead of "tending".

p. 1666, line 11, change "to both the of the latest" to "to both of the latest".

p. 1668, line 10, change the word "off" to "up".

p. 1668, line 13, change the word "off" to "up".

p. 1669, line 11, change the word "evaluation" to "evacuation".

p. 1669, line 16, change "responsible for its question" to "responsive to this question".

p. 1670, line 6, change "Mr. Chairman to staff" to "Mr. Chairman the staff".

p. 1672, line 2, change "in the Bettis" to "to the Bettis".

p. 1672, line 12, change "have" to "having".

p. 1785, line 23, change "fnr" to "for".

p. 1787, line 7, change "S fuel" to "SFUEL".

p. 1787, line 13, change "I have not" to "I have no".

p. 1806, line 17, change "true than an" to "true that an".

p. 1806, line 20, change "licensee" to "licensing".

p. 1806, line 21, change "motion or the Board ot order" to "motion for the Board to order".