Lake Powell Pipeline Project
FERC Additional Information Request Schedule B – Item 13

Exhibit E
Geology and Soils

13. In section 5.1.5 of the Final Study Report 4, *Geology and Soil Resources*, you indicate that soil and rock materials unsuitable for pipeline and penstock trench backfill would be disposed of in previously excavated borrow pits. However, in exhibit E and Final Study Report 4, *Geology and Soil Resources*, you state that all excavated material unsuitable for bed or trench backfill would be spread along the ROW. Please revise your disposal plan and estimate the amount of spoil that would to be disposed of in borrow pits and along the ROW, so we can assess the potential effects for a range of rock hardness, include assumptions of 50 percent and 25 percent useable rock, as discussed in comment 11.

UBWR Response:

Tables 2-1, 2-2 and 2-3 show for each of the three LPP project alignment alternatives the spoil material thicknesses if all the spoil material generated during construction is wasted along the pipeline ROW for each of the three assumptions of the percentage of blasted rock that would be suitable for use as pipe bedding: 75 percent, 50 percent, and 25 percent, respectively. On the basis of these spoil thicknesses, it is unlikely that spoil would need to be disposed of in pits. However, for reference, Figures 2-1 and 2-2 show the locations of potential borrow and spoil pits along the LPP project Water Conveyance and Hydro Systems, respectively.

Table 2-1
Thickness of Spoil Material Wasted on Pipeline ROW
(Assuming 75% of blasted rock is suitable for use as pipe bedding)

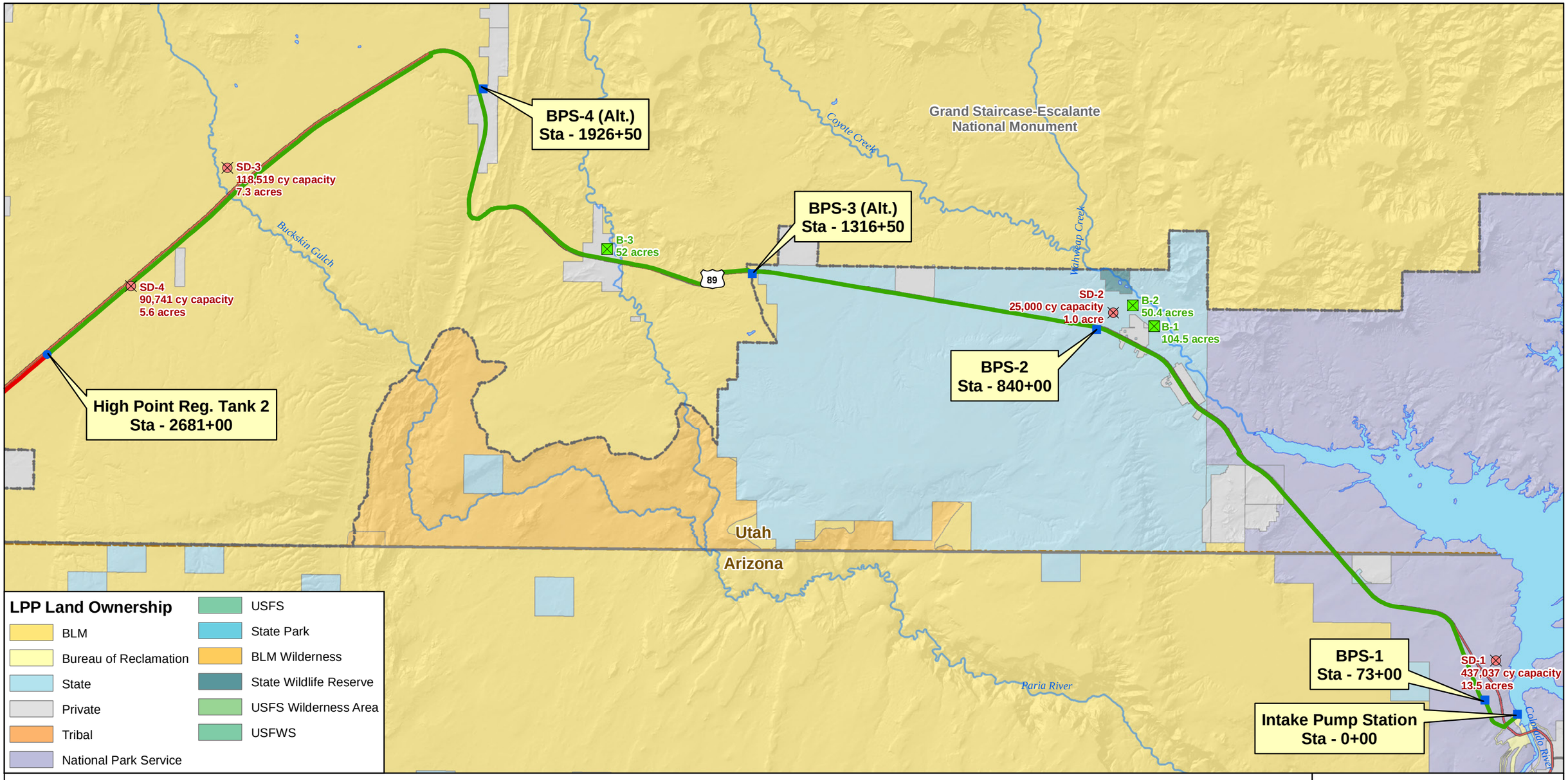
Alignment	Material Thickness (inches)
Proposed Action	5.0
Existing Highway Alternative	7.2
Southeast Corner Alternative	4.9

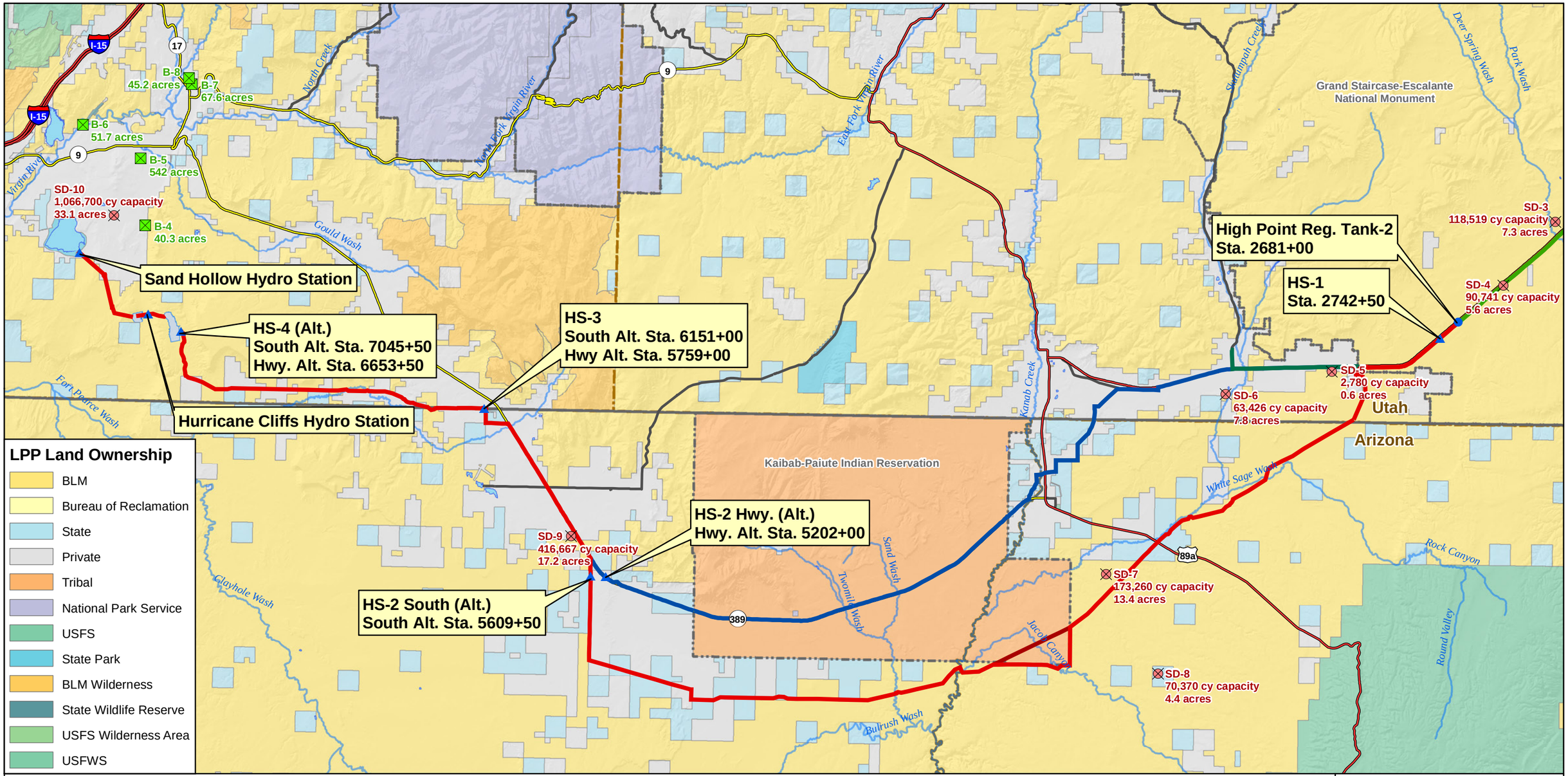
Table 2-2
Thickness of Spoil Material Wasted on Pipeline ROW
(Assuming 50% of blasted rock is suitable for use as pipe bedding)

Alignment	Material Thickness (inches)
Proposed Action	6.7
Existing Highway Alternative	8.2
Southeast Corner Alternative	6.7

Table 2-3
Thickness of Spoil Material Wasted on Pipeline ROW
(Assuming 25% of blasted rock is suitable for use as pipe bedding)

Alignment	Material Thickness (inches)
Proposed Action	8.5
Existing Highway Alternative	9.2
Southeast Corner Alternative	8.5


BPS-4 (Alt.)
Sta - 1926+50
SD-3
118,519 cy capacity
7.3 acres
Buckskin Gulch
SD-4
90,741 cy capacity
5.6 acres
High Point Reg. Tank 2
Sta - 2681+00
B-3
52 acres
89
BPS-3 (Alt.)
Sta - 1316+50
Coyote Creek
Grand Staircase-Escalante
National Monument
Wahweap Creek
SD-2
25,000 cy capacity
1.0 acre
B-2
50.4 acres
B-1
104.5 acres
BPS-2
Sta - 840+00
Utah
Arizona
Paria River
BPS-1
Sta - 73+00
SD-1
437,037 cy capacity
13.5 acres
Intake Pump Station
Sta - 0+00
Colorado River
LPP Land Ownership
BLM
Bureau of Reclamation
State
Private
Tribal
National Park Service
USFS
State Park
BLM Wilderness
State Wildlife Reserve
USFS Wilderness Area
USFWS
SD-# Spoil Disposal Site
B-# Borrow Source
Project Pump Station
Project Regulating Tank
Project Hydro Station
Water Conveyance System
Hydro System - Proposed Action
KCWCD System
Hydro System, Existing Highway Alternative
Hydro System, Southeast Corner Alternative
Interstate
US Highway
ST Highway
Hwy
Major Road
Lakes & Reservoirs
Major Rivers & Streams
National Park/Monument
GSENM-Boundary
State Boundaries
FERC Project Number:
12966-001
BLM Serial Numbers:
AZA-34941
UTU-85472
N
0 0.5 1 2 3 4
Miles
Lake Powell Pipeline Project
Spatial Reference: UTM Zone 12N, NAD-83
UDWRe
Figure 2-1
MWH
Lake Powell Pipeline
Borrow and Spoil Locations
Water Conveyance System



LPP Land Ownership

- BLM
- Bureau of Reclamation
- State
- Private
- Tribal
- National Park Service
- USFS
- State Park
- BLM Wilderness
- State Wildlife Reserve
- USFS Wilderness Area
- USFWS

- SD-# Spoil Disposal Site
- B-# Borrow Source
- Project Pump Station
- Project Regulating Tank
- Project Hydro Station

- Water Conveyance System
- Hydro System - Proposed Action
- KCWCD System
- Hydro System, Existing Highway Alternative
- Hydro System, Southeast Corner Alternative

- Interstate
- US Highway
- ST Highway
- Hwy
- Major Road

- National Park/Monument
- GSENM Boundary
- Tribal Lands
- State Boundaries
- County Boundaries

- Hurricane Cliffs Forebay/Afterbay
- Lakes & Reservoirs
- Major Rivers & Streams

FERC Project Number:
12966-001
BLM Serial Numbers:
AZA-34941
UTU-85472

N

0 1.25 2.5 5 7.5 10 Miles

Lake Powell Pipeline Project

Spatial Reference: UTM Zone 12N, NAD-83

UDWRe **Figure 2-2** MWH

Lake Powell Pipeline
Borrow and Spoil Locations
Hydro System