Holtec Consolidated Interim Storage – Legal, Technical concerns

9/3/2019 – John R. Buchser – Rio Grande Chapter, Sierra Club

1. Application relies on illegal contract (ownership) - assumes DOE would take title. Waste could be stranded in NM with no state oversight or control.

2. Large quantities of spent fuel requires long term storage. Exceeds design life of many casks.

3. High burnup fuel (HBF, all present reactor operations since 1990's) takes longer to cool. Cladding failure rates higher (brittleness increases). Leads to higher transportation risk. Potential need for better long-term storage casks or double-cask.

4. Current designs of casks (Holtec) are thin walled stainless steel, 60 year service life. On-site loading for dry storage at reactor sites is resulting in some cases in scratching of casks which could lead to early cracking failure. Holtec app is for 120 years of storage.

5. Holtec rejects any leaking casks when received. "Return to Sender"

6. No on-site problem resolution means of dealing with leaking casks. Options: Russian doll (cask within cask) or Hot cell (very expensive)

7. Inadequate monitoring in storage.

8. Transportation: US rail has D+ rating from US Civil Engineers. Billions of $$ need to be invested to make rail adequately safe.

9. Transportation routes not identified.

10. Site is highly alkaline. Will gradually damage casks.

11. Inadequate assessment of potential aquifer contamination.

12. No long-term storage site exists. Closest US got was Yucca Mtn., which has water detected that could be a fatal flaw.

13. NRC states waste can be stored at site of production indefinitely. Then why a CIS (consolidated interim storage) site?

14. How is a CIS site 'safer'?

15. Site may be in service up to 120 years. However, if a permanent site does not exist in 120 years, what then? This should be evaluated.

16. NEPA requires a no-action alternative be considered. HOSS (hardened on-site storage) should be analyzed in the no-action alternative.

17. Holtec depends too much on conclusions of Blue Ribbon Commission (post-Obama Yucca closure technical report).

18. 10CFR72.30 establishes decommissioning of interim facilities. Holtec app is incomplete in this regard.

19. Waste that is greater than class C: Regs require this waste go in a permanent repository.

20. Earthquakes are on the rise due to fracking. No analysis provided.

21. Dunes sagebrush lizard "not present" based on one visit. This endangered species lives in that habitat.

22. Tetra Tech is the main preparer of the ER (Holtec environmental analysis). Tetra Tech accused of fraud in cleanup of Naval Shipyard in San Francisco.

23. Inadequate analysis of Holtec HI-STORM UMAX cask / transport system. For example, both intake and outflow cooling for cask is at top; natural air heat flow is up.

23. Fractured rock beneath site - what risks are present?

24. Various accident scenarios should be assessed. Particularly for transportation.

25. Rail is safest transport. DOE 'gave up' negotiating with rail as not enough $$ in it for rail companies. Used fuel in casks will push rail lines to their design limits with respect to weight.

26. Scheduling shipments by rail will result in shipment being 'parked' at times. This can expose workers to high levels of radiation.

27. Exposure to radiation by pregnant women is much greater risk than for the general population.

28. Accident response is 'run'. Although rail presents low probability of being a problem, just one accident resulting in large spill could result in permanent evacuation of hundreds of square mile area.

29. Cask is filled with helium. Helium loss leads to too high of temperatures.

30. HBF hydrogen adsorption into zircalloy metal can lead to cladding embrittlement.

31. If cladding problems, how to detect? How to fix?

32. Holtec MPC-37 cannister loading process complex. Issues with long storage prior to shipment to CIS site.

33. Law requires LBF (low burnup fuel) be shipped before HBF. However, Holtec is mixing both in casks. Casks are welded shut with no means to address this problem.

34. Until there is a solution (facility) for long-term storage, we should not be creating more nuclear waste from commercial reactors. However, in the absence of such a facility, the risk of the Holtec CIS site becoming a re-processing source is significant. Re-processing will perpetuate the nuclear waste problem.

35. New Mexico has already been 'home' to all sorts of insults in terms of our nuclear past. The Church Rock spill of uranium tailings is the largest radioactive accident in US history.

36. SE NM has a bunch of low-level radioactive sources (WIPP, Urenco, etc). Fracking and oil extraction is also a low-level rad waste producer. So we add to this? Who evaluates the cumulative impact?

37. Employers in SE NM have threatened employees if they speak out about perceived risks from this project.

38. US Navy ships to Idaho (unannounced) their used nuclear cores. However, the design is very different - the fuel cores must be OK at multiple-G levels, the transport casks are 10 inch stainless steel. Holtec's casks are 5/8 inch stainless. Commercial reactor fuel cores are quite fragile. NRC testing is for a 30 foot drop. Many rail bridges exceed this distance.

39. Accident liability: If accident exceeds Holtec's $$, Holtec folds, who holds the bag?

40. Accident liability: If major accident, who reimburses businesses, residents? Loss of state income on O&G taxes.

41. Cancer rate increase: Who pays for increased medical care and loss of productivity/life?

42. Lack of state engagement on this CIS facility approval process.

43. Need to establish that NM does not consent (SE NM politicians do). This was essential for stopping Yucca Mtn.

44. What is State Land Office role? Impact on SLO land adjacent. Split estate problem.