The Refuge
Positive Hit Music

Exhibit 1 Reason for TPO Change

2/7/2005

With this amendment, Refuge Media Group (RMG) is showing the reason for the change in TPO from 0.300 kW to 0.317 kW. RMG relocated the equipment on the structure (a grain elevator.)* This resulted in a longer feed line. **Please Note: The ERP remains at the authorized level of 0.250 kW**

TPO is calculated as follows:

The main cable used is 220 feet of Andrew LDF7-50A 1-5/8" (foam filled)
The jumper cable is 30 feet of Andrew LDF5-50A 7/8" (foam filled)

ERP = 0.250 kW
Antenna Gain = .900 Main Cable gain = 0.896
Jumper Cable gain = 0.978

Total power gain of system = 0.900 * 0.896 * 0.978 = 0.789

TPO = ERP/Total power gain = 0.317 kW

Previous TPO Calculation:
The main feed cable previously was 52 feet of Cablewave FLC12-50J ½" (foam filled) and no jumpers using the same antenna. The total gain of the previous system was 0.900 * 0.925 = 0.833.
The previous TPO calculates as follows: 0.250 kW/0.833 = 0.300 kW

*The equipment previously was located on top of the silos; we moved it to the ground level for easier access and maintenance.

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