

OPUS-RS solution : 401289227V.14O OP1408556605801

opus <opus@ngs.noaa.gov>

Wed 8/20/2014 11:50 AM

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

FILE: 401289227V.14O OP1408556605801

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 20, 2014
 RINEX FILE: 4012227v.14o TIME: 17:49:52 UTC

SOFTWARE: rsgps 1.37 RS51.prl 1.99.2 START: 2014/08/15 21:13:55
 EPHEMERIS: igr18055.eph [rapid] STOP: 2014/08/15 21:45:30
 NAV FILE: brdc2270.14n OBS USED: 1184 / 1348 : 88%
 ANT NAME: CHCX91R NONE QUALITY IND. 4.66/ 20.95
 ARP HEIGHT: 1.8 NORMALIZED RMS: 0.380

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.62163)

X: -1379112.156(m) 0.005(m) -1379113.031(m) 0.005(m)
 Y: -4036335.254(m) 0.020(m) -4036334.030(m) 0.020(m)
 Z: 4727419.065(m) 0.030(m) 4727419.056(m) 0.030(m)

LAT: 48 7 55.68845 0.008(m) 48 7 55.70936 0.008(m)
 E LON: 251 8 9.66879 0.008(m) 251 8 9.60961 0.008(m)
 W LON: 108 51 50.33121 0.008(m) 108 51 50.39039 0.008(m)
 EL HGT: 972.509(m) 0.035(m) 971.918(m) 0.035(m)
 ORTHO HGT: 987.994(m) 0.036(m) [NAVD88 (Computed using GEOID12A)]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 12)	SPC (2500 MT)
Northing (Y) [meters]	5333193.290	431573.989
Easting (X) [meters]	658926.135	647321.618
Convergence [degrees]	1.59099477	0.46525065
Point Scale	0.99991035	0.99958420
Combined Factor	0.99975797	0.99943187

US NATIONAL GRID DESIGNATOR: 12UXU5892633193(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9749	MTMS MONTANA STATE UNI	CORS ARP	N483227.426 W1094111.858	76077.2
DM7133	MTLW LEWISTOWN	CORS ARP	N470314.929 W1092633.764	127531.5
DI3425	P052 LRRNCHJRDNMT2006	CORS ARP	N472229.026 W1070107.185	161987.2
DI3422	P050 WICKUMRNCHMT2006	CORS ARP	N484834.096 W1111454.296	191743.8

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.