1- To be relevant, the abstract needs to tell the parameters of the fuel, and the casks being studied. I.e. fuel type, BU, cask pressure etc.
2- Same comment as #1 for the "Public Summary"
3- Last paragraph of Sec 1.1 indicates the study is for LBU fuel, but in fact the section on release fractions is a muddling of HBU and LBU phenomena.
4- 1st paragraph Section 3.6 - If the fuel is modeled as a total mass and not individual rods, how can they tell how many rods in the cask would fail and the number of locations they would fail at. Does this analysis take into account the temperature gradient in the fuel? Does the analysis account for the fact that some of the fuel may stay in the cask for a very long time, and the temperature of the cladding during transportation may be below the ductile/brittle temperature transition in some locations, especially for higher burnup fuel?
5- Bottom of page 61. – refers to the strains being less than half the 4% strain capacities indicated in Sanders (1992). This strain capacity was a guess and should not be relied up. This section should have some discussion of the present day thinking of what the strain limit should be.
6- Table-III-5. Why weren't the values for irradiated Zircaloy, in Geelhood and Beyer, which at least for low burnup fuel been recommended by NRC, been used instead of the properties of unirradiated Zircaloy-4 in this table?
7- Section V.5.3 – 1st paragraph – indicates that larger particles are filtered by even larger particles within the cask. This is not true. This type of filtering only takes place with the rod it affects the rod –to-cask releases not the cask –to-atmosphere release as implied.
8- Section V.5.4.1 – 2nd to last bullet of page 465 - Why wasn't the activity of the Co-60 decayed for the 9 years in storage. Crud inventories are quoted at the time of removal from the reactor.
9- Section V.5.4.1 – last bullet of page 465 - Why was the whole mass of the Crud converted into Co-60 activity. The preponderance of the mass for BWR Crud is Fe_2O_3 This results in an excessively high Co-60 activity
10- Page 466, 1st line – state what the conservative assumptions are (breakup of crud flakes), and how they affect the airborne fraction.
11- Page 466, last sentence of paragraph under Eq. V-6 – This statement is wrong. There will be a driving force from the cask pressurization and a heat up of this gas due to the decay heat of the fuel.
12- Page 466 – Eq V-7 – The internal temperature used is incorrect. The temperature used should not be the temperature of the seals during the fire but rather the average temperature of the gas in the cask, which is heated due to both the fire and decay heat of the fuel. Due to the time lags I am not sure whether this temperature will be higher or lower than the seal temperature. It should have been calculated.
13- Page 468, 1st full line- what does "relatively high burnup fuel" mean?
14- Page 468, The section from the middle of the paragraph above Fig. V-6 to the end of the paragraph below V-6 including Fig.V-6 should be removed. This release fraction treatment deals with fuels with burnups below 45 GWd/MTU yet this verbiage deals with fuel characteristics of HBU fuel. HBU fuel should be treated separate calculations. In addition while an opinion by Hansen is stated on the behavior of the rim, there is equally compelling information for other positions.
15- Page 468, last paragraph – Hansen gives a range of release rates from 1×10^{-6} to 2×10^{-5}. This incorporates the value used in the calculation of 4.8×10^{-6} but there is no reason to pick the value chosen. These release fractions are somewhat lower than the value by Einziger 3×10^{-5} but this is to be expected since: 1) Hansen's test samples showed very little fuel cracking, and 2) Hansen's values do not account for the fuel that will be released upon initial impact and fracture of the cladding, it only accounts for

particulate that would be released because it was entrained in the rod depressurization stream.

16- Table V-19, this table gives the release fractions and the source of the release fractions.

   i) The F_{CE} for the particles and volatiles is only the (1-f) factor and does not include the depressurization factors; interestingly the (1-f) were from NUREG-6672 and derived for the case of a cask pressurized to 5 atmospheres not he one atmosphere used in this calculation. The report needs to be consistent. If the cask is being depressurized 1 atmosphere then justification is needed for using 5 atmosphere data.
   ii) F_{RC} is only for a LBU rod that has not fractured additionally during the impact releasing additional gas. For LBU the gas release of fractured fuel has been estimated to be ~12%. It could be as high as 40% for HBU
   iii) F_{CE} for gas is inconsistent with the text that says the depressurization was 2/3
   iv) A range of values should be used for F_{RC} for particulates.