Bonneville Power Administration Geodetic Control Data Sheet

Station: WM022 (222) Project: Wallula-Smiths Harbor-McNary Section: NE 1/4 35 Township: 7 North Range: 31 East Meridian: Willamette County: Walla Walla State: WA **USGS Quad:** Wallula, Washington Surveyor: M R Heidecke Date Surveyed: July, 2001

Instrument:

The horizontal coordinates and orthometric elevation were established by GPS observations using six Trimble 4000 SSI dual frequency receivers with Compact L1/L2 antennae with ground plane.

Adjustment:

The Basis of Coordinates for this survey is the Washington State Coordinate System, South Zone, NAD 83 (1998). The horizontal component of the least squares adjustment was constrained by holding NGS Stations B 340 (A), B 502 (B), PENDLETON (B), STANFIELD EAST BASE RESET (B), and BURDEN (B). The vertical component of the least squares adjustment was constrained by holding NGS Benchmarks B 340 (First Order Class II), B 502 (First Order Class II), BURDEN (Second Order Class II), V 203 (Second Order Class 0), G 640 (First Order Class I). The elevation for point 106, 201, 249, and 255 were determined by differential leveling from G 640, D 502, E 525 and F 431 respectively and held.

Horizontal Datum:NAD83 (1998)Linear Unit:U.S. Survey FeetVertical Datum:NAVD88Linear Unit:U.S. Survey Feet

Latitude: N 46-02-43.7	le: N 46-02-43.72340		Longitude: W 118-53-38.99875	
US State Plane Coordinate System:			Washington South Zone - 4602	
Northing: 263,844.670		Easting	2,048,150.421	
Orthometric Elevation:	1063.93		Ellipsoid Height:	993.41
Combined Factor:	0.99991127		Convergence: -	1-09-59
Confidence: 95% Confidence ("1.96 Sigma") Values				
Northing-0.01	Northing-0.011		800	Elevation-0.097

Monumentation: BPA 31/4-inch Aluminum Cap on 5/8-inch aluminum rod, flush with ground. Stamping: U.S.D.O.E. Bonneville Pwr. Adm., WM022 - FEC-01 - ATB - GPS

To-Reach Description:

Begin on Washington State Highway #12 at the Washington State Truck Weigh Station at Wallula Junction. Drive west on Washington State Highway #12, 0.1 miles to the intersection of Hatch Grade to the left (south). Drive southeasterly on Hatch Grade Road 1.5 miles to intersection of BPA Lower Monumental- McNary 500kV transmission line near tower 39/3. The station is approximately 200 feet northwest of the tower and 19 feet east of the east right-of-way fence of Hatch Grade Road.

Witness post is a yellow carsonite marker inscribed with BPA logo, bearing and distance to station.

13 d By 02 -12-9