

OPUS-RS solution : 401289223B.14O OP1408119914362

opus <opus@ngs.noaa.gov>

Fri 8/15/2014 10:28 AM

To:Chad Mozol <Chad.Mozol@neciusa.com>;

FILE: 401289223B.14O OP1408119914362

NGS OPUS-RS SOLUTION REPORT =====

All computed coordinate accuracies are listed as 1-sigma RMS values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: cmozol@neciusa.com DATE: August 15, 2014
RINEX FILE: 4012224b.14o TIME: 16:28:05 UTC

SOFTWARE: rsgps 1.37 RS50.prl 1.99.2 START: 2014/08/12 01:37:55
EPHEMERIS: igr18052.eph [rapid] STOP: 2014/08/12 02:38:35
NAV FILE: brdc2240.14n OBS USED: 4140 / 4236 : 98%
ANT NAME: CHCX91R NONE QUALITY IND. 19.15/ 54.14
ARP HEIGHT: 1.8 NORMALIZED RMS: 0.290

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.61120)

X: -1392822.229(m) 0.004(m) -1392823.104(m) 0.004(m)
Y: -4036104.425(m) 0.013(m) -4036103.202(m) 0.013(m)
Z: 4723609.799(m) 0.013(m) 4723609.790(m) 0.013(m)

LAT: 48 4 51.31467 0.003(m) 48 4 51.33544 0.003(m)
E LON: 250 57 39.31264 0.002(m) 250 57 39.25341 0.002(m)
W LON: 109 2 20.68736 0.002(m) 109 2 20.74659 0.002(m)
EL HGT: 964.372(m) 0.019(m) 963.783(m) 0.019(m)

ORTHO HGT: 979.559(m) 0.021(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

	UTM (Zone 12)	SPC (2500 MT)
Northing (Y) [meters]	5327154.221	425790.567
Easting (X) [meters]	646043.902	634327.439
Convergence [degrees]	1.45935596	0.33716505
Point Scale	0.99986208	0.99956702
Combined Factor	0.99971098	0.99941596

US NATIONAL GRID DESIGNATOR: 12UXU4604327154(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9749	MTMS MONTANA STATE UNI CORS ARP	N483227.426	W1094111.858	70178.9
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	118148.4
DL7731	P053 WHITEWATERMT2007 CORS ARP	N484333.865	W1074331.456	120873.2
DI2257	P049 ARMINGTON_MT2006 CORS ARP	N472059.850	W1105422.382	161983.1
DI3425	P052 LRRNCHJRDNMT2006 CORS ARP	N472229.026	W1070107.185	170707.8
DI3422	P050 WICKUMRNCHMT2006 CORS ARP	N484834.096	W1111454.296	182441.0

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.