

# OPUS-RS solution : 400422230C.14O OP1408553615704

opus <opus@ngs.noaa.gov>

Wed 8/20/2014 10:56 AM

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

FILE: 400422230C.14O OP1408553615704

2005 NOTE: The IGS precise and IGS rapid orbits were not available  
2005 at processing time. The IGS ultra-rapid orbit was/will be used to  
2005 process the data.  
2005

## 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: 4004231c.14o                      TIME: 16:56:26 UTC

SOFTWARE: rsgps 1.37 RS52.prl 1.99.2                      START: 2014/08/19 02:16:05  
EPHEMERIS: igu18062.eph [ultra-rapid]                      STOP: 2014/08/19 03:14:50  
NAV FILE: brdc2310.14n                      OBS USED: 1895 / 2930 : 65%  
ANT NAME: CHCX91B                      NONE                      QUALITY IND. 34.65/ 8.43  
ARP HEIGHT: 1.8                      NORMALIZED RMS:                      0.519

REF FRAME: NAD\_83(2011)(EPOCH:2010.0000)                      IGS08 (EPOCH:2014.63045)

X: -1368584.743(m) 0.006(m)                      -1368585.618(m) 0.006(m)  
Y: -4050100.083(m) 0.029(m)                      -4050098.858(m) 0.029(m)  
Z: 4718914.381(m) 0.032(m)                      4718914.371(m) 0.032(m)

LAT: 48 0 59.41609                      0.008(m)                      48 0 59.43706                      0.008(m)  
E LON: 251 19 45.04418                      0.004(m)                      251 19 44.98526                      0.004(m)  
W LON: 108 40 14.95582                      0.004(m)                      108 40 15.01474                      0.004(m)  
EL HGT: 1090.082(m) 0.043(m)                      1089.486(m) 0.043(m)  
ORTHO HGT: 1105.486(m) 0.044(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES                      STATE PLANE COORDINATES  
UTM (Zone 12)                      SPC (2500 MT )  
Northing (Y) [meters]                      5320759.542                      418857.484  
Easting (X) [meters]                      673685.875                      661828.828  
Convergence [degrees]                      1.73179681                      0.60654788  
Point Scale                      0.99997069                      0.99954655  
Combined Factor                      0.99979987                      0.99937581

US NATIONAL GRID DESIGNATOR: 12UXU7368520759(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DL7731	P053 WHITEWATERMT2007	CORS ARP	N484333.865 W1074331.456	105520.5
DM7133	MTLW LEWISTOWN	CORS ARP	N470314.929 W1092633.764	121780.4
DI3425	P052 LRRNCHJRDNMT2006	CORS ARP	N472229.026 W1070107.185	143093.6
DI2257	P049 ARMINGTON_MT2006	CORS ARP	N472059.850 W1105422.382	183486.6
DI3422	P050 WICKUMRNCHMT2006	CORS ARP	N484834.096 W1111454.296	210216.8

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.