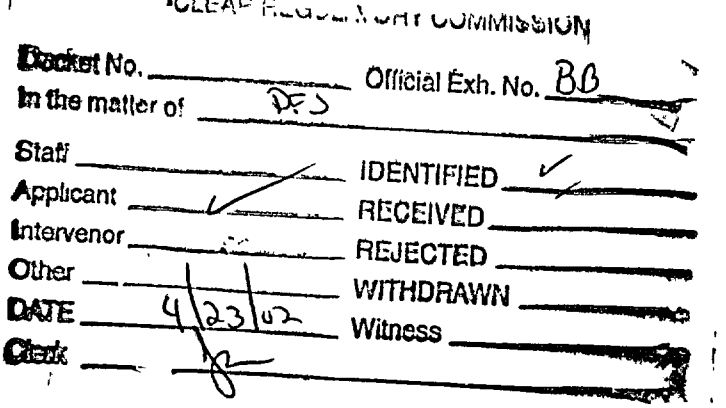
RAS 5204 72-22-ISFSI - Applicant Exhibit BB - Rec'd 4/23/02

PFS Exhibit BB

Excerpts from PFS Environmental Report



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SECY-02

3.2.1.5 Low Corridor Rail Line

A new rail line, the preferred transportation method, will be constructed by the PFSLLC to connect the PFSF directly to the Union Pacific mainline railroad at Low. The rail line will be approximately 32 miles long and will originate from the mainline on the south side of Interstate highway 80 at Low (Figure 3.2-2). From the mainline at Low, the rail line will proceed southeast parallel to Interstate highway 80 for approximately 3 miles, then turn south along the western side of Skull Valley for approximately 26 miles, and then turn east for approximately 3 miles to the PFSF. The rail line will consist of a single track installed on undeveloped public rangeland administered by the BLM.

Construction activities will begin at Low Junction where excavation will be required to connect the new line to the existing mainline railroad and to provide the required sidings. The existing grades are elevated where the railroad and interstate highway cross the north end of the Cedar Mountains. The mainline is depressed beneath the two Interstate highway 80 overpasses at Low Junction. The excavated soils will be stockpiled for use as fill for rail line construction in Skull Valley.

Construction of the rail line beyond the Low Junction will be on the relatively flat terrain of Skull Valley. Approximately 65 dry arroyos cross the transportation corridor. Sufficient culverts will be provided in the design to facilitate drainage from these arroyos and to allow passage of the 100-year flood. Construction will begin with clearing and grubbing activities as necessary to accommodate a 40 ft wide rail bed. The upper 6-in. of soil (topsoil) will then be excavated for a width of approximately 10-ft. (5-ft. on both sides of rail line centerline) and stockpiled for later use. The roadbed will be proof-rolled and backfilled with 1-ft. of compacted fill material (excavated or imported). A minimum of eight inches of sub-ballast will be placed on the prepared surface. The ties and rail will be laid on top of the sub-ballast and a rail construction machine will travel along the previously laid track and install the remaining crushed gravel or rock ballast (approximately 8 inches) beneath

and around the wooden ties. The construction machine will also attach the rails to the ties using spikes and tie plates. The rail will be spliced with bolts for ease of assembly.

Construction of the new rail line will take place during Phase 1 to support testing and startup of the PFSF.

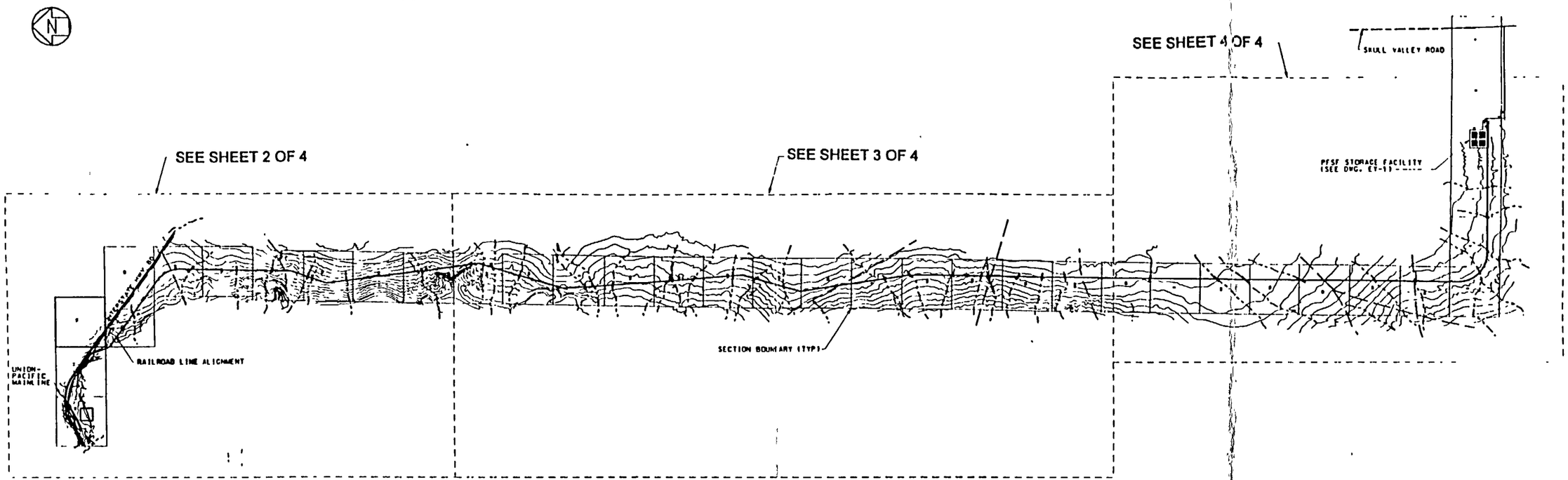
3.3.1 Direct Rail Delivery of Shipping Casks to the PFSF

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.

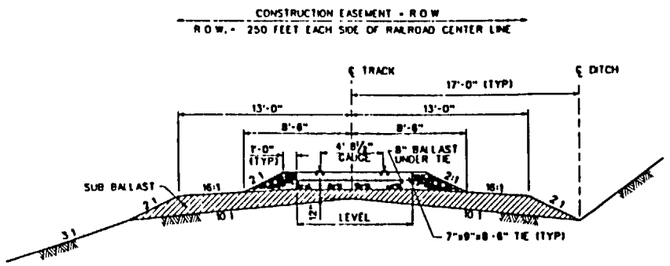
Regardless of the mode of transportation, the ultimate capacity of the PFS storage facility is based on 4000 casks received over 20 years. This translates to an average receipt rate of 200 loaded casks per year (4 casks per week). For the preferred mode of transportation, direct rail, PFS intends to 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



KEY PLAN



LOW RAILROAD LINE
TYPICAL SECTION

NOT TO SCALE

LEGEND:

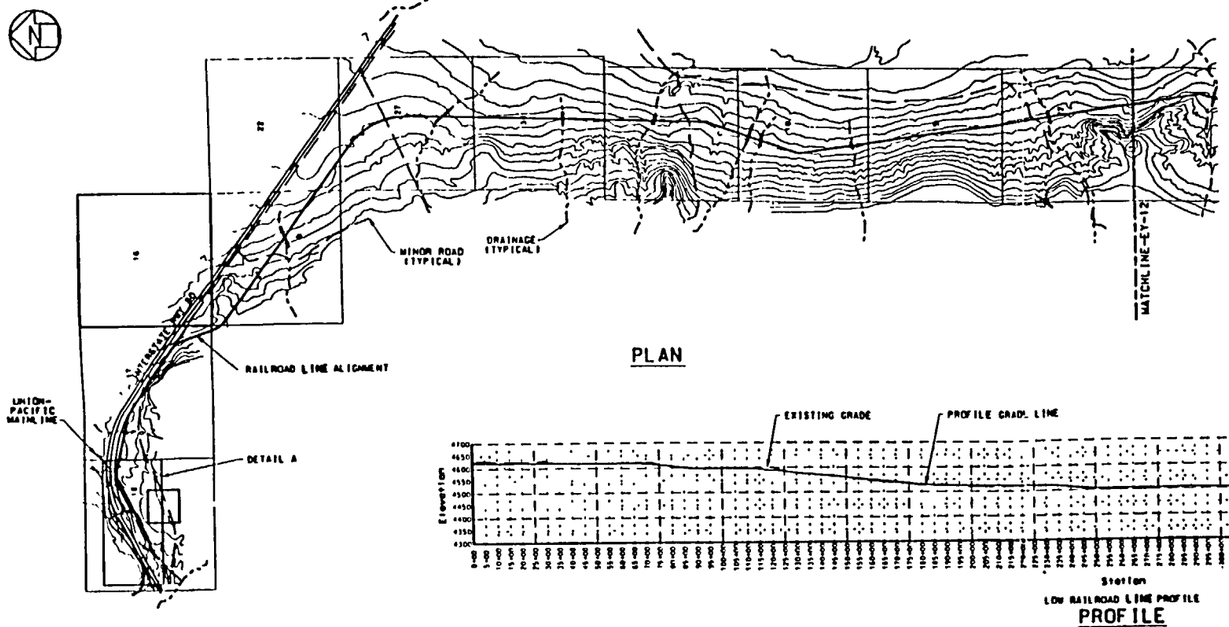
- DRAINAGE PATH
- EXISTING CONTOUR
- EXISTING DIRT ROAD

Figure 3.2-2

LOW CORRIDOR RAIL LINE
Sheet 1 of 4

PRIVATE FUEL STORAGE FACILITY
ENVIRONMENTAL REPORT

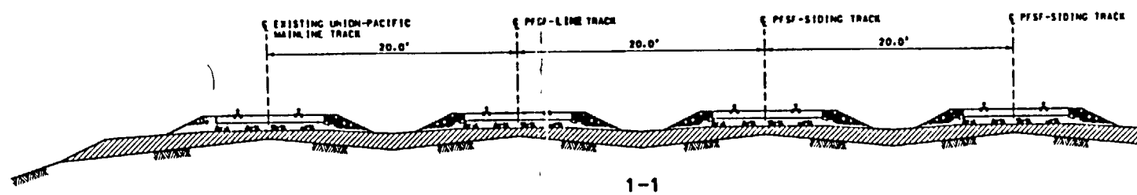
Revision 2



PLAN

LOW RAILROAD LINE PROFILE

PROFILE



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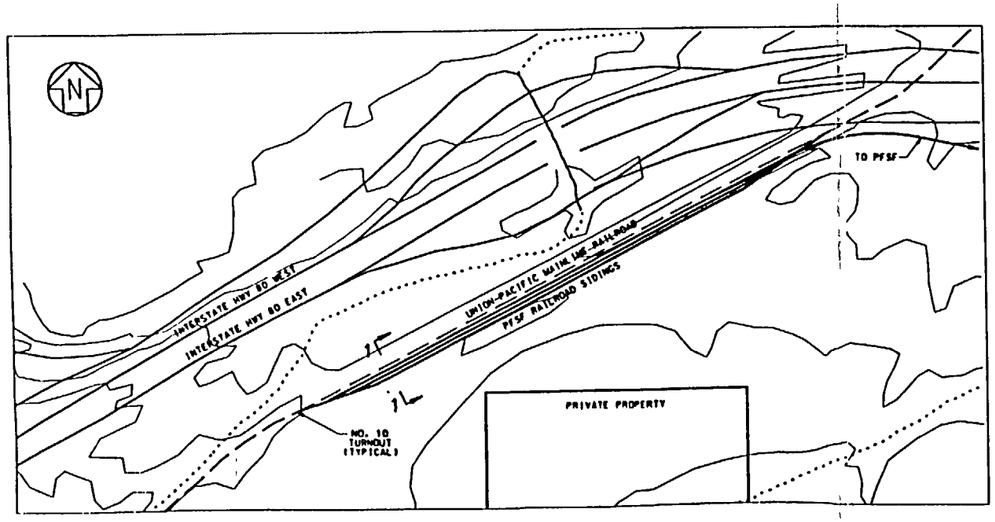
N.T.S.



DETAIL A
SCALE: 1" = 500'

LEGEND:

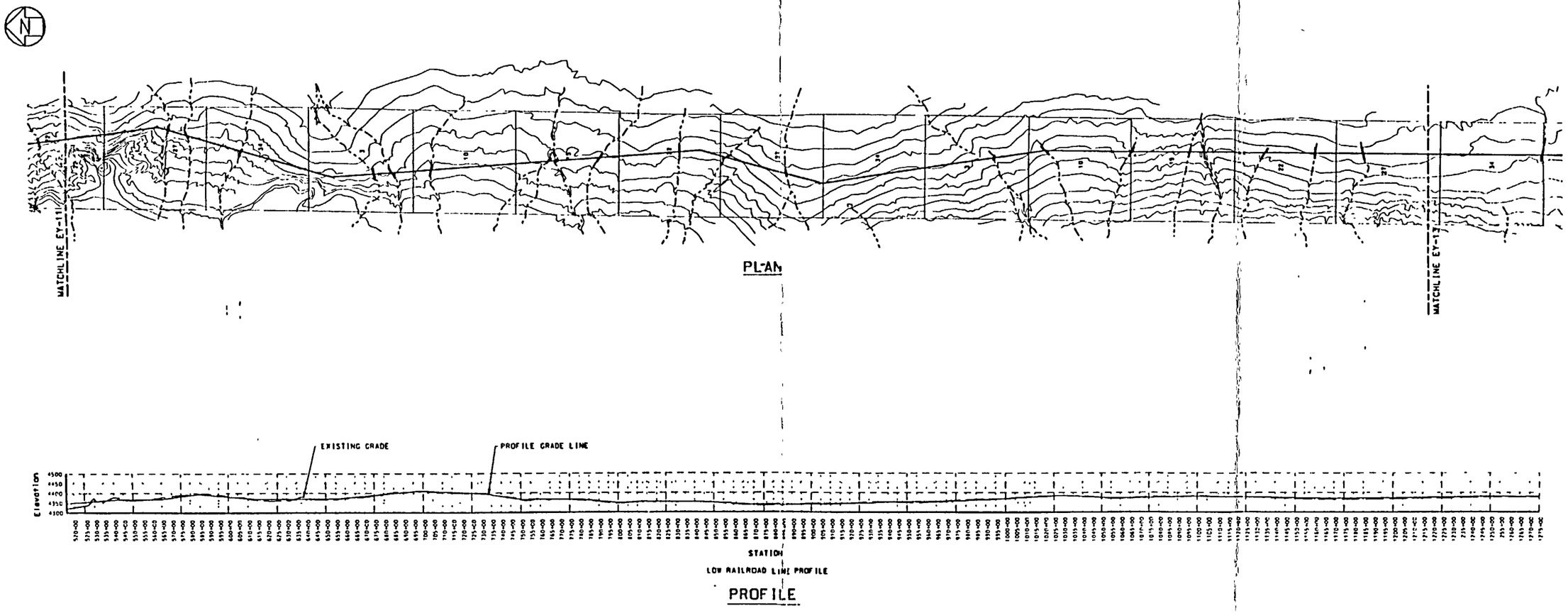
- DRAINAGE PATH
- EXISTING CONTOUR
- EXISTING DIRT ROAD
- EXISTING GRADE (PROFILE ONLY)
- PROPOSED VERTICAL ALIGNMENT (PROFILE GRADE LINE)

Figure 3.2-2

LOW CORRIDOR RAIL LINE
Sheet 2 of 4

PRIVATE FUEL STORAGE FACILITY
ENVIRONMENTAL REPORT

Revision 2



PLAN

PROFILE

Figure 3.2-2

LOW CORRIDOR RAIL LINE
Sheet 3 of 4

PRIVATE FUEL STORAGE FACILITY
ENVIRONMENTAL REPORT

Revision 2

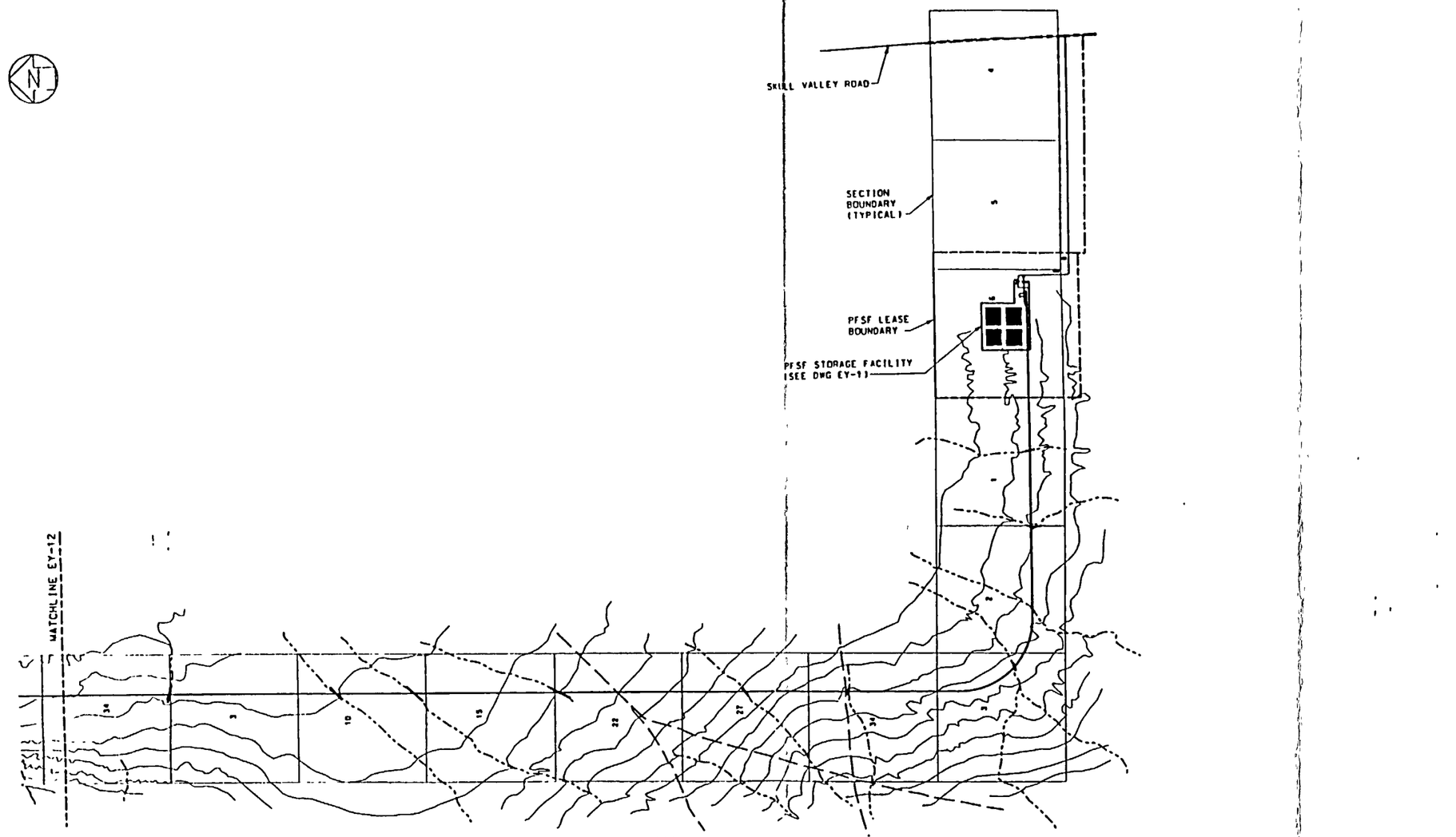


Figure 3.2-2

LOW CORRIDOR RAIL LINE
Sheet 4 of 4

PRIVATE FUEL STORAGE FACILITY
ENVIRONMENTAL REPORT

Revision 2

4.4 EFFECTS OF CONSTRUCTION AND OPERATION OF THE RAILROAD SPUR ALTERNATIVE

A new railroad spur may be constructed by the Private Fuel Storage L.L.C. (PFSLLC) to connect the PFSF directly to the Union Pacific railroad mainline. Skull Valley Road improvements (road widening) will not be required if this alternative were implemented. The rail spur will be approximately 24 miles long, beginning at the railroad mainline and continuing south to the PFSF site. The railroad will consist of a single track installed parallel to the existing Skull Valley Road.

The railroad feasibility study will determine on which side of Skull Valley Road the track will be located. A preliminary estimate of the railroad cross-section shows the overall railroad width (toe to toe of ballast) to be approximately 16 feet. The toe of the ballast will be located 6 feet (minimum) from the edge of the existing road pavement and 6 feet (minimum) from the right-of-way on the other side to accommodate a new replacement drainage ditch. Thus, the minimum required width for the railroad will be 28 feet and will be located adjacent to the edge of the existing road pavement. This alternative will require the permanent alteration of approximately 81.5 acres of land adjacent to the roadway.

4.4.1 Effects on Geography, Land Use, and Demography

Construction of a new railroad spur will require the alteration of approximately 81.5 acres of land adjacent to the existing Skull Valley Road. This estimate assumes that conventional construction practices will occur within the existing Skull Valley road right-of-way and that no additional land acquisition will be required. This alternative will result in the permanent alteration of approximately 52.5 acres more than the road expansion. However, because of the sparse population in Skull Valley, it is anticipated that only minor realignment of range fencing, driveways, and other roadside utilities that

are present within the existing Skull Valley Road right-of-way will be required. No relocation of residential, commercial, or industrial structures is anticipated under this alternative.

Operation of a rail spur for cask transport to the PFSF could result in locomotives and casks passing closer to two residences located adjacent to the Skull Valley Road right-of-way than equipment used by the heavy-haul transport method. Additional survey work is required prior to final design and alignment of the railroad spur and to develop any necessary mitigation measures for these two residences.

4.4.2 Effects on Ecological Resources

The railroad spur alternative will require alteration of land adjacent to the existing Skull Valley Road. Construction of a new railroad spur will require the permanent alteration of approximately 81.5 acres of land. This estimate assumes that normal construction practices will occur within the existing road right-of-way and that no additional land acquisition will be required. This alternative will result in the permanent alteration of approximately 52.5 acres more than the road expansion. The intermodal transfer point will not be built with the railroad alternative. The small amount of vegetation lost is minor compared to the overall availability of similar communities and habitat types in Skull Valley. Environmentally sensitive areas (e.g., raptor nests, WMA's, ACEC's) and species discussed in Section 4.3.2 will require the development of similar construction mitigation techniques described in that section of this Environmental Report.

Mitigation measures, developed in consultation with BLM, will ensure that the Horseshoe Springs area is not adversely impacted by railroad construction. Construction plans will consider access to the Horseshoe Springs and will include measures to ensure that any resident BLM-sensitive species or UDWR "high interest" species will not be adversely affected by construction activities.

4.4.3 Effects on Air Quality

The construction and operational impacts of the railroad spur alternative will be similar to those described for heavy haul transport, given that the railroad spur will also parallel Skull Valley Road. The construction activities associated with the railroad spur will essentially be the same as heavy haul transport relative to the types and quantities of pollutant emissions and in regard to mitigation techniques. Operational impacts will also consist of localized increases in concentrations of the same pollutants emitted by the heavy haul trucks. Individual diesel locomotive pollutant emissions will be higher than from individual trucks but this alternative will involve fewer train trips than truck trips, with each train hauling several casks compared to one cask per truck trip. In any event, air quality impacts from the railroad spur alternative will also be very localized and transient in nature, affecting few residences and having no effect on air quality attainment goals.

4.4.4 Effects on Hydrological Resources

As discussed in Section 4.3.4, hydrological resources along the Skull Valley Road right-of-way consist of intermittent drainages conveyed from east to west by culverts beneath the road and several series of springs west of the road. As the railroad spur requires a slightly wider right-of-way than the heavy haul road, the locations of the springs need to be evaluated in order to preclude any incursion to those areas.

Based on examination of aerial photographs, it appears that the springs at Salt Mountain may be within 150 ft of the existing Skull Valley Road and Burnt Spring may be within 250 ft. Preliminary plans for the railroad spur indicate that a minimum of an additional 28 ft of land will be required from the edge of the existing Skull Valley Road to accommodate the railroad.

Because there are no existing surface water bodies and ground water is over 100 ft below the surface, it is unlikely that the railroad spur will have any impact on hydrological resources.

4.4.5 Effects on Mineral Resources

No mineral resources have been identified along the Skull Valley Road corridor. Therefore, no impact to this resource is expected from the construction of a railroad spur along the existing road corridor.

4.4.6 Effects on Socioeconomics

No adverse impacts on socioeconomic resources are anticipated under this alternative. Minor short-term employment will result from construction activities associated with the railroad spur alternative. 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. Due to the lack of resources in Skull Valley, no increase of industrial development is foreseen as a result of the railroad installation.

4.4.7 Effects of Noise and Traffic

Installation of a new railroad spur parallel to Skull Valley Road will not affect existing traffic patterns or levels of service because construction activities will occur outside of the flow of traffic. Where required, at-grade rail crossings will be installed to allow continued entrance and egress from intersecting roadways and private drives. Railway construction will occur near the two residential receptors located close to the edge of Skull Valley Road. However, because construction will take place during daytime hours, there will be no impact on ambient nighttime sound levels.

Cask transport by rail will have no impact on traffic volumes an Skull Valley Road. Cask transport by rail could have adverse impacts on sensitive residential receptors along Skull Valley Road. However, these impacts would be localized and transient in nature, minimizing the effects on residents of Skull Valley.

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

The SHPO indicates that only 5 percent of the land in the area of potential effect from the 24-mile track spur has been subject to cultural resource surveys and suggests that additional survey may yield new information about prehistoric inhabitants of the Skull Valley (letter from J. L. Dykmann, Compliance Archaeologist, Utah State Historical Society, to N.T. Georges, SWEC, April 30, 1997). The SHPO notes nine canyons, knolls, or places that have high potential for the location of other historic properties. These locations include the historic village of Iosepa, Antelope, Indian Hickman, and Muskrat Canyons, Salt Mountain, Ranch Knoll, Horseshoe Spring, Lone Rock, and springs in section 34. These places are located from 500 ft to several miles from the PFSF site and transportation corridor. The rail spur construction area is situated at a considerable distance from the areas with high potential for containing archeological sites.

A Class III cultural resource survey will be performed in the area potentially affected by the railroad spur alternative. In Utah, a Class III survey includes a literature search of prior surveys, a walkover of the project area, and sufficient subsurface testing to determine whether any potentially significant sites meet the criteria for listing in the National Register of Historic Places. The survey will be conducted in consultation with the SHPO in a manner consistent with SHPO and BLM guidelines and regulations. The survey will be conducted by an archaeological firm holding an active joint archeologcai survey permit issued by these two agencies.

A new railroad spur along Skull Valley Road will introduce new visual elements to the Skull Valley landscape. Railroad tracks are familiar linear features located adjacent to roadways and will not cause a significant negative impact to the scenic environment. Depending on which side of Skull Valley Road the rail is constructed, access will have to be maintained to the Horseshoe Springs WMA during construction.

4.4 EFFECTS OF CONSTRUCTION AND OPERATION OF THE LOW CORRIDOR RAIL LINE

A new rail line will be constructed to connect the PFSF directly to the Union Pacific mainline railroad at Low. The single track rail line will be approximately 32 miles long and will originate from the mainline on the south side of Interstate 80 at Low. From the mainline at Low, the rail line will proceed southeast parallel to Interstate 80 for approximately 3 miles, then turn south along the western side of Skull Valley for approximately 26 miles, and then turn east for approximately 3 miles to the PFSF. Associated sidings will be located either at the PFSF or near Low Junction.

A 200 foot wide right-of-way for construction of the Low Corridor would temporarily remove or disturb about 776 acres of greasewood and desert shrub salt/brush habitat. A 40 foot wide rail line width is necessary to operate the rail line to the PFSF site; therefore approximately 155 acres would be permanently altered, and about 621 acres would be actively revegetated with appropriate naturally occurring species and restored to previous conditions following construction.

4.4.1 Effects on Geography, Land Use, and Demography

Construction of a new rail line will require the alteration of approximately 776 acres of land along the rail line. This estimate assumes that conventional construction practices will occur and that no additional land acquisition will be required. The rail line will result in the permanent alteration of approximately 155 acres.

The railroad turnout would be located on public land administered by the BLM, with right-of-way granted for the railroad. The full length of the rail line would require the granting of Right-of-Way from the BLM.

The Low Corridor rail line would cross the Eightmile and Black Knoll Pastures which are part of the Skull Valley grazing allotment. Construction activities related to the Low Corridor will temporarily disturb resident livestock and cause them to avoid the construction area. Impacts from the removal of habitat (776 acres temporarily and 155 acres permanently) is minimal when compared to the 271,00 acres of rangeland in Skull Valley. Operation of the rail line is not expected to adversely affect the use of the area for livestock grazing. Livestock will be able to freely cross the rail line tracks accessing rangeland on either side. Due to the infrequent number of trips (1-2 round trips/week) and the slow train speed (20 mph), collisions with livestock are not anticipated. Further consultation with BLM will be conducted to determine if any additional measures are required to insure livestock access and safety.

Recreational use for the land on either side of the rail line will be maintained by providing crossings where the rail line intersects off-highway vehicle trails or dirt roads.

There are no known wetlands or other environmentally sensitive areas along the entire 32-mile rail line. Horseshoe Springs and other local Skull Valley wetlands are well outside of the Low Corridor. The rail line will cross approximately 65 small and large dry arroyos. Small, medium, and large culverts; as well as short bridge crossings, will be constructed over these arroyos. Sufficient culverts will be provided in the design to facilitate drainage from these arroyos and to allow passage of the 100-year flood.

There are no demographic impacts along the entire rail corridor since the route does not encounter any private ranches or other members of the public. State inholdings along the route and a small piece of private land near Low Junction will be avoided. Therefore, relocation of residential structures, or realignment of fencing, driveways, and roadside utilities will not be required. In addition, all construction activity is south of Interstate 80 which eliminates any conflicts associated with the highway, such as overpass/underpass construction.

4.4.2 Effects on Ecological Resources

The Low Corridor rail line will require alteration of 155 acres of public land administered by the BLM for the life of the PFSF. Generally, the ecological resources in the vicinity of the Low transportation corridor are similar to those found in the Skull Valley transportation corridor and at the PFSF site. No federal or state-listed threatened or endangered plant species are known to occur within the Low Corridor transportation area (letters from USFWS, Utah Field Office, dated February 10, 1997, February 27, 1997, and July 31, 1998 and UDWR, 1997).

Ecological resources potentially affected by construction of the Low Corridor rail line include both terrestrial vegetation and wildlife. Within the 200-foot right-of-way, construction activities would temporarily remove 776 acres of greasewood and desert shrub/saltbrush habitat. The 40-foot wide permanent rail line width required for operation will result in the permanent loss of approximately 155 acres while approximately 621 acres would be actively revegetated and restored to previous conditions after construction. This small amount of vegetation is minor compared to the over 1 million acres of desert shrub/saltbrush within Tooele County. There are also no unique vegetation habitat features in areas proposed for vegetation removal. A detailed revegetation plan will be developed in consultation with the BLM for the rail line. The plan will be developed during construction and will incorporate the latest requirements/recommendations for soil preparation, type of seed mix, time of year to plant, watering frequency, etc. The revegetation plan will follow guidelines currently used by the BLM such as the Interagency Forage and Conservation, Planting Guide for Utah, EC 433, or later documents in effect at the time the plan is developed.

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.

4.4.3 Effects on Air Quality

Although the construction of the Low Corridor rail line will require a significant amount of alteration of public land administered by the BLM, the overall impacts on air quality from construction and operation will be minor and limited to the general vicinity of the corridor. Any impacts will mainly be associated with emissions of fugitive dust from construction activities and from locomotive emissions during cask transport operations. No long-term impacts on the local meteorology/climatology will result from these activities.

Emissions of particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns (PM-10) are estimated for activities related to the construction of the Low Corridor Railroad Line including: clearing/grubbing; vehicular traffic on unpaved roads; wind erosion from temporary topsoil piles; material handling; bulldozing; compacting; scraping and grading. Emissions of total particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) are also estimated from construction vehicle operation and locomotive use for the installation of ballast, ties, and rail. Calculations of concentrations of these pollutants in ambient air are not meaningful as there are no sensitive receptors in the vicinity of the rail corridor that can be impacted by these emissions.

Estimates of air pollutant emissions due to construction activities are determined on the basis of estimated material handling (e.g., cubic yards of topsoil and cut moved) and reasonable assumptions regarding construction equipment mileage and hours of operation during the construction period. PM-10 emissions estimates are provided for fugitive dust caused by clearing/grubbing; vehicular traffic on unpaved roads; wind erosion from temporary topsoil piles; material handling; bulldozing; compacting; scraping and grading. Applicable gaseous criteria pollutant emissions from equipment use (i.e., NO_x, CO,, PM, and VOC) are also provided. Most of the construction activities are assumed to be occurring simultaneously during any given construction month for purposes of ensuring conservatism in these emissions estimates.

The emission factors used in the estimates for construction activities are taken from the 5th edition of EPA's AP-42 document (EPA, 1998) assuming reasonable levels of emissions control as needed to satisfy DEQ requirements.

On-road dump truck exhaust emissions are based on emission factors taken from the pending 5th edition of EPA's AP-42 document (EPA, 1998a). These factors apply to heavy duty diesel powered vehicles (HDDV) operated at high altitudes (~5,550 ft MSL) for model year 1996 or later at the federal test method speed of 19.6 mph. Non-road

construction equipment exhaust emission factors are taken from EPA's Nonroad Emissions Model (EPA, 1998b). The locomotive emission factors used are conservatively based on 1997 estimates provided by the Internet Web site DieselNet (http://www.dieselnet.com). The construction equipment exhaust emission factors (E) used in this calculation are as follows:

On-Road Dump Truck and Watering Truck Exhaust (grams/mile @ 19.6 mph):

$E(NO_x)$ = 6.5

E(CO) = 17.2

E(VOC) = 4.7

E(PM) = N/A

Non-Road Construction Equipment Exhaust (grams/bhp-hr):

Graders:
$E(NO_x)$ = 9.5
E(CO) = 2.4
E(VOC) = 1.0
E(PM) = 0.76

Scrapers:
$E(NO_x)$ = 8.6
E(CO) = 3.9
E(VOC) = 0.47
E(PM) = 0.96

Bulldozers:
$E(NO_x)$ = 10.4
E(CO) = 1.8
E(VOC) = 0.56
E(PM) = 0.50

Roller:
$E(NO_x)$ = 9.2
E(CO) = 3.9
E(VOC) = 0.74
E(PM) = 0.94

Locomotive Operation (grams/bhp-hr):

$E(NO_x)$ = 13.5
E(CO) = 1.5
E(VOC) = 0.5
E(PM) = 0.34

The estimated air pollutant emissions associated with the construction of the Low Corridor Rail Line are summarized in Table 4.4-1.

Similarly, the effects on air quality of the Low Corridor rail line cask transport between Low and the PFSF were assessed relative to annual air pollutant emissions since there are no residences to be impacted along the entire corridor. This assessment considers the total locomotive mileage, vehicle speed, and appropriate locomotive air pollutant emission factors. Generally, there will be 1-2 locomotive round trips per week; with each trip transporting full casks to PFSF, and returning back to Low Junction with empty casks. It is also possible that additional trips would be required to deliver empty casks to the mainline rail siding for pickup by the mainline train. The additional 2 round trips results in a bounding case of a maximum of 4 round trips per week, yielding 13,312 vehicle miles of rail travel per year. The largest train is expected to consist of 2 1500-horsepower locomotives with 6 cars containing casks, 2 empty cars, and a security car. The maximum train speed is expected to be 20 miles per hour.

The annual air pollutant emissions potential are estimated on the basis of annual vehicle miles traveled and emissions of current model diesel locomotive engines. The latter were based on current estimates (1997) from the Internet web site DieselNet. EPA standards were not applicable since they only apply to remanufactured engines, which may not be the case for the Low Corridor rail system. The criteria air pollutants for which emissions are provided include HC, CO, NO_x, and PM, expressed as grams per brake horsepower per hour and are summarized below for line haul locomotives:

Pollutant	Emission Rate, g/bhp-hr
HC	0.5
CO	1.5

NO_x	13.5
PM	0.34

At an average speed of 20 mph, the annual hours of locomotive operation, for 13,312 miles traveled, is 665.6 hours. Therefore, assuming 3,000 bhp locomotive for the two locomotives, the annual air pollutant emissions potential in tons/year is:

Pollutant	Emissions, tons/yr
HC	1.1
CO	3.3
NO_x	29.7
PM	0.7

It can be concluded that the emissions from the rail transport operations are trivial, when compared to existing (1994) Tooele County emissions that are 3-4 orders of magnitude higher.

4.4.4 Effects on Hydrological Resources

Because there are no existing surface water bodies and ground water is over 100 ft below the surface, it is unlikely that the rail line will have any impact on hydrological resources.

4.4.5 Effects on Mineral Resources

No mineral resources have been identified along the rail line corridor. Therefore, no impact to this resource is expected from the construction of a rail line. Refer to Section 4.1.5 for additional discussion on Skull Valley mineral resources, claims and leases.

4.4.5.1 Imported Materials Required for Construction

The type and quantity of required imported materials necessary for construction of the rail line are provided in Table 4.1-6. 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. Refer to Section 4.1.5.1 for additional information on aggregate sources located in and near Skull Valley in Tooele County, Utah.

4.4.5.2 Excess Materials Resulting from Construction Activities

The rail line will generate excess material from stripping operations, approx. 125,000 cubic yards (40' x 169,127' x 0.5'). This material will be used to stabilize side slopes. Assuming a length of slope of 11.2' (for a 5' high embankment) and a length of 169,127 feet and both a left and right embankment, the depth of "excess" soil works out to be less than one foot (10.5"). The rail line as currently designed will also generate approx. 131,000 cubic yards of excess common fill. As the design is refined during final design, this quantity will be reduced. Any remaining excess material will be used as embankment material. No material will be disposed of off site.

Consideration was given as to whether the excess material generated from stripping operations will be suitable for fill. While a geotechnical program along the Low Corridor has not yet been implemented (but will be prior to start of railroad construction), PFS is confident that the cut generated along the route is suitable for fill. As indicated in Section 2.5.5, the valley-fill deposits in Skull Valley consist of inter-stratified colluvium, alluvium, lacustrine, and fluvial deposits with minor basalt and ash, and some eolian material. In general, these deposits are coarser near the perimeter of the valley, grading into well-sorted sand and gravel, and they are interlayered with lacustrine silt and clay towards the center of the valley. The major cuts are located near the northern end of the proposed route, where it skirts the northeastern flank of the Cedar

Mountains. It is anticipated that the deposits in this area will be colluvial and alluvial deposits, which are expected to be coarser sands and gravels near the base of the mountains. Such soils will be suitable for use as fill wherever needed. Even finer grained soils, such as the silts and clays that are expected to be encountered along portions of the route, can be used to construct the interior portions of the embankments that are required. Techniques may be required to compact these and protect them from erosion should it be economical to use them as fills, rather than spoiling them and importing better quality fills.

4.4.6 Effects on Socioeconomics

No adverse impacts on socioeconomic resources are anticipated as a result of the new 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.

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Number of Workers for Activities at the Low Corridor Rail Line

Construction

The estimate of 130 workers from Section 4.1.1 applies to construction of the storage facility and not the Low Corridor Rail siding or rail line. The rail siding consists of three siding tracks just off the UP mainline approximately 2400 ft long. The rail line consists of 32 miles of railroad track. Both the rail siding and rail line will be constructed as one project utilizing the same construction crews. Construction activities will be conducted primarily during daylight hours and will be completed in approximately one-year.

During construction of the rail line, an estimated peak work force of 125 workers will be required for various tasks. The bulk of the manpower will be for the earthwork. This work will involve clearing, cutting and filling, installing culverts, contouring the ground for the required profile, finish grading, and seeding. The equipment will include bulldozers, scrapers, dump trucks, front-end loaders, compactors, graders, and water trucks. This portion of the work is estimated to take approximately 109 workers including equipment operators, laborers, electricians, iron workers, concrete finishers, and construction supervision staff.

The remainder of the work involves laying the sub ballast, ballast, ties, track, and spikes. A track-laying machine with dedicated work locomotives will be utilized. Approximately 16 workers will be required to support the track-laying machine.

Operation

The number of workers stated in ER Section 4.2.6 for operation of the storage facility (42 workers) does include the workers required for operation of the rail line. As noted in Section 4.4.7, there will generally be 1-2 locomotive round trips per week. Typically, 2 personnel will be required to operate the locomotives and perform the necessary coupling and uncoupling operations at the siding. The delivery of a train to the PFSF

from the siding area could occur at any time of the day although daytime hours are preferred in order to minimize shift schedule impacts.

4.4.7 Effects of Noise and Traffic

The distances between the proposed rail line and the residences along Skull Valley Road are on the order of 5 to 10 miles. The construction noise is not expected to be audible along Skull Valley Road.

Sound level predictions were made for the locomotive and rail cars delivering the casks to the site. The train noise predictions were based upon methodologies outlined in C.M. Harris's Handbook of Noise Control. The propagation calculations were made using atmospheric absorption at standard conditions. No credit was taken for ground absorption or wind and thermal gradients. The levels predicted are maximum levels which could occur with the receptor down wind. During calm clear days or receptor upwind conditions, the levels would be at least 20 dBA less than indicated.

There are some ranches and residences along Skull Valley Road between I-80 and the PFSF site. The proposed rail line parallels Skull Valley Road from the site northward to Low Junction. The distance between the rail alignment and Skull Valley Road in this region is approximately 5 miles. The maximum locomotive and rail car noise would be 31 dBA at Skull Valley Road, which may occasionally be just audible if the ambient sound level drops into the 20s dBA. Where the alignment turns east to the site, the levels may occasional reach 45 dBA and be audible.

North of 8 Mile Spring Road, Skull Valley Road veers north-northeast and the distance from the rail line increases to 7 miles at Horseshoe Springs, and to 10 miles where Skull Valley road intersects I-80. The predicted maximum rail noise to receptors along Skull Valley Road (near Eight Mile Spring Road) is 26 dBA, and 19 dBA at the

intersection of I-80 and Skull Valley Road. The train is not expected to be generally audible in this area.

Traffic on east-west roads is not expected to be affected or public safety threatened. The proposed new rail line will cross several roads. Most of the roads are little more than dirt jeep trails that are subject to little, if any, use. Eight Mile Spring Road, however, is graded. It appears that ranchers use the road to access the interior of Skull Valley, and that hunters and other recreationists travel the road on an infrequent basis to gain access to the southern end of the Cedar Mountains. Because of the unimproved nature of the roads, traffic usually proceeds at a reduced speed. The new rail line will be used only once or twice a week, with the trains traveling at approximately 20 miles per hour. Because the area is flat, unoccupied and unwooded, users of both the roads and rail line will have a virtually unlimited field of vision. Based on these factors, it is unlikely that the rail line will have any impact on traffic or vehicular safety.

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

The Class I cultural resource inventory for the Low Corridor rail line conducted in May 1998 included a study area of a mile wide corridor centered over the proposed rail line. The Class I Survey concluded that there is only a low probability of encountering archeological or historical sites in the proposed rail line corridor or ITP area.

A Class III Cultural Resource Inventory has been completed for the Low Transportation Corridor (P-III Associates, Inc., 1999a). In Utah, a Class III survey includes a literature search of prior surveys, a walkover of the project area, and sufficient subsurface testing to determine whether any potentially significant sites meet the criteria for listing in the National Register of Historic Places. 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 a Treatment Plan to preserve the significant historical data of the Hastings Cutoff in Skull Valley has been prepared (P-III Associates, Inc., 1999b.)

The Low Corridor rail line will add a visual element to Skull Valley. However, due to the variations in the rolling topography and the low profile of the rail line (essentially at grade level), the rail line will not be obviously visible from most locations in the valley. The Low Corridor rail line will be an apparent change in the visual landscape only in the developed areas near I-80 and from high elevations in the Cedar Mountains. Although the rail line represents a change in the landscape, it will be consistent with the visual resource management classification (VRM Class IV) established by BLM for the Low Corridor and with other developments in the area, such as I-80, the mainline railroad along I-80, and the Skull Valley Road. Because of the low level of recreational use of the area and lack of nearby residences, the Low Corridor is not expected to be a significant impact to the scenic environment.

To reduce the potential for increased range fires that may be caused by rail transport, the 40 ft wide rail line corridor will be cleared of vegetation to provide a buffer zone in preventing fires. Also the elevation of the rail line will be constructed close to grade to allow emergency fire vehicles access over the rail bed.

Section 3.3.1 describes operations involving the preferred mode of "direct rail" transport of shipping casks to the PFSF, utilizing 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.

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. 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. 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. 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.

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. 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. 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) and the existing rail sidings at Timpie, Utah.

Appendix 4A presents artist's concepts of the PFS rail siding area at Low as viewed from the I-80 off-ramp, and of the Low Corridor rail line as viewed from a number of vantage points accessible to the viewing public, including I-80, the I-80 off-ramp, the I-80 frontage road west of Low, the old US 40, and from the Cedar Mountains near the middle of Skull Valley.

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