

OPUS-RS solution : 018773_14_266_A0.14O OP1411927219627

opus <opus@ngs.noaa.gov>

Sun 9/28/2014 12:04 PM

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

FILE: 018773_14_266_A0.14O OP1411927219627

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
 RINEX FILE: 0187266w.14o

DATE: September 28, 2014
 TIME: 18:04:17 UTC

SOFTWARE: rsgps 1.37 RS92.prl 1.99.2 START: 2014/09/23 22:51:00
 EPHEMERIS: igr18112.eph [rapid] STOP: 2014/09/23 23:51:00
 NAV FILE: brdc2660.14n OBS USED: 2264 / 2720 : 83%
 ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 8.68/ 2.03
 ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.378

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.72869)

| | | | | |
|----|-----------------|----------|-----------------|----------|
| X: | -1325375.506(m) | 0.030(m) | -1325376.365(m) | 0.030(m) |
| Y: | -4304875.614(m) | 0.095(m) | -4304874.358(m) | 0.095(m) |
| Z: | 4502619.381(m) | 0.105(m) | 4502619.338(m) | 0.105(m) |

| | | | | |
|--------|-----------------|----------|-----------------|----------|
| LAT: | 45 10 54.44901 | 0.008(m) | 45 10 54.46980 | 0.008(m) |
| E LON: | 252 53 15.23159 | 0.002(m) | 252 53 15.17707 | 0.002(m) |
| W LON: | 107 6 44.76841 | 0.002(m) | 107 6 44.82293 | 0.002(m) |

EL HGT: 1420.876(m) 0.145(m) 1420.178(m) 0.145(m)
 ORTHO HGT: 1435.096(m) 0.145(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

| | | |
|-----------------------|-------------|------------|
| Northing (Y) [meters] | 5005316.163 | 106426.013 |
| Easting (X) [meters] | 334035.265 | 787607.027 |
| Convergence [degrees] | -1.49879018 | 1.74651334 |
| Point Scale | 0.99993869 | 0.99989575 |
| Combined Factor | 0.99971598 | 0.99967305 |

US NATIONAL GRID DESIGNATOR: 13TCL3403505316(NAD 83)

BASE STATIONS USED

| PID | DESIGNATION | LATITUDE | LONGITUDE | DISTANCE(m) |
|--------|--------------------------------|-------------|--------------|-------------|
| DG9745 | MTEI ENGINC CORS ARP | N454447.035 | W1083600.736 | 132217.5 |
| DJ8992 | P033 TENSLEEPTRWY2005 CORS ARP | N435710.415 | W1072315.121 | 138324.1 |
| DL7758 | P722 YNPBASSRCHMT2005 CORS ARP | N452725.985 | W1093415.586 | 195212.8 |
| DI2260 | P054 TEREKALAKAMT2006 CORS ARP | N455046.833 | W1042629.062 | 221413.1 |

NEAREST NGS PUBLISHED CONTROL POINT

| | | | | |
|--------|--------|-------------|--------------|--------|
| QV0445 | SPRING | N450946.922 | W1070400.886 | 4138.0 |
|--------|--------|-------------|--------------|--------|

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.