

OPUS-RS solution : 018506_14_246_A0.14O OP1410194461027

opus <opus@ngs.noaa.gov>

Mon 9/8/2014 10:46 AM

To:John Freetly <John.Freetly@neciusa.com>;

FILE: 018506_14_246_A0.14O OP1410194461027

NGS OPUS-RS SOLUTION REPORT

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All computed coordinate accuracies are listed as 1-sigma RMS values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>USER: john.freetly@neciusa.com
RINEX FILE: 0185246a.14oDATE: September 08, 2014
TIME: 16:46:16 UTCSOFTWARE: rsgps 1.37 RS50.prl 1.99.2 START: 2014/09/03 00:20:40
EPHEMERIS: igr18083.eph [rapid] STOP: 2014/09/03 01:58:55
NAV FILE: brdc2460.14n OBS USED: 6846 / 7044 : 97%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 19.37/ 73.40
ARP HEIGHT: 1.800 NORMALIZED RMS: 0.280

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.67137)

X: -1355883.086(m) 0.004(m) -1355883.945(m) 0.004(m)
Y: -4289860.767(m) 0.010(m) -4289859.513(m) 0.010(m)
Z: 4507521.671(m) 0.010(m) 4507521.629(m) 0.010(m)LAT: 45 14 46.92419 0.007(m) 45 14 46.94478 0.007(m)
E LON: 252 27 35.91971 0.003(m) 252 27 35.86483 0.003(m)
W LON: 107 32 24.08029 0.003(m) 107 32 24.13517 0.003(m)
EL HGT: 1203.201(m) 0.012(m) 1202.512(m) 0.012(m)
ORTHO HGT: 1216.942(m) 0.015(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5013458.035 112667.183
Easting (X) [meters] 300667.646 753836.895
Convergence [degrees] -1.80436507 1.43373192
Point Scale 1.00008857 0.99986105
Combined Factor 0.99989995 0.99967247

US NATIONAL GRID DESIGNATOR: 13TCL0066713458(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	64825.9
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	88090.0
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	99791.8
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	160893.7
DI3425	P052 LRRNCHJRDNMT2006 CORS ARP	N472229.026	W1070107.185	239990.7
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	248979.6

NEAREST NGS PUBLISHED CONTROL POINT

Information on nearest mark is not available due to database connectivity issues or has restrictions on when or how it can be published.

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.