

OPUS solution : 018773_14_246_A2.14O OP1410213397963

opus <opus@ngs.noaa.gov>

Mon 9/8/2014 4:00 PM

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

FILE: 018773_14_246_A2.14O OP1410213397963

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>USER: john.freetly@neciusa.com
RINEX FILE: 0187246u.14oDATE: September 08, 2014
TIME: 21:59:55 UTCSOFTWARE: page5 1209.04 master90.pl 022814 START: 2014/09/03 20:15:00
EPHEMERIS: igr18083.eph [rapid] STOP: 2014/09/04 00:01:00
NAV FILE: brdc2460.14n OBS USED: 7827 / 8670 : 90%
ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 58 / 65 : 89%
ARP HEIGHT: 1.800 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.6738)

X: -1361855.067(m) 0.003(m) -1361855.926(m) 0.003(m)
Y: -4292769.407(m) 0.017(m) -4292768.153(m) 0.017(m)
Z: 4502957.223(m) 0.007(m) 4502957.181(m) 0.007(m)LAT: 45 11 17.60611 0.014(m) 45 11 17.62665 0.014(m)
E LON: 252 23 55.26777 0.008(m) 252 23 55.21290 0.008(m)
W LON: 107 36 4.73223 0.008(m) 107 36 4.78710 0.008(m)
EL HGT: 1186.697(m) 0.009(m) 1186.008(m) 0.009(m)
ORTHO HGT: 1199.886(m) 0.018(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5007152.137 106089.496
Easting (X) [meters] 295649.371 749183.689
Convergence [degrees] -1.84607618 1.38889642
Point Scale 1.00011349 0.99989224
Combined Factor 0.99992745 0.99970624

US NATIONAL GRID DESIGNATOR: 13TBL9564907152(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	63504.9
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	99767.7
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	92337.8

NEAREST NGS PUBLISHED CONTROL POINT

QV0342	AIRWAY BCN 34 10 MI NW WYOLA	N451149.514	W1073456.179	1790.3
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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.