

OPUS-RS solution : 018773_14_259_A1.14O OP1411071853121

opus <opus@ngs.noaa.gov>

Thu 9/18/2014 2:29 PM

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

FILE: 018773_14_259_A1.14O OP1411071853121

6030 ***** WARNING *****
 6030 One or both of the standard deviations associated with
 6030 horizontal coordinates is greater than 5 cm, and/or the
 6030 standard deviation associated with the vertical coordinate
 6030 is greater than 10 cm. This means that the vectors used to
 6030 determine your position did not agree as well as expected.
 6030 Often this is the result of problems with the adopted coordinates
 6030 at one or more of the reference stations selected by OPUS-RS.
 6030 If a problem reference station can be identified, it can
 6030 be excluded with the Exclude feature on the OPUS Options
 6030 page.
 6030

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: September 18, 2014
 RINEX FILE: 0187259x.14o TIME: 20:28:51 UTC

SOFTWARE: rsgps 1.37 RS94.prl 1.99.2 START: 2014/09/16 23:12:35
 EPHEMERIS: igr18102.eph [rapid] STOP: 2014/09/17 00:30:25
 NAV FILE: brdc2590.14n OBS USED: 3168 / 3576 : 89%
 ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 11.20/ 33.18
 ARP HEIGHT: 1.800 NORMALIZED RMS: 0.300

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.70957)

X: -1375593.466(m) 0.032(m) -1375594.325(m) 0.032(m)
 Y: -4293406.770(m) 0.073(m) -4293405.516(m) 0.073(m)
 Z: 4498591.044(m) 0.078(m) 4498591.001(m) 0.078(m)

LAT: 45 7 48.11925 0.006(m) 45 7 48.13966 0.006(m)
 E LON: 252 14 4.96147 0.009(m) 252 14 4.90654 0.009(m)
 W LON: 107 45 55.03853 0.009(m) 107 45 55.09346 0.009(m)

EL HGT: 1461.607(m) 0.111(m) 1460.919(m) 0.111(m)
 ORTHO HGT: 1473.553(m) 0.111(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

	UTM (Zone 13)	SPC (2500 MT)
Northing (Y) [meters]	5001116.012	99325.818
Easting (X) [meters]	282546.777	736445.320
Convergence [degrees]	-1.96055208	1.26894877
Point Scale	1.00018146	0.99992444
Combined Factor	0.99995231	0.99969535

US NATIONAL GRID DESIGNATOR: 13TBL8254601116(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	94676.0
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	95232.2
DJ8992	P033 TENSLEEPTRWY2005 CORS ARP	N435710.415	W1072315.121	134234.9
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	146264.8

NEAREST NGS PUBLISHED CONTROL POINT

QV0349	SPRING	N450430.189	W1074418.593	6472.3
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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.