

OPUS-RS solution : 400422224S.14O OP1408469637896

opus <opus@ngs.noaa.gov>

Tue 8/19/2014 11:37 AM

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

FILE: 400422224S.14O OP1408469637896

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 DATE: August 19, 2014
 RINEX FILE: 4004224s.14o TIME: 17:37:00 UTC

SOFTWARE: rsgps 1.37 RS52.prl 1.99.2 START: 2014/08/12 18:13:25
 EPHEMERIS: igr18052.eph [rapid] STOP: 2014/08/12 19:38:20
 NAV FILE: brdc2240.14n OBS USED: 3486 / 4680 : 74%
 ANT NAME: CHCX91R NONE QUALITY IND. 16.09/ 42.76
 ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.285

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.61312)

X: -1384997.804(m) 0.005(m) -1384998.679(m) 0.005(m)
 Y: -4035638.710(m) 0.009(m) -4035637.487(m) 0.009(m)
 Z: 4726294.363(m) 0.010(m) 4726294.354(m) 0.010(m)

LAT: 48 7 1.30995 0.006(m) 48 7 1.33079 0.006(m)
 E LON: 251 3 29.53338 0.003(m) 251 3 29.47418 0.003(m)
 W LON: 108 56 30.46662 0.003(m) 108 56 30.52582 0.003(m)
 EL HGT: 967.958(m) 0.013(m) 967.369(m) 0.013(m)
 ORTHO HGT: 983.314(m) 0.016(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters] 5331356.626 429851.016
 Easting (X) [meters] 653181.638 641544.002
 Convergence [degrees] 1.53264974 0.40832837
 Point Scale 0.99988832 0.99957905
 Combined Factor 0.99973665 0.99942743

US NATIONAL GRID DESIGNATOR: 12UXU5318131356(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9749	MTMS MONTANA STATE UNI CORS ARP	N483227.426	W1094111.858	72619.7
DL7731	P053 WHITEWATERMT2007 CORS ARP	N484333.865	W1074331.456	112672.3
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	124054.4
DI3425	P052 LRRNCHJRDNMT2006 CORS ARP	N472229.026	W1070107.185	166175.9
DI2257	P049 ARMINGTON_MT2006 CORS ARP	N472059.850	W1105422.382	170267.6
DI3422	P050 WICKUMRNCHMT2006 CORS ARP	N484834.096	W1111454.296	187174.3

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.