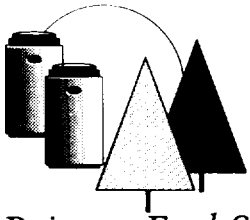

Private Fuel Storage, L.L.C.

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John L. Donnell, P.E., Project Director

U.S. Nuclear Regulatory Commission
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September 15, 2000

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
COMMITMENT RESOLUTION LETTER #1
DOCKET NO. 72-22 / TAC NO. L22462
PRIVATE FUEL STORAGE FACILITY
PRIVATE FUEL STORAGE L.L.C.

References: 1. September 1, 2000 telephone call between the NRC, Private Fuel Storage (PFS), and Stone and Webster (S&W)

During the above referenced telephone call, Mr. Scott Flanders of the NRC requested additional information regarding groundwater in the Skull Valley area and the availability of water from offsite water sources. The NRC request is documented below along with the PFS response.

NRC Requests/Questions

Groundwater on the Skull Valley Reservation

1. If additional water wells are necessary to supply water for worker use and for making concrete for construction of the Private Fuel Storage Facility (PFSF), will PFS drill additional wells only on the Skull Valley reservation, or elsewhere in Skull Valley?

RESPONSE

PFS would only drill wells on the Skull Valley reservation. This is addressed in Section 4.5.5 of the PFSF Environmental Report, which states the following:

"In the event that onsite water quality or quantity are inadequate, potable water will be obtained directly from the Reservation's existing supply, or an additional well or wells will be drilled east of the site, where the quantity and quality of ground water are likely to be more satisfactory. These wells would be outside of the OCA [owner controlled area], but they would still be on the Reservation."

NMSS01Rdb

2. What are the Skull Valley Band of Goshute's water rights in Skull Valley concerning groundwater? Are there agreements between the State of Utah and the Band concerning water rights in Skull Valley? Are the Band's water rights limited to the water underlying the Skull Valley reservation? Are there any restrictions on the Band's use of the groundwater that they have rights to, and if so, who has jurisdiction and with whom must the Band interface? If the Band has unlimited rights to the groundwater underlying the reservation, is there a limit on groundwater that PFS could obtain?

RESPONSE

2a. *What are the Skull Valley Band of Goshute's water rights in Skull Valley concerning groundwater?*

The Skull Valley Band's water rights to groundwater in Skull Valley arise under well established federal law. The Skull Valley Reservation was established by executive orders of September 7, 1917, and February 15, 1918 (IV Kappler, Indian Affairs, Laws and Treaties 1049). The former order set aside approximately 17,920 acres and the latter 640 acres. At the time the Reservation was established, the doctrine of federal reserved water rights operated to reserve from then unappropriated sources of water appurtenant to the Reservation an amount necessary to fulfill the purpose of the Reservation. The reserved water right vested at the creation of the Reservation. Thus, under the Indian reserved rights doctrine, the larger parcel has a 1917 priority date and the smaller one 1918. The purpose has been described generally as maintenance of a permanent tribal homeland. More specifically, the purpose has been addressed in terms of the amount of water to irrigate practicably irrigable acreage, maintain fisheries, and supply domestic, municipal and industrial needs.

The federal government holds title to the reserved water right in trust for the benefit of the Skull Valley Band. The reserved water right cannot be lost by nonuse. *Colville Confederated Tribes v. Walton*, 460 F. Supp. 1320, 1326 (E.D. Wash. 1978), *aff'd on other grounds*, 647 F.2d 42 (9th Cir.), *cert. denied*, 454 U.S. 1092 (1981). The reserved rights doctrine is judicially created and does not depend on state law or procedure for its existence. The right was first expressed in *Winters v. United States,* 207 U.S. 564 (1908); and further developed in *Arizona v. California,* 373 U.S. 546 (1963), 376 U.S. 340 (1964) (decree), 439 U.S. 419 (1979) (supplemental decree), 460 U.S. 605 (1983) (omitted land and disputed boundary land claims), 466 U.S. 144 (1984) (second supplemental decree); *Cappaert v. United States,* 426 U.S. 128 (1976); and *United States v. New Mexico,* 438 U.S. 696 (1978).

In Opinion M-36164, September 10, 1953, "Applicability to Indian Lands in Arizona Law Regulating Withdrawal of Ground Water," II Op. Sol. on Indian Affairs 1618 (U.S.D.I. 1979), the Solicitor concluded that state ground water laws were not enforceable against Indian lands because "the application of State laws to Indians on Indian reservations is excluded unless Congress has specifically made them applicable,

and this general proposition has been applied to Indian water rights, which have been held to be reserved exclusively for the benefit of Indians." *Id.* At 1619. The Solicitor further concluded that the Secretary is without power to make an agreement, even with the consent of the Indians, to make state laws applicable to tribal water resources because 25 U.S.C. § 177 "prohibits any alienation of Indian 'lands,' and lands commonly include the appurtenant water rights." *Id.*

Specifically with regard to the State, the Solicitor has concluded that "[u]nder the Winters doctrine there appears to be no question but that the Indians' water rights of the Uintah and Ouray Reservation are not subject to the laws of the State of Utah. This is so even where the reserved water right has not been quantified and adjudicated." "Water Rights--Uintah and Ouray Reservation--Interest of United States" (Nov. 14, 1960) II Op. Sol. on Indian Affairs 1892, 1893.

2b. *Are there agreements between the State of Utah and the Band concerning water rights in Skull Valley?*

No. Leon Bear, Chairman of the Skull Valley Band, has confirmed this.

2c. *Are the Band's water rights limited to the water underlying the Skull Valley Reservation?*

Not necessarily. To the extent that the aquifer underlying the reservation extends beyond the reservation boundary (which the USGS record indicates is the case) and the portion of the aquifer under the reservation is recharged by water migrating from off-reservation portions of the aquifer, then the Tribe would be entitled to the benefit of that recharge.

2d. *Are there any restriction on the Band's use of groundwater that they have rights to, and if so, who has jurisdiction and with whom must the Band interface?*

The Band's reserved water right is a usufructury right. The right to use water in the arid west is restricted to beneficial use. A water right owner is not at liberty to waste the scarce resource. The Band has sovereignty over its water resources and the governing body of the Band has authority to promulgate ordinances regarding the use of water by those within its jurisdiction. In the case of the Private Fuel Storage Lease, Section 1E contains specific provisions regarding water use by the applicant. Thus, in this case the Band has both governmental and proprietary control over water use by PFS.

The federal government as trustee for the Band has responsibility for protecting the Band's water rights. Congress has specifically instructed the Secretary of the Interior to insure a just and equal distribution of water among Indians whose lands need water to render them available for agricultural purposes. 25 U.S.C. § 381. *See also Hackford v. Babbitt*, 14 F.3d 1457 (10th Cir. 1994) (confirming the reserved rights doctrine's applicability to an Indian reservation in Utah and the Secretary's authority over a water project on the reservation.) Accordingly, the Band is subject to "interfacing" with the federal government in the management of its groundwater at least in the context of

irrigation uses. (Of course in this case the applicant's lease specifically provides for water use and that provision is subject to the Secretary's review and approval pursuant to 25 U.S.C. § 415.)

2e. *If the Band has unlimited rights to the groundwater underlying the reservation, is there a limit on groundwater that PFS could obtain?*

As mentioned above, the applicant's lease (Section 1E) contains specific provisions on water use for the project from reservation sources. The lease restricts PFS usage of water to that required for employee consumption and light industrial use.

3. Is there a more recent reference that discusses groundwater in the Skull Valley area than the Hood and Waddell study that was published in 1968? If not, provide a justification as to why this study is still applicable to the present groundwater conditions in Skull Valley.

RESPONSE

The Hood and Waddell study (1968) is still the most comprehensive discussion of groundwater conditions in Skull Valley. A regional study that included Skull Valley was published in 1981 (Schlotthauer et al., 1981). In that study groundwater budget data for the period 1970 to 1979 indicated virtually no change from the previous analysis of Hood and Waddell (1968). The State of Utah also used the Hood and Waddell data in their 1987 effort to become the Host State for the Superconducting Supercollider Project (SSC). Their solution to the water needs of that project was to develop a series of wells along the alluvial fan at the northeast end of Skull Valley. Water needs for the SSC project were estimated to be 2450 gpm. By comparison, the average withdrawal rate from the PFSF well(s) is estimated to be less than 2 gpm (Section 4.5.5 of the PFSF Environmental Report).

The USGS Salt Lake office was contacted and we were assured by the supervisor of the hydrology group, as well as K.M. Waddell, that there have been no other comprehensive ground water studies of Skull Valley since the work of Hood and Waddell (1968). There have been numerous studies at Dugway completed by USGS personnel and private contractors concerning groundwater contamination issues at various locations on the facility. These have no direct application to the PFSF, however.

As discussed in the PFSF Environmental Report, the remote location and a lack of private land suitable for development inhibit growth in Skull Valley. Population growth rates in Tooele County declined between 1980 – 1990 as compared to the previous decade. The total population of Skull Valley is estimated as 1916 with over 1700 persons residing at Dugway (Section 2.2.2.3 of the PFSF Environmental Report). Whereas population has undoubtedly increased in the settlement of Terra since the 1960s, other areas have likely declined. The disappearance of small, family-owned ranches in favor of large, single-owner operations and the "de-militarization" program of the 1990s undoubtedly have had

a negative impact on population in the area, although conclusive data will not be available until the Year 2000 Census has been tabulated.

Irrigation of land for cattle fodder is the single largest usage of water resources in Skull Valley and accounts for about 35% of the well and spring water used in the valley (Schlotthauer et al., 1981). The Hood and Waddell study indicated about 2600 acres were being irrigated at that time. Currently, there are approximately 2400 acres being irrigated in Skull Valley. The total acreage is slightly less than that being irrigated in the 1960s. It can reasonably be assumed that the long-term precipitation has not changed dramatically in the past 40 years in Skull Valley and, therefore, it can also be concluded that the water budget for Skull Valley has not changed much either. The Hood and Waddell report remains as valid today as it was when written in 1968.

Groundwater at the Intermodal Transfer Point near Timpie

4. Provide information on the depth to the water table below the planned location of the Intermodal Transfer Point near Timpie Utah.

RESPONSE

PFS has not performed subsurface investigations to determine the depth to water table near the planned location of the Intermodal Transfer Point near Timpie, UT because no water supply wells or leach fields for on-site septic systems will be constructed at the site. However, the depth to the water table can be estimated using the following logic.

Page 4.3-9 of the ER indicates:

> *The existing elevation of the ITP area is from 4220 ft. to 4225 ft. as determined from the Poverty Point, Utah and Timpie, Utah 7 1/2 minute USGS quadrangle topography map 5 ft. contours. The actual ITP will be designed nearer the elevation of 4225 ft. In 1986, the Great Salt Lake flooded to an historic elevation of 4211.85 ft., which is well below the ITP area elevation of 4220 ft. to 4225 ft.*
>
> *In addition, the Great Salt Lake Planning Project Draft Analysis of Proposed Management Alternatives, issued by the State of Utah Department of Natural Resources in January 1999, has designated the flood plain of the lake at 4212 ft. for planning purposes...*

The planned location of the Intermodal Transfer Point near Timpie, UT is fairly close to the mud flats surrounding the Great Salt Lake; therefore, it is reasonable to expect that the elevation of the water table will be fairly close to the elevation of the lake. Based on this assumption, and assuming that the ITP area will be only as high as elevation 4220 ft, the minimum existing elevation in the vicinity, the depth to the water table would be approximately 4220 – 4212, or 8 ft. Assuming the normal pool level is elevation 4193 ft, as shown on Corral Canyon, UT USGS 7.5 quadrangle topographic map, 1968, the depth

to water would be 4220 – 4193, or 27 ft. Therefore, the depth to the water table is estimated to range from about 8 ft to as much as 27 ft below grade at the planned location of the Intermodal Transfer Point near Timpie, UT.

Offsite Water Sources

5. Provide additional information on the availability of water in the Skull Valley area, including:
   (a) the proposed well sites that will supply water that will be trucked to the PFSF site?
   (b) who are the other users of water from the proposed well sites?
   (c) what fraction of the total water yield from the proposed well sites would be for PFSF facilities?
   (d) what impact would this water usage by PFS have on other users of the same water source(s)?

RESPONSE

PFS intends to lease or buy the water necessary for its construction needs from permitted water users in the vicinity of the rail line and the PFSF, which is a common practice in similar construction projects. To date, PFS has not entered into such a lease or purchase agreement, because such a contract would be premature this far in advance of the commencement of actual construction. Accordingly, no specific well site has been identified as the well that will supply water for the construction of the PFSF site or the rail line. Instead, PFS has investigated the permitted water rights and the water availability in the area to assure itself that adequate quantities of water are available to satisfy its construction needs. That investigation has demonstrated that such quantities are available and that the water laws of Utah are designed to ensure that a temporary change of use, such as that involved in PFS's leasing or buying this quantity of water from existing water users in the area, will not materially impact other users in the area.

Water to satisfy PFS's needs will be obtained by contracting with the holders of existing water rights. The Utah Division of Water Rights (the "Division" or the "Water Rights Division") has the exclusive jurisdiction over the allocation, administration, distribution, and use of water rights in the State of Utah. Included in this jurisdiction is the authority to approve or deny, based on specific criteria set forth in the water statutes, an application to appropriate a new water right. In approving a new water right application, the Division specifies, among other things, the use to which the water may be applied and the point of use. A change in the nature of the use requires the Division's approval of a change application. Prior to approving a new water right or a change application, the Division must conclude there is reason to believe that use of the new water right or the proposed change in use will not unreasonably impair the rights of other water right holders. If the Division determines that a proposed use of water will impair other rights, it will deny the application or approve it subject to conditions designed to avoid the

potential impairment. Accordingly, under Utah's water law, PFS's temporary use of existing water rights should not result in any material impairment of existing water rights.

The records of the Water Rights Division indicate that there are a number of water rights in the Skull Valley area that together represent a significant amount of permitted water uses. Attachment 1 is a chart that summarizes the information in the Division's records about those rights. Water rights for small quantities of water are not included. As reflected in the chart, many of these rights are for quantities of water that standing alone would satisfy the estimated water requirements for the construction of the PFSF and the rail line. In this regard, note that the quantity of water required to construct the rail line and Phase I of the PFSF is approximately 144 acre -feet of water[1] over the 18-month period of construction.

The Attachment 1 chart identifies water rights represented by both approved applications and certificated water rights. The approved applications represent decisions by the Water Rights Division that the applied-for use could be made without impairing existing rights. It should be noted that an approved application does not necessarily guarantee that the well or other diversion actually produces the amount of water permitted. On the other hand, certificated, or perfected, water rights are rights that have been fully developed and so recognized by the Division. In order to obtain a certificated or perfected water right, a water user must demonstrate that the well or other source produces the specified quantity of water. Specifically, once the holder of an approved application has constructed the diversion works, placed the specified quantity of water to beneficial use, submitted (through a registered engineer) proof of beneficial use to the Division, and that information has been field checked and deemed accurate, the Division issues a certificate evidencing the actual, verified water use. Thus, the Division's records indicate there are significant quantities of water under existing rights that could be used in the PFS construction activities without adversely affecting other existing water rights.

To assure itself that the quantity of water necessary to support its project is actually available, PFS has made inquiry of persons familiar with the water quantities and usage in the Skull Valley area as to whether there is water available in the area that could be leased or purchased and used to satisfy PFS's water needs. As previously reported, the conclusion of these individuals is that there is more than sufficient water available in the area to satisfy PFS's needs. In particular, these individuals have indicated to PFS that there are three permitted wells within a 15-mile radius of Low, which produce sufficient quantities of water to satisfy the existing, dedicated uses of the wells, as well as PFS's needs. Each of these wells is capable of producing, and is authorized to produce, over 400,000 gallons of water per day, and in no case does it appear that the current usage of the water exceeds one-half of that quantity. Further, each of these wells is held under an approved or perfected application, which was approved only after the Water Rights Division determined, in the exercise of its professional judgment, that there was no reason to believe that use of that quantity of water would impair other water rights.

[1] One acre-foot of water is equivalent to 325,872 gallons.

If you have any questions regarding this response, please contact me at 303-741-7009.

Sincerely

John L. Donnell
Project Director
Private Fuel Storage L.L.C.

Attachments

Copy to (with enclosure):
Mark Delligatti
Scott Flanders
John Parkyn
Jay Silberg
Sherwin Turk
Greg Zimmerman
Scott Northard
Denise Chancellor
Richard E. Condit
John Paul Kennedy
Joro Walker

ATTACHMENT 1 TO DEIS
COMMITMENT RESOLUTION LETTER #1

WATER RIGHT SUMMARY

BASED ON THE STATE OF UTAH, DIVISION OF WATER RIGHTS' RECORDS

	Owner	Use	Source	Point of Diversion			Estimated Quantity (acre-feet per year)
Perfected Water Rights				**Sec.**	**T**	**R**	
16-26	State of Utah, Division of Wildlife Resources	Irrigation	Big Spring	8, 9	1S	7W	2340.8
15-1703	New Morton International Inc.	Industrial	Surface Storm Runoff	13	1S	7W	85
15-1952	Magnesium Corporation of America	Industrial	Tooele Valley Run-off	13	1S	7W	208
16-571	Jensen, Gerald C. and Diana M.	Irrigation Domestic Stockwatering	Well	30	1S	7W	80
16-105	Jensen, Gerald C. and Diana M.	Irrigation	Well	31	1S	7W	160
16-66	Hale, Blaine and Yvonne	Irrigation	Well	6	2S	7W	183.68
16-81	Lawrence, David N.	Irrigation	Well	7	2S	7W	1108.6
16-20	Skull Valley Company, Ltd.	Industrial	Box Canyon Creek	8	3S	7W	289.6
16-549	Sutton, Gary L.	Irrigation	Middle Springs	7	3S	7W	80
16-4	Skull Valley Company, Ltd.	Irrigation	Box Creek	9	3S	7W	538
15-625	State of Utah Board of Water Resources	Irrigation Stockwatering Domestic	Davenport Creek & North Willow Creek	24	3S	7W	6038.76
16-2	Skull Valley Company	Irrigation	Chokecherry Creek	29 30 31	3S	7W	2880.2
16-3	Skull Valley Company	Municipal	Chokecherry Creek	29 30 31	3S	7W	1911.36
16-13	Skull Valley Company, Ltd.	Irrigation	Spring	31	3S	7W	253.2
15-284	State of Utah Board of Water Resources	Irrigation	Spring in Left Hand Fork	35	3S	7W	6038.76
16-85	Skull Valley Company, Ltd.	Irrigation Stockwatering	Muskrat Spring	13	2S	8W	208.4

	Owner	Use	Source	Point of Diversion			Estimated Quantity (acre-feet per year)
Perfected Water Rights				**Sec.**	**T**	**R**	
16-68	Cole, Albert B. (Jr.)	Irrigation Stockwatering Domestic	Well	24	2S	8W	240
16-69	Arbon, Marnel	Irrigation Stockwatering	Well	23	2S	8W	160
16-83	Arbon, Marnel Dale	Irrigation	Well	25	2S	8W	40
16-1	Skull Valley Company, Ltd.	Irrigation	Deep Springs	26	2S	8W	1600
16-29	Skull Valley Company, Ltd.	Irrigation	Five Springs	26 3,10 15	2S 3S 3S	8W	6223.2
16-605	Skull Valley Company, Ltd.	Irrigation Stockwatering	Lake Spring	15	3S	8W	440
16-604	Skull Valley Company, Ltd.	Irrigation Stockwatering	Spring	15	3S	8W	440
16-606	Skull Valley Company, Ltd.	Irrigation Stockwatering	Cicely Spring	15	3S	8W	320
16-170	Skull Valley Company, Ltd.	Irrigation Stockwatering	Well	21	3S	8W	844
16-127	Skull Valley Company, Ltd.	Irrigation Stockwatering	Well	28	3S	8W	3120
16-103	Skull Valley Company, Ltd.	Irrigation Stockwatering	Well	28	3S	8W	105.12
16-93	Skull Valley Company, Ltd.	Irrigation Stockwatering	Well	28	3S	8W	2004.48
16-106	Cargill Incorporated	Irrigation	Well	31	1S	7W	240
16-75	Cargill Incorporated	Irrigation	Well	31	1S	7W	480
16-800	USPCI	Domestic Industrial	Well	16	2S	10W	483.6
						Total =	39,145

	Owner	Use	Source	Point of Diversion			Estimated Quantity (acre-feet per year)
Approved Water Rights				**Sec.**	**T**	**R**	
15-3486	Morton International	Domestic Industrial	Well	21	1S	6W	941.2
16-160	Magnesium Corp. of America	Industrial	Skull Valley Drain and Big Spring	5, 3 10	1S	7W	3600
16-527	Magnesium Corp. of America	Domestic Industrial	Well	29	1S	7W	7240
16-181	Magnesium Corp. of America	Other	Well	29	1S	7W	3620
16-182	Magnesium Corp. of America	Domestic Industrial	Well	29	1S	7W	1448
16-758	Materials Energy Research and Recovery	Domestic Industrial	Well	3	1N	9W	724
16-757	Safety-Kleen (Aragonite), Inc.	Domestic Industrial	Well	16	1S	10W	1086
16-68	Cole, Albert B. (Jr.)	Irrigation	Well	24	2S	8W	2240
16-784	Skull Valley Company, Ltd.	Irrigation	Rock Bottom Spring	4	3S	8W	2880
16-170	Skull Valley Company, Ltd.	Irrigation Stockwatering Domestic	Well	16 21	3S	8W	1920
16-763	Cargill Incorporated	Industrial	Timpie Spring Waterflow Management	4	1S	7W	724
16-762	Cargill Incorporated	Industrial	Spring	9	1S	7W	724
16-772	Envirocare of Utah, Inc.	Other	Well	18	1S	11W	521.28
16-802	Envirocare of Utah, Inc.	Other	Well	18	1S	11W	448.88
16-816	Envirocare of Utah, Inc.	Other	Well	29	1S	11W	11222
						Total =	39,339