

SCE Position Paper
Independent Spent Fuel Storage Installation (ISFSI) Location

I. Summary

A variety of locations were considered and evaluated for the permanent dry fuel storage location of the spent fuel assemblies at San Onofre. The fuel assemblies will remain at this location until collected by the Department of Energy (DOE). SCE's current plan is to expand the current location of the ISFSI because it offers the highest level of certainty for safely moving the spent fuel from wet to dry storage as expeditiously as possible as well as the lowest cost for customers.

II. Scope

The purpose of this paper is to provide the background and basis for SCE's decision for the location of the ISFSI at San Onofre.

A detailed evaluation of options for the final ISFSI pad site included analysis of three categories of locations. The sites were identified without regard for the current licensing status (i.e., these locations may or may not have the NRC license to store nuclear fuel). The three categories of locations were as follows: (1) within the San Onofre Easement, (2) the surrounding area of Camp Pendleton including the San Onofre Mesa location, and (3) offsite areas. Currently only the San Onofre Easement is permitted under the 10 CFR Part 50 license to store spent fuel, while neither the surrounding area of Camp Pendleton nor the offsite areas are licensed for spent fuel storage.

Factors considered in the evaluation were:

1. Siting requirements
2. State permits, geological analysis
3. Ability to transport spent fuel to these locations
4. NRC regulatory license requirements
5. Length of time the spent fuel would be in wet storage before it could be transferred to dry storage at the ISFSI pad

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III. Analysis

A summary table of the evaluation compares the main factors for determining the ISFSI pad location.

Table 1. SCE ISFSI Pad Location Evaluation

A. Location	B. Currently maintains a license to store nuclear fuel (10 CFR Part 50 or Part 72)	C. Requires Siting, Permitting, Licensing and Geological studies	D. Duration of wet storage*	E. Confidence of stakeholder approvals (i.e., Regulatory, City, State, Public)	F. Direct Cost
Within San Onofre Easement	Yes	Minimal for existing, Yes for other sites	5-12 years	High	\$400M + \$50-\$300M
Camp Pendleton Area including SCE Mesa area	No	Yes	24-33 years	Low	>\$400M + \$1-\$2.9B for extended wet storage
Offsite areas	No	Yes	40+ years	Very Low	>\$400M + \$1.8-\$3.6B for extended wet storage

*Years from 2014

In considering the various locations for spent fuel storage, SCE assumed that selecting a location would entail four phases – agreement of site selection, site permitting and licensing, site construction and offloading the spent fuel pools and transporting the spent fuel to that site. For site selection, each potential location was evaluated for its technical feasibility to design and construct a licensed dry fuel storage system. The locations were then evaluated based on the ability to get consent to site an ISFSI, such as with state and local permitting, NRC licensing process, including Environmental Impact and the ability to transport spent fuel to the location. Activities highlighted in column C add uncertainty to options that are beyond the 10 CFR Part 50 licensed area.

Three specific San Onofre locations within the currently licensed area were considered: (1) the current location, (2) the South Bluff area and (3) the Reservoir. The benefits of these easement locations are that they are in the 10 CFR Part 50 licensed area, and can support a timely transportation of the spent fuel from the wet storage in pools to dry storage on the pad within 5-12 years. Among the options within the San Onofre Easement, the timing and success for the geological soil preparations, state and local permitting of the South Bluff and Reservoir areas bring uncertainty into the decommissioning project.

For the Camp Pendleton, including the Mesa dry storage site area option, SCE roughly estimates that it would take approximately 24-33 years. For example, for planning purposes, SCE estimates the consent-based process for site selection would be likely take 3-5 years, 10 years for site permitting and licensing,

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5-10 years for site construction and 6-8 years to transfer fuel spent fuel to that site. For offsite areas, the rough order of magnitude estimate is 40 years or more – with 10 years for consent-based process for site selection, 10 years for site permitting and licensing, 5-10 years for site construction and 10 years to transfer fuel spent fuel to that site.

Column E of the table reflects these uncertainties and the level of confidence for approval of options. Another consideration was the ability to quickly move the spent fuel from wet to dry storage - a high priority for SCE, the San Onofre Community Engagement Panel, and the general public. As seen from Table 1 above, the locations within the San Onofre Easement provide the most practical options.

SCE concludes that the existing location best meets criteria of the most predictable licensing and permitting outcome, providing the quickest offload from wet to dry storage and most prudent cost to customers.

IV. Conclusion

SCE's analysis of the range of options concludes the existing ISFSI site as the best location for the expansion of the pad. The current location provides the highest level of certainty for safely moving the spent fuel from wet to dry storage as expeditiously as possible combined with the lowest cost.