PART 5: RUNUP2

        for transect: CM-161-1

Station locations shifted by: -1.94 feet from their
original location to set the shoreline to
elevation 0 for RUNUP2 input

_____RUNUP2 INPUT CONVERSIONS_____
        for transect: CM-161-1

Incident significant wave height: 1.45 feet

Peak wave period: 2.20 seconds

Mean wave height: 0.91 feet

Local Depth below SWEL: 76.55 feet

Mean wave height deshoaled using Hunt approximation for
celerity assuming constant wave energy flux.
 References: R.G. Dean and R.A. Dalrymple. 2000. Water

            Wave Mechanics for Engineers and Scientists. World
            Scientific Publishing Company, River Edge New Jersy

            USACE (1985), Direct Methods for Calculating Wavelength, CETN-1-17
            US Army Engineer Waterways Experiment Station Coastel Engineering
            Research Center, Vicksburg, MS

            also see Coastal Engineering Manual Part II-3
            for discussion of shoaling coefficient

    Depth, D = 76.55
    Period, T = 1.87
    Waveheight, H = 0.91
Deep water wavelength, L0 (ft)
    L0 = g*T*T/twopi
    L0 = 32.17*1.87*1.87/6.28 = 17.94
Deep water wave celerity, C0 (ft/s)
    C0 = L0/T
    C0 = 17.94/1.87 = 9.58
Angular frequency, sigma (rad/s)
    sigma = twopi/T
    sigma = 6.28/1.87 = 3.36
Hunts (1979) approximation for Celerity C1H (ft/s) at Depth D (ft)
    y = sigma.*sigma.*D./g
    y = 3.36*3.36*76.55/32.17 = 26.81
    C1H = sqrt(g.*D./(y+1./(1 + 0.6522.*y + 0.4622.*y.^2 + 0.0864.*y.^4 +0.0675.*y.^5)))
    C1H = 9.58
Shoaling Coefficient KsH
    KsH = sqrt(C0/C1H)
    KsH = sqrt(9.58/9.58) = 1.00
Deepwater Wave Height H0_H (ft)
    H0_H = H/KsH
    H0_H = 0.91/1.00 = 0.91

Deepwater mean wave height: 0.91 feet

_____END RUNUP2 CONVERSIONS_____

_____RUNUP2 RESULTS_____
        for transect: CM-161-1

RUNUP2 SWEL:
8.90
8.90
8.90
8.90

```
8.90
8.90
8.90
8.90
8.90
```

RUNUP2 deepwater mean wave heights:
```
0.86
0.86
0.86
0.91
0.91
0.91
0.95
0.95
0.95
```

RUNUP2 mean wave periods:
```
1.78
1.87
1.97
1.78
1.87
1.97
1.78
1.87
1.97
```

RUNUP2 runup above SWEL:
```
1.16
1.18
1.19
1.21
1.24
1.25
1.25
1.28
1.31
```

RUNUP2 Mean runup height above SWEL: 1.23 feet

RUNUP2 2-percent runup height above SWEL: 2.71 feet

RUNUP2 2-percent runup elevation: 11.61 feet-NAVD88

RUNUP2 Messages:
No Messages

_____END RUNUP2 RESULTS_____

_____ACES BEACH RUNUP_____

Incident significant wave height: 1.45 feet

Significant wave height deshoaled using Hunt equation

Deepwater significant wave height: 1.27 feet

Peak wave period: 2.20 seconds

Average beach Slope: 1:7.65 (H:V)

ACES RUNUP CALCULATED USING 'Aces_Beach_Runup.m'

ACES Beach 2-percent runup height above SWEL: 1.60 feet

ACES Beach 2-percent runup elevation: 10.50 feet-NAVD88

ACES BEACH RUNUP is valid

_____END ACES BEACH RESULTS_____

PART 5 COMPLETE_____