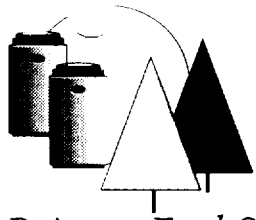

Private Fuel Storage, LLC

P.O. Box C4010, La Crosse, WI 54602-4010
John D. Parkyn, Chairman of the Board

October 19, 1999

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

See Reports

RESPONSES TO SECOND ROUND EIS
REQUEST FOR ADDITIONAL INFORMATION
DOCKET NO. 72-22/TAC NO. L22462
PRIVATE FUEL STORAGE FACILITY
PRIVATE FUEL STORAGE L.L.C.

References: 1) NRC Letter, Flanders to Parkyn, Request for Additional Information for the Environmental Impact Statement, dated August 19, 1999

Please find enclosed Private Fuel Storage responses to the NRC's Second Round EIS Request for Additional Information (Reference 1).

The enclosed responses contain non-proprietary information. The response to EIS RAI No. 2, Question 4-21, is proprietary and is being submitted under separate cover.

If you have any questions regarding this submittal, please contact me at 608-787-1236 or Mr. J. L. Donnell, Project Director, at 303-741-7009.

Sincerely,

John D. Parkyn, Chairman
Private Fuel Storage L.L.C.

NMSS/RGN1 FO6

JDP:JRJ
Enclosures

Ltr to File Room

CC: Mr. Bear – Skull Valley Band of Goshutes
Ms. Chancellor, Esq. – State of Utah
Mr. Condit – Land and Water Fund for the Rockies
Mr. Delligatti – U.S. NRC
Mr. Donnell – Stone & Webster Engineering
Mr. Flanders – U.S. NRC (8 copies)
Mr. Kennedy, Esq. – Confederated Tribes of the Goshute Reservation
Mr. Northard – Northern States Power Company
Mr. Quintana, Esq. – Skull Valley Band of Goshutes
Mr. Silberg, Esq. – Shaw, Pittman, Potts & Trowbridge
Mr. Walker – Land and Water Fund of the Rockies

ENVIRONMENTAL IMPACT STATEMENT

1. PURPOSE AND NEED

1-1. Provide an update on the status of required approvals, licenses, and permits for agencies other than the NRC, BIA and BLM.

The discussion should include any Tribal permits, licenses, and approvals required for the facility.

RESPONSE

A highly productive meeting with representatives of EPA Region VIII was held on February 9, 1999 to review the proposed environmental permits and plans and to establish a timetable for applicable permit/plan preparation and submittal. General agreement was received that the PFSF, Low Corridor, and ITP permitting assessment is on target. Additional meetings with Region VIII staff are planned to ensure that the appropriate environmental permits are secured in a timely manner. Similar meetings with UDEQ to discuss the Low Corridor and ITP permits and plans have not yet been scheduled.

The following information addresses the status of compliance with Federal, State, and local permits, licenses and approvals for the PFSF, Low Corridor, ITP and other activities on Tribal Lands.

A. Compliance status for permits, licenses and approvals for the PFSF, access road and other activities on Tribal Lands

1. NPDES Storm Water General Permit Associated with Construction Activity

This NPDES permit is required to authorize storm water discharges associated with the construction of the PFSF access road and ancillary facilities on the Skull Valley Band of Goshute Indian Reservation. The permit is issued by EPA Region VIII.

The Surface Water Protection subsection of Section 9.1.3 of the Environmental Report (ER) indicates that an NPDES permit is required under Clean Water Act (CWA) enabling regulations for all construction activities that disturb five or more acres of soil, which could result in point source discharges of storm water from the construction site to waters of the United States. EPA Region VIII has a General Permit that is available for qualifying construction activity on Indian Lands in Utah. Prior to initiating construction, PFS will take the necessary steps to secure coverage under this general permit. The process for securing such coverage involves filing a Notice of Intent (NOI) with EPA Region VIII at least 48 hours prior to the initiation of construction activity. Part of the application process requires all applicants to

prepare a comprehensive Storm Water Pollution Prevention Plan (SWPPP) prior to NOI submittal. This SWPPP will address potential impacts to endangered species, outline erosion and sediment controls, discuss soil stabilization practices and structural controls, and identify other best management practices to be employed during construction to protect offsite waters from adverse impacts from construction-related storm water runoff.

A copy of the NPDES General Permit application form and supporting documentation has already been secured from EPA Region VIII. A draft of the SWPPP has also been prepared, and all remaining activities that must be completed to finalize the SWPPP and secure coverage under the NPDES General Permit have been identified.

2. Spill Prevention Control and Countermeasures (SPCC) Plan for Oil Storage

   The Surface Water Protection subsection of Section 9.1.3 of the ER discusses the potential requirement for the preparation of a SPCC Plan. Although no permit application process or formal agency approvals are required, applicable enabling regulations at 40 CFR Part 112 may require a SPCC Plan if certain oil storage thresholds are exceeded at the PFS site. Current plans call for aboveground diesel fuel storage in excess of 1,320 gallons (one of the oil storage thresholds that may trigger the need for a SPCC plan). Therefore, an evaluation will be initiated during the PFSF construction phase to determine if the facility needs a SPCC plan or otherwise meets the exemption criteria under 40 CFR 112.3(b). If the exemption criteria are not met, a SPCC Plan will be developed, stamped by a Professional Engineer, and maintained onsite. In anticipation that a plan will be required, a draft SPCC Plan template has already been prepared.

3. Drinking Water and Groundwater Protection

   The Drinking Water and Groundwater Protection subsection of Section 9.1.3 of the ER discusses the PFSF compliance with the Safe Drinking Water Act (SDWA). Following an evaluation of the available drinking water sources and an assessment of the drinking water needs for the PFSF, potable water will be provided for the operation of the PFSF by drilling drinking water wells on-site. Since the drinking water wells will serve more than 25 of the same individuals at least 60 days out of the year, the system will be classified in accordance with SDWA enabling regulations as a non-transient, non-community public water supply. All necessary registrations needed to ensure compliance with the SDWA and enabling regulations will be secured from EPA Region VIII. The wells will also be developed, tested and operated in accordance with requirements under the SDWA enabling regulations. The registration of the wells as non-transient, non-community drinking water wells will be secured through EPA Region VIII since they have direct responsibility for regulation of public water systems on Tribal Lands.

The status of the Drinking Water and Groundwater Protection section has undergone significant revision and updating since the last RAI request.

4. Underground Injection Control (UIC) Registration of Septic Tank/Leach Fields

   The Drinking Water and Groundwater Protection subsection of Section 9.1.3 of the ER discusses the disposal of sanitary waste. Sanitary waste septic tank/leach fields with a design capacity to serve 20 or more people are classified as Class V injection wells under the 40 CFR 144, Underground Injection Control (UIC) enabling regulations. Section 144.26(a) identifies simple registration information to be provided to the EPA Regional Director before initiation of injection of fluids into a new Class V injection well. Since the two PFSF septic tank/leach field systems will qualify as Class V injection wells, a UIC inventory form will be filed with EPA prior to placing these septic tank/leach field systems into service.

   The status of this UIC registration remains unchanged since the last RAI request.

5. Septic Tank/Leach Field Design

   Two separate septic tank/leach field systems will be used for sanitary waste treatment and disposal once the PFSF is placed in operation. Although the Utah DEQ does not have permitting jurisdiction on Tribal Lands, the treatment system siting, sizing, design criteria and materials of construction will use as a basis the requirements outlined under regulations issued by the Utah Department of Health, Division of Environmental Health.

6. Construction Emissions Control Plan (CECP) to Manage Fugitive Dust Impacts

   The Preservation of Air Quality subsection of Section 9.1.3 of the ER discusses the minimal effect PFSF construction and operations will have on air quality. Throughout the PFSF operation, no exceedances of Clean Air Act (CAA) Title I, III, IV, and V permitting thresholds are expected. An initial draft of a CECP, for managing fugitive dust emissions during PFSF construction activities has been developed. Following completion of the draft, it will be incorporated into the Storm Water Pollution Prevention Plan (SWPPP) associated with the construction of the PFSF and access road. This CECP is not a document that must be filed with or approved by Federal and State agencies.

7. Pollution Prevention and Solid Waste Management

   The Pollution Prevention and Waste Management subsection of Section 9.1.3

of the ER discusses the management of the minimal waste quantities expected to be generated during PFSF operations. It is anticipated that the PFSF will not generate sufficient quantities of RCRA regulated hazardous wastes that will require it to be classified as a small quantity generator (i.e. less than 100 kg/month should be generated). Accordingly, we anticipate that PFSF will be classified as a Conditionally Exempt Small Quantity Generator (CESQG). In order to document the proper management and disposal of these wastes PFS anticipates filing for a RCRA ID number to seek classification as a CESQG. The Utah DEQ, Division of Solid and Hazardous Waste is responsible for issuing RCRA ID numbers for all applicable facilities on state and federal lands in Utah, inclusive of Indian Lands.

The EPA Form 8700-12 (i.e., Notification of Regulated Waste Activity) that must be filed to secure a RCRA ID number has been completed and we intend to file the form with the Utah DEQ shortly. As stated above, the issuance of a RCRA ID number will allow PFSF to ensure proper tracking and disposal of the small volumes of characteristic and/or listed hazardous wastes that are anticipated to be generated during the operation of the facility.

B. Compliance status for permits, licenses, and approvals for the Low Corridor Rail Line and the ITP

1. NPDES Permit Authorizing Storm Water Discharges Associated with Construction Activity

The Surface Water Protection subsection of Section 9.2.1 of the ER indicates that an NPDES permit is required under Clean Water Act (CWA) enabling regulations for all construction activities that disturb 5 of more acres of soil, and which could result in point source discharges of storm water from the construction site to waters of the United States. The Utah Department of Environmental Quality (UDEQ) has a General Permit that is available for qualifying construction activity on all lands other than Indian Lands in Utah. Prior to initiating construction, PFS will take the necessary steps to secure coverage under this general permit. The process for securing such coverage involves filing a Notice of Intent (NOI) with UDEQ at least 48 hours prior to the initiation of construction activity. Part of the application process also requires all applicants to prepare a comprehensive Storm Water Pollution Prevention Plan (SWPPP) prior to NOI submittal. This SWPPP will address potential impacts to endangered species, outline erosion and sediment controls, discuss soil stabilization practices and structural controls, and identify other best management practices to be employed during construction to protect offsite waters from adverse impacts from construction-related storm water runoff.

A copy of the NPDES General Permit application form and supporting documentation have already been secured from the Utah DEQ. A draft of the

SWPPP has also been prepared, and all remaining activities that must be completed to finalize the SWPPP and secure coverage under the NPDES General Permit have been identified.

2. Stream Alteration Permit for Low Corridor

   The Surface Water Protection subsection of Section 9.2.1 of the Environmental Report (ER) indicates that an individual, or general 404 Permit, and 401 Water Quality Certification, may respectively be required from the U.S. Army Corps of Engineers (ACE) and the UDEQ. The Section 404 permit and 401 water quality certification may need to be secured prior to construction of portions of the Low Corridor rail line, which will use culverts to cross numerous arroyos along the planned route.

   Currently, we anticipate that filing a Joint Application for a Stream Alteration Permit with the Utah State Engineer, will satisfy any applicable CWA Section 401 Water Quality certification that may be required for any steam crossings. In addition, coverage under the Corps of Engineers General Permit # 40 should satisfy the CWA Section 404 permit requirements for dredge and fill activities associated with the same stream crossings.

   A final decision on the need for this type of permitting will be made when detailed design work associated with the construction of the Low Corridor rail line is initiated.

3. Drinking Water and Groundwater Protection

   The Drinking Water and Groundwater Protection subsection of Section 9.2.1 of the ER indicates that no drinking water or groundwater permits, registrations, or applications are required for the construction of the Low Corridor and ITP. No permanent source of drinking water will be developed for the operation of the Low Corridor or ITP. Drinking water for the construction and operation of the Intermodal Transfer Point (ITP) and Low corridor will be provided from off-site sources.

4. Construction Emissions Control Plan (CECP) to Manage Fugitive Dust Impacts

   The Preservation of Air Quality subsection of Section 9.2.1 of the ER indicates that a CECP is required, under UDEQ regulations (i.e., R307-12.3) for control of fugitive dust generated by construction activities by any person engaging in clearing, leveling, earth moving, excavation or movement of trucks where ¼ acre or more is disturbed. A draft of this CECP has been developed and will be finalized, prior to initiating construction activities. Although this plan must be developed, the regulations do not require agency submittal or approval.

5. Pollution Prevention and Solid Waste Management

   The Pollution Prevention and Waste Management subsection of Section 9.2.1 of the ER indicates that no permits, registrations or applications are required for the construction of the Low Corridor and ITP. However, should operational activities result in the generation of minor quantities of hazardous wastes, they will be identified, stored, and disposed of in accordance with CESQG requirements.

6. Approval From The Surface Transportation Board

   In order for PFS to implement either of the two alternative means proposed for cask transport from the railroad mainline at Low, Utah to the PFSF – construction and operation of a new rail line to the PFS (the preferred alternative) or use of heavy haul tractor/trailer via Skull Valley Road – regulatory authority must first be obtained from the United States Surface Transportation Board ("STB"). As to the first alternative, the STB would have to approve construction and operation of a new rail line and associated sidings between Low, Utah and a point in the south-central portion of the Skull Valley, Utah, where PFS would construct the PFSF. As to the second alternative, the STB would have to approve the construction of a run-around track and sidings at a point approximately 1.8 miles west of Timpie, Utah, where PFS would construct an Intermodal Transfer Point that would be employed to transfer spent nuclear fuel casks transported on existing rail lines to truck for movement to the PFSF. A Notice of Intent to construct rail lines was filed with the STB on August 6, 1999. PFS anticipates filing an application for STB approval of the foregoing actions, or a request for exemption from formal approval requirements, in mid-December 1999.

Summary

The NPDES General Permit application filings authorizing the discharge of storm water runoff during the construction of the PFSF, ITP and Low Corridor are not required to be submitted to EPA or the Utah DEQ until 48 hours prior to initiation of construction activities. Therefore, filing of these permits is not anticipated until 3 – 4 months prior to initiating construction activities. No regulatory agency approval is normally required for coverage under an NPDES General Permit for construction activity, as coverage is automatically received 48-hours after filing.

The request for a RCRA ID number should be filed shortly and it should take about a month for the agency to process. Other environmental permits/registrations that may be required during the construction phase of the project (e.g., Corps of Engineers Section 404 permit) should be filed within the next 6-8 months. Agency approval of any applicable 404 permits and 401 water

quality certifications is anticipated at least one or two months in advance of the construction schedule.

Several of the other environmental plans/registrations identified herein either do not require state or federal agency approval, or are not required until the PFSF begins operations (e.g., the UIC registration, drinking water permits and SPCC Plan development) in the Year 2002. In addition, we have identified no activities that will require the issuance of a Tribal permit.

ACTION

The ER will be updated to include information on the Surface Transportation Board.

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-1. Clarify whether the estimate of the type and quantity of construction materials provided in the February 18, 1999, RAI response (Response 4-1) included the type and quantity of materials necessary to construct the rail line and Intermodal Transfer Facility (ITF), as well as the Private Fuel Storage Facility (PFSF).

If it does not, then provide an estimate of the type and quantity of materials needed to construct the proposed rail line and the ITF.

RESPONSE

The previous RAI Response, EIS RAI No. 1, Question 4-1 did not include the type and quantity of required imported materials necessary for construction of the alternative rail line and ITP. Refer to the attached table, which lists complete estimated construction material quantities required for the direct rail alternative, ITP, and the PFSF site.

ACTION

The ER will be updated to include these estimated construction material quantities.

PRELIMINARY CONSTRUCTION MATERIAL QUANTITIES
10-19-99

Item	Quantity (CY)	Material Specification
PFSF Construction Phase I	**19 Months**	
Concrete Aggregate		
Small (Sand)	21000	1. UDOT Section 505, Table 505-3 (sand)
Large (Crushed rock)	29000	2. UDOT Section 505, Table 505-1; (1" gradation)
Crushed Rock Grading		
Access Road Base	22000	3. UDOT Section 301, Table 301-1; (1" gradation)
Storage & Building Areas	53000	4. UDOT Section 301, Table 301-1; (1 1/2" gradation)
Fill Materials		
Struct. Fill	0	5. Select, well-graded fill; (1 1/2" minus)
Common Fill	121000	6. Native soil, no deleterious material; Plasticity Index = 10-15
Asphalt Paving	16500 (Tons)	9. Bituminous mix (3/8" minus)
PFSF Construction Phase II	**10 Years**	
Concrete Aggregate		
Small (Sand)	47500	1. UDOT Section 505, Table 505-3 (sand)
Large (Crushed rock)	66500	2. UDOT Section 505, Table 505-1; (1" gradation)
Crushed Rock Grading		
Storage Area	30500	4. UDOT Section 301, Table 301-1; (1 1/2" gradation)
Fill Materials		
Struct. Fill	0	5. Select, well-graded fill; (1 1/2" minus)
PFSF Construction Phase III	**10 Years**	
Concrete Aggregate		
Small (Sand)	59500	1. UDOT Section 505, Table 505-3 (sand)
Large (Crushed rock)	83000	2. UDOT Section 505, Table 505-1; (1" gradation)
Crushed Rock Grading		
Storage Area	53500	4. UDOT Section 301, Table 301-1; (1 1/2" gradation)
Fill Materials		
Struct. Fill	0	5. Select, well-graded fill; (1 1/2" minus)
Common Fill	26000	6. Native soil, no deleterious material; Plasticity Index = 10-15

PRELIMINARY CONSTRUCTION MATERIAL QUANTITIES
10-19-99

Direct Rail Alternative		
Subballast	225,000	7. Union Pacific Std., AREA Subballast Spec. (Exhibit "H")
Ballast	95,732	8. Union Pacific Std., Gradation 3 (Exhibit "G")
Intermodal Transfer Point		
Concrete Aggregate		
Small (Sand)	1150	1. UDOT Section 505, Table 505-3 (sand)
Large (Crushed rock)	1600	2. UDOT Section 505, Table 505-1; (1" gradation)
Crushed Rock Grading		
Access Road Base	650	3. UDOT Section 301, Table 301-1; (1" gradation)
Oval Track Base	3000	4. UDOT Section 301, Table 301-1; (1 1/2" gradation)
Subballast	5450	7. Union Pacific Std., AREA Subballast Spec. (Exhibit "H")
Ballast	4300	8. Union Pacific Std., Gradation 3 (Exhibit "G")
Structural Fill	2700	5. Select, well-graded fill; (1 1/2" minus)
Asphalt Paving	2800 (Tons)	9. Bituminous mix (3/8" minus)

Notes:
1. All quantities are in-place cubic yards unless otherwise noted

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-2. Clarify whether PFS intends to obtain any or all of the construction material from Federal or Tribal owned lands.

Include the quantity and location of material PFS intends to obtain from Federal or Tribal lands.

RESPONSE

PFS does not intend to obtain any required imported construction materials from Federal or Tribal lands, but plans to obtain materials from private, commercial sources in and around the Skull Valley area. Determining the specific sources for obtaining backfill soil materials, concrete aggregate, cement, crushed rock, asphalt, etc. will be a function of typical competitive bid processes, and, therefore, cannot be specifically reported at this time. Refer to EIS RAI NO. 2, Question 4-3 for a discussion of potential sources of construction material in the Skull Valley area.

The only in-situ materials planned to be utilized are native common fills and any acceptable topsoil used for re-seeding disturbed areas. If the native excavated material is determined to be acceptable via testing as expected, it is planned to be used to balance cut and fill operations for items such as the rail line, surface water control berms, etc.

ACTION

The ER will be updated to clarify the expected source of construction materials.

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-3. Clarify whether PFS intends to construct and operate an asphalt plant on site.

If a plant is expected to be constructed and operated on site, provide the approximate area affected by the construction and operation of the plant. The February 18, 1999 RAI response indicated that the estimated quantity of asphalt does not justify locating a plant on site, however, other information such as emission estimates and the site description include an asphalt plant.

RESPONSE

Discussions with asphalt suppliers in the area have indicated that the estimated required material quantity does not justify a site-situated facility, and that the material can be successfully obtained from existing asphalt plants in the area. Therefore, PFS does not plan to construct and operate an asphalt batch plant on site. The original ER basis conservatively included provisions for a site-situated asphalt batch plant.

ACTION

The ER will be revised to remove reference to an on-site batch plant.

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-4 Discuss how the proposed barbed wire range fence surrounding the owner controlled area (330 ha or 820 acres) will satisfy BIA and BLM range fence requirements.

BIA and BLM require 4-strand wire range fences (1 smooth and 3 barbed). The range fence must (1) include a specific ratio of steel posts to wood posts, (2) space line posts 16 feet 6 inches apart, (3) include brace panels every 1/8 mile and at abrupt changes in land slope, and (4) space the wire strands in accordance with BLM specifications (smooth line 16 inches above the ground, the first barbed wire 7 inches above the smooth line, and the strands of barbed wire spaced 8 inches apart).

RESPONSE

In general, the Owner Controlled Area (OCA) boundary fence will be a typical 4-strand wire range fence, which will serve to identify the limit of PFSF activities and to keep out any stray livestock. Specifications for the fence, such as wire type and spacing, and pole type and spacing will meet the requirements of the BLM Manual Handbook H-1741-1 for Fencing and/or other applicable requirements identified by the BLM and BIA. PFS will consult with the BLM and BIA prior to construction of the fence to make sure the fence meets the latest BLM/BIA requirements.

ACTION

The ER will be updated to include the above information.

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-5 Clarify the sources of potable and non-potable water for the proposed facility during construction and operation.

Information has been provided that states necessary water will come from wells located on site, while other information indicates that it will come from the Indian Reservation water supply.

RESPONSE

As stated in PFSF ER Section 4.2.4, It is anticipated that surface storage tanks will be erected for potable water, emergency fire water, and for the concrete batch plant, as it is unlikely that water wells drilled into the main valley aquifer will yield adequate quantities of water for these purposes on demand. Several wells on the site may be required to meet the daily demand. 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, outside of the OCA (but on the reservation), where water supplies are likely to be more satisfactory.

The response to EIS RAI No. 2, Question 4-4 provides all of the water use requirements throughout the project and states: "Water for worker use and for concrete will be obtained from on site wells. The remaining quantity of water, suitable for construction, is available from private water sources located within 15 miles of Timpie and Low, Utah. Alternate or additional water sources that may become available during the course of the project will be considered by PFS."

ACTION

The ER will be revised to make all sections, including Sections 4.1.4, 4.2.4, 4.3.4, 4.4.4, 4.5, 9.1.3 and 9.2.1, consistent with this response.

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-6 Discuss any anticipated holding periods for the spent nuclear fuel (SNF) shipments at the ITF and the Skunk Ridge rail siding.

Include an estimate of the number of casks held, the location (i.e., inside the ITF or on rail siding next to the ITF etc.), and the duration of the holding periods. Include a description of the visibility of the casks being held at the ITF or the Skunk Ridge rail siding to individuals traveling on I-80 or other nearby roads.

The February 18, 1999, RAI response indicates that the average number of rail shipments per year is anticipated to be 50, and the average number of casks shipped per year is expected to be 100 to 200 a year. This implies that an average of 2 to 4 casks will be received each shipment. Since the RAI response indicates that a fleet of two heavy haul tractor/trailers will be used, it appears that PFS anticipates casks will be held at the ITF for some period of time. It is unclear whether PFS expects casks to be held at the Skunk Ridge rail siding.

RESPONSE

The following response is provided to address the specific points raised in the written question concerning holding periods and locations, numbers of casks shipped, and the visibility of the casks while on the rail sidings. The siding areas in question include one at Low, UT (identified in RAI Question 2-6 as Skunk Ridge) and the Intermodal Transfer Point (identified in RAI Question 2-6 as the "ITF", or Intermodal Transfer Facility). Photographic "Figures" from the perspective of the viewing public of the existing areas where these sidings will be located are attached to this RAI response. The response to RAI Question 4-29 includes the same or related photographic views which depict the proposed rail sidings as well.

Private Fuel Storage (PFS) has included within the License Application two modes of transportation for delivery of Spent Nuclear Fuel (SNF) to the Private Fuel Storage Facility (PFSF). These two modes, direct rail and heavy haul, have different routes from the mainline railroad to the PFSF.

The preferred mode of "direct rail" utilizes a new 32-mile long rail-line originating at Low, Utah and terminating at the PFSF. At Low, adjacent to the mainline, multiple sidings are provided to facilitate the arrival of each single purpose train transporting SNF to the PFSF and for the cars "out-bound" from the PFSF for the start of another SNF delivery cycle. At the PFSF, rail sidings are also provided within the protected area. These sidings facilitate the receipt of single purpose SNF trains and the return of empty cask cars for the start of another spent fuel delivery cycle.

Regardless of the mode of transportation, the ultimate capacity of the PFS storage facility is based on 4000 casks received over 20 years. This translates to an average receipt rate of 200 loaded casks per year (4 casks per week). For the preferred mode of transportation, direct rail, PFS intends to procure and use two single purpose trains carrying a maximum of 6 casks per train. On average, PFS would receive one train a week carrying 4 loaded casks per train, which would result in PFS reaching its ultimate storage capacity in 20 years. If needed, a larger capacity single train could be assembled utilizing the necessary rail equipment from the two planned trains but the average weekly receipt rate would be maintained.

The operating scenario for an incoming train to PFS with SNF is as follows:

> The single purpose train carrying the loaded cask cars will arrive at Low, Utah, at a coordinated time with PFS. The train, operated by Union Pacific personnel utilizing rail equipment provided by PFS, will then leave the mainline and stop at the Low siding area provided adjacent to the new rail-line. The mainline locomotives will then be disconnected from the balance of the train (containing the loaded cask cars, security car and buffer cars). A PFS provided short-line locomotive and crew will then pick-up the incoming train, excluding the mainline locomotives, and complete the in-bound trip to the PFS storage facility. This delivery as stated before would occur on the average of once per week with an average of 4 loaded shipping casks per train. The loaded SNF train would only be located at the Low siding area for the duration of time necessary to transfer the incoming train from the mainline locomotives to the PFS short-line locomotives. A second option under consideration by PFS would be only to change the crew at Low, which would reduce the time that loaded casks would be at its Low siding. In this event, the entire single purpose train including the "mainline" locomotives would continue on directly to the PFSF for receipt with a crew provided by PFS. Since PFS will be capable of contacting the loaded single purpose train at all times, its arrival at Low, UT would be known in advance to plan, coordinate and facilitate the transfer. No significant time periods (measured in a few hours) are anticipated for this transfer and there are no known reasons for "holding" the casks at the Low siding area other than to complete the transfer or crew change as previously described. The mainline locomotives and empty cars awaiting return to the delivery cycle will be picked up by Union Pacific in "manifest service" (traditional mixed freight service rather than single purpose trains) at the Low siding area for the start of the next scheduled delivery cycle of SNF to the PFSF. Although it is difficult to predict the waiting time associated with "manifest service" for the return trip pickups by Union Pacific, it will be routine, scheduled, and must ultimately support the delivery rate schedule of a maximum of 200 cask cars per year.

Westbound I-80 vehicular traffic, traveling at the posted speed limit of 75-mph, approaching the Low siding area, would have a limited opportunity for viewing a SNF train or empty cars that are stationary at the siding area (Figure 1). Since the siding area is substantially below grade (at grade to 27' deep), the stationary SNF train or parked empty cars would be hidden from view or partially visible due to the natural topography of the siding area (Figure 2). Eastbound I-80 traffic approaching the Low area would be visually blocked from seeing the siding area until after passing the highway overpass crossing I-80 at which point the siding area would be adjacent to or behind the viewing public (Figures 3 and 4). Again, the stationary SNF train or empty cars would be hidden or only partially visible due to the topography of the area and the fact that the siding area will be substantially below grade. The view of any of the rail equipment on the sidings would be limited to the upper portion of a car or locomotive.

The only other vehicular roads in the area from which members of the public could potentially see the Low rail siding area are two unimproved roads and one improved road. One of the unimproved roads is north of I-80, starting at the vehicle overpass crossing I-80 and heading north and east away from the Low siding area. The traveling public would not typically use this unimproved road and further the rail equipment on the Low siding cannot clearly be seen from the road due to natural topography, the presence of I-80, and the fact that the siding area will be substantially below grade (Figure 5).

A second unimproved road, a short portion of which is a remnant of the abandoned old US 40, exists south and immediately adjacent to the Low siding area. This unimproved road crosses the new rail-line near the Cedar Mountains heading east and follows the rail corridor until the road turns south along the base of the Cedar Mountains. This unimproved road provides only a partial view of the rail equipment on the Low siding, due to natural topography and the fact that the siding area will be substantially below grade (Figure 6). This road is not used by the traveling public but provides off road access to the Western region of Skull Valley from the north.

The only improved (paved) road in the vicinity of the Low siding area heads west and north from the vehicular overpass crossing I-80. This improved road would have a short vantage point for observation of the start of the siding area at the mainline railroad before "rounding the mountain" heading north (Figure 7). This view provides a minimum viewing opportunity to the traveling public due to natural topography and distance to the siding area.

In comparison, the Low siding area offers less of a viewing vista than other existing industrial areas along I-80 including the two salt plants (Morton and Cargil, Figures 8 and 9) and the existing rail sidings at Timpie, Utah (Figure 10).

The alternate mode of transportation, "heavy haul", utilizes an over the road delivery of SNF from an Intermodal Transfer Point (ITP) 1.8 mile west of Timpie, Utah to the PFSF utilizing the existing I-80 frontage road and Skull Valley Road to and from the storage facility. The ITP has multiple sidings similar to those described for the direct rail

(preferred) mode of transportation at Low to receive SNF single purpose trains (in-bound) and to process the return of cars (out-bound) for another spent fuel delivery cycle. The viewing vista for the traveling public is essentially limited to the I-80 corridor (Figure 11). The adjacent frontage road, which provides access to the MagCorp facility approximately 13 miles north of the ITP, offers little difference to the viewing public from those traveling on I-80 as they are in close proximity to each other. The view of the ITP from I-80 / frontage road is very similar to those previously discussed with regard to other existing industrial facilities along I-80 (salt plants and the Timpie, UT siding area which is frequently used by Union Pacific; Figures 8, 9, and 10).

As stated previously, the average receipt rate for the PFSF is 200 casks per year (4 casks per week) to achieve the ultimate capacity of 4000 casks over a 20 year loading cycle. The ITP can handle a maximum of 3 casks per single purpose train. To achieve the desired receipt rate of 4 casks per week (on the average), two equivalent incoming trains per week carrying 2 casks per train will be required.

The operating scenario at the ITP is as follows:

> The transfer of SNF at the ITP requires only that the loaded shipping cask, shipping cradle, and impact limiter assembly be moved from the incoming rail car to a custom designed heavy haul trailer. This assembly is moved as one piece between the vehicles. The rail car and heavy haul trailer will share a common design for the attachment fixture utilized on both types of transport vehicles to lock the shipping cradle to the vehicle (rail or trailer). The ITP will utilize an overhead, single failure proof gantry crane to facilitate this transfer. The operations necessary for this to occur are limited in number. The shipping cradle attachment fixture is first released on the rail car. The necessary rigging is attached to the shipping cradle for the lift of the cask from the rail car. The shipping assembly (cask, cradle, and impact limiter assembly) is relocated over the heavy haul trailer and lowered in place. The shipping cradle attachment fixture is locked in placed and the shipping cask assembly on the heavy haul trailer is then delivered to the PFSF.

For the duration of time that the first shipping cask is being moved from rail car to heavy haul trailer and delivered to the PFSF, a maximum of two (more likely one) other shipping cask rail cars would be parked on the adjacent rail sidings located at the ITP. These casks (or cask) would represent the remaining part of the single purpose train (which would also include the security car and associated buffer car). The mainline locomotives, associated buffer car, and empty cask cars awaiting return to the delivery cycle will be picked up by Union Pacific in "manifest service" for delivery to the start of the next scheduled cycle of SNF to the PFSF. As in the preferred mode of direct rail shipment, it is difficult to predict the "waiting time" associated with "manifest service" for the return trip pickups by Union Pacific. It will be routine, scheduled, and must ultimately support the delivery rate schedule of a maximum of 200 cask cars per year.

The rail equipment parked on the sidings, including loaded casks (or cask) awaiting transfer to the heavy haul trailer and the railroad equipment awaiting pickup by Union Pacific, would be in full view of the traveling public on east and westbound I-80 (Figure 12). This view, at the closest point, is approximately 550 feet. It is anticipated that for the maximum train size of 3 loaded cask cars, it would take approximately 28 work hours to complete the transfer of the last cask to the heavy haul trailer for delivery to the PFSF. This is based on the use of a single heavy haul trailer; the second heavy haul vehicle and truck is an available spare. The more typical receipt of 2 cask car trains would require approximately 16 work hours to complete the transfer of the last cask to the heavy haul trailer for delivery to the PFSF. Since PFS will be capable of contacting the loaded single purpose train at all times and controls the number of casks per single purpose train, the arrival to the ITP would be known in advance to plan, coordinate and facilitate the transfer. Extended workdays will likely be used for those infrequent times a 3-cask train is processed through the ITP.

ACTION

The ER will be updated to include applicable portions of the above information.

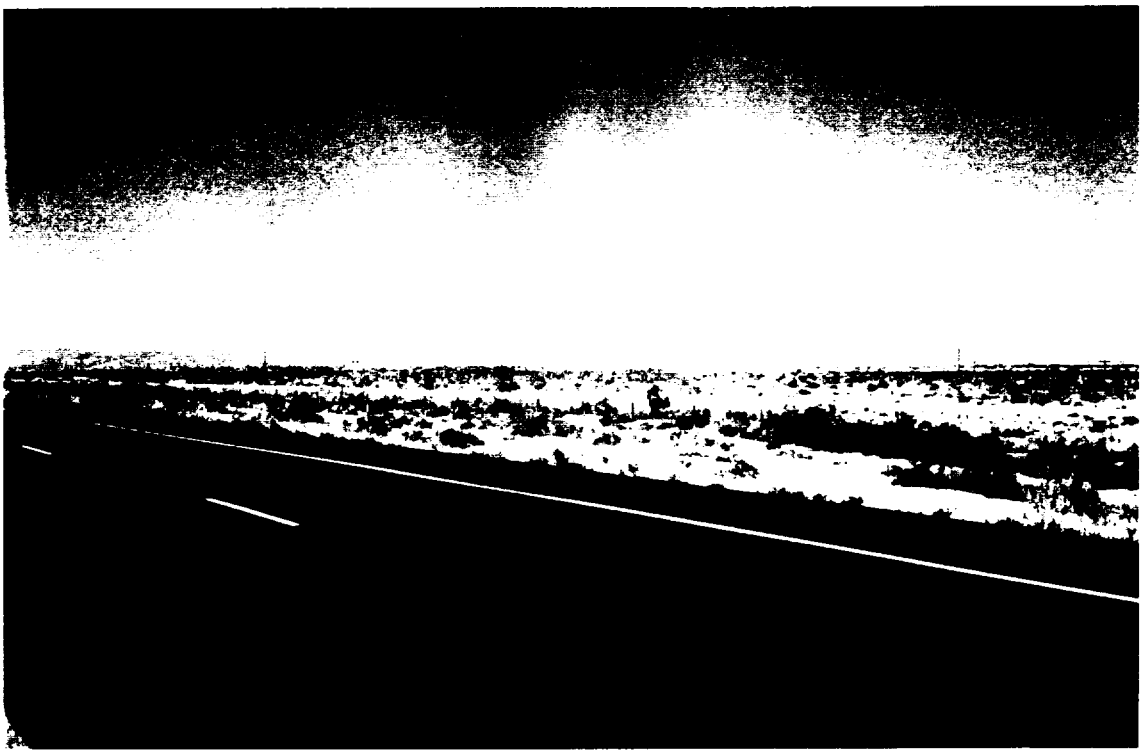

Figure 11 – ITP, looking northwest from I-80, is located left of center adjacent to the mainline railroad (line of poles at the base of the mountainous background).

Figure 12 – ITP, looking northwest from I-80, is located in the center of the photo adjacent to the mainline railroad.

ENVIRONMENTAL IMPACT STATEMENT

2. ALTERNATIVES

2-7. Discuss the feasibility of constructing a new heavy haul road from Skunk Ridge to the PFSF site instead of a rail line.

This discussion should identify any differences in environmental impacts from construction and operation.

RESPONSE

Feasibility

Construction of a new heavy haul road from Low, Utah ("Skunk Ridge") to the PFSF site instead of a rail line is feasible, based on the environmental considerations discussed below. However, a rail line along this route would be the preferred alternative. Rail transport of a shipping cask from the nuclear power plant where the spent fuel is loaded into a canister directly to the PFSF site obviates the need for transfer of the shipping cask to a heavy haul trailer at an intermediate point (the Intermodal Transfer Point -ITP), and thus improves transportation efficiency. The addition of a second road through Skull Valley that parallels the Skull Valley Road opens up the western portion of Skull Valley to vehicular traffic, which PFS believes is an undesirable impact to Skull Valley. As discussed below, the area of land permanently impacted by a heavy haul road is substantially greater than that permanently impacted by a railroad, due to the greater width associated with such a road. Laying a 34 ft wide strip of asphalt along the 32 mile Low Corridor is considered to have a greater impact on the environment than installation of the ties and rails needed for rail transport over the same route.

The response to EIS RAI No. 2, Question 4-16, indicates that both the Low rail siding and Low Corridor rail line will be constructed as one project utilizing the same construction crews. An estimated 125 workers will be required for this project, with the bulk of the manpower involved in earthwork. Construction activities will be conducted primarily during daylight hours and will be completed in approximately one year. The response to EIS RAI No. 2, Question 4-16, also estimates that construction of the ITP 1.8 miles west of Timpie, Utah would require a about 35 workers and take approximately one year. This is also considered to be a reasonable estimate for the construction of an ITP at Low, which would be required if a new road were constructed to the PFSF. Construction of a heavy haul road from Low to the PFSF using the Low Corridor is considered to require roughly the same work force as that estimated for the rail project, about 125 workers, and take approximately one year, with construction activities conducted primarily during daylight hours. As with construction of the rail line, the majority of these workers would be involved with earthwork.

The following table presents a comparison of the construction materials that would be needed for each of the two transport alternatives, direct rail vs. heavy haul. The table is based on the assumption that the heavy haul road is 34 ft wide, with two 12 ft wide lanes and two 5 ft wide shoulders. The entire 34 ft road width is underlain by a 12 inch compacted aggregate base. The two 12 ft wide lanes would consist of 8 inches thick asphalt, and the two 5 ft wide shoulders would consist of 4 inches thick asphalt. The table includes an ITP which would also be required at Low for the transfer of a shipping cask from a rail car arriving on the Union Pacific main line to a heavy haul trailer. For estimating purposes, the quantities of material for the ITP 1.8 miles west of Timpie are used in the following table for a similar ITP at Low.

	Volume of Material in cubic yards			
Type of Construction Material	32 Mile Long Heavy Haul Road	Intermodal Transfer Point	Total for Heavy Haul Alternative	Total for Low Corridor Rail Alternative
Gross Cut	815,500	22,000	837,500	884,400
Gross Fill	819,500	31,000	850,500	627,800
Aggregate Base	213,000	3,700	216,700	0
Asphalt Concrete	121,100	1,400	122,500	0
Ballast	0	4,300	4,300	95,700
Subballast	0	5,400	5,400	225,100

Although construction of an ITP at Low and a heavy haul road along the Low Corridor are feasible, the Low Corridor rail line is the preferred means of transporting shipping casks between the Union Pacific main rail line and the PFSF site since it optimizes operating efficiency and does not open up the west side of Skull Valley (Low Corridor) to vehicular traffic.

Differences in Environmental Impacts

Section 4.4 of the ER, "Effects of Construction and Operation of the Low Corridor Rail Line", addresses effects on the following: geography, land use, anddemography; ecologic resources; air quality; hydrological resources; mineral resources; socioeconomics; noise and traffic; and regional historical, cultural, scenic, and natural features. Differences in environmental effects between a rail line and heavy haul road are considered for each of these areas in the following paragraphs. In addition, a heavy haul road along the Low Corridor would require location of the ITP near Low instead of its present location 1.8 mile west of the intersection of Skull Valley Road and I-80.

Geography, Land Use, and Demography

ER Section 4.4.1 states that construction of a new rail line will require the alteration of approximately 776 acres of land along the rail line, which is the area involved in a construction right-of-way that is approximately 200 ft wide and running the 32 mile length of the rail line. Since the construction right-of-way for a heavy haul road would also be approximately 200 ft, the same area of land would be affected by construction of a heavy haul road (approximately 776 acres). ER Section 4.4.1 states that the new rail line will require the permanent alteration of 155 acres, based on an affected area 32 miles long and 40 ft wide. The width permanently affected by the heavy haul road would be greater, approximately 60 ft. The area of land permanently affected by the 60 ft wide 32 mile long heavy haul road would be 1.5 times that permanently affected by the rail line, or 233 acres.

Construction activities associated with a heavy haul road would temporarily disturb resident livestock and cause them to avoid the construction area, the same as would be the case for construction of the rail line, as discussed in ER Section 4.4.1. Effects on livestock due to the operational phase would be the result of traffic along the Low Corridor. The response to EIS RAI No. 2, Question 2-6, discusses the number of trains vs. heavy haul trucks needed to provide PFSF with 200 loaded shipping casks on the average per year (4 casks per week). For the direct rail alternative, PFS would receive an average of one train per week carrying 4 loaded shipping casks per train. While one return trip could transport 4 empty shipping casks from the PFSF back to Low, based on timing considerations it is likely that another trip would be made to transport all 4 empty shipping casks back to Low, for an average of 2 rail round trips per week expected. For the heavy haul alternative, PFS would receive an average of 4 shipping casks transported by heavy haul truck per week. While a truck could transport an empty shipping cask back to the ITP on its return trip, based on timing considerations it is likely that some trips would return to the ITP without a cask. It is anticipated that, on average, 6 heavy haul truck round trips would be required to transport 4 loaded casks to the PFSF and haul 4 empty casks back to the ITP each week. Therefore, it is considered that the heavy haul alternative would require about 3 times the number of round trips as rail. Even so, it is considered that the heavy haul trucks traveling along the Low Corridor would not have a significant adverse affect on livestock, and there would be little difference from effects associated with direct rail, discussed in ER Section 4.4.1. Due to the infrequent number of trips (6 round trips on average per week for transporting 200 casks per year to and from the PFSF) and slow speed of the heavy haul trucks (20 mph), collisions with livestock are not anticipated and range fences on either side of the road are not necessary. Livestock would be able to freely cross the road to access rangeland on either side. Other effects (recreational land use, crossing arryos, demographics) of a heavy haul road would be essentially the same as discussed for the Low Corridor rail line in ER Section 4.4.1.

A heavy haul road along the Low Corridor would require location of the ITP at Low instead of its present location 1.8 miles west of the intersection of Skull Valley Road and I-80. The relocated ITP would be about the same size as discussed in ER Section 4.3.1, affecting approximately 11 acres of land that would require alteration for the building housing the gantry crane, access road and rail sidings. The land that would be affected at Low is public land administered by the BLM that is not currently in use, much of which has been previously disturbed in the construction of old U.S. 40, Interstate 80, and the railroad.

Effects on Ecological Resources

Construction and operation of a heavy haul road in place of the Low Corridor rail line would affect ecological resources differently by impacting different acreages of land. Rail line construction would temporarily remove approximately 776 acres of greasewood and desert shrub/saltbrush habitat (ER Section 4.4.2), but permanently alter only 155 acres of public land administered by the BLM. Heavy haul road construction would also temporarily affect approximately 776 acres, but permanently alter 233 acres of public land administered by the BLM. With the exception of areas of land affected by the two different modes of transportation, the ecological effects discussed in ER Section 4.4.2 for construction and operation of the rail line would be about the same as for construction and operation of a heavy haul road along the same route.

In addition to the area of land affected by the 32 mile long heavy haul road, approximately 11 acres of land would be affected by the addition of the ITP at Low. These 11 acres are for the gantry crane building, access road and rail sidings. As discussed in the response to EIS RAI No. 2, Question 3-2, the entire Low railhead area, located between Interstate 80 and the old U.S. 40 road, is grassland. Vegetation at the Low railhead that would be impacted by construction of an ITP is dominated by invasive annuals such as cheatgrass, which likely invaded the area partly as the result of disturbance from U.S. 40, Interstate 80, and the railroad. No federal or state-listed threatened or endangered plant species are known to occur within the railhead area at Low or along the 32 mile Low Corridor.

ER Section 4.4.2 states the following in regards to potential effects on wildlife of construction/operation of the Low Corridor rail line:

> "Construction activities related to the Low Corridor will temporarily disturb resident wildlife species. Larger mammals would temporarily avoid the construction area, but likely return following the completion of construction. Prior to construction, a comprehensive wildlife survey should be conducted to assure that no kit fox, burrowing owls, northern harriers, or ferruginous hawks are nesting (or denning) within 0.5 mile of the rail line. If any animals are

located, mitigation plans such as construction timing restrictions should be implemented and alternative nest (or den) site locations should be established in consultation with the BLM, UDWR, and FWS to offset the loss of these sites due to construction and improve habitat for local populations."

"Impacts to wild horses, mule deer and pronghorn antelope could occur if rail cars traveling the corridor collide with these animals. In addition, the rail corridor has the potential to divide natural wildlife travel corridors between the west and east sides of Skull Valley during construction. Because most of the water resources are concentrated on the east side of Skull Valley, construction and operation of the rail line could cause some wild horses, mule deer, and pronghorn antelope to avoid the area. Other animals may habituate to the noise of new construction and continue to cross the rail corridor. The level of impact to the local population of these species from construction and operation is expected to be minimal."

"All other ecological resources identified in Section 2.3.3, such as migratory peregrine falcons, should not be adversely affected by construction activities, since these activities are temporary in nature. Additional consultation relative to threatened and endangered species may be required with the BLM and USFWS."

This information would also apply to a heavy haul road along the Low Corridor.

Peregrine falcons have been known to nest at the Timpie Waterfowl Management Area. Approximately the northern 1/3 of the Low Corridor would be within 15 miles of potential nesting sites and therefore could potentially be within the feeding range of peregrine falcons. As noted in ER Section 4.3.2, construction activities at the ITP 1.8 miles west of Timpie are unlikely to affect the falcon's forage base of small mammals and birds because of the small amount of land altered in the area (approximately 11 acres). For the same reason, construction of an ITP at Low would also be unlikely to affect the falcon's forage base. In addition, an ITP at Low would be along the outer reaches of the foraging range of falcons nesting at the Timpie Waterfowl Management Area.

Effects on Air Quality

The air quality effects associated with constructing a heavy haul road would be different than those associated with construction of the rail line. Fugitive dust emissions associated with road construction involving approximately 776 acres would be similar to that for the rail line construction, also involving approximately 776 acres. However, road construction would involve the placement of 32 miles of asphalt, approximately 34 ft wide (two 12 ft lanes and two 5 ft shoulders), and resultant air emissions from asphalt production operations at one or more local asphalt plants. Emissions can be estimated for construction of the asphalt road by extrapolating based on the quantity of pollutants calculated in ER Table 4.1-4

for production of 11,500 cubic yards of asphalt used in the PFSF access road. The asphalt thickness across the 24 ft wide main road would be 8 inches to withstand the loads associated with heavy haul vehicles, and the 10 ft total shoulder width would have an asphalt thickness of 4 inches. This results in a cross-sectional asphalt area of 19.33 ft. For a 32 mile road, there would be 3.27 million cubic feet of asphalt, or 121,000 cubic yards. This is a factor of 10.5 times the amount of asphalt assumed in ER Table 4.1-4. Pollutant emissions from the asphalt production operations associated with the 32 mile heavy haul road can be estimated by multiplying the emissions rate of each of the pollutants listed in ER Table 4.1-4 by a factor of 10.5. ER Table 4.1-5 evaluates air quality impacts conservatively assuming that an asphalt batch plant is located at the PFSF site. Production of 11,500 cubic yards of asphalt for the PFSF access road is evaluated and calculated pollutant concentrations at the Skull Valley Road and the nearest residences are compared with EPA standards. Assuming that 121,000 cubic yards of asphalt for a Low Corridor heavy haul road were to be produced at a single batch plant located at the PFSF site (which is conservative), then air quality impacts can be assessed by multiplying each of the air pollutant concentrations in Table 4.1-5 by a factor of 10.5. When this is done, it is seen that air pollutant concentrations remain below the EPA standards at the Skull Valley Road and at the nearest residences.

Pollutant emissions from grading, bulldozing, and dump-truck operation involved in construction of a heavy haul road would be similar to that calculated for construction of the Low Corridor rail line in ER Table 4.3-2.

The air quality impacts associated with construction of the 11 acre ITP, documented in ER Section 4.3.3, would be essentially the same regardless of whether the ITP is constructed at its planned location near Timpie, or at Low.

During PFSF operation, air emissions produced by heavy haul trucks traveling along the Low Corridor can be estimated using calculated emissions for heavy haul vehicles using the Skull Valley Road (ER Section 4.3.3). Four round trips on average per week are necessary to meet the average of 200 casks per year PFSF loading rate, with a heavy haul truck transporting loaded shipping casks to the PFSF and returning to the ITP with empty casks. Accounting for trucks dropping off full casks and returning without casks, ER Section 4.3.3 assumes 312 round trips per year (6 round trips per week) to calculate pollutant emissions, with the heavy haul trucks assumed to travel at 20 mph. For the same number of trips on a Low Corridor heavy haul route, air pollutant emissions would be somewhat higher due to the 32 mile distance vs. the 26 mile distance of the Skull Valley Road. Therefore, pollutant emissions from heavy haul vehicle trips along a Low Corridor heavy haul route can be estimated by multiplying the emissions rate of each of the pollutants listed in ER Section 4.3.3 for operation by a factor of (32 mi / 26 mi =) 1.23. ER Section 4.3.3 concluded that the quantity of air emissions from diesel trucks hauling shipping casks along the Skull Valley Road would be minimal compared to Tooele County emissions that are 3-4 orders of

magnitude higher. The same conclusion would apply for diesel trucks hauling shipping casks along a Low Corridor heavy haul road, since calculated emissions for the Low Corridor route would only be a factor of 1.23 times greater than those associated with the route using the Skull Valley Road (shown in ER Section 4.3.3).

Effects on Hydrological Resources

As stated in ER Section 4.4.4 for the Low Corridor rail line, there are no existing surface water bodies and ground water is over 100 ft below the surface. Therefore, it is unlikely that either a rail line or a heavy haul road would have any impact on hydrological resources.

Effects on Mineral Resources

As stated in ER Section 4.4.5 for the Low Corridor rail line, no mineral resources have been identified along the rail line corridor. Therefore, no impact to this resource is expected for a rail line or a heavy haul road.

Effects on Socioeconomics

No adverse impacts on socioeconomic resources are anticipated as a result of the new rail line or a heavy haul road along the Low Corridor. As stated in ER Section 4.4.6 for the rail line, "minor short-term employment will result from construction activities associated with the rail line. These activities will utilize a local labor force commuting daily to the project area and will therefore not induce relocation of families and associated impacts on local government services." The same is true for a heavy haul road.

Effects of Noise and Traffic

A heavy haul vehicle traveling along the Low Corridor would produce less noise than locomotives. Therefore, the discussion of noise effects in ER Section 4.4.7 for locomotives travelling along the Low Corridor rail line provides a conservative assessment of the effects of noise that could be produced by heavy haul trucks traveling along a road in the Low Corridor. Use of the heavy haul transport mode would result in approximately three times as many round trips as rail transport, with about 6 heavy haul round trips on average per week anticipated to transport 200 loaded shipping casks from the ITP to the PFSF and 200 empty shipping casks back to the ITP in an average year. As discussed in ER Section 4.4.7, because of the unimproved nature of the roads crossing the Low Corridor, the infrequent off-road traffic proceeds at a reduced speed. Heavy haul trucks will only travel at approximately 20 mph. Because the area is flat, unoccupied and unwooded, users of both the Low Corridor heavy haul road and roads that cross this road would have a virtually unlimited field of vision. Based on this, it is unlikely that a heavy haul road would have any impact on traffic or vehicular

safety, even with three times the number of trips than that expected for rail usage.

Effects on Regional Historical, Cultural, Scenic, and Natural Features

The discussion in ER Section 4.4.8 for the rail line would also apply to a heavy haul road in the Low Corridor. A heavy haul road could result in slightly greater visual impact due to the permanently affected area of the road being 60 ft wide, whereas the rail line involves a 40 ft wide corridor cleared of native vegetation to provide a buffer zone in reducing the propagation of fires.

ACTION

The ER will be updated to include this information.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-1 Provide a general description of the mineral resources and claims known to be in Skull Valley, Utah.

The description should include an explicit reference to the mineral and claims resources known to be along the proposed rail route, ITF, and site.

RESPONSE

Claims and Leases

BLM Lands -- Rail Corridor and ITP

There are no mining claims within the Rail Corridor or ITP site, and none has ever been filed on those lands. In addition, only one mining claim has ever been filed on any of the sections of land affected by the Rail Corridor and ITP site -- a 1982 claim located in Section 20, T. 1 N., R. 9 W., approximately one-half mile from the Rail Corridor. The claim was abandoned in 1983.

The only mineral leases ever issued on land affected by the Rail Corridor and ITP site were oil and gas leases, all but one of which have terminated. The one existing lease affects the Rail Corridor within Section 27, T. 3 S., R. 9 W. Under BLM's multiple use concepts, the existence of the oil and gas lease will not preclude construction and operation of the rail line.

The State of Utah owns the minerals underlying one section of land affected by the Rail Corridor, Section 2, T. 5 S., R. 9 W., with the BLM owning the surface of that section. State lands are not subject to location of mining claims. No mineral leases currently affect that section of land, and the only historic leases were oil and gas leases.

Reservation Lands -- Terminus of Rail Corridor and the PFSF

The terminus of the Rail Corridor and the PFSF are located on the Skull Valley Reservation. Reservation lands are not subject to location of mining claims, and according to the BIA, there are no mineral leases on the Skull Valley Reservation.

Mineral Resources

To assess the mineral potential of Skull Valley, PFS conducted a search of publications by the United States Geological Survey and publications and library

holdings of the Utah Geological Survey regarding Skull Valley. PFS also consulted with two independent geologists regarding the potential for economic mineralization in the valley. That inquiry reflects that Skull Valley (including the Rail Corridor, ITP and PFSF) contains no known mineral or oil and gas deposits, except for sand and gravel and other commonly occurring deposits. None of these latter types of deposits are located within the Rail Corridor, ITP or PFSF. In addition, this inquiry indicates that Skull Valley has little mineral or oil and gas potential. In particular, the inquiry reveals that Skull Valley has very low potential for the discovery of economic metallic mineral deposits, and there is no reasonable possibility of an open pit metallic mine that would interfere with the proposed rail line operations during the projected life of the PFSF. *See, e.g.,* Stein, H. J., et al., Open-file Report 89-467, "Tooele 1° x 2° Quadrangle, Northwest Utah, A CUSMAP Preassessment Study," (USGS 1989), p. 88-105 and Plates 19-22 (areas of Skull Valley including the Rail Corridor, the ITP site and the PFSF have no or low potential for metallic minerals).

ACTION

The ER will be updated to include the above information.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-2. Provide additional information on the types of vegetation and habitat at the proposed Low railhead.

Include the existing and historical environment, as well as the current and historical land uses of this area.

RESPONSE

The information provided in Section 2.3.3 of the ER, Ecological Resources Along The Low Corridor, includes the area of the proposed Low railhead.

The entire Low railhead area is grassland. It is located between the Interstate 80 and the old Route 40 road, which still receives some usage by four wheel drive vehicles to access jeep trails in the valley. The vegetation at the Low railhead site is dominated by invasive annuals such as cheatgrass. As stated in the Rare Plant Inventory (Intermountain Ecosystems, May 1998), which was conducted along the proposed Low transportation corridor, the abundance of invasive annuals and absence of natural plant communities reflects the past history and repeated cycles of overgrazing, drought, and fire. It is likely that the cheatgrass invasion at the Low railhead area is also partially due to disturbance from Route 40, Route 80, and the railroad through the years.

ACTION

The ER will be updated to clarify that the existing ecological information applies to the Low Corridor railhead.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-3. Provide Skull Valley raptor data (i.e. birds of prey including eagles, hawks, falcons, and owls) from Hawkwatch International.

RESPONSE

According to Dr. Jeff Smith, Science Director of Hawkwatch International (personal communication on August 27, 1999) no formal raptor surveys have been conducted by Hawkwatch International in Skull Valley.

ACTION

No update to the ER is required

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-4 Provide land cover maps from the Utah Division of Wildlife Resources which include the proposed rail corridor and the Skunk Ridge rail siding.

The maps should be similar to those provided in figures 2.3-8 and 2.3-9 of the Environmental Report (ER).

RESPONSE

Land cover maps for the Low Rail corridor have been requested from the Utah Division of Wildlife Resources (UDWR) and will be provided upon receipt. Recent communications with UDWR indicate that the land cover maps should be provided to PFS by October 22, 1999.

ACTION

The ER will be revised to include applicable maps when they are received.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-5 Provide the results of the 1996 and 1997 United States Forest Service surveys for the spotted bats.

RESPONSE

As stated in ER Section 2.3.1.4.2, "The USFS conducted surveys in Skull Valley for the spotted bat in 1996 and 1997 and did not locate any individuals."

PFS contacted Mr. Richard Williams of the U.S. Forest Service on September 28, 1999. Mr. Williams confirmed the previous information received from the U.S. Forest Service that the spotted bat has not been found during Skull valley bat surveys. The spotted bat occurs in southern Utah and as far as he knows has never been found in Skull Valley.

ACTION

The results are currently reported in the ER. No additional update is required.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-6 Provide an up-to-date map for raptor nesting locations for the Skull Valley area.

The map should be similar to ER figure 2.3-7 and depict locations of the proposed site, Skull Valley Road, ITF, and Skunk Ridge rail corridor.

RESPONSE

The most recent raptor nesting location maps have been requested from the Utah Division of Wildlife Resources and will be provided upon receipt. Recent communications with UDWR indicate that the maps should be provided to PFS by October 22, 1999.

ACTION

The ER will be updated to include the latest maps when they are received.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-7 Specify protection measures recommended and/or implemented by the State of Utah for species identified by the state as high interest species.

The February 18, 1999 RAI response provides the Utah Code 63-34-14, Species Protection Account, definition for species protection but does not describe any actions taken by the state to protect species of high interest.

RESPONSE

As stated in our February 18, 1999 RAI response, according to the Utah Division of Wildlife Resources (UDWR) "high interest species" are defined as all game species; any economically important species; and any species of special aesthetic, scientific, or educational significance including those deemed as being sensitive, which would include all federally listed threatened or endangered species. High interest species include those species, which are not particularly rare, but are considered especially important to the public, UDWR, or other resource management agencies (letters from UDWR, March 27, 1997 and January 6, 1998). Species are not provided any protection measures based on their being high interest species. However, some high interest species are protected because of other classifications, such as federally threatened or endangered.

In their March 27, 1997 and January 6, 1998 letters UDWR recommended that surveys be done for the high interest invertebrate species they identified. As discussed in ER Section 2.3, PFS conducted wildlife surveys for threatened, endangered and sensitive species in May and June 1998. For the speckled dace, mink, and amphibian high interest species they recommended that precautions need to be taken to ensure that water pollution does not occur. If pollution occurs, current methodology for containment and clean up should be implemented.

Recommended protection methods, including those recommended by the State, for raptors and Skull Valley Pocket Gophers are discussed in Sections 2.3 and 4.1.2 and 4.2.2 of the ER.

UDWR recommends that nest sites of the chukar, ring-necked pheasant, sage grouse, and hungarian partridge (if located) should be protected from disturbance and disturbed sites should be revegetated with species having value to the birds.

For the mule deer, UDWR recommends that construction be avoided in fawning areas during the fawning period and on deer winter range during the winter

moths of December 1 to April 15th. No construction related to this project will occur within these mule deer usage areas.

Sections 2.3, 4.1.2, 4.3.2, and 4.4.2 of the ER currently discuss whether or not the proposed project would affect these high interest species.

ACTION

The ER will be updated to include the above information that is not already in the ER.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-8 Identify any known projects, other than public facilities, planned for the area near the proposed facility.

RESPONSE

On September 21, 1999 PFS contacted Mr. Scott Muir, Economic Development Director for Tooele County. Mr. Muir indicated that to the best of his knowledge there are no new private projects planned for Skull Valley. PFS also contacted Mr. Leon Bear, Chairman of the Skull Valley Band of Goshute Indians. As chairman, Mr. Bear is in a position to know of any proposed projects in the Skull Valley area and in particular for the Skull Valley Reservation. Mr. Bear has indicated that to his knowledge there are no business projects currently planned for the area. Likewise, PFS is not aware of any private projects planned for implementation in Skull Valley.

ACTION

No update to the ER is required.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-9 Provide enrollment data for Tooele Central School.

The February 18, 1999, response included this school in its list of Tooele County public schools, however, information provided by the Tooele County School District did not include Tooele Central School.

RESPONSE

The Tooele Central School has been closed for a number of years. It was replaced by the Northlake Elementary School, which had a fall 1998 enrollment of 755 students.

ACTION

The ER will be updated to include the latest list of Tooele County Schools and enrollment data and to discuss any future school expansion due to the PFSF project construction and operation workforce as previously discussed in EIS RAI No. 1, Question 11-3.

ENVIRONMENTAL IMPACT STATEMENT

3. AFFECTED ENVIRONMENT

3-10 Provide the results of any cultural resource surveys performed for the proposed site and the rail line from Skunk Ridge.

RESPONSE

PFS has contracted with P-III Associates, Inc to perform a Class III Cultural Resource Inventory for the Private Fuel Storage Facility (PFSF). The areas inventoried include the Intermodal Transfer Point, the Low Transportation Corridor, and the PFSF site area on the Goshute Indian Reservation. The Class III inventory confirmed the location of the Hastings Cutoff (site 42T0709) along the Low Transportation Corridor, and resulted in the discovery of an additional site (42T01187) and eight isolated finds. None of the isolated finds are considered eligible for inclusion in the National Register of Historic Places (NRHP).

Site 42T01187 is a rock alignment and cairn. The rock alignment is located approximately 550-ft East of the rail line centerline and therefore will be avoided by construction activities and operation of the rail line. Site 42T0709 is the Hastings Cutoff Trail in the immediate vicinity of the Low Transportation Corridor. This portion of the trail cannot be avoided by the Low Corridor rail line and therefore PFS has had P-III Associates, Inc prepare a Treatment Plan to preserve the significant historical data of the Hastings Cutoff in Skull Valley.

Both the Class III Cultural Resource Inventory and the Treatment Plan are considered "drafts" and have been submitted to the BLM for review and approval. A copy of the draft version of both reports is enclosed. After approval by the BLM and supporting agencies a final copy will be provided.

ACTION

Results of the Class III Cultural Resource Inventory and the Treatment Plan will be summarized in appropriate sections of the ER.

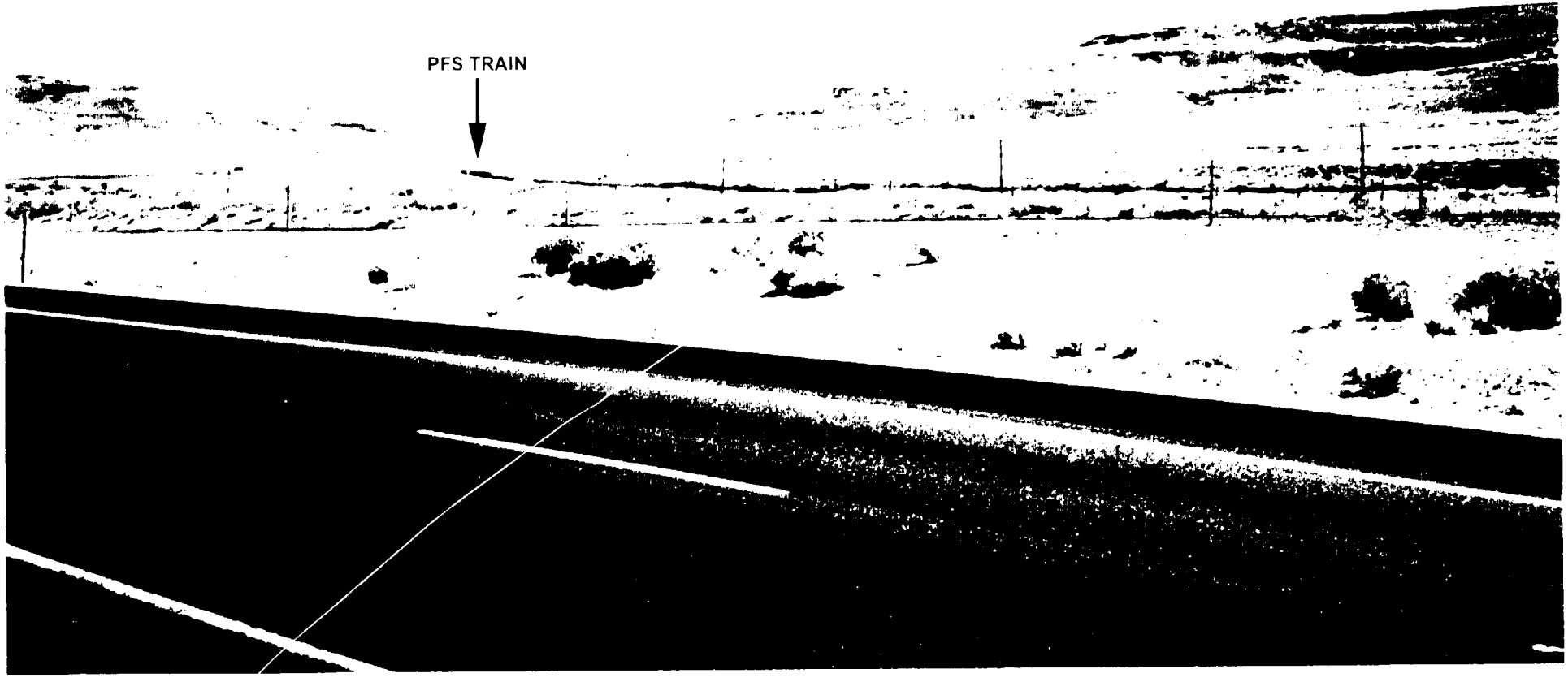

Figure 2
PFS Rail Line at Low from I-80

FIGURE 1 – Low, UT looking west. Railroad sidings will be at grade on the left to 27' below grade in the distance at the railroad mainline (center of photo).

FIGURE 2 – Low, UT looking south at the start of the westbound exit to the I-80 vehicle overpass. Rail sidings will be approximately 15' to 22' below grade left to right at this point.

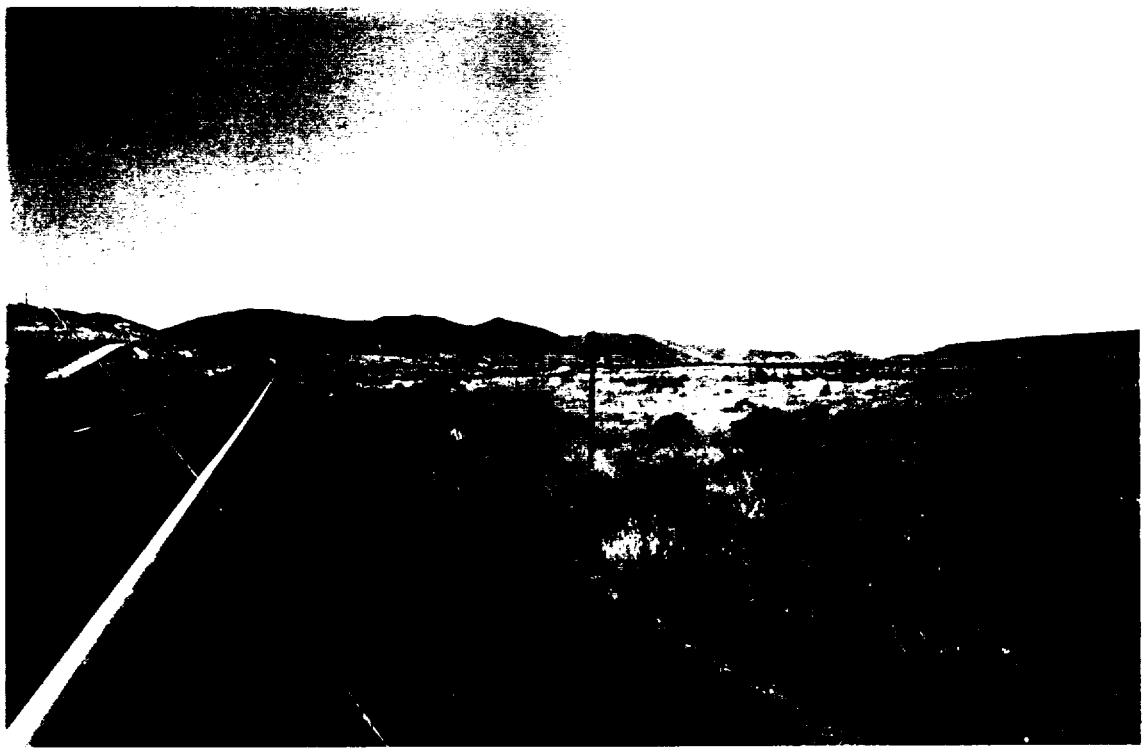

Figure 3 – Low, UT looking east on eastbound I-80 toward the siding area. The actual siding area is obscured from view (located beyond Skunk Ridge which is at the I-80 horizon).

FIGURE 4 – Low, UT looking east from the exit ramp. Natural topography blocks the view of the siding area (begins on the left side of the photo to the center of the photo - Cedar Mountains).

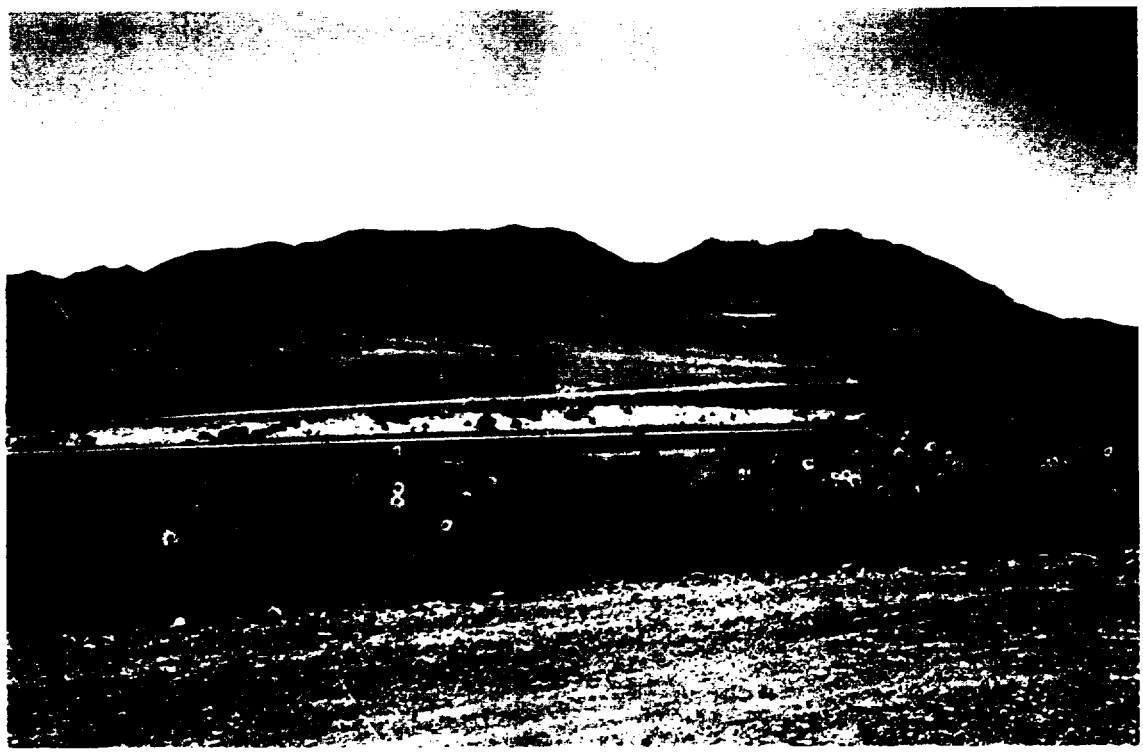

FIGURE 5 – Low, UT looking south from the unimproved road heading north and east from the I-80 vehicle overpass. The rail siding is 15' to 27' below grade left to right in this view.

FIGURE 6 – Low, UT looking north across the siding area from the adjacent unimproved road. Rail siding will be 27' to 10' below grade left to right in this view.

Figure 7 – Low, UT looking east from the paved frontage road west of the I-80 vehicle overpass. Siding area is in the center of photo obscured from view. Entrance to cut will be visible.

Figure 8 – Morton Salt Plant approximately 8 miles east of Timpie, UT looking northwest from I-80.

Figure 9 – Cargil Salt Plant at Timpie, UT looking northwest from I-80.

Figure 10 – Timpie, UT looking west adjacent to I-80 from the east end of the rail siding access and support area.

Figure 3
PFS Rail Line from the I-80 Off-ramp

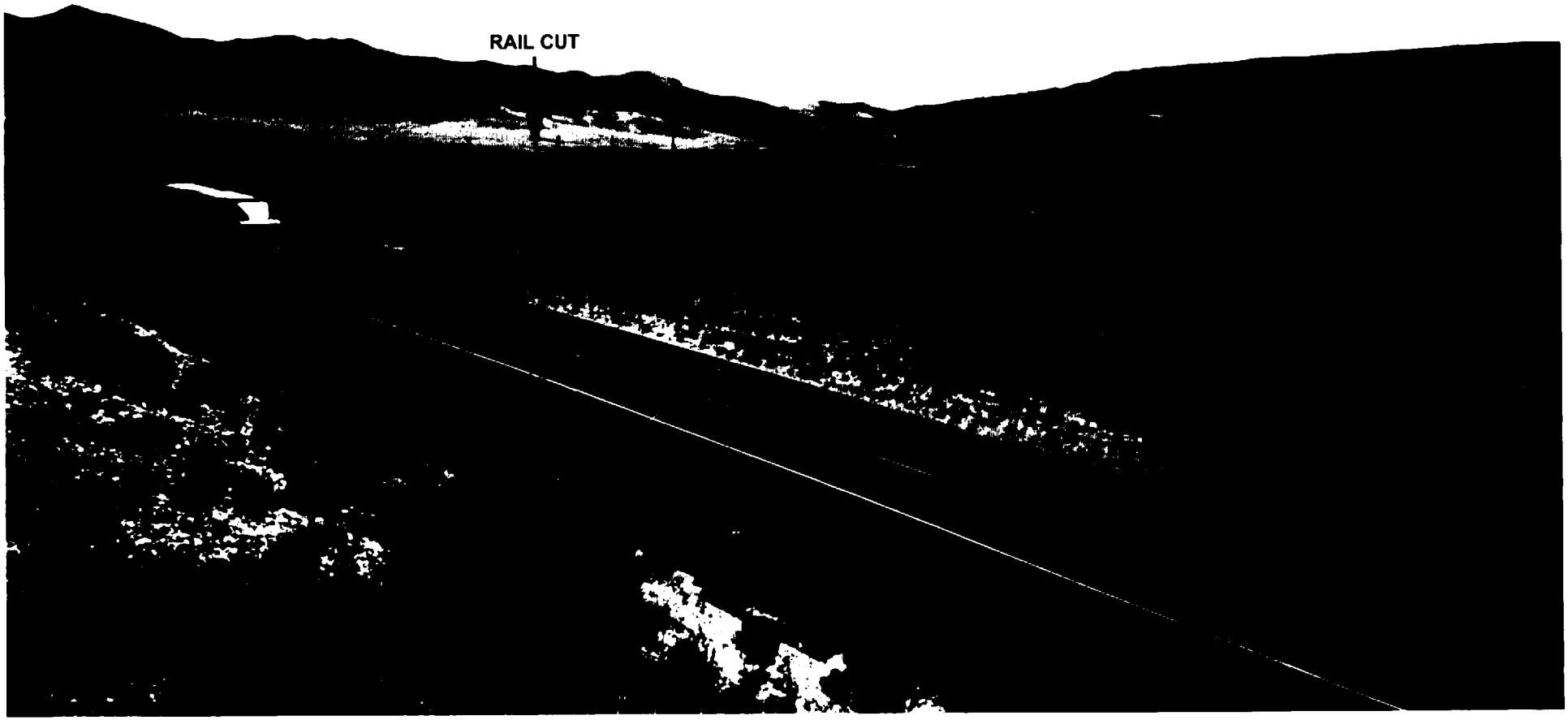

Figure 4
PFS Rail Line from West of Low

Figure 5
PFS Rail Line from Old US 40

Figure 6
PFS Rail Line from Cedar Mountains at Mid-valley

Figure 7
PFS Intermodal Transfer Point

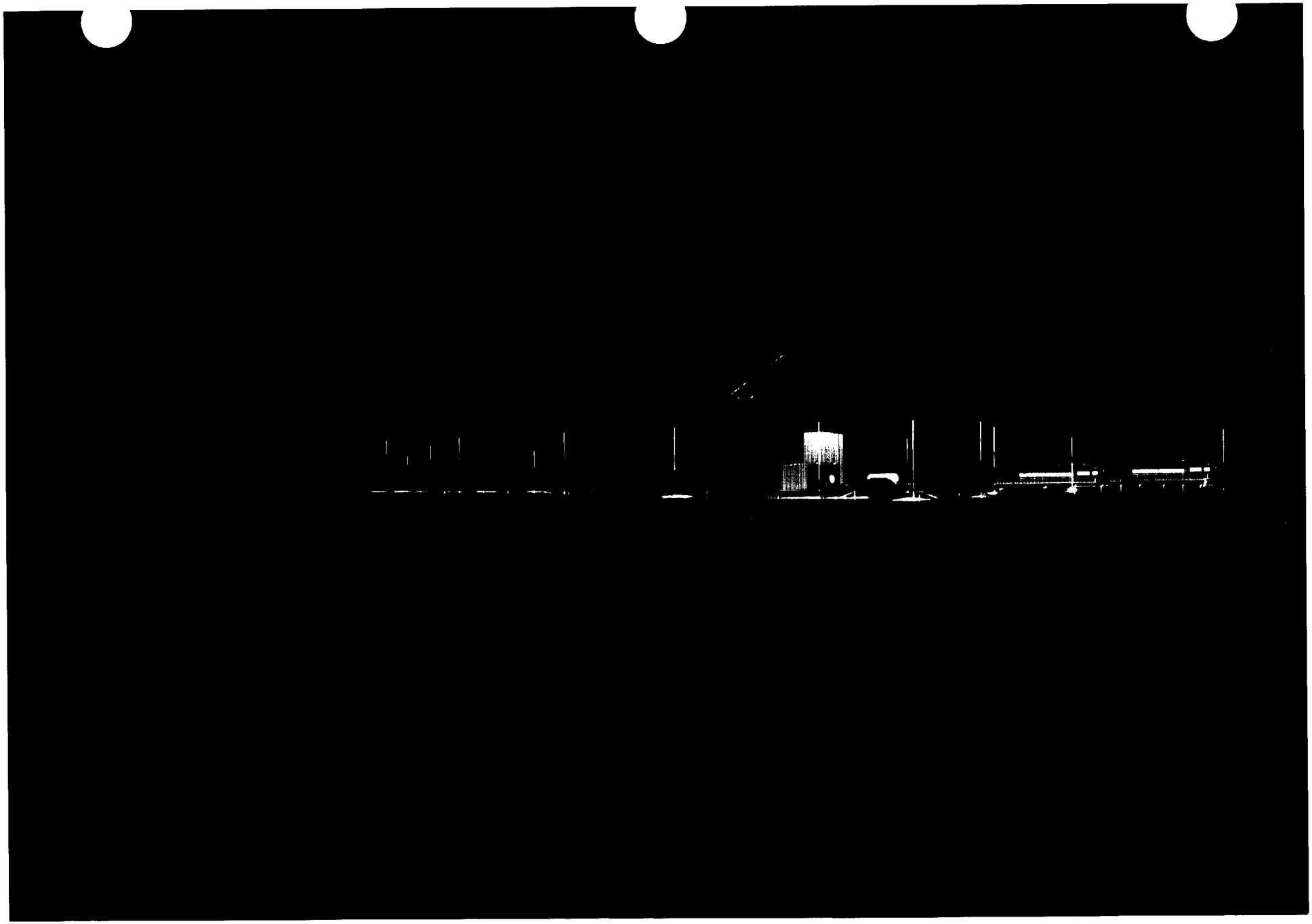

Figure 8
PFS Intermodal Transfer Point at Night

Figure 9
PFS Facility from Deseret Peak

Figure 10
PFS Facility from Deseret Peak at Night

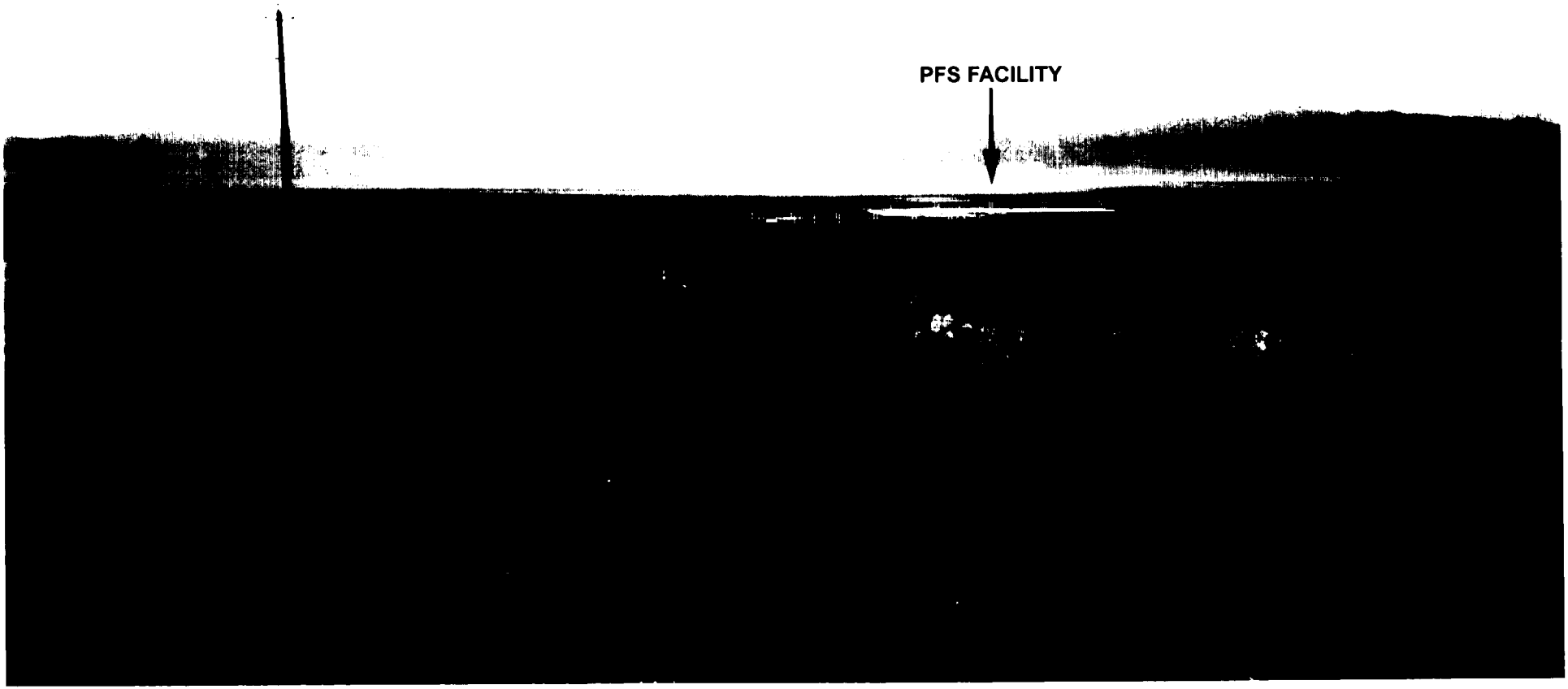

Figure 11
PFS Facility from Goshute Village

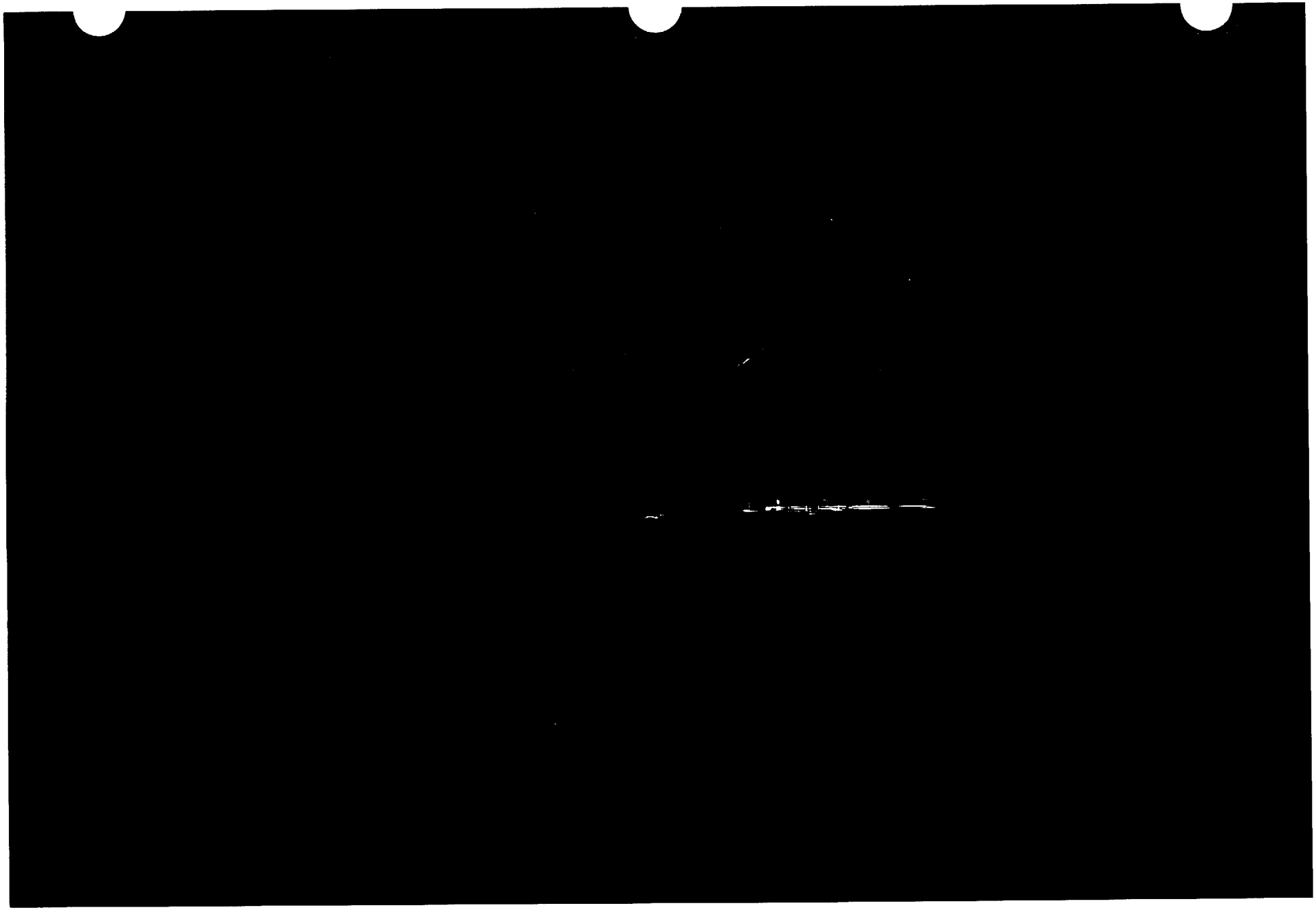

Figure 12
PFS Facility from Goshute Village at Night

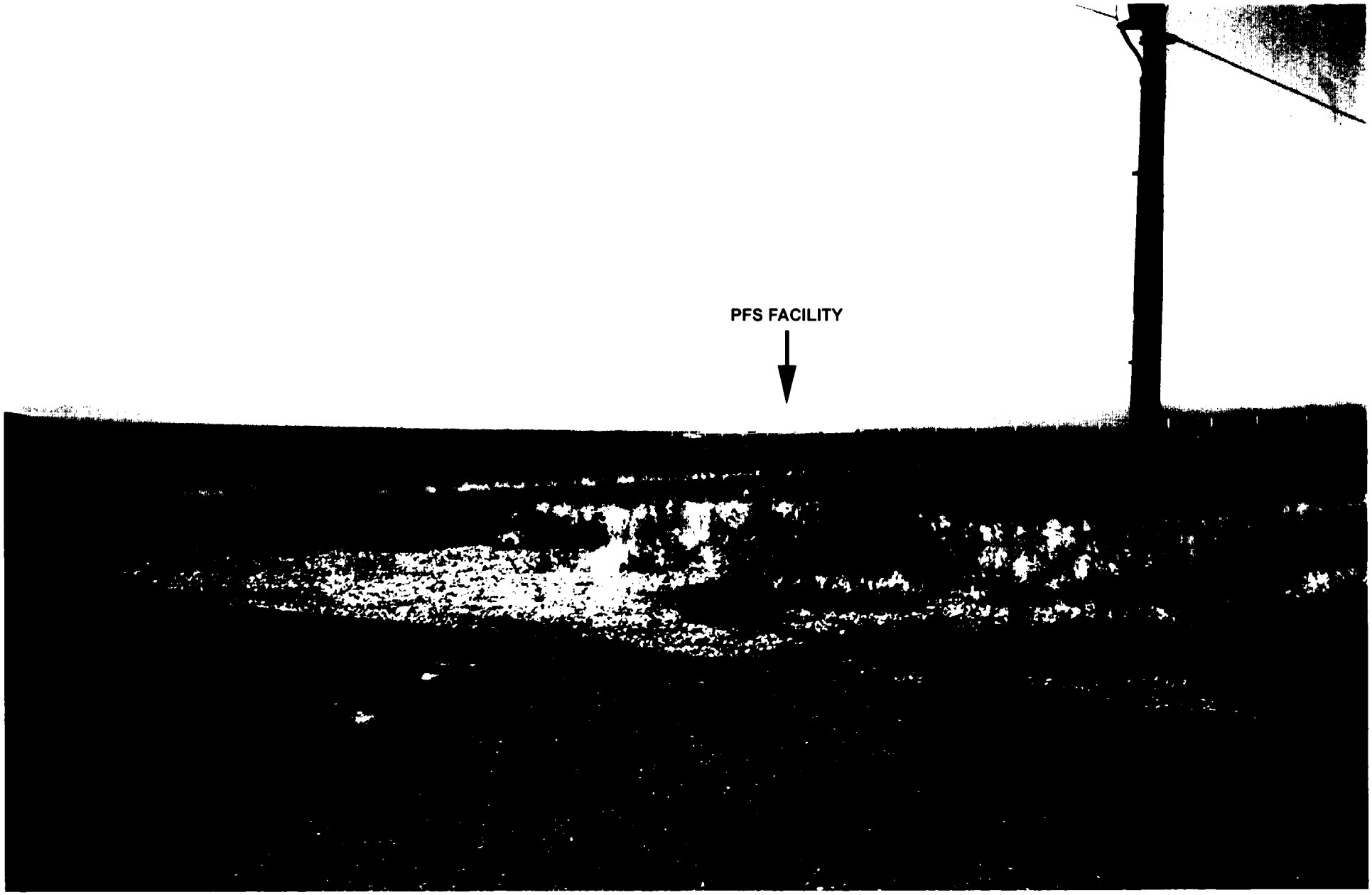

Figure 13
PFS Facility from Pony Express Store

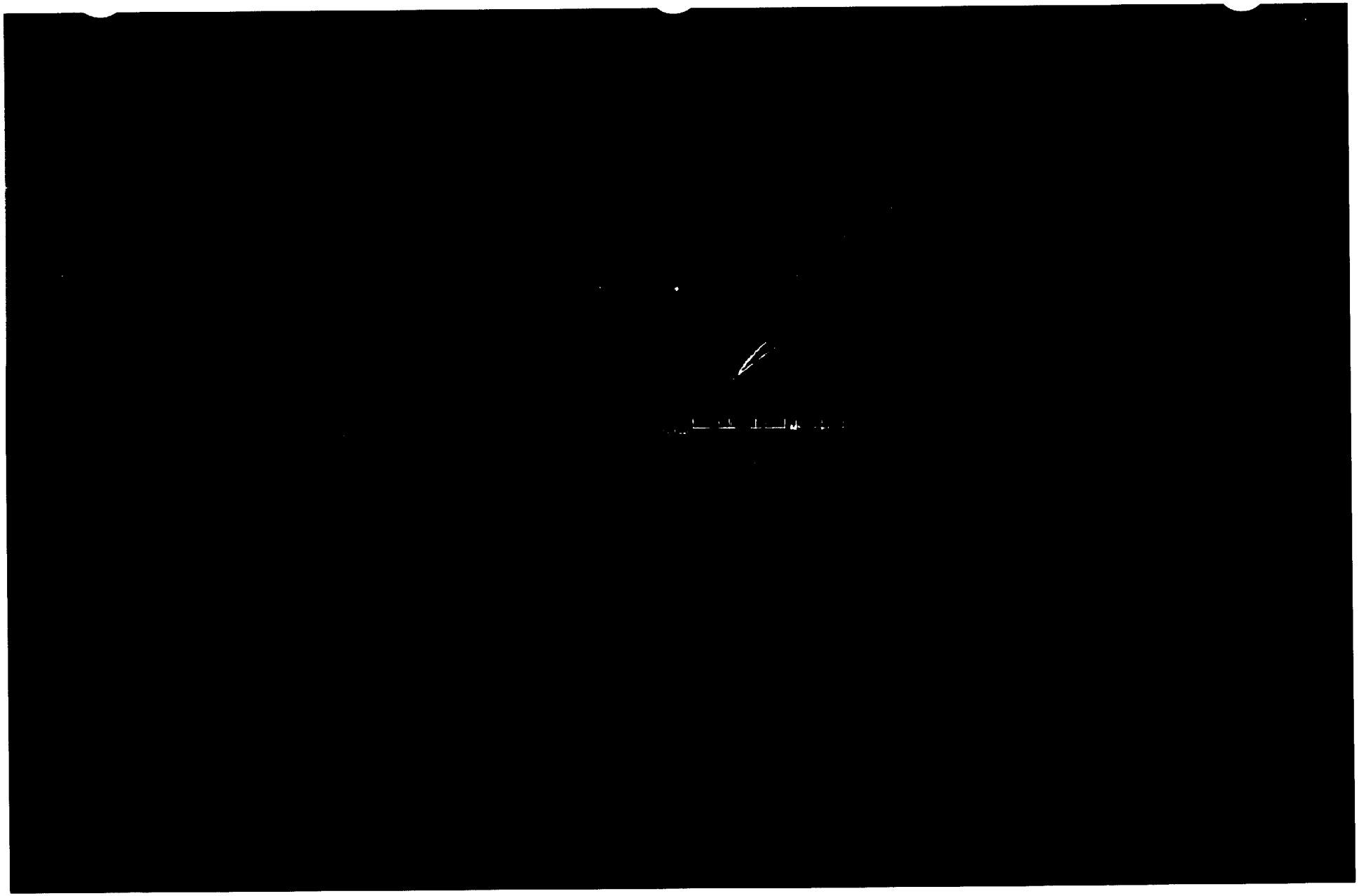

Figure 14
PFS Facility from Pony Express Store at Night

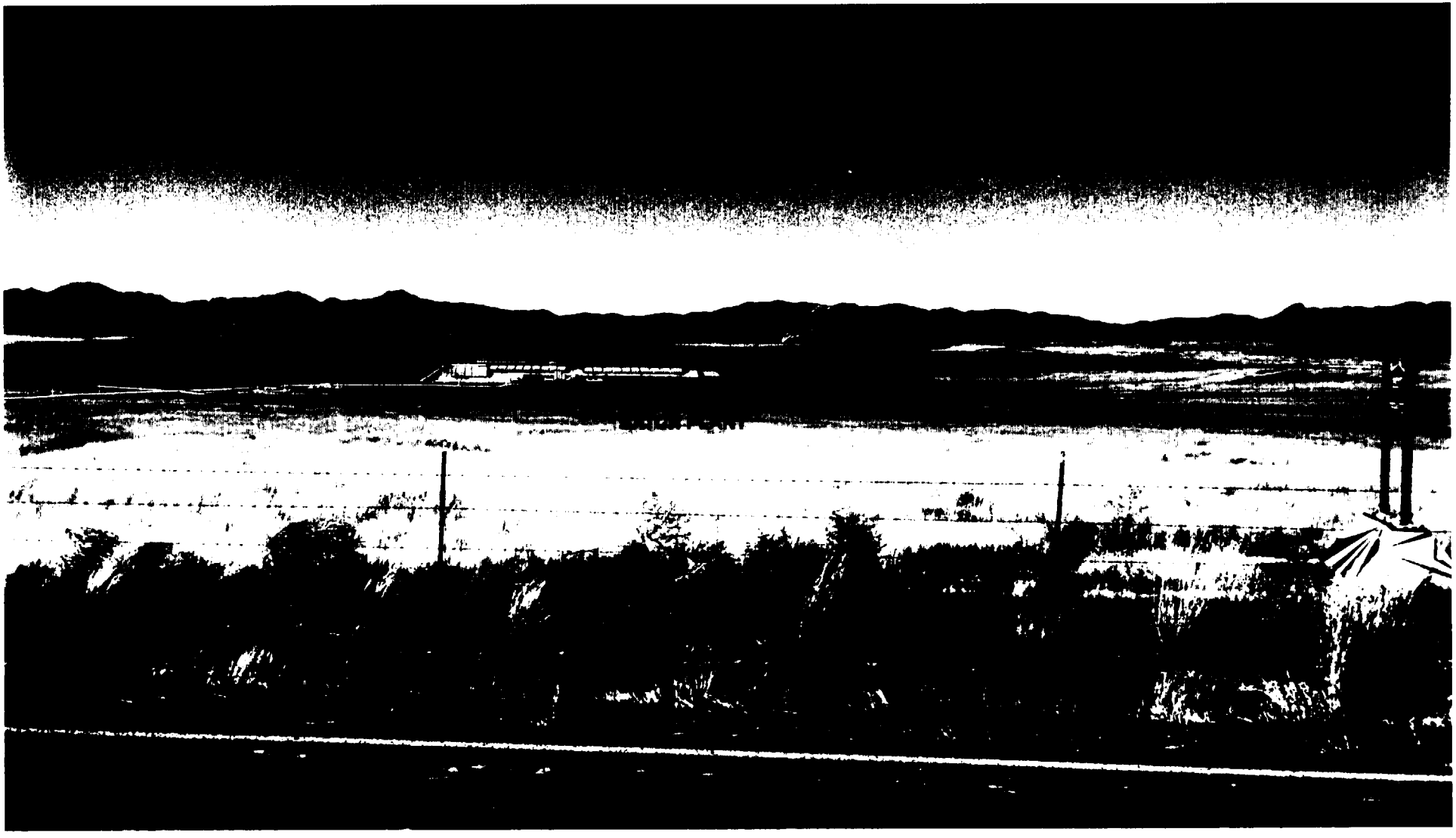

Figure 15
PFS Facility from Skull Valley Road

ENVIRONMENTAL IMPACT STATEMENT

4. ENVIRONMENTAL CONSEQUENCES

4-7 Provide in electronic form, hourly meteorological data from the Pony Express convenience store, as well as meteorological data from the nearest source to the Skunk Ridge rail siding.

Include hourly records of wind speed, wind direction, air temperature, and atmospheric stability or some parameter from which an estimate of wind stability can be derived, such as the standard deviation of the horizontal wind direction.

RESPONSE

Hourly meteorological data from the Pony Express convenience store for the entire period of record, December 19, 1996 to December 29, 1998, are provided in an Excel spreadsheet labeled "METDATA.XLS" on the attached diskette. The parameters included in the spreadsheet consist of hourly average values of wind speed, wind direction, air temperature, and the standard deviation of the horizontal wind direction (sigma theta). All wind data were collected at the 10-meter tower level while the temperature data were collected at the 2-meter level.

There are no other sources of hourly meteorological data, useable for dispersion modeling purposes, that are more representative of the Low Corridor rail line than the PFSF site data. The Utah Mesonet operates a number of meteorological stations in Tooele County with the station closest to the Low Corridor rail line and siding being located in Muskrat Springs, approximately 18 miles southeast. Although hourly wind speed, wind direction and temperature data are collected at this site, no parameter for the determination of atmospheric stability class, such as sigma theta, is available.

ACTION

No update to the ER is required. Information on wind speed, wind direction, and air temperature is currently summarized in Table 6.1-2

ENVIRONMENTAL IMPACT STATEMENT

4. ENVIRONMENTAL CONSEQUENCES

4-8 Provide, for each air emission source, UTM coordinates, elevation above mean sea level (or relative benchmark), estimates of stack height and inside diameter at the stack top, and stack gas exit temperatures and exit velocities.

RESPONSE

The available stack parameter data for the significant point sources located within 60 kilometers of the PFSF site, as supplied by the DEQ for the year 1998, are provided in an Excel spreadsheet labeled "STACK.XLS" on the attached diskette. The parameters included in the spreadsheet consist of UTM coordinates, stack height, stack inner diameter, stack exit temperature, and stack flow rate (ft^3/sec). Stack elevations above mean sea level were not provided in the DEQ database but have been added to the DEQ spreadsheet using U.S.G.S. topographic maps as available. It should be noted that the DEQ database does not contain stack parameters for every source listed in Table 2.4-11 (EIS RAI No. 2, Question 4-6), and this data is therefore not available.

ACTION

The ER will be updated to include the above information.