

Table A-1  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Segment 4: Talega Hub to Talega Substation 69kV/138kV

Segment 4: Talega Hub to Talega Substation 69kV and 138 kV

| Equipment/Phase                                    | Emission Factors |     |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |               |               |             |              |               |                 |             |              |
|--|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|---------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|
|  | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day    | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |
| <b>Trans: Talega Hub to Talega Substation 2013</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |
| Bulldozer  | DIESEL           | 350 | 0.3211      | 1.4228     | 2.7305      | 0.0026      | 0.1133       | 0.1008544     | 264.8725    | 0.0290      | 0.2594      | 2               | 6           | 33              | 3.85         | 17.07         | 32.77         | 0.03        | 1.36         | 1.21          | 3178.47         | 0.35        | 3.11         |
| Road Grader/Blade                                  | DIESEL           | 350 | 0.1855      | 0.6289     | 1.6842      | 0.0023      | 0.0608       | 0.0541153     | 229         | 0.0167      | 0.1600      | 1               | 8           | 22              | 1.48         | 5.03          | 13.47         | 0.02        | 0.49         | 0.43          | 1835.87         | 0.13        | 1.28         |
| Scraper  | DIESEL           | 350 | 0.3186      | 1.2113     | 2.8288      | 0.0032      | 0.1099       | 0.0978252     | 321.4286    | 0.0287      | 0.2687      | 1               | 3           | 44              | 0.96         | 3.63          | 8.49          | 0.01        | 0.33         | 0.29          | 964.29          | 0.09        | 0.81         |
| Compactor  | DIESEL           | 250 | 0.1262      | 0.3887     | 1.3124      | 0.0017      | 0.0451       | 0.0401412     | 153.0898    | 0.0114      | 0.1247      | 1               | 4           | 66              | 0.50         | 1.55          | 5.25          | 0.01        | 0.18         | 0.16          | 612.36          | 0.05        | 0.50         |
| Loader   | DIESEL           | 200 | 0.1259      | 0.3685     | 1.2125      | 0.0017      | 0.0417       | 0.0371039     | 149.0       | 0.0114      | 0.1152      | 2               | 4           | 44              | 1.01         | 2.95          | 9.70          | 0.01        | 0.33         | 0.30          | 1191.81         | 0.09        | 0.92         |
| Water Truck  | DIESEL           | 175 | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 2               | 5           | 66              | 1.40         | 3.84          | 12.37         | 0.02        | 0.41         | 0.37          | 1665.45         | 0.13        | 1.18         |
| Dump/Haul Truck                                    | DIESEL           | 235 | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 3               | 8           | 44              | 3.36         | 9.21          | 29.70         | 0.04        | 0.99         | 0.88          | 3997.09         | 0.30        | 2.82         |
| Excavator  | DIESEL           | 300 | 0.1735      | 0.5271     | 1.4763      | 0.0023      | 0.0516       | 0.0459342     | 234         | 0.0157      | 0.1402      | 2               | 6           | 44              | 2.08         | 6.33          | 17.72         | 0.03        | 0.62         | 0.55          | 2804.83         | 0.19        | 1.68         |
| Drill Rig  | DIESEL           | 82  | 0.0447      | 0.4698     | 0.4583      | 0.0009      | 0.0257       | 0.0228866     | 77.1        | 0.0040      | 0.0435      | 2               | 8           | 22              | 0.71         | 7.52          | 7.33          | 0.01        | 0.41         | 0.37          | 1233.95         | 0.06        | 0.70         |
| Small Crane  | DIESEL           | 75  | 0.0919      | 0.3618     | 0.5508      | 0.0006      | 0.0493       | 0.0438598     | 50.1        | 0.0083      | 0.0523      | 2               | 8           | 22              | 1.47         | 5.79          | 8.81          | 0.01        | 0.79         | 0.70          | 802.37          | 0.13        | 0.84         |
| Concrete Trucks                                    | DIESEL           | 235 | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 2               | 8           | 22              | 2.24         | 6.14          | 19.80         | 0.03        | 0.66         | 0.59          | 2664.73         | 0.20        | 1.88         |
| <b>Subtotal</b>                                    |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>19.07</b> | <b>69.05</b>  | <b>165.40</b> | <b>0.22</b> | <b>6.57</b>  | <b>5.85</b>   | <b>20951.21</b> | <b>1.72</b> | <b>15.71</b> |
| <b>Trans: Talega Hub to Talega Substation 2014</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |
| Concrete Trucks                                    | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 66              | 0.27         | 0.75          | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |
| Drill Rig  | DIESEL           | 82  | 0.0409      | 0.4684     | 0.4254      | 0.0009      | 0.0204       | 0.0181324     | 77.1        | 0.0037      | 0.0404      | 2               | 6           | 66              | 0.49         | 5.62          | 5.10          | 0.01        | 0.24         | 0.22          | 925.46          | 0.04        | 0.48         |
| CAT 416 Rubber Tire Backhoe                        | DIESEL           | 85  | 0.0902      | 0.4119     | 0.5654      | 0.0007      | 0.0477       | 0.0424203     | 58.9        | 0.0081      | 0.0537      | 2               | 4           | 66              | 0.72         | 3.30          | 4.52          | 0.01        | 0.38         | 0.34          | 471.31          | 0.07        | 0.43         |
| Dump Trucks  | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 4           | 66              | 1.06         | 3.01          | 8.84          | 0.01        | 0.29         | 0.26          | 1332.36         | 0.10        | 0.84         |
| <b>Subtotal</b>                                    |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.54</b>  | <b>12.68</b>  | <b>20.68</b>  | <b>0.04</b> | <b>0.99</b>  | <b>0.88</b>   | <b>3062.22</b>  | <b>0.23</b> | <b>1.96</b>  |
| <b>Trans: Talega Hub to Talega Substation 2014</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |
| Dump Trucks  | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 3           | 110             | 0.80         | 2.26          | 6.63          | 0.01        | 0.22         | 0.20          | 999.27          | 0.07        | 0.63         |
| Crane  | DIESEL           | 399 | 0.1468      | 0.4948     | 1.2979      | 0.0018      | 0.0470       | 0.041826      | 180.1       | 0.0132      | 0.1233      | 1               | 6           | 22              | 0.88         | 2.97          | 7.79          | 0.01        | 0.28         | 0.25          | 1080.61         | 0.08        | 0.74         |
| CAT 416 Rubber Tire Backhoe                        | DIESEL           | 85  | 0.0902      | 0.4119     | 0.5654      | 0.0007      | 0.0477       | 0.0424203     | 58.9        | 0.0081      | 0.0537      | 1               | 4           | 110             | 0.36         | 1.65          | 2.26          | 0.00        | 0.19         | 0.17          | 235.65          | 0.03        | 0.21         |
| Concrete Trucks                                    | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 4           | 22              | 0.53         | 1.50          | 4.42          | 0.01        | 0.15         | 0.13          | 866.18          | 0.05        | 0.42         |
| Compactor  | DIESEL           | 250 | 0.1180      | 0.3717     | 1.2002      | 0.0017      | 0.0407       | 0.036283      | 153.0898    | 0.0106      | 0.1140      | 1               | 4           | 44              | 0.47         | 1.49          | 4.80          | 0.01        | 0.16         | 0.15          | 612.36          | 0.04        | 0.46         |
| <b>Subtotal</b>                                    |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.04</b>  | <b>9.86</b>   | <b>25.90</b>  | <b>0.04</b> | <b>1.00</b>  | <b>0.89</b>   | <b>3594.08</b>  | <b>0.27</b> | <b>2.46</b>  |
| <b>Trans: Talega Hub to Talega Substation 2014</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                                | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 110             | 0.27         | 0.75          | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |
| Crane  | DIESEL           | 399 | 0.1468      | 0.4948     | 1.2979      | 0.0018      | 0.0470       | 0.041826      | 180.1       | 0.0132      | 0.1233      | 2               | 3           | 110             | 0.88         | 2.97          | 7.79          | 0.01        | 0.28         | 0.25          | 1080.61         | 0.08        | 0.74         |
| Manlift  | DIESEL           | 75  | 0.0509      | 0.2400     | 0.3531      | 0.0004      | 0.0272       | 0.024239      | 38.1        | 0.0046      | 0.0335      | 4               | 6           | 110             | 1.22         | 5.76          | 8.47          | 0.01        | 0.65         | 0.58          | 913.72          | 0.11        | 0.80         |
| Air Compressor                                     | DIESEL           | 45  | 0.0831      | 0.2446     | 0.2134      | 0.0003      | 0.0201       | 0.0179101     | 22.3        | 0.0075      | 0.0203      | 3               | 8           | 110             | 1.99         | 5.87          | 5.12          | 0.01        | 0.48         | 0.43          | 534.51          | 0.18        | 0.49         |
| <b>Subtotal</b>                                    |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>4.36</b>  | <b>15.35</b>  | <b>23.59</b>  | <b>0.03</b> | <b>1.49</b>  | <b>1.33</b>   | <b>2861.93</b>  | <b>0.39</b> | <b>2.24</b>  |
| <b>Trans: Talega Hub to Talega Substation 2014</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |
| Manlift  | DIESEL           | 75  | 0.0509      | 0.2400     | 0.3531      | 0.0004      | 0.0272       | 0.024239      | 38.1        | 0.0046      | 0.0335      | 2               | 6           | 66              | 0.61         | 2.88          | 4.24          | 0.01        | 0.33         | 0.29          | 456.86          | 0.06        | 0.40         |
| Puller and Tensioner                               | DIESEL           | 300 | 0.1379      | 0.5080     | 1.3457      | 0.0025      | 0.0441       | 0.0392193     | 254.2       | 0.0124      | 0.1278      | 2               | 6           | 66              | 1.65         | 6.10          | 16.15         | 0.03        | 0.53         | 0.47          | 3050.86         | 0.15        | 1.53         |
| Reel Trailer                                       | DIESEL           | 300 | 0.1379      | 0.5080     | 1.3457      | 0.0025      | 0.0441       | 0.0392193     | 254.2       | 0.0124      | 0.1278      | 2               | 6           | 66              | 1.65         | 6.10          | 16.15         | 0.03        | 0.53         | 0.47          | 3050.86         | 0.15        | 1.53         |
| Splice Trailer                                     | DIESEL           | 300 | 0.1379      | 0.5080     | 1.3457      | 0.0025      | 0.0441       | 0.0392193     | 254.2       | 0.0124      | 0.1278      | 1               | 6           | 66              | 0.83         | 3.05          | 8.07          | 0.01        | 0.26         | 0.24          | 1525.43         | 0.07        | 0.77         |
| <b>Subtotal</b>                                    |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>4.75</b>  | <b>18.12</b>  | <b>44.61</b>  | <b>0.08</b> | <b>1.65</b>  | <b>1.47</b>   | <b>8084.02</b>  | <b>0.43</b> | <b>4.24</b>  |
| <b>Trans: Talega Hub to Talega Substation 2014</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                                | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 88              | 0.27         | 0.75          | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |
| Manlift  | DIESEL           | 75  | 0.0509      | 0.2400     | 0.3531      | 0.0004      | 0.0272       | 0.024239      | 38.1        | 0.0046      | 0.0335      | 2               | 3           | 88              | 0.31         | 1.44          | 2.12          | 0.00        | 0.16         | 0.15          | 228.43          | 0.03        | 0.20         |
| Chainsaw   | DIESEL           | 25  | 0.0199      | 0.0678     | 0.1256      | 0.0002      | 0.0048       | 0.0042461     | 16.5        | 0.0018      | 0.0119      | 2               | 1           | 88              | 0.04         | 0.14          | 0.25          | 0.00        | 0.01         | 0.01          | 32.96           | 0.00        | 0.02         |
| Loader   | DIESEL           | 200 | 0.1186      | 0.3553     | 1.0966      | 0.0017      | 0.0375       | 0.0333776     | 149.0       | 0.0107      | 0.1042      | 1               | 2           | 88              | 0.24         | 0.71          | 2.19          | 0.00        | 0.08         | 0.07          | 297.95          | 0.02        | 0.21         |
| Crane  | DIESEL           | 399 | 0.1468      | 0.4948     | 1.2979      | 0.0018      | 0.0470       | 0.041826      | 180.1       | 0.0132      | 0.1233      | 1               | 2           | 88              | 0.29         | 0.99          | 2.60          | 0.00        | 0.09         | 0.08          | 360.20          | 0.03        | 0.25         |
| <b>Subtotal</b>                                    |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>1.14</b>  | <b>4.03</b>   | <b>9.37</b>   | <b>0.01</b> | <b>0.42</b>  | <b>0.37</b>   | <b>1252.63</b>  | <b>0.10</b> | <b>0.89</b>  |
| <b>Total</b>                                       |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>34.90</b> | <b>129.10</b> | <b>289.54</b> | <b>0.42</b> | <b>12.13</b> | <b>10.79</b>  | <b>39806.10</b> | <b>3.15</b> | <b>27.51</b> |

Table A-1  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Segment 4: Talega Hub to Talega Substation 69kV/138kV

| Equipment/Phase   | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |
|---|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|   |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Trans: Talega Hub to Talega Substation - Site Grading</b>                            |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer   |      |    | 0.064                  | 0.282           | 0.541            | 0.001            | 0.022             | 0.020              | 52.445           | 0.006            | 0.051            |
| Road Grader/Blade   |      |    | 0.016                  | 0.055           | 0.148            | 0.000            | 0.005             | 0.005              | 20.195           | 0.001            | 0.014            |
| Scraper   |      |    | 0.021                  | 0.080           | 0.187            | 0.000            | 0.007             | 0.006              | 21.214           | 0.002            | 0.018            |
| Compactor   |      |    | 0.017                  | 0.051           | 0.173            | 0.000            | 0.006             | 0.005              | 20.208           | 0.002            | 0.016            |
| Loader  |      |    | 0.022                  | 0.065           | 0.213            | 0.000            | 0.007             | 0.007              | 26.220           | 0.002            | 0.020            |
| Water Truck   |      |    | 0.046                  | 0.127           | 0.408            | 0.001            | 0.014             | 0.012              | 54.960           | 0.004            | 0.039            |
| Dump/Haul Truck   |      |    | 0.074                  | 0.203           | 0.653            | 0.001            | 0.022             | 0.019              | 87.936           | 0.007            | 0.062            |
| Excavator   |      |    | 0.046                  | 0.139           | 0.390            | 0.001            | 0.014             | 0.012              | 61.706           | 0.004            | 0.037            |
| Drill Rig   |      |    | 0.008                  | 0.083           | 0.081            | 0.000            | 0.005             | 0.004              | 13.573           | 0.001            | 0.008            |
| Small Crane   |      |    | 0.016                  | 0.064           | 0.097            | 0.000            | 0.009             | 0.008              | 8.826            | 0.001            | 0.009            |
| Concrete Trucks   |      |    | 0.025                  | 0.068           | 0.218            | 0.000            | 0.007             | 0.006              | 29.312           | 0.002            | 0.021            |
| <b>Subtotal</b>   |      |    | <b>0.354</b>           | <b>1.215</b>    | <b>3.109</b>     | <b>0.004</b>     | <b>0.118</b>      | <b>0.105</b>       | <b>396.595</b>   | <b>0.032</b>     | <b>0.295</b>     |
| <b>Trans: Talega Hub to Talega Substation - Foundation Installations</b>                |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Concrete Trucks   |      |    | 0.009                  | 0.025           | 0.073            | 0.000            | 0.002             | 0.002              | 10.992           | 0.001            | 0.007            |
| Drill Rig   |      |    | 0.016                  | 0.185           | 0.168            | 0.000            | 0.008             | 0.007              | 30.540           | 0.001            | 0.016            |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.024                  | 0.109           | 0.149            | 0.000            | 0.013             | 0.011              | 15.553           | 0.002            | 0.014            |
| Dump Trucks   |      |    | 0.035                  | 0.099           | 0.292            | 0.000            | 0.010             | 0.009              | 43.968           | 0.003            | 0.028            |
| <b>Subtotal</b>   |      |    | <b>0.084</b>           | <b>0.418</b>    | <b>0.682</b>     | <b>0.001</b>     | <b>0.033</b>      | <b>0.029</b>       | <b>101.053</b>   | <b>0.008</b>     | <b>0.065</b>     |
| <b>Trans: Talega Hub to Talega Substation - Underground Trench/Conduit/Substructure</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Dump Trucks   |      |    | 0.044                  | 0.124           | 0.365            | 0.001            | 0.012             | 0.011              | 54.960           | 0.004            | 0.035            |
| Crane   |      |    | 0.010                  | 0.033           | 0.086            | 0.000            | 0.003             | 0.003              | 11.887           | 0.001            | 0.008            |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.020                  | 0.091           | 0.124            | 0.000            | 0.010             | 0.009              | 12.961           | 0.002            | 0.012            |
| Concrete Trucks   |      |    | 0.006                  | 0.017           | 0.049            | 0.000            | 0.002             | 0.001              | 7.328            | 0.001            | 0.005            |
| Compactor   |      |    | 0.010                  | 0.033           | 0.106            | 0.000            | 0.004             | 0.003              | 13.472           | 0.001            | 0.010            |
| <b>Subtotal</b>   |      |    | <b>0.089</b>           | <b>0.297</b>    | <b>0.729</b>     | <b>0.001</b>     | <b>0.031</b>      | <b>0.028</b>       | <b>100.608</b>   | <b>0.008</b>     | <b>0.069</b>     |
| <b>Trans: Talega Hub to Talega Substation - Steel Structure Installations</b>           |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.015                  | 0.041           | 0.122            | 0.000            | 0.004             | 0.004              | 18.320           | 0.001            | 0.012            |
| Crane   |      |    | 0.048                  | 0.163           | 0.428            | 0.001            | 0.016             | 0.014              | 59.433           | 0.004            | 0.041            |
| Manlift   |      |    | 0.067                  | 0.317           | 0.466            | 0.001            | 0.036             | 0.032              | 50.255           | 0.006            | 0.044            |
| Air Compressor  |      |    | 0.110                  | 0.323           | 0.282            | 0.000            | 0.027             | 0.024              | 29.398           | 0.010            | 0.027            |
| <b>Subtotal</b>   |      |    | <b>0.240</b>           | <b>0.844</b>    | <b>1.298</b>     | <b>0.002</b>     | <b>0.082</b>      | <b>0.073</b>       | <b>157.406</b>   | <b>0.022</b>     | <b>0.123</b>     |
| <b>Trans: Talega Hub to Talega Substation - Cable/Conductor Pulling and Tensioning</b>  |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift   |      |    | 0.020                  | 0.095           | 0.140            | 0.000            | 0.011             | 0.010              | 15.076           | 0.002            | 0.013            |
| Puller and Tensioner  |      |    | 0.055                  | 0.201           | 0.533            | 0.001            | 0.017             | 0.016              | 100.678          | 0.005            | 0.051            |
| Reel Trailer  |      |    | 0.055                  | 0.201           | 0.533            | 0.001            | 0.017             | 0.016              | 100.678          | 0.005            | 0.051            |
| Splice Trailer  |      |    | 0.027                  | 0.101           | 0.266            | 0.000            | 0.009             | 0.008              | 50.339           | 0.002            | 0.025            |
| <b>Subtotal</b>   |      |    | <b>0.157</b>           | <b>0.598</b>    | <b>1.472</b>     | <b>0.003</b>     | <b>0.054</b>      | <b>0.048</b>       | <b>266.773</b>   | <b>0.014</b>     | <b>0.140</b>     |
| <b>Trans: Talega Hub to Talega Substation - Removal of Wood Pole Structures</b>         |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.012                  | 0.033           | 0.097            | 0.000            | 0.003             | 0.003              | 14.656           | 0.001            | 0.009            |
| Manlift   |      |    | 0.013                  | 0.063           | 0.093            | 0.000            | 0.007             | 0.006              | 10.051           | 0.001            | 0.009            |
| Chainsaw  |      |    | 0.002                  | 0.006           | 0.011            | 0.000            | 0.000             | 0.000              | 1.450            | 0.000            | 0.001            |
| Loader  |      |    | 0.010                  | 0.031           | 0.097            | 0.000            | 0.003             | 0.003              | 13.110           | 0.001            | 0.009            |
| Crane   |      |    | 0.013                  | 0.044           | 0.114            | 0.000            | 0.004             | 0.004              | 15.849           | 0.001            | 0.011            |
| <b>Subtotal</b>   |      |    | <b>0.050</b>           | <b>0.177</b>    | <b>0.412</b>     | <b>0.001</b>     | <b>0.018</b>      | <b>0.016</b>       | <b>55.116</b>    | <b>0.005</b>     | <b>0.039</b>     |
| <b>Total</b>  |      |    | <b>0.97</b>            | <b>3.55</b>     | <b>7.70</b>      | <b>0.01</b>      | <b>0.34</b>       | <b>0.30</b>        | <b>1077.55</b>   | <b>0.09</b>      | <b>0.73</b>      |

Table A-2  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Transmission Segment 1: Capistrano Substation Getaways

Segment 1: Capistrano Substation Getaways 138kV

| Equipment/Phase                             | Emission Factors |     |             |            |             |             |              |               |             |             |             |                 | Emissions   |                 |              |              |               |             |              |               |                 |             |              |
|---|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|
|   | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |
| <b>Trans: Capistrano Substation Getaway</b> | 2013             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Bulldozer                                   | DIESEL           | 350 | 0.3211      | 1.4228     | 2.7305      | 0.0026      | 0.1133       | 0.1008544     | 264.8725    | 0.0290      | 0.2594      | 1               | 6           | 11              | 1.93         | 8.54         | 16.38         | 0.02        | 0.68         | 0.61          | 1589.23         | 0.17        | 1.56         |
| Compactor                                   | DIESEL           | 250 | 0.1262      | 0.3887     | 1.3124      | 0.0017      | 0.0451       | 0.0401412     | 153.0898    | 0.0114      | 0.1247      | 1               | 4           | 44              | 0.50         | 1.55         | 5.25          | 0.01        | 0.18         | 0.16          | 612.36          | 0.05        | 0.50         |
| Loader                                      | DIESEL           | 200 | 0.1259      | 0.3685     | 1.2125      | 0.0017      | 0.0417       | 0.0371039     | 149.0       | 0.0114      | 0.1152      | 1               | 4           | 88              | 0.50         | 1.47         | 4.85          | 0.01        | 0.17         | 0.15          | 595.91          | 0.05        | 0.46         |
| CAT 416 Rubber Tire Backhoe                 | DIESEL           | 85  | 0.1281      | 0.4684     | 0.7862      | 0.0008      | 0.0669       | 0.0594977     | 64.9        | 0.0116      | 0.0747      | 1               | 4           | 88              | 0.51         | 1.87         | 3.14          | 0.00        | 0.27         | 0.24          | 259.58          | 0.05        | 0.30         |
| Water Truck                                 | DIESEL           | 175 | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 1               | 5           | 88              | 0.70         | 1.92         | 6.19          | 0.01        | 0.21         | 0.18          | 832.73          | 0.06        | 0.59         |
| Dump/Haul Truck                             | DIESEL           | 235 | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 1               | 3           | 88              | 0.42         | 1.15         | 3.71          | 0.01        | 0.12         | 0.11          | 499.64          | 0.04        | 0.35         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>4.57</b>  | <b>16.51</b> | <b>39.53</b>  | <b>0.05</b> | <b>1.62</b>  | <b>1.45</b>   | <b>4389.44</b>  | <b>0.41</b> | <b>3.76</b>  |
| <b>Trans: Capistrano Substation Getaway</b> | 2013             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Excavator                                   | DIESEL           | 300 | 0.1735      | 0.5271     | 1.4763      | 0.0023      | 0.0516       | 0.0459342     | 234         | 0.0157      | 0.1402      | 1               | 6           | 22              | 1.04         | 3.16         | 8.86          | 0.01        | 0.31         | 0.28          | 1402.41         | 0.09        | 0.84         |
| Crane                                       | DIESEL           | 399 | 0.1551      | 0.5292     | 1.4230      | 0.0018      | 0.0518       | 0.0461327     | 180.1       | 0.0140      | 0.1352      | 1               | 3           | 22              | 0.47         | 1.59         | 4.27          | 0.01        | 0.16         | 0.14          | 540.30          | 0.04        | 0.41         |
| Jack-n-Bore Machine                         | DIESEL           | 300 | 0.1452      | 0.5234     | 1.5187      | 0.0025      | 0.0491       | 0.0437136     | 254.2       | 0.0131      | 0.1443      | 1               | 4           | 22              | 0.58         | 2.09         | 6.07          | 0.01        | 0.20         | 0.17          | 1016.95         | 0.05        | 0.58         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.09</b>  | <b>6.84</b>  | <b>19.20</b>  | <b>0.03</b> | <b>0.66</b>  | <b>0.59</b>   | <b>2959.67</b>  | <b>0.19</b> | <b>1.82</b>  |
| <b>Trans: Capistrano Substation Getaway</b> | 2014             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Concrete Trucks                             | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 3           | 22              | 0.40         | 1.13         | 3.31          | 0.01        | 0.11         | 0.10          | 499.64          | 0.04        | 0.31         |
| Drill Rig                                   | DIESEL           | 82  | 0.0409      | 0.4684     | 0.4254      | 0.0009      | 0.0204       | 0.0181324     | 77.1        | 0.0037      | 0.0404      | 1               | 8           | 22              | 0.33         | 3.75         | 3.40          | 0.01        | 0.16         | 0.15          | 616.97          | 0.03        | 0.32         |
| CAT 416 Rubber Tire Backhoe                 | DIESEL           | 85  | 0.0902      | 0.4119     | 0.5654      | 0.0007      | 0.0477       | 0.0424203     | 58.9        | 0.0081      | 0.0537      | 1               | 3           | 22              | 0.27         | 1.24         | 1.70          | 0.00        | 0.14         | 0.13          | 176.74          | 0.02        | 0.16         |
| Dump Trucks                                 | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 22              | 0.27         | 0.75         | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>1.26</b>  | <b>6.86</b>  | <b>10.62</b>  | <b>0.02</b> | <b>0.49</b>  | <b>0.44</b>   | <b>1626.44</b>  | <b>0.11</b> | <b>1.01</b>  |
| <b>Trans: Capistrano Substation Getaway</b> | 2014             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Dump Trucks                                 | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 3           | 66              | 0.40         | 1.13         | 3.31          | 0.01        | 0.11         | 0.10          | 499.64          | 0.04        | 0.31         |
| Crane                                       | DIESEL           | 399 | 0.1468      | 0.4948     | 1.2979      | 0.0018      | 0.0470       | 0.041826      | 180.1       | 0.0132      | 0.1233      | 1               | 4           | 22              | 0.59         | 1.98         | 5.19          | 0.01        | 0.19         | 0.17          | 720.41          | 0.05        | 0.49         |
| Excavator                                   | DIESEL           | 300 | 0.1657      | 0.5102     | 1.3127      | 0.0023      | 0.0463       | 0.0412169     | 234         | 0.0149      | 0.1247      | 2               | 8           | 66              | 2.65         | 8.16         | 21.00         | 0.04        | 0.74         | 0.66          | 3739.77         | 0.24        | 2.00         |
| CAT 416 Rubber Tire Backhoe                 | DIESEL           | 85  | 0.0902      | 0.4119     | 0.5654      | 0.0007      | 0.0477       | 0.0424203     | 58.9        | 0.0081      | 0.0537      | 2               | 8           | 88              | 1.44         | 6.59         | 9.05          | 0.01        | 0.76         | 0.68          | 942.62          | 0.13        | 0.86         |
| Concrete Trucks                             | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 66              | 0.27         | 0.75         | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |
| Compactor                                   | DIESEL           | 250 | 0.1180      | 0.3717     | 1.2002      | 0.0017      | 0.0407       | 0.036263      | 153.0898    | 0.0106      | 0.1140      | 1               | 4           | 22              | 0.47         | 1.49         | 4.80          | 0.01        | 0.16         | 0.15          | 612.36          | 0.04        | 0.46         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>5.82</b>  | <b>20.10</b> | <b>45.57</b>  | <b>0.07</b> | <b>2.04</b>  | <b>1.81</b>   | <b>6847.87</b>  | <b>0.52</b> | <b>4.33</b>  |
| <b>Trans: Capistrano Substation Getaway</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                         | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 4           | 22              | 0.50         | 1.48         | 3.93          | 0.01        | 0.13         | 0.12          | 666.18          | 0.05        | 0.37         |
| Crane                                       | DIESEL           | 399 | 0.1393      | 0.4663     | 1.1812      | 0.0018      | 0.0426       | 0.0379443     | 180.1       | 0.0126      | 0.1122      | 1               | 4           | 22              | 0.56         | 1.87         | 4.72          | 0.01        | 0.17         | 0.15          | 720.41          | 0.05        | 0.45         |
| Manlift                                     | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 2               | 8           | 44              | 0.74         | 3.80         | 5.24          | 0.01        | 0.39         | 0.35          | 609.15          | 0.07        | 0.50         |
| Air Compressor                              | DIESEL           | 45  | 0.0747      | 0.2360     | 0.2056      | 0.0003      | 0.0183       | 0.0162811     | 22.3        | 0.0067      | 0.0195      | 3               | 8           | 44              | 1.79         | 5.66         | 4.93          | 0.01        | 0.44         | 0.39          | 534.51          | 0.16        | 0.47         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.59</b>  | <b>12.81</b> | <b>18.82</b>  | <b>0.03</b> | <b>1.13</b>  | <b>1.01</b>   | <b>2530.25</b>  | <b>0.32</b> | <b>1.79</b>  |
| <b>Trans: Capistrano Substation Getaway</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Manlift                                     | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 2               | 6           | 66              | 0.55         | 2.85         | 3.93          | 0.01        | 0.29         | 0.26          | 456.86          | 0.05        | 0.37         |
| Puller and Tensioner                        | DIESEL           | 300 | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 1               | 4           | 66              | 0.52         | 1.99         | 4.75          | 0.01        | 0.16         | 0.14          | 1016.95         | 0.05        | 0.45         |
| Reel Trailer                                | DIESEL           | 300 | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 1               | 4           | 66              | 0.52         | 1.99         | 4.75          | 0.01        | 0.16         | 0.14          | 1016.95         | 0.05        | 0.45         |
| Splice Trailer                              | DIESEL           | 300 | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 1               | 4           | 44              | 0.52         | 1.99         | 4.75          | 0.01        | 0.16         | 0.14          | 1016.95         | 0.05        | 0.45         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.12</b>  | <b>8.81</b>  | <b>18.17</b>  | <b>0.04</b> | <b>0.77</b>  | <b>0.68</b>   | <b>3507.72</b>  | <b>0.19</b> | <b>1.73</b>  |
| <b>Trans: Capistrano Substation Getaway</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                         | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 3           | 22              | 0.38         | 1.11         | 2.95          | 0.01        | 0.10         | 0.09          | 499.64          | 0.03        | 0.28         |
| Manlift                                     | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 2               | 6           | 22              | 0.55         | 2.85         | 3.93          | 0.01        | 0.29         | 0.26          | 456.86          | 0.05        | 0.37         |
| Manlift                                     | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 1               | 4           | 22              | 0.18         | 0.95         | 1.31          | 0.00        | 0.10         | 0.09          | 152.29          | 0.02        | 0.12         |
| Jackhammer                                  | DIESEL           | 25  | 0.0159      | 0.0544     | 0.1008      | 0.0002      | 0.0039       | 0.0034382     | 13.2        | 0.0014      | 0.0096      | 1               | 4           | 22              | 0.06         | 0.22         | 0.40          | 0.00        | 0.02         | 0.01          | 52.87           | 0.01        | 0.04         |
| Dump Trucks                                 | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 3           | 22              | 0.38         | 1.11         | 2.95          | 0.01        | 0.10         | 0.09          | 499.64          | 0.03        | 0.28         |
| Crane                                       | DIESEL           | 399 | 0.1393      | 0.4663     | 1.1812      | 0.0018      | 0.0426       | 0.0379443     | 180.1       | 0.0126      | 0.1122      | 1               | 4           | 6               | 0.56         | 1.87         | 4.72          | 0.01        | 0.17         | 0.15          | 720.41          | 0.05        | 0.45         |
| <b>Subtotal</b>                             |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.11</b>  | <b>8.11</b>  | <b>16.25</b>  | <b>0.03</b> | <b>0.78</b>  | <b>0.69</b>   | <b>2381.70</b>  | <b>0.19</b> | <b>1.54</b>  |
| <b>Total</b>                                |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>21.55</b> | <b>80.05</b> | <b>168.16</b> | <b>0.26</b> | <b>7.49</b>  | <b>6.67</b>   | <b>24243.10</b> | <b>1.94</b> | <b>15.97</b> |

Table A-2  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Transmission Segment 1: Capistrano Substation Getaways

| Equipment/Phase  | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |
|--|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Trans: Capistrano Substation Getaways - Site Development</b>                        |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer  |      |    | 0.011                  | 0.047           | 0.090            | 0.000            | 0.004             | 0.003              | 8.741            | 0.001            | 0.009            |
| Compactor  |      |    | 0.011                  | 0.034           | 0.115            | 0.000            | 0.004             | 0.004              | 13.472           | 0.001            | 0.011            |
| Loader   |      |    | 0.022                  | 0.065           | 0.213            | 0.000            | 0.007             | 0.007              | 26.220           | 0.002            | 0.020            |
| CAT 416 Rubber Tire Backhoe  |      |    | 0.023                  | 0.082           | 0.138            | 0.000            | 0.012             | 0.010              | 11.422           | 0.002            | 0.013            |
| Water Truck  |      |    | 0.031                  | 0.084           | 0.272            | 0.000            | 0.009             | 0.008              | 36.640           | 0.003            | 0.026            |
| Dump/Haul Truck  |      |    | 0.018                  | 0.051           | 0.163            | 0.000            | 0.005             | 0.005              | 21.984           | 0.002            | 0.016            |
| <b>Subtotal</b>  |      |    | <b>0.116</b>           | <b>0.363</b>    | <b>0.993</b>     | <b>0.001</b>     | <b>0.041</b>      | <b>0.037</b>       | <b>118.478</b>   | <b>0.010</b>     | <b>0.094</b>     |
| <b>Trans: Capistrano Substation Getaways - Bore Pits</b>                               |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Excavator  |      |    | 0.011                  | 0.035           | 0.097            | 0.000            | 0.003             | 0.003              | 15.427           | 0.001            | 0.009            |
| Crane  |      |    | 0.005                  | 0.017           | 0.047            | 0.000            | 0.002             | 0.002              | 5.943            | 0.000            | 0.004            |
| Jack-n-Bore Machine  |      |    | 0.006                  | 0.023           | 0.067            | 0.000            | 0.002             | 0.002              | 11.186           | 0.001            | 0.006            |
| <b>Subtotal</b>  |      |    | <b>0.023</b>           | <b>0.075</b>    | <b>0.211</b>     | <b>0.000</b>     | <b>0.007</b>      | <b>0.006</b>       | <b>32.556</b>    | <b>0.002</b>     | <b>0.020</b>     |
| <b>Trans: Capistrano Substation Getaways - Foundation Installations</b>                |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Concrete Trucks  |      |    | 0.004                  | 0.012           | 0.036            | 0.000            | 0.001             | 0.001              | 5.496            | 0.000            | 0.003            |
| Drill Rig  |      |    | 0.004                  | 0.041           | 0.037            | 0.000            | 0.002             | 0.002              | 6.787            | 0.000            | 0.004            |
| CAT 416 Rubber Tire Backhoe  |      |    | 0.003                  | 0.014           | 0.019            | 0.000            | 0.002             | 0.001              | 1.944            | 0.000            | 0.002            |
| Dump Trucks  |      |    | 0.003                  | 0.008           | 0.024            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| <b>Subtotal</b>  |      |    | <b>0.014</b>           | <b>0.076</b>    | <b>0.117</b>     | <b>0.000</b>     | <b>0.005</b>      | <b>0.005</b>       | <b>17.891</b>    | <b>0.001</b>     | <b>0.011</b>     |
| <b>Trans: Capistrano Substation Getaways - Underground Trench/Conduit/Substructure</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Dump Trucks  |      |    | 0.013                  | 0.037           | 0.109            | 0.000            | 0.004             | 0.003              | 16.488           | 0.001            | 0.010            |
| Crane  |      |    | 0.006                  | 0.022           | 0.057            | 0.000            | 0.002             | 0.002              | 7.924            | 0.001            | 0.005            |
| Excavator  |      |    | 0.087                  | 0.269           | 0.693            | 0.001            | 0.024             | 0.022              | 123.412          | 0.008            | 0.066            |
| CAT 416 Rubber Tire Backhoe  |      |    | 0.063                  | 0.290           | 0.398            | 0.000            | 0.034             | 0.030              | 41.475           | 0.006            | 0.038            |
| Concrete Trucks  |      |    | 0.009                  | 0.025           | 0.073            | 0.000            | 0.002             | 0.002              | 10.992           | 0.001            | 0.007            |
| Compactor  |      |    | 0.005                  | 0.016           | 0.053            | 0.000            | 0.002             | 0.002              | 6.736            | 0.000            | 0.005            |
| <b>Subtotal</b>  |      |    | <b>0.184</b>           | <b>0.660</b>    | <b>1.383</b>     | <b>0.002</b>     | <b>0.068</b>      | <b>0.060</b>       | <b>207.028</b>   | <b>0.017</b>     | <b>0.131</b>     |
| <b>Trans: Capistrano Substation Getaways - Steel Structure Installations</b>           |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck  |      |    | 0.006                  | 0.016           | 0.043            | 0.000            | 0.001             | 0.001              | 7.328            | 0.000            | 0.004            |
| Crane  |      |    | 0.006                  | 0.021           | 0.052            | 0.000            | 0.002             | 0.002              | 7.924            | 0.001            | 0.005            |
| Manlift  |      |    | 0.016                  | 0.084           | 0.115            | 0.000            | 0.009             | 0.008              | 13.401           | 0.001            | 0.011            |
| Air Compressor   |      |    | 0.039                  | 0.125           | 0.109            | 0.000            | 0.010             | 0.009              | 11.759           | 0.004            | 0.010            |
| <b>Subtotal</b>  |      |    | <b>0.067</b>           | <b>0.245</b>    | <b>0.319</b>     | <b>0.000</b>     | <b>0.022</b>      | <b>0.019</b>       | <b>40.413</b>    | <b>0.006</b>     | <b>0.030</b>     |
| <b>Trans: Capistrano Substation Getaways - Cable/Conductor Pulling and Tensioning</b>  |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift  |      |    | 0.018                  | 0.094           | 0.130            | 0.000            | 0.010             | 0.009              | 15.076           | 0.002            | 0.012            |
| Puller and Tensioner   |      |    | 0.017                  | 0.066           | 0.157            | 0.000            | 0.005             | 0.005              | 33.559           | 0.002            | 0.015            |
| Reel Trailer   |      |    | 0.017                  | 0.066           | 0.157            | 0.000            | 0.005             | 0.005              | 33.559           | 0.002            | 0.015            |
| Splice Trailer   |      |    | 0.012                  | 0.044           | 0.104            | 0.000            | 0.003             | 0.003              | 22.373           | 0.001            | 0.010            |
| <b>Subtotal</b>  |      |    | <b>0.064</b>           | <b>0.269</b>    | <b>0.547</b>     | <b>0.001</b>     | <b>0.024</b>      | <b>0.021</b>       | <b>104.568</b>   | <b>0.006</b>     | <b>0.052</b>     |
| <b>Trans: Capistrano Substation Getaways - Removal of Structures</b>                   |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck  |      |    | 0.004                  | 0.012           | 0.032            | 0.000            | 0.001             | 0.001              | 5.496            | 0.000            | 0.003            |
| Manlift  |      |    | 0.006                  | 0.031           | 0.043            | 0.000            | 0.003             | 0.003              | 5.025            | 0.001            | 0.004            |
| Manlift  |      |    | 0.002                  | 0.010           | 0.014            | 0.000            | 0.001             | 0.001              | 1.875            | 0.000            | 0.001            |
| Jackhammer   |      |    | 0.001                  | 0.002           | 0.004            | 0.000            | 0.000             | 0.000              | 0.582            | 0.000            | 0.000            |
| Dump Trucks  |      |    | 0.004                  | 0.012           | 0.032            | 0.000            | 0.001             | 0.001              | 5.496            | 0.000            | 0.003            |
| Crane  |      |    | 0.002                  | 0.006           | 0.014            | 0.000            | 0.001             | 0.000              | 2.161            | 0.000            | 0.001            |
| <b>Subtotal</b>  |      |    | <b>0.019</b>           | <b>0.074</b>    | <b>0.141</b>     | <b>0.000</b>     | <b>0.007</b>      | <b>0.006</b>       | <b>20.435</b>    | <b>0.002</b>     | <b>0.013</b>     |
| <b>Total</b>   |      |    | <b>0.49</b>            | <b>1.76</b>     | <b>3.71</b>      | <b>0.01</b>      | <b>0.17</b>       | <b>0.16</b>        | <b>541.37</b>    | <b>0.04</b>      | <b>0.35</b>      |

Table A-3  
 Construction Heavy Equipment Emissions  
 South Orange County Transmission Project  
 Segment 3: Talega to Rancho San Juan 230kV

Segment 3: Talega to Rancho San Juan 230 kV

| Equipment/Phase                              | Emission Factors |     |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |              |               |             |              |               |                 |             |              |  |
|--|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|--|
|  | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |  |
| <b>Trans: Talega to Rancho San Juan - S</b>  | 2014             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Bulldozer                                    | DIESEL           | 350 | 0.3072      | 1.3307     | 2.5592      | 0.0026      | 0.1058       | 0.0941749     | 264.8725    | 0.0277      | 0.2431      | 1               | 6           | 44              | 1.84         | 7.98         | 15.36         | 0.02        | 0.63         | 0.57          | 1589.23         | 0.17        | 1.46         |  |
| Road Grader/Blade                            | DIESEL           | 350 | 0.1759      | 0.5992     | 1.5242      | 0.0023      | 0.0550       | 0.0489226     | 229         | 0.0159      | 0.1448      | 1               | 8           | 22              | 1.41         | 4.79         | 12.19         | 0.02        | 0.44         | 0.39          | 1835.87         | 0.13        | 1.16         |  |
| Scraper                                      | DIESEL           | 350 | 0.3033      | 1.1355     | 2.6139      | 0.0032      | 0.1012       | 0.0901001     | 321.4284    | 0.0274      | 0.2483      | 1               | 8           | 22              | 2.43         | 9.08         | 20.91         | 0.03        | 0.81         | 0.72          | 2571.43         | 0.22        | 1.99         |  |
| Compactor                                    | DIESEL           | 250 | 0.1180      | 0.3717     | 1.2002      | 0.0017      | 0.0407       | 0.036263      | 153.0898    | 0.0106      | 0.1140      | 1               | 6           | 44              | 0.71         | 2.23         | 7.20          | 0.01        | 0.24         | 0.22          | 918.54          | 0.06        | 0.68         |  |
| Loader                                       | DIESEL           | 200 | 0.1186      | 0.3553     | 1.0966      | 0.0017      | 0.0375       | 0.0333776     | 149.0       | 0.0107      | 0.1042      | 2               | 6           | 66              | 1.42         | 4.26         | 13.16         | 0.02        | 0.45         | 0.40          | 1787.72         | 0.13        | 1.25         |  |
| Water Truck                                  | DIESEL           | 175 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 5           | 66              | 1.33         | 3.76         | 11.05         | 0.02        | 0.37         | 0.33          | 1665.45         | 0.12        | 1.05         |  |
| Dump/Haul Truck                              | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 4           | 44              | 1.06         | 3.01         | 8.84          | 0.01        | 0.29         | 0.26          | 1332.36         | 0.10        | 0.84         |  |
| Excavator                                    | DIESEL           | 300 | 0.1657      | 0.5102     | 1.3127      | 0.0023      | 0.0463       | 0.0412169     | 234         | 0.0149      | 0.1247      | 2               | 6           | 44              | 1.99         | 6.12         | 15.75         | 0.03        | 0.56         | 0.49          | 2804.82         | 0.18        | 1.50         |  |
| Drill Rig                                    | DIESEL           | 82  | 0.0409      | 0.4684     | 0.4254      | 0.0009      | 0.0204       | 0.0181324     | 77.1        | 0.0037      | 0.0404      | 1               | 8           | 22              | 0.33         | 3.75         | 3.40          | 0.01        | 0.16         | 0.15          | 616.97          | 0.03        | 0.32         |  |
| Small Crane                                  | DIESEL           | 75  | 0.0859      | 0.3587     | 0.5189      | 0.0006      | 0.0453       | 0.0403555     | 50.1        | 0.0078      | 0.0493      | 1               | 4           | 44              | 0.34         | 1.43         | 2.08          | 0.00        | 0.18         | 0.16          | 200.59          | 0.03        | 0.20         |  |
| Concrete Trucks                              | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 4           | 22              | 0.53         | 1.50         | 4.42          | 0.01        | 0.15         | 0.13          | 666.18          | 0.05        | 0.42         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>13.38</b> | <b>47.93</b> | <b>114.36</b> | <b>0.17</b> | <b>4.29</b>  | <b>3.82</b>   | <b>15989.19</b> | <b>1.21</b> | <b>10.86</b> |  |
| <b>Trans: Talega to Rancho San Juan - Fd</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Concrete Trucks                              | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 2               | 2           | 132             | 0.50         | 1.48         | 3.93          | 0.01        | 0.13         | 0.12          | 666.18          | 0.05        | 0.37         |  |
| Drill Rig                                    | DIESEL           | 82  | 0.0376      | 0.4676     | 0.3736      | 0.0009      | 0.0160       | 0.0142836     | 77.1        | 0.0034      | 0.0355      | 2               | 4           | 132             | 0.30         | 3.74         | 2.99          | 0.01        | 0.13         | 0.11          | 616.97          | 0.03        | 0.28         |  |
| CAT 416 Rubber Tire Backhoe                  | DIESEL           | 85  | 0.0835      | 0.4090     | 0.5226      | 0.0007      | 0.0431       | 0.0383212     | 58.9        | 0.0075      | 0.0496      | 2               | 6           | 132             | 1.00         | 4.91         | 6.27          | 0.01        | 0.52         | 0.46          | 706.96          | 0.09        | 0.60         |  |
| Dump Trucks                                  | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 3           | 132             | 0.80         | 2.26         | 6.63          | 0.01        | 0.22         | 0.20          | 999.27          | 0.07        | 0.63         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.60</b>  | <b>12.39</b> | <b>19.82</b>  | <b>0.03</b> | <b>1.00</b>  | <b>0.89</b>   | <b>2989.39</b>  | <b>0.23</b> | <b>1.88</b>  |  |
| <b>Trans: Talega to Rancho San Juan - S</b>  | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                          | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 2               | 2           | 132             | 0.50         | 1.48         | 3.93          | 0.01        | 0.13         | 0.12          | 666.18          | 0.05        | 0.37         |  |
| Crane  | DIESEL           | 399 | 0.1393      | 0.4663     | 1.1812      | 0.0018      | 0.0426       | 0.0379443     | 180.1       | 0.0126      | 0.1122      | 2               | 3           | 132             | 0.84         | 2.80         | 7.09          | 0.01        | 0.26         | 0.23          | 1080.61         | 0.08        | 0.67         |  |
| Manlift                                      | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 4               | 4           | 132             | 0.74         | 3.80         | 5.24          | 0.01        | 0.39         | 0.35          | 609.15          | 0.07        | 0.50         |  |
| Air Compressor                               | DIESEL           | 45  | 0.0747      | 0.2360     | 0.2056      | 0.0003      | 0.0183       | 0.0162811     | 22.3        | 0.0067      | 0.0195      | 3               | 8           | 132             | 1.79         | 5.66         | 4.93          | 0.01        | 0.44         | 0.39          | 534.51          | 0.16        | 0.47         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.87</b>  | <b>13.75</b> | <b>21.18</b>  | <b>0.03</b> | <b>1.22</b>  | <b>1.08</b>   | <b>2890.45</b>  | <b>0.35</b> | <b>2.01</b>  |  |
| <b>Trans: Talega to Rancho San Juan - C</b>  | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Manlift                                      | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 4               | 4           | 66              | 0.74         | 3.80         | 5.24          | 0.01        | 0.39         | 0.35          | 609.15          | 0.07        | 0.50         |  |
| Puller and Tensioner                         | DIESEL           | 300 | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 2               | 6           | 66              | 1.57         | 5.96         | 14.24         | 0.03        | 0.47         | 0.42          | 3050.86         | 0.14        | 1.35         |  |
| Reel Trailer                                 | DIESEL           | 300 | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 2               | 6           | 66              | 1.57         | 5.96         | 14.24         | 0.03        | 0.47         | 0.42          | 3050.86         | 0.14        | 1.35         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.88</b>  | <b>15.71</b> | <b>33.71</b>  | <b>0.07</b> | <b>1.34</b>  | <b>1.19</b>   | <b>6710.87</b>  | <b>0.35</b> | <b>3.20</b>  |  |
| <b>Trans: Talega to Rancho San Juan - R</b>  | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                          | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 2               | 2           | 132             | 0.50         | 1.48         | 3.93          | 0.01        | 0.13         | 0.12          | 666.18          | 0.05        | 0.37         |  |
| Manlift                                      | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 4               | 4           | 132             | 0.74         | 3.80         | 5.24          | 0.01        | 0.39         | 0.35          | 609.15          | 0.07        | 0.50         |  |
| Loader                                       | DIESEL           | 200 | 0.1118      | 0.3444     | 0.9890      | 0.0017      | 0.0337       | 0.0299803     | 149.0       | 0.0101      | 0.0940      | 2               | 3           | 132             | 0.67         | 2.07         | 5.93          | 0.01        | 0.20         | 0.18          | 893.86          | 0.06        | 0.56         |  |
| Jackhammer                                   | DIESEL           | 25  | 0.0159      | 0.0544     | 0.1008      | 0.0002      | 0.0039       | 0.0034382     | 13.2        | 0.0014      | 0.0096      | 1               | 3           | 132             | 0.05         | 0.16         | 0.30          | 0.00        | 0.01         | 0.01          | 39.65           | 0.00        | 0.03         |  |
| Dump/Haul Truck                              | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 2           | 132             | 0.25         | 0.74         | 1.96          | 0.00        | 0.07         | 0.06          | 333.09          | 0.02        | 0.19         |  |
| Small Crane                                  | DIESEL           | 75  | 0.1393      | 0.4663     | 1.1812      | 0.0018      | 0.0426       | 0.0379443     | 180.1       | 0.0126      | 0.1122      | 1               | 3           | 132             | 0.42         | 1.40         | 3.54          | 0.01        | 0.13         | 0.11          | 540.30          | 0.04        | 0.34         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.62</b>  | <b>9.65</b>  | <b>20.91</b>  | <b>0.03</b> | <b>0.93</b>  | <b>0.83</b>   | <b>3082.24</b>  | <b>0.24</b> | <b>1.99</b>  |  |
| <b>Total</b>                                 |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>26.35</b> | <b>99.44</b> | <b>209.98</b> | <b>0.34</b> | <b>8.78</b>  | <b>7.81</b>   | <b>31662.14</b> | <b>2.38</b> | <b>19.95</b> |  |

Table A-3  
Construction Heavy Equipment Emissions  
South Orange County Transmission Project  
Segment 3: Talega to Rancho San Juan 230kV

| Equipment/Phase  | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |
|--|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Trans: Talega to Rancho San Juan - Site Grading</b>                           |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer  |      |    | 0.041                  | 0.176           | 0.338            | 0.000            | 0.014             | 0.012              | 34.963           | 0.004            | 0.032            |
| Road Grader/Blade  |      |    | 0.015                  | 0.053           | 0.134            | 0.000            | 0.005             | 0.004              | 20.195           | 0.001            | 0.013            |
| Scraper  |      |    | 0.027                  | 0.100           | 0.230            | 0.000            | 0.009             | 0.008              | 28.286           | 0.002            | 0.022            |
| Compactor  |      |    | 0.016                  | 0.049           | 0.158            | 0.000            | 0.005             | 0.005              | 20.208           | 0.001            | 0.015            |
| Loader   |      |    | 0.047                  | 0.141           | 0.434            | 0.001            | 0.015             | 0.013              | 58.995           | 0.004            | 0.041            |
| Water Truck  |      |    | 0.044                  | 0.124           | 0.365            | 0.001            | 0.012             | 0.011              | 54.960           | 0.004            | 0.035            |
| Dump/Haul Truck  |      |    | 0.023                  | 0.066           | 0.194            | 0.000            | 0.006             | 0.006              | 29.312           | 0.002            | 0.018            |
| Excavator  |      |    | 0.044                  | 0.135           | 0.347            | 0.001            | 0.012             | 0.011              | 61.706           | 0.004            | 0.033            |
| Drill Rig  |      |    | 0.004                  | 0.041           | 0.037            | 0.000            | 0.002             | 0.002              | 6.787            | 0.000            | 0.004            |
| Small Crane  |      |    | 0.008                  | 0.032           | 0.046            | 0.000            | 0.004             | 0.004              | 4.413            | 0.001            | 0.004            |
| Concrete Trucks  |      |    | 0.006                  | 0.017           | 0.049            | 0.000            | 0.002             | 0.001              | 7.328            | 0.001            | 0.005            |
| <b>Subtotal</b>  |      |    | <b>0.273</b>           | <b>0.932</b>    | <b>2.332</b>     | <b>0.003</b>     | <b>0.086</b>      | <b>0.077</b>       | <b>327.152</b>   | <b>0.025</b>     | <b>0.222</b>     |
| <b>Trans: Talega to Rancho San Juan - Foundation Installations</b>               |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Concrete Trucks  |      |    | 0.033                  | 0.098           | 0.259            | 0.000            | 0.009             | 0.008              | 43.968           | 0.003            | 0.025            |
| Drill Rig  |      |    | 0.020                  | 0.247           | 0.197            | 0.000            | 0.008             | 0.008              | 40.720           | 0.002            | 0.019            |
| CAT 416 Rubber Tire Backhoe  |      |    | 0.066                  | 0.324           | 0.414            | 0.001            | 0.034             | 0.030              | 46.660           | 0.006            | 0.039            |
| Dump Trucks  |      |    | 0.052                  | 0.149           | 0.438            | 0.001            | 0.015             | 0.013              | 65.952           | 0.005            | 0.042            |
| <b>Subtotal</b>  |      |    | <b>0.171</b>           | <b>0.817</b>    | <b>1.308</b>     | <b>0.002</b>     | <b>0.066</b>      | <b>0.059</b>       | <b>197.300</b>   | <b>0.015</b>     | <b>0.124</b>     |
| <b>Trans: Talega to Rancho San Juan - Steel Structure Installations</b>          |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck  |      |    | 0.033                  | 0.098           | 0.259            | 0.000            | 0.009             | 0.008              | 43.968           | 0.003            | 0.025            |
| Crane  |      |    | 0.055                  | 0.185           | 0.468            | 0.001            | 0.017             | 0.015              | 71.320           | 0.005            | 0.044            |
| Manlift  |      |    | 0.049                  | 0.251           | 0.346            | 0.000            | 0.026             | 0.023              | 40.204           | 0.004            | 0.033            |
| Air Compressor   |      |    | 0.118                  | 0.374           | 0.326            | 0.000            | 0.029             | 0.026              | 35.278           | 0.011            | 0.031            |
| <b>Subtotal</b>  |      |    | <b>0.255</b>           | <b>0.907</b>    | <b>1.398</b>     | <b>0.002</b>     | <b>0.080</b>      | <b>0.072</b>       | <b>190.770</b>   | <b>0.023</b>     | <b>0.133</b>     |
| <b>Trans: Talega to Rancho San Juan - Cable/Conductor Pulling and Tensioning</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift  |      |    | 0.024                  | 0.126           | 0.173            | 0.000            | 0.013             | 0.012              | 20.102           | 0.002            | 0.016            |
| Puller and Tensioner   |      |    | 0.052                  | 0.197           | 0.470            | 0.001            | 0.016             | 0.014              | 100.678          | 0.005            | 0.045            |
| Reel Trailer   |      |    | 0.052                  | 0.197           | 0.470            | 0.001            | 0.016             | 0.014              | 100.678          | 0.005            | 0.045            |
| <b>Subtotal</b>  |      |    | <b>0.128</b>           | <b>0.519</b>    | <b>1.113</b>     | <b>0.002</b>     | <b>0.044</b>      | <b>0.039</b>       | <b>221.459</b>   | <b>0.012</b>     | <b>0.106</b>     |
| <b>Trans: Talega to Rancho San Juan - Removal of Wood Pole Structures</b>        |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck  |      |    | 0.033                  | 0.098           | 0.259            | 0.000            | 0.009             | 0.008              | 43.968           | 0.003            | 0.025            |
| Manlift  |      |    | 0.049                  | 0.251           | 0.346            | 0.000            | 0.026             | 0.023              | 40.204           | 0.004            | 0.033            |
| Loader   |      |    | 0.044                  | 0.136           | 0.392            | 0.001            | 0.013             | 0.012              | 58.995           | 0.004            | 0.037            |
| Jackhammer   |      |    | 0.003                  | 0.011           | 0.020            | 0.000            | 0.001             | 0.001              | 2.617            | 0.000            | 0.002            |
| Dump/Haul Truck  |      |    | 0.017                  | 0.049           | 0.130            | 0.000            | 0.004             | 0.004              | 21.984           | 0.001            | 0.012            |
| Small Crane  |      |    | 0.028                  | 0.092           | 0.234            | 0.000            | 0.008             | 0.008              | 35.660           | 0.002            | 0.022            |
| <b>Subtotal</b>  |      |    | <b>0.173</b>           | <b>0.637</b>    | <b>1.380</b>     | <b>0.002</b>     | <b>0.061</b>      | <b>0.055</b>       | <b>203.428</b>   | <b>0.016</b>     | <b>0.131</b>     |
| <b>Total</b>   |      |    | <b>1.00</b>            | <b>3.81</b>     | <b>7.53</b>      | <b>0.01</b>      | <b>0.34</b>       | <b>0.30</b>        | <b>1140.11</b>   | <b>0.09</b>      | <b>0.72</b>      |

Table A-4  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Segment 2: Rancho San Juan 230kV

Segment 2: Rancho San Juan 230 kV

| Equipment/Phase                              | Emission Factors |     |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |              |               |             |              |               |                 |             |              |  |
|--|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|--|
|  | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |  |
| <b>Trans: Rancho San Juan - Site Grading</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
|  | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Bulldozer                                    | DIESEL           | 350 | 0.2932      | 1.2456     | 2.3951      | 0.0026      | 0.0985       | 0.0876814     | 264.8726    | 0.0265      | 0.2275      | 1               | 4           | 22              | 1.17         | 4.98         | 9.58          | 0.01        | 0.39         | 0.35          | 1059.49         | 0.11        | 0.91         |  |
| Compactor                                    | DIESEL           | 250 | 0.1107      | 0.3575     | 1.0948      | 0.0017      | 0.0368       | 0.0327659     | 153.0898    | 0.0100      | 0.1040      | 1               | 4           | 22              | 0.44         | 1.43         | 4.38          | 0.01        | 0.15         | 0.13          | 612.36          | 0.04        | 0.42         |  |
| Loader                                       | DIESEL           | 200 | 0.1118      | 0.3444     | 0.9890      | 0.0017      | 0.0337       | 0.0299803     | 149.0       | 0.0101      | 0.0940      | 1               | 8           | 22              | 0.89         | 2.76         | 7.91          | 0.01        | 0.27         | 0.24          | 1191.81         | 0.08        | 0.75         |  |
| Water Truck                                  | DIESEL           | 175 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 8           | 22              | 1.00         | 2.96         | 7.85          | 0.01        | 0.26         | 0.23          | 1332.36         | 0.09        | 0.75         |  |
| Dump/Haul Truck                              | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 4           | 22              | 0.50         | 1.48         | 3.93          | 0.01        | 0.13         | 0.12          | 666.18          | 0.05        | 0.37         |  |
| Excavator                                    | DIESEL           | 300 | 0.1577      | 0.4964     | 1.1619      | 0.0023      | 0.0413       | 0.0367837     | 234         | 0.0142      | 0.1104      | 1               | 4           | 22              | 0.63         | 1.99         | 4.65          | 0.01        | 0.17         | 0.15          | 934.94          | 0.06        | 0.44         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>4.64</b>  | <b>15.60</b> | <b>38.30</b>  | <b>0.06</b> | <b>1.37</b>  | <b>1.22</b>   | <b>5797.15</b>  | <b>0.42</b> | <b>3.64</b>  |  |
| <b>Trans: Rancho San Juan - Foundation</b>   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
|  | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Concrete Trucks                              | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 44              | 0.27         | 0.75         | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |  |
| Drill Rig                                    | DIESEL           | 82  | 0.0376      | 0.4676     | 0.3736      | 0.0009      | 0.0160       | 0.0142836     | 77.1        | 0.0034      | 0.0355      | 1               | 3           | 66              | 0.11         | 1.40         | 1.12          | 0.00        | 0.05         | 0.04          | 231.37          | 0.01        | 0.11         |  |
| CAT 416 Rubber Tire Backhoe                  | DIESEL           | 85  | 0.0835      | 0.4090     | 0.5226      | 0.0007      | 0.0431       | 0.0383212     | 58.9        | 0.0075      | 0.0496      | 1               | 3           | 66              | 0.25         | 1.23         | 1.57          | 0.00        | 0.13         | 0.11          | 176.74          | 0.02        | 0.15         |  |
| Dump Trucks                                  | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 44              | 0.27         | 0.75         | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>0.89</b>  | <b>4.13</b>  | <b>7.11</b>   | <b>0.01</b> | <b>0.32</b>  | <b>0.29</b>   | <b>1074.29</b>  | <b>0.08</b> | <b>0.68</b>  |  |
| <b>Trans: Rancho San Juan - Undergroun</b>   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
|  | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Excavator                                    | DIESEL           | 300 | 0.1496      | 0.4851     | 1.0236      | 0.0023      | 0.0366       | 0.032587      | 234         | 0.0135      | 0.0972      | 2               | 8           | 44              | 2.39         | 7.76         | 16.38         | 0.04        | 0.59         | 0.52          | 3739.77         | 0.22        | 1.56         |  |
| Dump Trucks                                  | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 5           | 44              | 1.18         | 3.65         | 8.68          | 0.02        | 0.29         | 0.26          | 1665.45         | 0.11        | 0.82         |  |
| Small Crane                                  | DIESEL           | 75  | 0.0744      | 0.3533     | 0.4476      | 0.0006      | 0.0378       | 0.0336101     | 50.1        | 0.0067      | 0.0425      | 1               | 2           | 44              | 0.15         | 0.71         | 0.90          | 0.00        | 0.08         | 0.07          | 100.30          | 0.01        | 0.09         |  |
| CAT 416 Rubber Tire Backhoe                  | DIESEL           | 85  | 0.0773      | 0.4063     | 0.4828      | 0.0007      | 0.0387       | 0.034432      | 58.9        | 0.0070      | 0.0459      | 2               | 8           | 44              | 1.24         | 6.50         | 7.72          | 0.01        | 0.62         | 0.55          | 942.62          | 0.11        | 0.73         |  |
| Concrete Trucks                              | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 2           | 44              | 0.47         | 1.46         | 3.47          | 0.01        | 0.12         | 0.10          | 666.18          | 0.04        | 0.33         |  |
| Compactor                                    | DIESEL           | 250 | 0.1042      | 0.3463     | 0.9961      | 0.0017      | 0.0333       | 0.0296601     | 153.0899    | 0.0094      | 0.0946      | 1               | 2           | 44              | 0.21         | 0.69         | 1.99          | 0.00        | 0.07         | 0.06          | 306.18          | 0.02        | 0.19         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.24</b>  | <b>13.01</b> | <b>22.76</b>  | <b>0.04</b> | <b>1.17</b>  | <b>1.04</b>   | <b>3680.73</b>  | <b>0.29</b> | <b>2.16</b>  |  |
| <b>Trans: Rancho San Juan - Steel Struct</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
|  | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                          | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 2           | 11              | 0.24         | 0.73         | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| Crane  | DIESEL           | 399 | 0.1325      | 0.4431     | 1.0723      | 0.0018      | 0.0387       | 0.0344466     | 180.1       | 0.0120      | 0.1019      | 1               | 4           | 11              | 0.53         | 1.77         | 4.29          | 0.01        | 0.15         | 0.14          | 720.41          | 0.05        | 0.41         |  |
| Manlift                                      | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 2               | 8           | 11              | 0.66         | 3.77         | 4.83          | 0.01        | 0.35         | 0.31          | 609.15          | 0.06        | 0.46         |  |
| Air Compressor                               | DIESEL           | 45  | 0.0667      | 0.2281     | 0.1982      | 0.0003      | 0.0165       | 0.0146739     | 22.3        | 0.0060      | 0.0188      | 3               | 8           | 11              | 1.60         | 5.47         | 4.76          | 0.01        | 0.40         | 0.35          | 534.51          | 0.14        | 0.45         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.03</b>  | <b>11.75</b> | <b>15.62</b>  | <b>0.02</b> | <b>0.96</b>  | <b>0.85</b>   | <b>2197.16</b>  | <b>0.27</b> | <b>1.48</b>  |  |
| <b>Trans: Rancho San Juan - Cable/Cond</b>   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
|  | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Manlift                                      | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 4               | 6           | 44              | 0.99         | 5.65         | 7.25          | 0.01        | 0.53         | 0.47          | 913.72          | 0.09        | 0.69         |  |
| Puller and Tensioner                         | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 4           | 44              | 0.99         | 3.89         | 8.33          | 0.02        | 0.28         | 0.25          | 2033.91         | 0.09        | 0.79         |  |
| Reel Trailer                                 | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 4           | 44              | 0.99         | 3.89         | 8.33          | 0.02        | 0.28         | 0.25          | 2033.91         | 0.09        | 0.79         |  |
| Splice Trailer                               | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 4           | 44              | 0.99         | 3.89         | 8.33          | 0.02        | 0.28         | 0.25          | 2033.91         | 0.09        | 0.79         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.97</b>  | <b>17.34</b> | <b>32.25</b>  | <b>0.07</b> | <b>1.37</b>  | <b>1.22</b>   | <b>7015.45</b>  | <b>0.36</b> | <b>3.06</b>  |  |
| <b>Trans: Rancho San Juan - Removal of</b>   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
|  | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                          | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 4           | 11              | 0.47         | 1.46         | 3.47          | 0.01        | 0.12         | 0.10          | 666.18          | 0.04        | 0.33         |  |
| Manlift                                      | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 2               | 8           | 11              | 0.66         | 3.77         | 4.83          | 0.01        | 0.35         | 0.31          | 609.15          | 0.06        | 0.46         |  |
| Jackhammer                                   | DIESEL           | 25  | 0.0159      | 0.0544     | 0.1008      | 0.0002      | 0.0038       | 0.003396      | 13.2        | 0.0014      | 0.0096      | 2               | 6           | 11              | 0.19         | 0.65         | 1.21          | 0.00        | 0.05         | 0.04          | 158.61          | 0.02        | 0.11         |  |
| Loader                                       | DIESEL           | 200 | 0.1056      | 0.3357     | 0.8897      | 0.0017      | 0.0302       | 0.0269188     | 149.0       | 0.0095      | 0.0845      | 1               | 4           | 11              | 0.42         | 1.34         | 3.56          | 0.01        | 0.12         | 0.11          | 595.91          | 0.04        | 0.34         |  |
| Dump Trucks                                  | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 2           | 11              | 0.24         | 0.73         | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| Crane  | DIESEL           | 399 | 0.1325      | 0.4431     | 1.0723      | 0.0018      | 0.0387       | 0.0344466     | 180.1       | 0.0120      | 0.1019      | 1               | 2           | 11              | 0.26         | 0.89         | 2.14          | 0.00        | 0.08         | 0.07          | 360.20          | 0.02        | 0.20         |  |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.25</b>  | <b>8.84</b>  | <b>16.95</b>  | <b>0.03</b> | <b>0.77</b>  | <b>0.68</b>   | <b>2723.14</b>  | <b>0.20</b> | <b>1.61</b>  |  |
| <b>Total</b>                                 |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>18.03</b> | <b>70.67</b> | <b>132.99</b> | <b>0.24</b> | <b>5.96</b>  | <b>5.30</b>   | <b>22487.91</b> | <b>1.63</b> | <b>12.63</b> |  |

Table A-4  
 Construction Heavy Equipment Emissions  
 South Orange County Reliability Project  
 Segment 2: Rancho San Juan 230kV

| Emission, tons (total)  |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
|---|------|----|------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
| Equipment/Phase   | FUEL | HP | ROG tons (total) | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Trans: Rancho San Juan - Site Grading</b>                            |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer   |      |    | 0.013            | 0.055           | 0.105            | 0.000            | 0.004             | 0.004              | 11.654           | 0.001            | 0.010            |
| Compactor   |      |    | 0.005            | 0.016           | 0.048            | 0.000            | 0.002             | 0.001              | 6.736            | 0.000            | 0.005            |
| Loader  |      |    | 0.010            | 0.030           | 0.087            | 0.000            | 0.003             | 0.003              | 13.110           | 0.001            | 0.008            |
| Water Truck   |      |    | 0.011            | 0.033           | 0.086            | 0.000            | 0.003             | 0.003              | 14.656           | 0.001            | 0.008            |
| Dump/Haul Truck   |      |    | 0.006            | 0.016           | 0.043            | 0.000            | 0.001             | 0.001              | 7.328            | 0.000            | 0.004            |
| Excavator   |      |    | 0.007            | 0.022           | 0.051            | 0.000            | 0.002             | 0.002              | 10.284           | 0.001            | 0.005            |
| <b>Subtotal</b>   |      |    | <b>0.051</b>     | <b>0.172</b>    | <b>0.421</b>     | <b>0.001</b>     | <b>0.015</b>      | <b>0.013</b>       | <b>63.769</b>    | <b>0.005</b>     | <b>0.040</b>     |
| <b>Trans: Rancho San Juan - Foundation Installations</b>                |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Concrete Trucks   |      |    | 0.006            | 0.017           | 0.049            | 0.000            | 0.002             | 0.001              | 7.328            | 0.001            | 0.005            |
| Drill Rig   |      |    | 0.004            | 0.046           | 0.037            | 0.000            | 0.002             | 0.001              | 7.635            | 0.000            | 0.004            |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.008            | 0.040           | 0.052            | 0.000            | 0.004             | 0.004              | 5.832            | 0.001            | 0.005            |
| Dump Trucks   |      |    | 0.006            | 0.017           | 0.049            | 0.000            | 0.002             | 0.001              | 7.328            | 0.001            | 0.005            |
| <b>Subtotal</b>   |      |    | <b>0.024</b>     | <b>0.120</b>    | <b>0.186</b>     | <b>0.000</b>     | <b>0.009</b>      | <b>0.008</b>       | <b>28.123</b>    | <b>0.002</b>     | <b>0.018</b>     |
| <b>Trans: Rancho San Juan - Underground Trench/Conduit/Substructure</b> |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Dump Trucks   |      |    | 0.026            | 0.080           | 0.191            | 0.000            | 0.006             | 0.006              | 36.640           | 0.002            | 0.018            |
| Small Crane   |      |    | 0.003            | 0.016           | 0.020            | 0.000            | 0.002             | 0.001              | 2.207            | 0.000            | 0.002            |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.027            | 0.143           | 0.170            | 0.000            | 0.014             | 0.012              | 20.738           | 0.002            | 0.016            |
| Concrete Trucks   |      |    | 0.010            | 0.032           | 0.076            | 0.000            | 0.003             | 0.002              | 14.656           | 0.001            | 0.007            |
| Compactor   |      |    | 0.005            | 0.015           | 0.044            | 0.000            | 0.001             | 0.001              | 6.736            | 0.000            | 0.004            |
| <b>Subtotal</b>   |      |    | <b>0.071</b>     | <b>0.286</b>    | <b>0.501</b>     | <b>0.001</b>     | <b>0.026</b>      | <b>0.023</b>       | <b>80.976</b>    | <b>0.006</b>     | <b>0.048</b>     |
| <b>Trans: Rancho San Juan - Steel Structure Installations</b>           |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.001            | 0.004           | 0.010            | 0.000            | 0.000             | 0.000              | 1.832            | 0.000            | 0.001            |
| Crane   |      |    | 0.003            | 0.010           | 0.024            | 0.000            | 0.001             | 0.001              | 3.962            | 0.000            | 0.002            |
| Manlift   |      |    | 0.004            | 0.021           | 0.027            | 0.000            | 0.002             | 0.002              | 3.350            | 0.000            | 0.003            |
| Air Compressor  |      |    | 0.009            | 0.030           | 0.026            | 0.000            | 0.002             | 0.002              | 2.940            | 0.001            | 0.002            |
| <b>Subtotal</b>   |      |    | <b>0.017</b>     | <b>0.065</b>    | <b>0.086</b>     | <b>0.000</b>     | <b>0.005</b>      | <b>0.005</b>       | <b>12.084</b>    | <b>0.002</b>     | <b>0.008</b>     |
| <b>Trans: Rancho San Juan - Cable/Conductor Pulling and Tensioning</b>  |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift   |      |    | 0.022            | 0.124           | 0.160            | 0.000            | 0.012             | 0.010              | 20.102           | 0.002            | 0.015            |
| Puller and Tensioner  |      |    | 0.022            | 0.086           | 0.183            | 0.000            | 0.006             | 0.005              | 44.746           | 0.002            | 0.017            |
| Reel Trailer  |      |    | 0.022            | 0.086           | 0.183            | 0.000            | 0.006             | 0.005              | 44.746           | 0.002            | 0.017            |
| Splice Trailer  |      |    | 0.022            | 0.086           | 0.183            | 0.000            | 0.006             | 0.005              | 44.746           | 0.002            | 0.017            |
| <b>Subtotal</b>   |      |    | <b>0.087</b>     | <b>0.381</b>    | <b>0.709</b>     | <b>0.002</b>     | <b>0.030</b>      | <b>0.027</b>       | <b>154.340</b>   | <b>0.008</b>     | <b>0.067</b>     |
| <b>Trans: Rancho San Juan - Removal of Steel Riser Structures</b>       |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.003            | 0.008           | 0.019            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Manlift   |      |    | 0.004            | 0.021           | 0.027            | 0.000            | 0.002             | 0.002              | 3.350            | 0.000            | 0.003            |
| Jackhammer  |      |    | 0.001            | 0.004           | 0.007            | 0.000            | 0.000             | 0.000              | 0.872            | 0.000            | 0.001            |
| Loader  |      |    | 0.002            | 0.007           | 0.020            | 0.000            | 0.001             | 0.001              | 3.277            | 0.000            | 0.002            |
| Dump Trucks   |      |    | 0.001            | 0.004           | 0.010            | 0.000            | 0.000             | 0.000              | 1.832            | 0.000            | 0.001            |
| Crane   |      |    | 0.001            | 0.005           | 0.012            | 0.000            | 0.000             | 0.000              | 1.961            | 0.000            | 0.001            |
| <b>Subtotal</b>   |      |    | <b>0.012</b>     | <b>0.049</b>    | <b>0.093</b>     | <b>0.000</b>     | <b>0.004</b>      | <b>0.004</b>       | <b>14.977</b>    | <b>0.001</b>     | <b>0.009</b>     |
| <b>Total</b>  |      |    | <b>0.26</b>      | <b>1.07</b>     | <b>2.00</b>      | <b>0.00</b>      | <b>0.09</b>       | <b>0.08</b>        | <b>354.27</b>    | <b>0.02</b>      | <b>0.19</b>      |

Table A-5  
 Construction Heavy Equipment Emissions  
 South Orange County Reliability Project  
 Transmission Segment 1: Rancho San Juan to San Juan Capistrano

Segment 1: Rancho San Juan to San Juan Capistrano

| Equipment/Phase                           | Emission Factors |     |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |              |               |             |              |               |                 |             |              |  |
|---|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|--|
|   | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |  |
| <b>Trans: Rancho San Juan to San Juan</b> | 2014             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Bulldozer                                 | DIESEL           | 350 | 0.3072      | 1.3307     | 2.5592      | 0.0026      | 0.1058       | 0.0941749     | 264.8725    | 0.0277      | 0.2431      | 1               | 6           | 44              | 1.84         | 7.98         | 15.36         | 0.02        | 0.63         | 0.57          | 1589.23         | 0.17        | 1.46         |  |
| Road Grader/Blade                         | DIESEL           | 350 | 0.1759      | 0.5992     | 1.5242      | 0.0023      | 0.0550       | 0.0489226     | 229         | 0.0159      | 0.1448      | 1               | 8           | 22              | 1.41         | 4.79         | 12.19         | 0.02        | 0.44         | 0.39          | 1835.87         | 0.13        | 1.16         |  |
| Scraper                                   | DIESEL           | 350 | 0.3033      | 1.1355     | 2.6139      | 0.0032      | 0.1012       | 0.0901001     | 321.4284    | 0.0274      | 0.2483      | 1               | 8           | 22              | 2.43         | 9.08         | 20.91         | 0.03        | 0.81         | 0.72          | 2571.43         | 0.22        | 1.99         |  |
| Compactor                                 | DIESEL           | 250 | 0.1180      | 0.3717     | 1.2002      | 0.0017      | 0.0407       | 0.036263      | 153.0898    | 0.0106      | 0.1140      | 1               | 6           | 44              | 0.71         | 2.23         | 7.20          | 0.01        | 0.24         | 0.22          | 918.54          | 0.06        | 0.68         |  |
| Loader                                    | DIESEL           | 200 | 0.1186      | 0.3553     | 1.0966      | 0.0017      | 0.0375       | 0.0333776     | 149.0       | 0.0107      | 0.1042      | 2               | 6           | 66              | 1.42         | 4.26         | 13.16         | 0.02        | 0.45         | 0.40          | 1787.72         | 0.13        | 1.25         |  |
| Water Truck                               | DIESEL           | 175 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 6           | 66              | 0.80         | 2.26         | 6.63          | 0.01        | 0.22         | 0.20          | 999.27          | 0.07        | 0.63         |  |
| Dump/Haul Truck                           | DIESEL           | 335 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 4           | 44              | 1.06         | 3.01         | 8.84          | 0.01        | 0.29         | 0.26          | 1332.36         | 0.10        | 0.84         |  |
| Excavator                                 | DIESEL           | 300 | 0.1657      | 0.5102     | 1.3127      | 0.0023      | 0.0463       | 0.0412169     | 234         | 0.0149      | 0.1247      | 2               | 6           | 44              | 1.99         | 6.12         | 15.75         | 0.03        | 0.56         | 0.49          | 2804.82         | 0.18        | 1.50         |  |
| Drill Rig                                 | DIESEL           | 82  | 0.0409      | 0.4684     | 0.4254      | 0.0009      | 0.0204       | 0.0181324     | 77.1        | 0.0037      | 0.0404      | 1               | 8           | 22              | 0.33         | 3.75         | 3.40          | 0.01        | 0.16         | 0.15          | 616.97          | 0.03        | 0.32         |  |
| Small Crane                               | DIESEL           | 75  | 0.0859      | 0.3587     | 0.5189      | 0.0006      | 0.0453       | 0.0403555     | 50.1        | 0.0078      | 0.0493      | 1               | 4           | 44              | 0.34         | 1.43         | 2.08          | 0.00        | 0.18         | 0.16          | 200.59          | 0.03        | 0.20         |  |
| Concrete Trucks                           | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 4           | 22              | 0.53         | 1.50         | 4.42          | 0.01        | 0.15         | 0.13          | 666.18          | 0.05        | 0.42         |  |
| <b>Subtotal</b>                           |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>12.85</b> | <b>46.43</b> | <b>109.94</b> | <b>0.16</b> | <b>4.14</b>  | <b>3.69</b>   | <b>15323.00</b> | <b>1.16</b> | <b>10.44</b> |  |
| <b>Trans: Rancho San Juan to San Juan</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Concrete Trucks                           | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 2           | 66              | 0.25         | 0.74         | 1.96          | 0.00        | 0.07         | 0.06          | 333.09          | 0.02        | 0.19         |  |
| Drill Rig                                 | DIESEL           | 82  | 0.0376      | 0.4676     | 0.3736      | 0.0009      | 0.0160       | 0.0142836     | 77.1        | 0.0034      | 0.0355      | 1               | 4           | 66              | 0.15         | 1.87         | 1.49          | 0.00        | 0.06         | 0.06          | 308.49          | 0.01        | 0.14         |  |
| CAT 416 Rubber Tire Backhoe               | DIESEL           | 85  | 0.0835      | 0.4090     | 0.5226      | 0.0007      | 0.0431       | 0.0383212     | 58.9        | 0.0075      | 0.0496      | 1               | 6           | 66              | 0.50         | 2.45         | 3.14          | 0.00        | 0.26         | 0.23          | 353.48          | 0.05        | 0.30         |  |
| Dump Trucks                               | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 3           | 66              | 0.40         | 1.13         | 3.31          | 0.01        | 0.11         | 0.10          | 499.64          | 0.04        | 0.31         |  |
| <b>Subtotal</b>                           |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>1.30</b>  | <b>6.19</b>  | <b>9.91</b>   | <b>0.02</b> | <b>0.50</b>  | <b>0.44</b>   | <b>1494.70</b>  | <b>0.12</b> | <b>0.94</b>  |  |
| <b>Trans: Rancho San Juan to San Juan</b> | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                       | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 2           | 132             | 0.47         | 1.46         | 3.47          | 0.01        | 0.12         | 0.10          | 666.18          | 0.04        | 0.33         |  |
| Crane                                     | DIESEL           | 399 | 0.1325      | 0.4431     | 1.0723      | 0.0018      | 0.0387       | 0.0344466     | 180.1       | 0.0120      | 0.1019      | 2               | 3           | 132             | 0.79         | 2.66         | 6.43          | 0.01        | 0.23         | 0.21          | 1080.61         | 0.07        | 0.61         |  |
| Manlift                                   | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 4               | 4           | 132             | 0.66         | 3.77         | 4.83          | 0.01        | 0.35         | 0.31          | 609.15          | 0.06        | 0.46         |  |
| Air Compressor                            | DIESEL           | 45  | 0.0667      | 0.2281     | 0.1982      | 0.0003      | 0.0165       | 0.0146739     | 22.3        | 0.0060      | 0.0188      | 3               | 8           | 132             | 1.60         | 5.47         | 4.76          | 0.01        | 0.40         | 0.35          | 534.51          | 0.14        | 0.45         |  |
| <b>Subtotal</b>                           |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.53</b>  | <b>13.36</b> | <b>19.50</b>  | <b>0.03</b> | <b>1.09</b>  | <b>0.97</b>   | <b>2890.45</b>  | <b>0.32</b> | <b>1.85</b>  |  |
| <b>Trans: Rancho San Juan to San Juan</b> | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| Manlift                                   | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 4               | 4           | 66              | 0.66         | 3.77         | 4.83          | 0.01        | 0.35         | 0.31          | 609.15          | 0.06        | 0.46         |  |
| Puller and Tensioner                      | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 6           | 66              | 1.49         | 5.84         | 12.50         | 0.03        | 0.42         | 0.37          | 3050.86         | 0.13        | 1.19         |  |
| Reel Trailer                              | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 6           | 66              | 1.49         | 5.84         | 12.50         | 0.03        | 0.42         | 0.37          | 3050.86         | 0.13        | 1.19         |  |
| <b>Subtotal</b>                           |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.64</b>  | <b>15.45</b> | <b>29.83</b>  | <b>0.07</b> | <b>1.19</b>  | <b>1.06</b>   | <b>6710.87</b>  | <b>0.33</b> | <b>2.83</b>  |  |
| <b>Trans: Rancho San Juan to San Juan</b> | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                       | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 2           | 132             | 0.24         | 0.73         | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| Manlift                                   | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 2               | 4           | 132             | 0.33         | 1.88         | 2.42          | 0.00        | 0.18         | 0.16          | 304.57          | 0.03        | 0.23         |  |
| Jackhammer                                | DIESEL           | 25  | 0.0159      | 0.0544     | 0.1008      | 0.0002      | 0.0038       | 0.003396      | 13.2        | 0.0014      | 0.0096      | 1               | 3           | 132             | 0.05         | 0.16         | 0.30          | 0.00        | 0.01         | 0.01          | 39.65           | 0.00        | 0.03         |  |
| Loader                                    | DIESEL           | 200 | 0.1056      | 0.3357     | 0.8897      | 0.0017      | 0.0302       | 0.0269188     | 149.0       | 0.0095      | 0.0845      | 1               | 3           | 132             | 0.32         | 1.01         | 2.67          | 0.01        | 0.09         | 0.08          | 446.93          | 0.03        | 0.25         |  |
| Dump Trucks                               | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 2           | 132             | 0.24         | 0.73         | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| Crane                                     | DIESEL           | 399 | 0.1325      | 0.4431     | 1.0723      | 0.0018      | 0.0387       | 0.0344466     | 180.1       | 0.0120      | 0.1019      | 1               | 3           | 132             | 0.40         | 1.33         | 3.22          | 0.01        | 0.12         | 0.10          | 540.30          | 0.04        | 0.31         |  |
| <b>Subtotal</b>                           |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>1.56</b>  | <b>5.84</b>  | <b>12.08</b>  | <b>0.02</b> | <b>0.51</b>  | <b>0.45</b>   | <b>1997.64</b>  | <b>0.14</b> | <b>1.15</b>  |  |
| <b>Total</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>22.89</b> | <b>87.28</b> | <b>181.25</b> | <b>0.30</b> | <b>7.44</b>  | <b>6.62</b>   | <b>28416.66</b> | <b>2.07</b> | <b>17.22</b> |  |

Table A-5  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Transmission Segment 1: Rancho San Juan to San Juan Capistrano

| Equipment/Phase   | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |
|---|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|   |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Trans: Rancho San Juan to San Juan Capistrano - Site Grading</b>                           |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer   |      |    | 0.041                  | 0.176           | 0.338            | 0.000            | 0.014             | 0.012              | 34.963           | 0.004            | 0.032            |
| Road Grader/Blade   |      |    | 0.015                  | 0.053           | 0.134            | 0.000            | 0.005             | 0.004              | 20.195           | 0.001            | 0.013            |
| Scraper   |      |    | 0.027                  | 0.100           | 0.230            | 0.000            | 0.009             | 0.008              | 28.286           | 0.002            | 0.022            |
| Compactor   |      |    | 0.016                  | 0.049           | 0.158            | 0.000            | 0.005             | 0.005              | 20.208           | 0.001            | 0.015            |
| Loader  |      |    | 0.047                  | 0.141           | 0.434            | 0.001            | 0.015             | 0.013              | 58.995           | 0.004            | 0.041            |
| Water Truck   |      |    | 0.026                  | 0.074           | 0.219            | 0.000            | 0.007             | 0.006              | 32.976           | 0.002            | 0.021            |
| Dump/Haul Truck   |      |    | 0.023                  | 0.066           | 0.194            | 0.000            | 0.006             | 0.006              | 29.312           | 0.002            | 0.018            |
| Excavator   |      |    | 0.044                  | 0.135           | 0.347            | 0.001            | 0.012             | 0.011              | 61.706           | 0.004            | 0.033            |
| Drill Rig   |      |    | 0.004                  | 0.041           | 0.037            | 0.000            | 0.002             | 0.002              | 6.787            | 0.000            | 0.004            |
| Small Crane   |      |    | 0.008                  | 0.032           | 0.046            | 0.000            | 0.004             | 0.004              | 4.413            | 0.001            | 0.004            |
| Concrete Trucks   |      |    | 0.006                  | 0.017           | 0.049            | 0.000            | 0.002             | 0.001              | 7.328            | 0.001            | 0.005            |
| <b>Subtotal</b>   |      |    | <b>0.256</b>           | <b>0.883</b>    | <b>2.186</b>     | <b>0.003</b>     | <b>0.081</b>      | <b>0.072</b>       | <b>305.168</b>   | <b>0.023</b>     | <b>0.208</b>     |
| <b>Trans: Rancho San Juan to San Juan Capistrano - Foundation Installations</b>               |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Concrete Trucks   |      |    | 0.008                  | 0.024           | 0.065            | 0.000            | 0.002             | 0.002              | 10.992           | 0.001            | 0.006            |
| Drill Rig   |      |    | 0.005                  | 0.062           | 0.049            | 0.000            | 0.002             | 0.002              | 10.180           | 0.000            | 0.005            |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.017                  | 0.081           | 0.103            | 0.000            | 0.009             | 0.008              | 11.665           | 0.001            | 0.010            |
| Dump Trucks   |      |    | 0.013                  | 0.037           | 0.109            | 0.000            | 0.004             | 0.003              | 16.488           | 0.001            | 0.010            |
| <b>Subtotal</b>   |      |    | <b>0.043</b>           | <b>0.204</b>    | <b>0.327</b>     | <b>0.001</b>     | <b>0.016</b>      | <b>0.015</b>       | <b>49.325</b>    | <b>0.004</b>     | <b>0.031</b>     |
| <b>Trans: Rancho San Juan to San Juan Capistrano - Steel Structure Installations</b>          |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.031                  | 0.096           | 0.229            | 0.000            | 0.008             | 0.007              | 43.968           | 0.003            | 0.022            |
| Crane   |      |    | 0.052                  | 0.175           | 0.425            | 0.001            | 0.015             | 0.014              | 71.320           | 0.005            | 0.040            |
| Manlift   |      |    | 0.044                  | 0.249           | 0.319            | 0.000            | 0.023             | 0.021              | 40.204           | 0.004            | 0.030            |
| Air Compressor  |      |    | 0.106                  | 0.361           | 0.314            | 0.000            | 0.026             | 0.023              | 35.278           | 0.010            | 0.030            |
| <b>Subtotal</b>   |      |    | <b>0.233</b>           | <b>0.882</b>    | <b>1.287</b>     | <b>0.002</b>     | <b>0.072</b>      | <b>0.064</b>       | <b>190.770</b>   | <b>0.021</b>     | <b>0.122</b>     |
| <b>Trans: Rancho San Juan to San Juan Capistrano - Cable/Conductor Pulling and Tensioning</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift   |      |    | 0.022                  | 0.124           | 0.160            | 0.000            | 0.012             | 0.010              | 20.102           | 0.002            | 0.015            |
| Puller and Tensioner  |      |    | 0.049                  | 0.193           | 0.412            | 0.001            | 0.014             | 0.012              | 100.678          | 0.004            | 0.039            |
| Reel Trailer  |      |    | 0.049                  | 0.193           | 0.412            | 0.001            | 0.014             | 0.012              | 100.678          | 0.004            | 0.039            |
| <b>Subtotal</b>   |      |    | <b>0.120</b>           | <b>0.510</b>    | <b>0.984</b>     | <b>0.002</b>     | <b>0.039</b>      | <b>0.035</b>       | <b>221.459</b>   | <b>0.011</b>     | <b>0.094</b>     |
| <b>Trans: Rancho San Juan to San Juan Capistrano - Removal of Wood Pole Structures</b>        |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.016                  | 0.048           | 0.115            | 0.000            | 0.004             | 0.003              | 21.984           | 0.001            | 0.011            |
| Manlift   |      |    | 0.022                  | 0.124           | 0.160            | 0.000            | 0.012             | 0.010              | 20.102           | 0.002            | 0.015            |
| Jackhammer  |      |    | 0.003                  | 0.011           | 0.020            | 0.000            | 0.001             | 0.001              | 2.617            | 0.000            | 0.002            |
| Loader  |      |    | 0.021                  | 0.066           | 0.176            | 0.000            | 0.006             | 0.005              | 29.497           | 0.002            | 0.017            |
| Dump Trucks   |      |    | 0.016                  | 0.048           | 0.115            | 0.000            | 0.004             | 0.003              | 21.984           | 0.001            | 0.011            |
| Crane   |      |    | 0.026                  | 0.088           | 0.212            | 0.000            | 0.008             | 0.007              | 35.660           | 0.002            | 0.020            |
| <b>Subtotal</b>   |      |    | <b>0.103</b>           | <b>0.386</b>    | <b>0.797</b>     | <b>0.001</b>     | <b>0.034</b>      | <b>0.030</b>       | <b>131.844</b>   | <b>0.009</b>     | <b>0.076</b>     |
| <b>Total</b>  |      |    | <b>0.75</b>            | <b>2.86</b>     | <b>5.58</b>      | <b>0.01</b>      | <b>0.24</b>       | <b>0.22</b>        | <b>898.57</b>    | <b>0.07</b>      | <b>0.53</b>      |

Table A-6  
 Construction Heavy Equipment Emissions  
 South Orange County Reliability Project  
 Transmission Segment 4: Talega Hub to Talega Substation 230kV

Segment 4: Talega Hub to Talega Substation 230 kV 230kV

| Equipment/Phase                              | Emission Factors |     |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |              |               |             |              |               |                 |             |              |
|--|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|
|  | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |
| <b>Trans: Talega Hub to Talega Substatio</b> | 2014             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Bulldozer                                    | DIESEL           | 350 | 0.3072      | 1.3307     | 2.5592      | 0.0026      | 0.1058       | 0.0941749     | 264.8725    | 0.0277      | 0.2431      | 1               | 6           | 11              | 1.84         | 7.98         | 15.36         | 0.02        | 0.63         | 0.57          | 1589.23         | 0.17        | 1.46         |
| Road Grader/Blade                            | DIESEL           | 350 | 0.1759      | 0.5992     | 1.5242      | 0.0023      | 0.0550       | 0.0489226     | 229         | 0.0159      | 0.1448      | 1               | 8           | 11              | 1.41         | 4.79         | 12.19         | 0.02        | 0.44         | 0.39          | 1835.87         | 0.13        | 1.16         |
| Scraper                                      | DIESEL           | 350 | 0.3033      | 1.1355     | 2.6139      | 0.0032      | 0.1012       | 0.0901001     | 321.4284    | 0.0274      | 0.2483      | 1               | 3           | 11              | 0.91         | 3.41         | 7.84          | 0.01        | 0.30         | 0.27          | 964.29          | 0.08        | 0.74         |
| Compactor                                    | DIESEL           | 250 | 0.1180      | 0.3717     | 1.2002      | 0.0017      | 0.0407       | 0.036263      | 153.0898    | 0.0106      | 0.1140      | 1               | 2           | 44              | 0.24         | 0.74         | 2.40          | 0.00        | 0.08         | 0.07          | 306.18          | 0.02        | 0.23         |
| Loader                                       | DIESEL           | 200 | 0.1186      | 0.3553     | 1.0966      | 0.0017      | 0.0375       | 0.0333776     | 149.0       | 0.0107      | 0.1042      | 2               | 4           | 44              | 0.95         | 2.84         | 8.77          | 0.01        | 0.30         | 0.27          | 1191.81         | 0.09        | 0.83         |
| Water Truck                                  | DIESEL           | 175 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 5           | 44              | 1.33         | 3.76         | 11.05         | 0.02        | 0.37         | 0.33          | 1665.45         | 0.12        | 1.05         |
| Dump/Haul Truck                              | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 3           | 44              | 0.80         | 2.26         | 6.63          | 0.01        | 0.22         | 0.20          | 999.27          | 0.07        | 0.63         |
| Excavator                                    | DIESEL           | 300 | 0.1657      | 0.5102     | 1.3127      | 0.0023      | 0.0463       | 0.0412169     | 234         | 0.0149      | 0.1247      | 1               | 6           | 44              | 0.99         | 3.06         | 7.88          | 0.01        | 0.28         | 0.25          | 1402.41         | 0.09        | 0.75         |
| Drill Rig                                    | DIESEL           | 82  | 0.0409      | 0.4684     | 0.4254      | 0.0009      | 0.0204       | 0.0181324     | 77.1        | 0.0037      | 0.0404      | 1               | 6           | 22              | 0.25         | 2.81         | 2.55          | 0.01        | 0.12         | 0.11          | 462.73          | 0.02        | 0.24         |
| Small Crane                                  | DIESEL           | 75  | 0.0859      | 0.3587     | 0.5189      | 0.0006      | 0.0453       | 0.0403555     | 50.1        | 0.0078      | 0.0493      | 1               | 6           | 22              | 0.52         | 2.15         | 3.11          | 0.00        | 0.27         | 0.24          | 300.89          | 0.05        | 0.30         |
| Concrete Trucks                              | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 3           | 44              | 0.40         | 1.13         | 3.31          | 0.01        | 0.11         | 0.10          | 499.64          | 0.04        | 0.31         |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>9.62</b>  | <b>34.94</b> | <b>81.10</b>  | <b>0.12</b> | <b>3.13</b>  | <b>2.79</b>   | <b>11217.78</b> | <b>0.87</b> | <b>7.70</b>  |
| <b>Trans: Talega Hub to Talega Substatio</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Concrete Trucks                              | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 3           | 44              | 0.38         | 1.11         | 2.95          | 0.01        | 0.10         | 0.09          | 499.64          | 0.03        | 0.28         |
| Drill Rig                                    | DIESEL           | 82  | 0.0376      | 0.4676     | 0.3736      | 0.0009      | 0.0160       | 0.0142836     | 77.1        | 0.0034      | 0.0355      | 2               | 6           | 44              | 0.45         | 5.61         | 4.48          | 0.01        | 0.19         | 0.17          | 925.46          | 0.04        | 0.43         |
| CAT 416 Rubber Tire Backhoe                  | DIESEL           | 85  | 0.0835      | 0.4090     | 0.5226      | 0.0007      | 0.0431       | 0.0383212     | 58.9        | 0.0075      | 0.0496      | 1               | 4           | 44              | 0.33         | 1.64         | 2.09          | 0.00        | 0.17         | 0.15          | 235.65          | 0.03        | 0.20         |
| Dump Trucks                                  | DIESEL           | 235 | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 3           | 44              | 0.80         | 2.26         | 6.63          | 0.01        | 0.22         | 0.20          | 999.27          | 0.07        | 0.63         |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>1.96</b>  | <b>10.61</b> | <b>16.15</b>  | <b>0.03</b> | <b>0.68</b>  | <b>0.61</b>   | <b>2660.02</b>  | <b>0.18</b> | <b>1.53</b>  |
| <b>Trans: Talega Hub to Talega Substatio</b> | 2015             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                          | DIESEL           | 235 | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 2           | 110             | 0.25         | 0.74         | 1.96          | 0.00        | 0.07         | 0.06          | 333.09          | 0.02        | 0.19         |
| Crane  | DIESEL           | 399 | 0.1393      | 0.4663     | 1.1812      | 0.0018      | 0.0426       | 0.0379443     | 180.1       | 0.0126      | 0.1122      | 1               | 3           | 110             | 0.42         | 1.40         | 3.54          | 0.01        | 0.13         | 0.11          | 540.30          | 0.04        | 0.34         |
| Manlift                                      | DIESEL           | 75  | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 2               | 6           | 110             | 0.55         | 2.85         | 3.93          | 0.01        | 0.29         | 0.26          | 456.86          | 0.05        | 0.37         |
| Air Compressor                               | DIESEL           | 45  | 0.0747      | 0.2360     | 0.2056      | 0.0003      | 0.0183       | 0.0162811     | 22.3        | 0.0067      | 0.0195      | 3               | 8           | 110             | 1.79         | 5.66         | 4.93          | 0.01        | 0.44         | 0.39          | 534.51          | 0.16        | 0.47         |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.01</b>  | <b>10.66</b> | <b>14.37</b>  | <b>0.02</b> | <b>0.93</b>  | <b>0.83</b>   | <b>1864.77</b>  | <b>0.27</b> | <b>1.36</b>  |
| <b>Trans: Talega Hub to Talega Substatio</b> | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Manlift                                      | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 2               | 6           | 66              | 0.50         | 2.83         | 3.63          | 0.01        | 0.26         | 0.23          | 456.86          | 0.04        | 0.34         |
| Puller and Tensioner                         | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 6           | 66              | 1.49         | 5.84         | 12.50         | 0.03        | 0.42         | 0.37          | 3050.86         | 0.13        | 1.19         |
| Reel Trailer                                 | DIESEL           | 300 | 0.1243      | 0.4868     | 1.0415      | 0.0025      | 0.0350       | 0.0311603     | 254.2       | 0.0112      | 0.0989      | 2               | 6           | 66              | 1.49         | 5.84         | 12.50         | 0.03        | 0.42         | 0.37          | 3050.86         | 0.13        | 1.19         |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.48</b>  | <b>14.51</b> | <b>28.62</b>  | <b>0.07</b> | <b>1.10</b>  | <b>0.98</b>   | <b>6558.59</b>  | <b>0.31</b> | <b>2.72</b>  |
| <b>Trans: Talega Hub to Talega Substatio</b> | 2016             |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                          | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 2           | 88              | 0.24         | 0.73         | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |
| Manlift                                      | DIESEL           | 75  | 0.0413      | 0.2355     | 0.3021      | 0.0004      | 0.0219       | 0.0194919     | 38.1        | 0.0037      | 0.0287      | 2               | 3           | 88              | 0.25         | 1.41         | 1.81          | 0.00        | 0.13         | 0.12          | 228.43          | 0.02        | 0.17         |
| Chainsaw                                     | DIESEL           | 25  | 0.0199      | 0.0678     | 0.1256      | 0.0002      | 0.0047       | 0.0041716     | 16.5        | 0.0018      | 0.0119      | 2               | 1           | 88              | 0.04         | 0.14         | 0.25          | 0.00        | 0.01         | 0.01          | 32.96           | 0.00        | 0.02         |
| Loader                                       | DIESEL           | 200 | 0.1056      | 0.3357     | 0.8897      | 0.0017      | 0.0302       | 0.0269188     | 149.0       | 0.0095      | 0.0845      | 1               | 2           | 88              | 0.21         | 0.67         | 1.78          | 0.00        | 0.06         | 0.05          | 297.95          | 0.02        | 0.17         |
| Crane  | DIESEL           | 399 | 0.1325      | 0.4431     | 1.0723      | 0.0018      | 0.0387       | 0.0344466     | 180.1       | 0.0120      | 0.1019      | 1               | 2           | 88              | 0.26         | 0.89         | 2.14          | 0.00        | 0.08         | 0.07          | 360.20          | 0.02        | 0.20         |
| <b>Subtotal</b>                              |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>1.00</b>  | <b>3.84</b>  | <b>7.72</b>   | <b>0.01</b> | <b>0.34</b>  | <b>0.30</b>   | <b>1252.63</b>  | <b>0.09</b> | <b>0.73</b>  |
| <b>Total</b>                                 |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>19.07</b> | <b>74.56</b> | <b>147.96</b> | <b>0.25</b> | <b>6.18</b>  | <b>5.50</b>   | <b>23553.79</b> | <b>1.72</b> | <b>14.06</b> |

Table A-6  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Transmission Segment 4: Talega Hub to Talega Substation 230kV

| Equipment/Phase   | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |              |
|---|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|--------------|
|   |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |              |
| <b>Trans: Talega Hub to Talega Substation 230 kV - Site Grading</b>                           |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |              |
| Bulldozer   |      |    | 0.010                  | 0.044           | 0.084            | 0.000            | 0.003             | 0.003              |                  | 8.741            | 0.001            | 0.008        |
| Road Grader/Blade   |      |    | 0.008                  | 0.026           | 0.067            | 0.000            | 0.002             | 0.002              |                  | 10.097           | 0.001            | 0.006        |
| Scraper   |      |    | 0.005                  | 0.019           | 0.043            | 0.000            | 0.002             | 0.001              |                  | 5.304            | 0.000            | 0.004        |
| Compactor   |      |    | 0.005                  | 0.016           | 0.053            | 0.000            | 0.002             | 0.002              |                  | 6.736            | 0.000            | 0.005        |
| Loader  |      |    | 0.021                  | 0.063           | 0.193            | 0.000            | 0.007             | 0.006              |                  | 26.220           | 0.002            | 0.018        |
| Water Truck   |      |    | 0.029                  | 0.083           | 0.243            | 0.000            | 0.008             | 0.007              |                  | 36.640           | 0.003            | 0.023        |
| Dump/Haul Truck   |      |    | 0.017                  | 0.050           | 0.146            | 0.000            | 0.005             | 0.004              |                  | 21.984           | 0.002            | 0.014        |
| Excavator   |      |    | 0.022                  | 0.067           | 0.173            | 0.000            | 0.006             | 0.005              |                  | 30.853           | 0.002            | 0.016        |
| Drill Rig   |      |    | 0.003                  | 0.031           | 0.028            | 0.000            | 0.001             | 0.001              |                  | 5.090            | 0.000            | 0.003        |
| Small Crane   |      |    | 0.008                  | 0.024           | 0.034            | 0.000            | 0.003             | 0.003              |                  | 3.310            | 0.001            | 0.003        |
| Concrete Trucks   |      |    | 0.009                  | 0.025           | 0.073            | 0.000            | 0.002             | 0.002              |                  | 10.992           | 0.001            | 0.007        |
| <b>Subtotal</b>   |      |    | <b>0.135</b>           | <b>0.447</b>    | <b>1.138</b>     | <b>0.002</b>     | <b>0.042</b>      | <b>0.037</b>       |                  | <b>165.966</b>   | <b>0.012</b>     | <b>0.108</b> |
| <b>Trans: Talega Hub to Talega Substation 230 kV - Foundation Installations</b>               |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |              |
| Concrete Trucks   |      |    | 0.008                  | 0.024           | 0.065            | 0.000            | 0.002             | 0.002              |                  | 10.992           | 0.001            | 0.006        |
| Drill Rig   |      |    | 0.010                  | 0.123           | 0.099            | 0.000            | 0.004             | 0.004              |                  | 20.360           | 0.001            | 0.009        |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.007                  | 0.036           | 0.046            | 0.000            | 0.004             | 0.003              |                  | 5.184            | 0.001            | 0.004        |
| Dump Trucks   |      |    | 0.017                  | 0.050           | 0.146            | 0.000            | 0.005             | 0.004              |                  | 21.984           | 0.002            | 0.014        |
| <b>Subtotal</b>   |      |    | <b>0.043</b>           | <b>0.234</b>    | <b>0.355</b>     | <b>0.001</b>     | <b>0.015</b>      | <b>0.013</b>       |                  | <b>58.521</b>    | <b>0.004</b>     | <b>0.034</b> |
| <b>Trans: Talega Hub to Talega Substation 230 kV - Steel Structure Installations</b>          |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |              |
| 2-ton Flatbed Truck   |      |    | 0.014                  | 0.041           | 0.108            | 0.000            | 0.004             | 0.003              |                  | 18.320           | 0.001            | 0.010        |
| Crane   |      |    | 0.023                  | 0.077           | 0.195            | 0.000            | 0.007             | 0.006              |                  | 29.717           | 0.002            | 0.019        |
| Manlift   |      |    | 0.030                  | 0.157           | 0.216            | 0.000            | 0.016             | 0.014              |                  | 25.127           | 0.003            | 0.021        |
| Air Compressor  |      |    | 0.099                  | 0.312           | 0.271            | 0.000            | 0.024             | 0.021              |                  | 29.398           | 0.009            | 0.026        |
| <b>Subtotal</b>   |      |    | <b>0.166</b>           | <b>0.586</b>    | <b>0.790</b>     | <b>0.001</b>     | <b>0.051</b>      | <b>0.045</b>       |                  | <b>102.562</b>   | <b>0.015</b>     | <b>0.075</b> |
| <b>Trans: Talega Hub to Talega Substation 230 kV - Cable/Conductor Pulling and Tensioning</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |              |
| Manlift   |      |    | 0.016                  | 0.093           | 0.120            | 0.000            | 0.009             | 0.008              |                  | 15.076           | 0.001            | 0.011        |
| Puller and Tensioner  |      |    | 0.049                  | 0.193           | 0.412            | 0.001            | 0.014             | 0.012              |                  | 100.678          | 0.004            | 0.039        |
| Reel Trailer  |      |    | 0.049                  | 0.193           | 0.412            | 0.001            | 0.014             | 0.012              |                  | 100.678          | 0.004            | 0.039        |
| <b>Subtotal</b>   |      |    | <b>0.115</b>           | <b>0.479</b>    | <b>0.945</b>     | <b>0.002</b>     | <b>0.036</b>      | <b>0.032</b>       |                  | <b>216.433</b>   | <b>0.010</b>     | <b>0.090</b> |
| <b>Trans: Talega Hub to Talega Substation 230 kV - Removal of Wood Pole Structures</b>        |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |              |
| 2-ton Flatbed Truck   |      |    | 0.010                  | 0.032           | 0.076            | 0.000            | 0.003             | 0.002              |                  | 14.656           | 0.001            | 0.007        |
| Manlift   |      |    | 0.011                  | 0.062           | 0.080            | 0.000            | 0.006             | 0.005              |                  | 10.051           | 0.001            | 0.008        |
| Chainsaw  |      |    | 0.002                  | 0.006           | 0.011            | 0.000            | 0.000             | 0.000              |                  | 1.450            | 0.000            | 0.001        |
| Loader  |      |    | 0.009                  | 0.030           | 0.078            | 0.000            | 0.003             | 0.002              |                  | 13.110           | 0.001            | 0.007        |
| Crane   |      |    | 0.012                  | 0.039           | 0.094            | 0.000            | 0.003             | 0.003              |                  | 15.849           | 0.001            | 0.009        |
| <b>Subtotal</b>   |      |    | <b>0.044</b>           | <b>0.169</b>    | <b>0.340</b>     | <b>0.001</b>     | <b>0.015</b>      | <b>0.013</b>       |                  | <b>55.116</b>    | <b>0.004</b>     | <b>0.032</b> |
| <b>Total</b>  |      |    | <b>0.50</b>            | <b>1.91</b>     | <b>3.57</b>      | <b>0.01</b>      | <b>0.16</b>       | <b>0.14</b>        |                  | <b>598.60</b>    | <b>0.05</b>      | <b>0.34</b>  |

Table A-7  
 Construction Heavy Equipment Emissions  
 South Orange County Reliability Project  
 Transmission Segment 2: Rancho San Juan 138/230kV North Runs

Segment 2: Rancho San Juan 138/230kV North Runs

| Equipment/Phase                                   | Emission Factors |     |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |              |               |             |              |               |                 |             |              |
|---|------------------|-----|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|
|   | FUEL             | HP  | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |
| <b>Trans: Rancho San Juan 138/230 kV - S 2016</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Excavator   | DIESEL           | 300 | 0.1496      | 0.4851     | 0.2036      | 0.0023      | 0.0366       | 0.032587      | 234         | 0.0135      | 0.0972      | 1               | 4           | 22              | 0.60         | 1.94         | 4.09          | 0.01        | 0.15         | 0.13          | 934.94          | 0.05        | 0.39         |
| Compactor   | DIESEL           | 250 | 0.1042      | 0.3463     | 0.9961      | 0.0017      | 0.0333       | 0.0296601     | 153.0899    | 0.0094      | 0.0946      | 1               | 4           | 22              | 0.42         | 1.39         | 3.98          | 0.01        | 0.13         | 0.12          | 612.36          | 0.04        | 0.38         |
| Loader  | DIESEL           | 200 | 0.1056      | 0.3357     | 0.8997      | 0.0017      | 0.0302       | 0.0269188     | 149.0       | 0.0095      | 0.0845      | 1               | 8           | 22              | 0.85         | 2.69         | 7.12          | 0.01        | 0.22         | 0.22          | 1191.81         | 0.08        | 0.68         |
| Water Truck                                       | DIESEL           | 175 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 5           | 22              | 0.59         | 1.83         | 4.34          | 0.01        | 0.15         | 0.13          | 832.73          | 0.05        | 0.41         |
| Dump/Haul Truck                                   | DIESEL           | 235 | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 1               | 8           | 22              | 0.94         | 2.92         | 6.94          | 0.01        | 0.23         | 0.21          | 1332.36         | 0.09        | 0.66         |
| <b>Subtotal</b>                                   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.39</b>  | <b>10.76</b> | <b>26.48</b>  | <b>0.05</b> | <b>0.90</b>  | <b>0.80</b>   | <b>4904.20</b>  | <b>0.31</b> | <b>2.52</b>  |
| <b>Trans: Rancho San Juan 138/230 kV - U 2017</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Dump Trucks                                       | DIESEL           | 235 | 0.1109      | 0.3608     | 0.7625      | 0.0019      | 0.0256       | 0.0228191     | 166.5       | 0.0100      | 0.0724      | 2               | 4           | 66              | 0.89         | 2.89         | 6.10          | 0.01        | 0.21         | 0.18          | 1332.36         | 0.08        | 0.58         |
| Crane   | DIESEL           | 399 | 0.1262      | 0.4243     | 0.9704      | 0.0018      | 0.0351       | 0.03124       | 180.1       | 0.0114      | 0.0922      | 1               | 2           | 66              | 0.25         | 0.85         | 1.94          | 0.00        | 0.07         | 0.06          | 360.20          | 0.02        | 0.18         |
| Excavator   | DIESEL           | 300 | 0.1415      | 0.4762     | 0.8988      | 0.0023      | 0.0323       | 0.0287329     | 234         | 0.0128      | 0.0854      | 2               | 8           | 66              | 2.26         | 7.62         | 14.38         | 0.04        | 0.52         | 0.46          | 3739.77         | 0.20        | 1.37         |
| CAT 416 Rubber Tire Backhoe                       | DIESEL           | 85  | 0.0714      | 0.4038     | 0.4460      | 0.0007      | 0.0346       | 0.0307584     | 58.9        | 0.0064      | 0.0424      | 2               | 8           | 66              | 1.14         | 6.46         | 7.14          | 0.01        | 0.55         | 0.49          | 942.62          | 0.10        | 0.68         |
| Concrete Trucks                                   | DIESEL           | 235 | 0.1109      | 0.3608     | 0.7625      | 0.0019      | 0.0256       | 0.0228191     | 166.5       | 0.0100      | 0.0724      | 2               | 2           | 66              | 0.44         | 1.44         | 3.05          | 0.01        | 0.10         | 0.09          | 666.18          | 0.04        | 0.29         |
| Compactor   | DIESEL           | 250 | 0.0985      | 0.3375     | 0.9035      | 0.0017      | 0.0302       | 0.0268756     | 153.0898    | 0.0089      | 0.0858      | 1               | 2           | 66              | 0.20         | 0.68         | 1.81          | 0.00        | 0.06         | 0.05          | 306.18          | 0.02        | 0.17         |
| <b>Subtotal</b>                                   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>5.19</b>  | <b>19.93</b> | <b>34.41</b>  | <b>0.08</b> | <b>1.51</b>  | <b>1.34</b>   | <b>7347.31</b>  | <b>0.47</b> | <b>3.27</b>  |
| <b>Trans: Rancho San Juan 138/230 kV - S 2017</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                               | DIESEL           | 235 | 0.1109      | 0.3608     | 0.7625      | 0.0019      | 0.0256       | 0.0228191     | 166.5       | 0.0100      | 0.0724      | 1               | 4           | 11              | 0.44         | 1.44         | 3.05          | 0.01        | 0.10         | 0.09          | 666.18          | 0.04        | 0.29         |
| Crane   | DIESEL           | 399 | 0.1262      | 0.4243     | 0.9704      | 0.0018      | 0.0351       | 0.03124       | 180.1       | 0.0114      | 0.0922      | 2               | 8           | 11              | 2.02         | 6.79         | 15.53         | 0.03        | 0.56         | 0.50          | 2881.62         | 0.18        | 1.47         |
| Manlift   | DIESEL           | 75  | 0.0368      | 0.2336     | 0.2787      | 0.0004      | 0.0194       | 0.0172398     | 38.1        | 0.0033      | 0.0265      | 2               | 8           | 11              | 0.59         | 3.74         | 4.46          | 0.01        | 0.31         | 0.28          | 609.15          | 0.05        | 0.42         |
| Air Compressor                                    | DIESEL           | 45  | 0.0591      | 0.2209     | 0.1914      | 0.0003      | 0.0148       | 0.0131279     | 22.3        | 0.0053      | 0.0182      | 3               | 8           | 11              | 1.42         | 5.30         | 4.59          | 0.01        | 0.35         | 0.32          | 534.51          | 0.13        | 0.44         |
| <b>Subtotal</b>                                   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>4.47</b>  | <b>17.27</b> | <b>27.63</b>  | <b>0.05</b> | <b>1.33</b>  | <b>1.18</b>   | <b>4691.46</b>  | <b>0.40</b> | <b>2.62</b>  |
| <b>Trans: Rancho San Juan 138/230 kV - C 2017</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| Manlift   | DIESEL           | 75  | 0.0368      | 0.2336     | 0.2787      | 0.0004      | 0.0194       | 0.0172398     | 38.1        | 0.0033      | 0.0265      | 4               | 6           | 66              | 0.88         | 5.61         | 6.69          | 0.01        | 0.46         | 0.41          | 913.72          | 0.08        | 0.64         |
| Puller and Tensioner                              | DIESEL           | 300 | 0.1181      | 0.4796     | 0.9136      | 0.0025      | 0.0311       | 0.0276647     | 254.2       | 0.0107      | 0.0868      | 2               | 4           | 66              | 0.94         | 3.84         | 7.31          | 0.02        | 0.25         | 0.22          | 2033.91         | 0.09        | 0.69         |
| Reel Trailer                                      | DIESEL           | 300 | 0.1181      | 0.4796     | 0.9136      | 0.0025      | 0.0311       | 0.0276647     | 254.2       | 0.0107      | 0.0868      | 2               | 4           | 66              | 0.94         | 3.84         | 7.31          | 0.02        | 0.25         | 0.22          | 2033.91         | 0.09        | 0.69         |
| Splice Trailer                                    | DIESEL           | 300 | 0.1181      | 0.4796     | 0.9136      | 0.0025      | 0.0311       | 0.0276647     | 254.2       | 0.0107      | 0.0868      | 2               | 4           | 66              | 0.94         | 3.84         | 7.31          | 0.02        | 0.25         | 0.22          | 2033.91         | 0.09        | 0.69         |
| <b>Subtotal</b>                                   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.72</b>  | <b>17.12</b> | <b>28.62</b>  | <b>0.07</b> | <b>1.21</b>  | <b>1.08</b>   | <b>7015.45</b>  | <b>0.34</b> | <b>2.72</b>  |
| <b>Trans: Rancho San Juan 138/230 kV - F 2017</b> |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 |              |              |               |             |              |               |                 |             |              |
| 2-ton Flatbed Truck                               | DIESEL           | 235 | 0.1109      | 0.3608     | 0.7625      | 0.0019      | 0.0256       | 0.0228191     | 166.5       | 0.0100      | 0.0724      | 1               | 4           | 11              | 0.44         | 1.44         | 3.05          | 0.01        | 0.10         | 0.09          | 666.18          | 0.04        | 0.29         |
| Manlift   | DIESEL           | 75  | 0.0368      | 0.2336     | 0.2787      | 0.0004      | 0.0194       | 0.0172398     | 38.1        | 0.0033      | 0.0265      | 2               | 8           | 11              | 0.59         | 3.74         | 4.46          | 0.01        | 0.31         | 0.28          | 609.15          | 0.05        | 0.42         |
| Excavator   | DIESEL           | 300 | 0.1415      | 0.4762     | 0.8988      | 0.0023      | 0.0323       | 0.0287329     | 234         | 0.0128      | 0.0854      | 1               | 4           | 11              | 0.57         | 1.90         | 3.60          | 0.01        | 0.13         | 0.11          | 934.94          | 0.05        | 0.34         |
| Jackhammer  | DIESEL           | 25  | 0.0159      | 0.0544     | 0.1908      | 0.0002      | 0.0038       | 0.003628      | 13.2        | 0.0014      | 0.0096      | 2               | 6           | 11              | 0.19         | 0.85         | 1.21          | 0.00        | 0.05         | 0.04          | 158.81          | 0.02        | 0.11         |
| Dump Trucks                                       | DIESEL           | 235 | 0.1109      | 0.3608     | 0.7625      | 0.0019      | 0.0256       | 0.0228191     | 166.5       | 0.0100      | 0.0724      | 1               | 2           | 11              | 0.22         | 0.72         | 1.53          | 0.00        | 0.05         | 0.05          | 333.09          | 0.02        | 0.14         |
| Crane   | DIESEL           | 399 | 0.1262      | 0.4243     | 0.9704      | 0.0018      | 0.0351       | 0.03124       | 180.1       | 0.0114      | 0.0922      | 1               | 2           | 11              | 0.25         | 0.85         | 1.94          | 0.00        | 0.07         | 0.06          | 360.20          | 0.02        | 0.18         |
| <b>Subtotal</b>                                   |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.26</b>  | <b>9.31</b>  | <b>15.78</b>  | <b>0.03</b> | <b>0.71</b>  | <b>0.63</b>   | <b>3062.17</b>  | <b>0.20</b> | <b>1.50</b>  |
| <b>Total</b>                                      |                  |     |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>19.03</b> | <b>74.39</b> | <b>132.92</b> | <b>0.28</b> | <b>5.65</b>  | <b>5.03</b>   | <b>27020.59</b> | <b>1.72</b> | <b>12.63</b> |

| Equipment/Phase  | FUEL | HP | ROG tons (total) | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
|--|------|----|------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
| <b>Trans: Rancho San Juan 138/230 kV - Site Development</b>                        |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Excavator  |      |    | 0.007            | 0.021           | 0.045            | 0.000            | 0.002             | 0.001              | 10.284           | 0.001            | 0.004            |
| Compactor  |      |    | 0.005            | 0.015           | 0.044            | 0.000            | 0.001             | 0.001              | 6.736            | 0.000            | 0.004            |
| Loader   |      |    | 0.009            | 0.030           | 0.078            | 0.000            | 0.003             | 0.002              | 13.110           | 0.001            | 0.007            |
| Water Truck  |      |    | 0.006            | 0.020           | 0.048            | 0.000            | 0.002             | 0.001              | 9.160            | 0.001            | 0.005            |
| Dump/Haul Truck  |      |    | 0.010            | 0.032           | 0.076            | 0.000            | 0.003             | 0.002              | 14.656           | 0.001            | 0.007            |
| <b>Subtotal</b>  |      |    | <b>0.037</b>     | <b>0.118</b>    | <b>0.291</b>     | <b>0.001</b>     | <b>0.010</b>      | <b>0.009</b>       | <b>53.946</b>    | <b>0.003</b>     | <b>0.028</b>     |
| <b>Trans: Rancho San Juan 138/230 kV - Underground Trench/Conduit/Substructure</b> |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Dump Trucks  |      |    | 0.029            | 0.095           | 0.201            | 0.000            | 0.007             | 0.006              | 43.968           | 0.003            | 0.019            |
| Crane  |      |    | 0.008            | 0.028           | 0.064            | 0.000            | 0.002             | 0.002              | 11.887           | 0.001            | 0.006            |
| Excavator  |      |    | 0.075            | 0.251           | 0.475            | 0.001            | 0.017             | 0.015              | 123.412          | 0.007            | 0.045            |
| CAT 416 Rubber Tire Backhoe  |      |    | 0.038            | 0.123           | 0.235            | 0.000            | 0.018             | 0.016              | 31.106           | 0.003            | 0.022            |
| Concrete Trucks  |      |    | 0.015            | 0.048           | 0.101            | 0.000            | 0.003             | 0.003              | 21.984           | 0.001            | 0.010            |
| Compactor  |      |    | 0.007            | 0.022           | 0.060            | 0.000            | 0.002             | 0.002              | 10.104           | 0.001            | 0.006            |
| <b>Subtotal</b>  |      |    | <b>0.171</b>     | <b>0.658</b>    | <b>1.136</b>     | <b>0.003</b>     | <b>0.050</b>      | <b>0.044</b>       | <b>242.461</b>   | <b>0.015</b>     | <b>0.108</b>     |
| <b>Trans: Rancho San Juan 138/230 kV - Steel Structure Installations</b>           |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck  |      |    | 0.002            | 0.008           | 0.017            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Crane  |      |    | 0.011            | 0.037           | 0.085            | 0.000            | 0.003             | 0.003              | 15.849           | 0.001            | 0.008            |
| Manlift  |      |    | 0.003            | 0.021           | 0.025            | 0.000            | 0.002             | 0.002              | 3.350            | 0.000            | 0.002            |
| Air Compressor   |      |    | 0.008            | 0.029           | 0.025            | 0.000            | 0.002             | 0.002              | 2.940            | 0.001            | 0.002            |
| <b>Subtotal</b>  |      |    | <b>0.025</b>     | <b>0.095</b>    | <b>0.152</b>     | <b>0.000</b>     | <b>0.007</b>      | <b>0.007</b>       | <b>25.803</b>    | <b>0.002</b>     | <b>0.014</b>     |
| <b>Trans: Rancho San Juan 138/230 kV - Cable/Conductor Pulling and Tensioning</b>  |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift  |      |    | 0.029            | 0.085           | 0.221            | 0.000            | 0.015             | 0.014              | 30.153           | 0.003            | 0.021            |
| Puller and Tensioner   |      |    | 0.031            | 0.127           | 0.241            | 0.001            | 0.008             | 0.007              | 67.119           | 0.003            | 0.023            |
| Reel Trailer   |      |    | 0.031            | 0.127           | 0.241            | 0.001            | 0.008             | 0.007              | 67.119           | 0.003            | 0.023            |
| Splice Trailer   |      |    | 0.031            | 0.127           | 0.241            | 0.001            | 0.008             | 0.007              | 67.119           | 0.003            | 0.023            |
| <b>Subtotal</b>  |      |    | <b>0.123</b>     | <b>0.565</b>    | <b>0.944</b>     | <b>0.002</b>     | <b>0.040</b>      | <b>0.036</b>       | <b>231.510</b>   | <b>0.011</b>     | <b>0.090</b>     |
| <b>Trans: Rancho San Juan 138/230 kV - Removal of Structures</b>                   |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck  |      |    | 0.002            | 0.008           | 0.017            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Manlift  |      |    | 0.003            | 0.021           | 0.025            | 0.000            | 0.002             | 0.002              | 3.350            | 0.000            | 0.002            |
| Excavator  |      |    | 0.003            | 0.010           | 0.020            | 0.000            | 0.001             | 0.001              | 5.142            | 0.000            | 0.002            |
| Jackhammer   |      |    | 0.001            | 0.004           | 0.007            | 0.000            | 0.000             | 0.000              | 0.872            | 0.000            | 0.001            |
| D  |      |    |                  |                 |                  |                  |                   |                    |                  |                  |                  |

Table A-8  
 Construction Heavy Equipment Emissions  
 South Orange County Reliability Project  
 Talega Substation

| Equipment/Phase                           | FUEL   | HP  | Emission Factors |            |             |             |              |               |             |             | Emissions   |                 |             |                 |             |              |              |             |              |               |                |             |             |
|---|--------|-----|------------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|-------------|--------------|--------------|-------------|--------------|---------------|----------------|-------------|-------------|
|   |        |     | ROG (lb/hr)      | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day | CO lbs/day   | NOX lbs/day  | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day    | CH4 lbs/day | N2O lbs/day |
| <b>Talega Substation Site Development</b> |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 |             |              |              |             |              |               |                |             |             |
| 2013                                      |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 |             |              |              |             |              |               |                |             |             |
| Bulldozer                                 | DIESEL | 350 | 0.3211           | 1.4228     | 2.7305      | 0.0026      | 0.1133       | 0.1008544     | 264.8725    | 0.0290      | 0.2594      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Road Grader/Blade                         | DIESEL | 350 | 0.1855           | 0.6289     | 1.6842      | 0.0023      | 0.0608       | 0.0541153     | 229         | 0.0167      | 0.1600      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Scraper                                   | DIESEL | 350 | 0.3186           | 1.2113     | 2.8288      | 0.0032      | 0.1099       | 0.0978252     | 321.4286    | 0.0287      | 0.2687      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Compactor                                 | DIESEL | 250 | 0.1262           | 0.3887     | 1.3124      | 0.0017      | 0.0451       | 0.0401412     | 153.0898    | 0.0114      | 0.1247      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Loader                                    | DIESEL | 200 | 0.1259           | 0.3685     | 1.2125      | 0.0017      | 0.0417       | 0.0371039     | 149.0       | 0.0114      | 0.1152      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Backhoe                                   | DIESEL | 85  | 0.0694           | 0.3529     | 0.4565      | 0.0006      | 0.0383       | 0.0340819     | 51.7280     | 0.0063      | 0.0434      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Water Truck                               | DIESEL | 175 | 0.1400           | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Dump/Haul Truck                           | DIESEL | 235 | 0.1400           | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| Excavator                                 | DIESEL | 300 | 0.1735           | 0.5271     | 1.4763      | 0.0023      | 0.0516       | 0.0459342     | 234         | 0.0157      | 0.1402      |                 |             |                 | 0.00        | 0.00         | 0.00         | 0.00        | 0.00         | 0.00          | 0.00           | 0.00        | 0.00        |
| <b>Subtotal</b>                           |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 | <b>0.00</b> | <b>0.00</b>  | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b>  | <b>0.00</b>   | <b>0.00</b>    | <b>0.00</b> | <b>0.00</b> |
| <b>Talega Substation Below Grade</b>      |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 |             |              |              |             |              |               |                |             |             |
| 2013                                      |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 |             |              |              |             |              |               |                |             |             |
| CAT 416 Rubber Tire Backhoe               | DIESEL | 85  | 0.1281           | 0.4684     | 0.7862      | 0.0008      | 0.0669       | 0.0594977     | 64.9        | 0.0116      | 0.0747      | 1               | 6           | 11              | 0.77        | 2.81         | 4.72         | 0.00        | 0.40         | 0.36          | 389.37         | 0.07        | 0.45        |
| Drill Rig                                 | DIESEL | 82  | 0.0447           | 0.4698     | 0.4583      | 0.0009      | 0.0257       | 0.0228866     | 77.1        | 0.0040      | 0.0435      | 1               | 6           | 11              | 0.27        | 2.82         | 2.75         | 0.01        | 0.15         | 0.14          | 462.73         | 0.02        | 0.26        |
| Front Loader                              | DIESEL | 200 | 0.1259           | 0.3685     | 1.2125      | 0.0017      | 0.0417       | 0.0371039     | 149.0       | 0.0114      | 0.1152      | 1               | 6           | 44              | 0.76        | 2.21         | 7.27         | 0.01        | 0.25         | 0.22          | 893.86         | 0.07        | 0.69        |
| Dump Trucks                               | DIESEL | 235 | 0.1400           | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 5               | 1           | 22              | 0.70        | 1.92         | 6.19         | 0.01        | 0.21         | 0.18          | 832.73         | 0.06        | 0.59        |
| Skid Steer Loaders                        | DIESEL | 37  | 0.0429           | 0.2748     | 0.3267      | 0.0005      | 0.0245       | 0.0217659     | 42.8        | 0.0039      | 0.0310      | 1               | 4           | 66              | 0.17        | 1.10         | 1.31         | 0.00        | 0.10         | 0.09          | 171.05         | 0.02        | 0.12        |
| 4000 Gallon Water Truck                   | DIESEL | 175 | 0.1400           | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 1               | 1           | 66              | 0.14        | 0.38         | 1.24         | 0.00        | 0.04         | 0.04          | 166.55         | 0.01        | 0.12        |
| Concrete Trucks                           | DIESEL | 235 | 0.1400           | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 5               | 1           | 22              | 0.70        | 1.92         | 6.19         | 0.01        | 0.21         | 0.18          | 832.73         | 0.06        | 0.59        |
| Ditch Witch                               | DIESEL | 165 | 0.1208           | 0.6668     | 0.8932      | 0.0013      | 0.0512       | 0.0459305     | 112.2       | 0.0109      | 0.0848      | 1               | 6           | 66              | 0.72        | 4.00         | 5.36         | 0.01        | 0.31         | 0.27          | 673.33         | 0.07        | 0.51        |
| Handheld Compactor                        | DIESEL | 8   | 0.0050           | 0.0263     | 0.0314      | 0.0001      | 0.0012       | 0.0010963     | 4.3         | 0.0005      | 0.0030      | 2               | 4           | 44              | 0.04        | 0.21         | 0.25         | 0.00        | 0.01         | 0.01          | 34.51          | 0.00        | 0.02        |
| <b>Subtotal</b>                           |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 | <b>4.27</b> | <b>17.37</b> | <b>35.27</b> | <b>0.05</b> | <b>1.67</b>  | <b>1.49</b>   | <b>4456.85</b> | <b>0.39</b> | <b>3.35</b> |
| <b>Talega Substation Constructor</b>      |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 |             |              |              |             |              |               |                |             |             |
| 2014                                      |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 |             |              |              |             |              |               |                |             |             |
| Boom Truck                                | DIESEL | 235 | 0.1326           | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 6           | 66              | 0.80        | 2.26         | 6.63         | 0.01        | 0.22         | 0.20          | 999.27         | 0.07        | 0.63        |
| Skid Steer Loaders                        | DIESEL | 37  | 0.0443           | 0.2196     | 0.2161      | 0.0003      | 0.0134       | 0.0119526     | 25.5        | 0.0040      | 0.0205      | 1               | 2           | 6.6             | 0.09        | 0.44         | 0.43         | 0.00        | 0.03         | 0.02          | 51.04          | 0.01        | 0.04        |
| Crane                                     | DIESEL | 399 | 0.1468           | 0.4948     | 1.2979      | 0.0018      | 0.0470       | 0.041826      | 180.1       | 0.0132      | 0.1233      | 1               | 2           | 132             | 0.29        | 0.99         | 2.60         | 0.00        | 0.09         | 0.08          | 360.20         | 0.03        | 0.25        |
| Manlift                                   | DIESEL | 75  | 0.0509           | 0.2400     | 0.3531      | 0.0004      | 0.0272       | 0.024239      | 38.1        | 0.0046      | 0.0335      | 1               | 6           | 132             | 0.31        | 1.44         | 2.12         | 0.00        | 0.16         | 0.15          | 228.43         | 0.03        | 0.20        |
| Cable Dolly                               | DIESEL | 525 | 0.1379           | 0.5080     | 1.3457      | 0.0025      | 0.0441       | 0.0392193     | 254.2       | 0.0124      | 0.1278      | 1               | 1           | 22              | 0.14        | 0.51         | 1.35         | 0.00        | 0.04         | 0.04          | 254.24         | 0.01        | 0.13        |
| Stringing Rigs                            | DIESEL | 300 | 0.1379           | 0.5080     | 1.3457      | 0.0025      | 0.0441       | 0.0392193     | 254.2       | 0.0124      | 0.1278      | 1               | 1           | 22              | 0.14        | 0.51         | 1.35         | 0.00        | 0.04         | 0.04          | 254.24         | 0.01        | 0.13        |
| Line Truck                                | DIESEL | 175 | 0.1326           | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 2               | 1           | 132             | 0.27        | 0.75         | 2.21         | 0.00        | 0.07         | 0.07          | 333.09         | 0.02        | 0.21        |
| Air Compressor                            | DIESEL | 45  | 0.0534           | 0.1694     | 0.1765      | 0.0003      | 0.0142       | 0.0126297     | 19.6        | 0.0048      | 0.0168      | 1               | 8           | 132             | 0.43        | 1.36         | 1.41         | 0.00        | 0.11         | 0.10          | 156.90         | 0.04        | 0.13        |
| <b>Subtotal</b>                           |        |     |                  |            |             |             |              |               |             |             |             |                 |             |                 | <b>2.45</b> | <b>8.25</b>  | <b>18.09</b> | <b>0.03</b> | <b>0.78</b>  | <b>0.69</b>   | <b>2637.41</b> | <b>0.22</b> | <b>1.72</b> |

| Equipment/Phase                           | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |
|---|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|
|   |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) |
| <b>Talega Substation Site Development</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |
| Bulldozer                                 |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Road Grader/Blade                         |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Scraper                                   |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Compactor                                 |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Loader                                    |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Backhoe                                   |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Water Truck                               |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Dump/Haul Truck                           |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Excavator                                 |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| <b>Subtotal</b>                           |      |    | <b>0.000</b>           | <b>0.000</b>    | <b>0.000</b>     | <b>0.000</b>     | <b>0.000</b>      | <b>0.000</b>       | <b>0.000</b>     | <b>0.000</b>     |
| <b>Talega Substation Below Grade</b>      |      |    |                        |                 |                  |                  |                   |                    |                  |                  |
| CAT 416 Rubber Tire Backhoe               |      |    | 0.004                  | 0.015           | 0.026            | 0.000            | 0.002             | 0.002              | 2.142            | 0.000            |
| Drill Rig                                 |      |    | 0.001                  | 0.016           | 0.015            | 0.000            | 0.001             | 0.001              | 2.545            | 0.000            |
| Front Loader                              |      |    | 0.017                  | 0.049           | 0.160            | 0.000            | 0.006             | 0.005              | 19.665           | 0.001            |
| Dump Trucks                               |      |    | 0.008                  | 0.021           | 0.068            | 0.000            | 0.002             | 0.002              | 9.160            | 0.001            |
| Skid Steer Loaders                        |      |    | 0.006                  | 0.036           | 0.043            | 0.000            | 0.003             | 0.003              | 5.645            | 0.001            |
| 4000 Gallon Water Truck                   |      |    | 0.005                  | 0.013           | 0.041            | 0.000            | 0.001             | 0.001              | 5.496            | 0.000            |
| Concrete Trucks                           |      |    | 0.008                  | 0.021           | 0.068            | 0.000            | 0.002             | 0.002              | 9.160            | 0.001            |
| Ditch Witch                               |      |    | 0.024                  | 0.132           | 0.177            | 0.000            | 0.010             | 0.009              | 22.220           | 0.002            |
| Handheld Compactor                        |      |    | 0.001                  | 0.005           | 0.006            | 0.000            | 0.000             | 0.000              | 0.759            | 0.000            |
| <b>Subtotal</b>                           |      |    | <b>0.073</b>           | <b>0.307</b>    | <b>0.604</b>     | <b>0.001</b>     | <b>0.028</b>      | <b>0.025</b>       | <b>76.791</b>    | <b>0.007</b>     |
| <b>Talega Substation Constructor</b>      |      |    |                        |                 |                  |                  |                   |                    |                  |                  |
| Boom Truck                                |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            |
| Skid Steer Loaders                        |      |    | 0.026                  | 0.074           | 0.219            | 0.000            | 0.007             | 0.006              | 32.976           | 0.002            |
| Crane                                     |      |    | 0.000                  | 0.001           | 0.001            | 0.000            | 0.000             | 0.000              | 0.168            | 0.000            |
| Manlift                                   |      |    | 0.019                  | 0.065           | 0.171            | 0.000            | 0.006             | 0.006              | 23.773           | 0.002            |
| Cable Dolly                               |      |    | 0.020                  | 0.095           | 0.140            | 0.000            | 0.011             | 0.010              | 15.076           | 0.002            |
| Stringing Rigs                            |      |    | 0.002                  | 0.006           | 0.015            | 0.000            | 0.000             | 0.000              | 2.797            | 0.000            |
| Air Compressor                            |      |    | 0.028                  | 0.089           | 0.093            | 0.000            | 0.007             | 0.007              | 10.356           | 0.003            |
| <b>Subtotal</b>                           |      |    | <b>0.097</b>           | <b>0.337</b>    | <b>0.654</b>     | <b>0.001</b>     | <b>0.033</b>      | <b>0.029</b>       | <b>87.943</b>    | <b>0.009</b>     |

Table A-9  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Capistrano Substation - Lower Yard

| Equipment/Phase                                | Emission Factors |      |             |            |             |             |              |               |             |             |             | Emissions       |             |                 |              |               |               |             |              |               |                 |             |              |  |
|--|------------------|------|-------------|------------|-------------|-------------|--------------|---------------|-------------|-------------|-------------|-----------------|-------------|-----------------|--------------|---------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|--|
|  | FUEL             | HP   | ROG (lb/hr) | CO (lb/hr) | NOX (lb/hr) | SOX (lb/hr) | PM10 (lb/hr) | PM2.5 (lb/hr) | CO2 (lb/hr) | CH4 (lb/hr) | N2O (lb/hr) | No of Equipment | Hrs Per Day | Days in Service | ROG lbs/day  | CO lbs/day    | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  |  |
| <b>Capistrano Substation Building Remo</b>     | 2013             | 2013 |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| 2-ton Flatbed Truck                            | DIESEL           | 235  | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 1               | 1           | 44              | 0.14         | 0.38          | 1.24          | 0.00        | 0.04         | 0.04          | 166.55          | 0.01        | 0.12         |  |
| Manlift  | DIESEL           | 75   | 0.0558      | 0.2425     | 0.3758      | 0.0004      | 0.0299       | 0.0265879     | 38.1        | 0.0050      | 0.0357      | 1               | 6           | 44              | 0.33         | 1.46          | 2.25          | 0.00        | 0.18         | 0.16          | 228.43          | 0.03        | 0.21         |  |
| Excavator                                      | DIESEL           | 300  | 0.1735      | 0.5271     | 1.4763      | 0.0023      | 0.0516       | 0.0459342     | 234         | 0.0157      | 0.1402      | 1               | 6           | 44              | 1.04         | 3.16          | 8.86          | 0.01        | 0.31         | 0.28          | 1402.41         | 0.09        | 0.84         |  |
| Jackhammer                                     | DIESEL           | 25   | 0.0160      | 0.0544     | 0.1013      | 0.0002      | 0.0041       | 0.0036114     | 13.2        | 0.0014      | 0.0096      | 2               | 6           | 44              | 0.19         | 0.65          | 1.22          | 0.00        | 0.05         | 0.04          | 158.61          | 0.02        | 0.12         |  |
| Dump Trucks                                    | DIESEL           | 235  | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 8               | 1           | 44              | 1.12         | 3.07          | 9.90          | 0.01        | 0.33         | 0.29          | 1332.36         | 0.10        | 0.94         |  |
| Crane  | DIESEL           | 399  | 0.1551      | 0.5292     | 1.4230      | 0.0018      | 0.0518       | 0.0461327     | 180.1       | 0.0140      | 0.1352      | 1               | 6           | 22              | 0.93         | 3.18          | 8.54          | 0.01        | 0.31         | 0.28          | 1080.61         | 0.08        | 0.81         |  |
| <b>Subtotal</b>                                |                  |      |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>3.76</b>  | <b>11.90</b>  | <b>32.00</b>  | <b>0.05</b> | <b>1.22</b>  | <b>1.09</b>   | <b>4368.97</b>  | <b>0.34</b> | <b>3.04</b>  |  |
| <b>Capistrano Substation Site Developme</b>    | 2013             |      |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| Bulldozer                                      | DIESEL           | 350  | 0.3211      | 1.4228     | 2.7305      | 0.0026      | 0.1133       | 0.1008544     | 264.8725    | 0.0290      | 0.2594      | 2               | 8           | 88              | 5.14         | 22.77         | 43.69         | 0.04        | 1.81         | 1.61          | 4237.96         | 0.46        | 4.15         |  |
| Road Grader/Blade                              | DIESEL           | 350  | 0.1855      | 0.6289     | 1.6842      | 0.0023      | 0.0608       | 0.0541153     | 229         | 0.0167      | 0.1600      | 2               | 8           | 88              | 2.97         | 10.06         | 26.95         | 0.04        | 0.97         | 0.87          | 3671.75         | 0.27        | 2.56         |  |
| Scraper  | DIESEL           | 350  | 0.3186      | 1.2113     | 2.8288      | 0.0032      | 0.1099       | 0.0978252     | 321.4286    | 0.0287      | 0.2687      | 2               | 8           | 88              | 5.10         | 19.38         | 45.26         | 0.05        | 1.76         | 1.57          | 5142.86         | 0.46        | 4.30         |  |
| Compactor                                      | DIESEL           | 250  | 0.1262      | 0.3887     | 1.3124      | 0.0017      | 0.0451       | 0.0401412     | 153.0898    | 0.0114      | 0.1247      | 1               | 8           | 132             | 1.01         | 3.11          | 10.50         | 0.01        | 0.36         | 0.32          | 1224.72         | 0.09        | 1.00         |  |
| Loader   | DIESEL           | 200  | 0.1259      | 0.3685     | 1.2125      | 0.0017      | 0.0417       | 0.0371039     | 149.0       | 0.0114      | 0.1152      | 1               | 6           | 132             | 0.76         | 2.21          | 7.27          | 0.01        | 0.25         | 0.22          | 893.86          | 0.07        | 0.89         |  |
| Backhoe  | DIESEL           | 85   | 0.0694      | 0.3529     | 0.4565      | 0.0006      | 0.0383       | 0.0340819     | 51.7280     | 0.0063      | 0.0434      | 1               | 4           | 132             | 0.28         | 1.41          | 1.83          | 0.00        | 0.15         | 0.14          | 206.91          | 0.03        | 0.17         |  |
| Water Truck                                    | DIESEL           | 175  | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 1               | 1           | 132             | 0.14         | 0.38          | 1.24          | 0.00        | 0.04         | 0.04          | 166.55          | 0.01        | 0.12         |  |
| Dump/Haul Truck                                | DIESEL           | 235  | 0.1400      | 0.3837     | 1.2373      | 0.0019      | 0.0412       | 0.0367012     | 166.5       | 0.0126      | 0.1175      | 30              | 6           | 132             | 25.20        | 69.06         | 222.72        | 0.34        | 7.42         | 6.61          | 29978.17        | 2.27        | 21.16        |  |
| Excavator                                      | DIESEL           | 300  | 0.1735      | 0.5271     | 1.4763      | 0.0023      | 0.0516       | 0.0459342     | 234         | 0.0157      | 0.1402      | 1               | 1           | 44              | 0.17         | 0.53          | 1.48          | 0.00        | 0.05         | 0.05          | 233.74          | 0.02        | 0.14         |  |
| <b>Subtotal</b>                                |                  |      |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>40.76</b> | <b>128.93</b> | <b>360.93</b> | <b>0.50</b> | <b>12.82</b> | <b>11.41</b>  | <b>45756.51</b> | <b>3.68</b> | <b>34.29</b> |  |
| <b>Capistrano Substation Below Grade - I</b>   | 2014             |      |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| CAT 416 Rubber Tire Backhoe                    | DIESEL           | 85   | 0.1281      | 0.4684     | 0.7862      | 0.0008      | 0.0669       | 0.0594977     | 64.9        | 0.0116      | 0.0747      | 1               | 8           | 176             | 1.02         | 3.75          | 6.29          | 0.01        | 0.53         | 0.48          | 519.16          | 0.09        | 0.80         |  |
| Drill Rig                                      | DIESEL           | 82   | 0.0409      | 0.4684     | 0.4254      | 0.0009      | 0.0204       | 0.0181324     | 77.1        | 0.0037      | 0.0404      | 1               | 8           | 22              | 0.33         | 3.75          | 3.40          | 0.01        | 0.16         | 0.15          | 616.97          | 0.03        | 0.32         |  |
| Front Loader                                   | DIESEL           | 200  | 0.1186      | 0.3553     | 1.0966      | 0.0017      | 0.0375       | 0.0333776     | 149.0       | 0.0107      | 0.1042      | 1               | 6           | 110             | 0.71         | 2.13          | 6.58          | 0.01        | 0.23         | 0.20          | 893.86          | 0.06        | 0.63         |  |
| Dump Trucks                                    | DIESEL           | 235  | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 40              | 1           | 132             | 5.30         | 15.05         | 44.19         | 0.07        | 1.47         | 1.31          | 6661.82         | 0.48        | 4.20         |  |
| Skid Steer Loaders                             | DIESEL           | 37   | 0.0443      | 0.2196     | 0.2161      | 0.0003      | 0.0134       | 0.0119526     | 25.5        | 0.0040      | 0.0205      | 1               | 5           | 176             | 0.22         | 1.10          | 1.08          | 0.00        | 0.07         | 0.06          | 127.60          | 0.02        | 0.10         |  |
| 4000 Gallon Water Truck                        | DIESEL           | 175  | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 1               | 2           | 176             | 0.27         | 0.75          | 2.21          | 0.00        | 0.07         | 0.07          | 333.09          | 0.02        | 0.21         |  |
| Concrete Trucks                                | DIESEL           | 235  | 0.1326      | 0.3761     | 1.1048      | 0.0019      | 0.0368       | 0.0327961     | 166.5       | 0.0120      | 0.1050      | 60              | 0.5         | 22              | 3.98         | 11.28         | 33.14         | 0.06        | 1.11         | 0.98          | 4996.36         | 0.36        | 3.15         |  |
| Ditch Witch                                    | DIESEL           | 165  | 0.0868      | 0.5867     | 0.7476      | 0.0012      | 0.0374       | 0.0333234     | 106.5       | 0.0078      | 0.0710      | 1               | 8           | 176             | 0.69         | 4.69          | 5.98          | 0.01        | 0.30         | 0.27          | 852.13          | 0.06        | 0.57         |  |
| Handheld Compactor                             | DIESEL           | 8    | 0.0050      | 0.0263     | 0.0314      | 0.0001      | 0.0012       | 0.0010907     | 4.3         | 0.0005      | 0.0030      | 1               | 6           | 110             | 0.03         | 0.16          | 0.19          | 0.00        | 0.01         | 0.01          | 25.88           | 0.00        | 0.02         |  |
| <b>Subtotal</b>                                |                  |      |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>12.55</b> | <b>42.66</b>  | <b>103.07</b> | <b>0.17</b> | <b>3.95</b>  | <b>3.52</b>   | <b>15026.87</b> | <b>1.13</b> | <b>9.79</b>  |  |
| <b>Capistrano Substation Construction - I</b>  | 2015             |      |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| Boom Truck                                     | DIESEL           | 235  | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 2               | 5           | 220             | 1.25         | 3.70          | 9.82          | 0.02        | 0.33         | 0.29          | 1665.45         | 0.11        | 0.93         |  |
| Crane  | DIESEL           | 399  | 0.1393      | 0.4663     | 1.1812      | 0.0018      | 0.0426       | 0.0379443     | 180.1       | 0.0126      | 0.1122      | 1               | 8           | 66              | 1.11         | 3.73          | 9.45          | 0.01        | 0.34         | 0.30          | 1440.81         | 0.10        | 0.90         |  |
| Manlift  | DIESEL           | 75   | 0.0460      | 0.2377     | 0.3272      | 0.0004      | 0.0246       | 0.0218611     | 38.1        | 0.0042      | 0.0311      | 2               | 8           | 286             | 0.74         | 3.80          | 5.24          | 0.01        | 0.39         | 0.35          | 609.15          | 0.07        | 0.50         |  |
| Rough Terrain Forklifts                        | DIESEL           | 180  | 0.1168      | 0.3650     | 1.0385      | 0.0019      | 0.0338       | 0.0301061     | 170.8       | 0.0105      | 0.0987      | 2               | 8           | 264             | 1.87         | 5.84          | 16.62         | 0.03        | 0.54         | 0.48          | 2732.74         | 0.17        | 1.58         |  |
| Line Truck                                     | DIESEL           | 235  | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 2               | 6           | 22              | 1.50         | 4.44          | 11.78         | 0.02        | 0.39         | 0.35          | 1998.54         | 0.14        | 1.12         |  |
| Cable Dolly                                    | DIESEL           | 525  | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 1               | 2           | 66              | 0.26         | 0.99          | 2.37          | 0.00        | 0.08         | 0.07          | 508.48          | 0.02        | 0.23         |  |
| Stringing Rigs                                 | DIESEL           | 300  | 0.1310      | 0.4963     | 1.1867      | 0.0025      | 0.0394       | 0.0350431     | 254.2       | 0.0118      | 0.1127      | 1               | 2           | 66              | 0.00         | 0.00          | 0.00          | 0.00        | 0.00         | 0.00          | 0.00            | 0.00        | 0.00         |  |
| Oil Rig  | DIESEL           | 235  | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 24          | 11              | 3.00         | 8.88          | 23.56         | 0.04        | 0.79         | 0.70          | 3997.09         | 0.27        | 2.24         |  |
| SF6 Trailer                                    | DIESEL           | 235  | 0.1252      | 0.3702     | 0.9818      | 0.0019      | 0.0328       | 0.0291649     | 166.5       | 0.0113      | 0.0933      | 1               | 24          | 22              | 3.00         | 8.88          | 23.56         | 0.04        | 0.79         | 0.70          | 3997.09         | 0.27        | 2.24         |  |
| <b>Subtotal</b>                                |                  |      |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>12.74</b> | <b>40.28</b>  | <b>102.40</b> | <b>0.19</b> | <b>3.65</b>  | <b>3.25</b>   | <b>16949.36</b> | <b>1.15</b> | <b>9.73</b>  |  |
| <b>Capistrano Substation Relay Testing - I</b> | 2016             |      |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| Relay/Telecommunication Van                    | DIESEL           | 175  | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 1           | 132             | 0.24         | 0.73          | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| <b>Subtotal</b>                                |                  |      |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>0.24</b>  | <b>0.73</b>   | <b>1.74</b>   | <b>0.00</b> | <b>0.06</b>  | <b>0.05</b>   | <b>333</b>      | <b>0.02</b> | <b>0.16</b>  |  |
| <b>Capistrano Substation Energization - I</b>  | 2016             |      |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| Relay/Telecommunication Van                    | DIESEL           | 175  | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 1           | 22              | 0.24         | 0.73          | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| Line Truck                                     | DIESEL           | 235  | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 1           | 22              | 0.24         | 0.73          | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| <b>Subtotal</b>                                |                  |      |             |            |             |             |              |               |             |             |             |                 |             |                 | <b>0.47</b>  | <b>1.46</b>   | <b>3.47</b>   | <b>0.01</b> | <b>0.12</b>  | <b>0.10</b>   | <b>666</b>      | <b>0.04</b> | <b>0.33</b>  |  |
| <b>Capistrano Substation Energize Temp</b>     | 2016             |      |             |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |
| Relay/Telecommunication Van                    | DIESEL           | 175  | 0.1179      | 0.3651     | 0.8678      | 0.0019      | 0.0290       | 0.0258471     | 166.5       | 0.0106      | 0.0824      | 2               | 1           | 22              | 0.24         | 0.73          | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         |  |
| Line Truck                                     | DIESEL           | 235  | 0.1179      |            |             |             |              |               |             |             |             |                 |             |                 |              |               |               |             |              |               |                 |             |              |  |

Table A-9  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Capistrano Substation - Lower Yard

| Equipment/Phase   | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |
|---|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|   |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Capistrano Substation Building Removal - Lower Yard</b>            |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| 2-ton Flatbed Truck   |      |    | 0.003                  | 0.008           | 0.027            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.003            |
| Manlift   |      |    | 0.007                  | 0.032           | 0.050            | 0.000            | 0.004             | 0.004              | 5.025            | 0.001            | 0.005            |
| Excavator   |      |    | 0.023                  | 0.070           | 0.195            | 0.000            | 0.007             | 0.006              | 30.853           | 0.002            | 0.019            |
| Jackhammer  |      |    | 0.004                  | 0.014           | 0.027            | 0.000            | 0.001             | 0.001              | 3.489            | 0.000            | 0.003            |
| Dump Trucks   |      |    | 0.025                  | 0.068           | 0.218            | 0.000            | 0.007             | 0.006              | 29.312           | 0.002            | 0.021            |
| Crane   |      |    | 0.010                  | 0.035           | 0.094            | 0.000            | 0.003             | 0.003              | 11.887           | 0.001            | 0.009            |
| <b>Subtotal</b>   |      |    | <b>0.072</b>           | <b>0.227</b>    | <b>0.610</b>     | <b>0.001</b>     | <b>0.023</b>      | <b>0.021</b>       | <b>84.231</b>    | <b>0.007</b>     | <b>0.058</b>     |
| <b>Capistrano Substation Site Development - Lower Yard</b>            |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer   |      |    | 0.226                  | 1.002           | 1.922            | 0.002            | 0.080             | 0.071              | 186.470          | 0.020            | 0.183            |
| Road Grader/Blade   |      |    | 0.131                  | 0.443           | 1.186            | 0.002            | 0.043             | 0.038              | 161.557          | 0.012            | 0.113            |
| Scraper   |      |    | 0.224                  | 0.853           | 1.991            | 0.002            | 0.077             | 0.069              | 226.286          | 0.020            | 0.189            |
| Compactor   |      |    | 0.067                  | 0.205           | 0.693            | 0.001            | 0.024             | 0.021              | 80.831           | 0.006            | 0.066            |
| Loader  |      |    | 0.050                  | 0.146           | 0.480            | 0.001            | 0.017             | 0.015              | 58.995           | 0.004            | 0.046            |
| Backhoe   |      |    | 0.018                  | 0.093           | 0.121            | 0.000            | 0.010             | 0.009              | 13.656           | 0.002            | 0.011            |
| Water Truck   |      |    | 0.009                  | 0.025           | 0.082            | 0.000            | 0.003             | 0.002              | 10.992           | 0.001            | 0.008            |
| Dump/Haul Truck   |      |    | 1.663                  | 4.558           | 14.699           | 0.022            | 0.490             | 0.436              | 1978.559         | 0.150            | 1.396            |
| Excavator   |      |    | 0.004                  | 0.012           | 0.032            | 0.000            | 0.001             | 0.001              | 5.142            | 0.000            | 0.003            |
| <b>Subtotal</b>   |      |    | <b>2.392</b>           | <b>7.336</b>    | <b>21.206</b>    | <b>0.030</b>     | <b>0.744</b>      | <b>0.662</b>       | <b>2722.489</b>  | <b>0.216</b>     | <b>2.015</b>     |
| <b>Capistrano Substation Below Grade - Lower Yard</b>                 |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.090                  | 0.330           | 0.554            | 0.001            | 0.047             | 0.042              | 45.686           | 0.008            | 0.053            |
| Drill Rig   |      |    | 0.004                  | 0.041           | 0.037            | 0.000            | 0.002             | 0.002              | 6.787            | 0.000            | 0.004            |
| Front Loader  |      |    | 0.039                  | 0.117           | 0.362            | 0.001            | 0.012             | 0.011              | 49.162           | 0.004            | 0.034            |
| Dump Trucks   |      |    | 0.350                  | 0.993           | 2.917            | 0.005            | 0.097             | 0.087              | 439.680          | 0.032            | 0.277            |
| Skid Steer Loaders  |      |    | 0.019                  | 0.097           | 0.095            | 0.000            | 0.006             | 0.005              | 11.228           | 0.002            | 0.009            |
| 4000 Gallon Water Truck   |      |    | 0.023                  | 0.066           | 0.194            | 0.000            | 0.006             | 0.006              | 29.312           | 0.002            | 0.018            |
| Concrete Trucks   |      |    | 0.044                  | 0.124           | 0.365            | 0.001            | 0.012             | 0.011              | 54.960           | 0.004            | 0.035            |
| Ditch Witch   |      |    | 0.061                  | 0.413           | 0.526            | 0.001            | 0.026             | 0.023              | 74.987           | 0.006            | 0.050            |
| Handheld Compactor  |      |    | 0.002                  | 0.009           | 0.010            | 0.000            | 0.000             | 0.000              | 1.424            | 0.000            | 0.001            |
| <b>Subtotal</b>   |      |    | <b>0.632</b>           | <b>2.190</b>    | <b>5.060</b>     | <b>0.008</b>     | <b>0.210</b>      | <b>0.187</b>       | <b>713.226</b>   | <b>0.057</b>     | <b>0.481</b>     |
| <b>Capistrano Substation Construction - Lower Yard</b>                |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Boom Truck  |      |    | 0.138                  | 0.407           | 1.080            | 0.002            | 0.036             | 0.032              | 183.200          | 0.012            | 0.103            |
| Crane   |      |    | 0.037                  | 0.123           | 0.312            | 0.000            | 0.011             | 0.010              | 47.547           | 0.003            | 0.030            |
| Manlift   |      |    | 0.105                  | 0.544           | 0.749            | 0.001            | 0.056             | 0.050              | 87.108           | 0.010            | 0.071            |
| Rough Terrain Forklifts   |      |    | 0.247                  | 0.771           | 2.193            | 0.004            | 0.071             | 0.064              | 360.722          | 0.022            | 0.208            |
| Line Truck  |      |    | 0.017                  | 0.049           | 0.130            | 0.000            | 0.004             | 0.004              | 21.984           | 0.001            | 0.012            |
| Cable Dolly   |      |    | 0.009                  | 0.033           | 0.078            | 0.000            | 0.003             | 0.002              | 16.780           | 0.001            | 0.007            |
| Stringing Rigs  |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            | 0.000            |
| Oil Rig   |      |    | 0.017                  | 0.049           | 0.130            | 0.000            | 0.004             | 0.004              | 21.984           | 0.001            | 0.012            |
| SF6 Trailer   |      |    | 0.033                  | 0.098           | 0.259            | 0.000            | 0.009             | 0.008              | 43.968           | 0.003            | 0.025            |
| <b>Subtotal</b>   |      |    | <b>0.601</b>           | <b>2.073</b>    | <b>4.931</b>     | <b>0.009</b>     | <b>0.195</b>      | <b>0.173</b>       | <b>783.293</b>   | <b>0.054</b>     | <b>0.468</b>     |
| <b>Capistrano Substation Relay Testing - Lower Yard</b>               |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Relay/Telecommunication Van   |      |    | 0.016                  | 0.048           | 0.115            | 0.000            | 0.004             | 0.003              | 21.984           | 0.001            | 0.011            |
| <b>Subtotal</b>   |      |    | <b>0.016</b>           | <b>0.048</b>    | <b>0.115</b>     | <b>0.000</b>     | <b>0.004</b>      | <b>0.003</b>       | <b>21.984</b>    | <b>0.001</b>     | <b>0.011</b>     |
| <b>Capistrano Substation Energization - Lower Yard</b>                |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Relay/Telecommunication Van   |      |    | 0.003                  | 0.008           | 0.019            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Line Truck  |      |    | 0.003                  | 0.008           | 0.019            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| <b>Subtotal</b>   |      |    | <b>0.005</b>           | <b>0.016</b>    | <b>0.038</b>     | <b>0.000</b>     | <b>0.001</b>      | <b>0.001</b>       | <b>7.328</b>     | <b>0.000</b>     | <b>0.004</b>     |
| <b>Capistrano Substation Energize Temporary TL 13835 - Lower Yard</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Relay/Telecommunication Van   |      |    | 0.003                  | 0.008           | 0.019            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Line Truck  |      |    | 0.003                  | 0.008           | 0.019            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Manlift   |      |    | 0.007                  | 0.041           | 0.053            | 0.000            | 0.004             | 0.003              | 6.701            | 0.001            | 0.005            |
| <b>Subtotal</b>   |      |    | <b>0.012</b>           | <b>0.058</b>    | <b>0.091</b>     | <b>0.000</b>     | <b>0.005</b>      | <b>0.005</b>       | <b>14.029</b>    | <b>0.001</b>     | <b>0.009</b>     |



Table A-10  
Construction Heavy Equipment Emissions  
South Orange County Reliability Project  
Capistrano Substation - Upper Yard

| Equipment/Phase   | FUEL | HP | Emission, tons (total) |                 |                  |                  |                   |                    |                  |                  |                  |
|---|------|----|------------------------|-----------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|   |      |    | ROG tons (total)       | CO tons (total) | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Capistrano Substation Remove RFS 138/12kV Equipment - 230 kV</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Manlift   |      |    | 0.011                  | 0.062           | 0.080            | 0.000            | 0.006             | 0.005              | 10.051           | 0.001            | 0.008            |
| Flatbed Truck   |      |    | 0.019                  | 0.060           | 0.143            | 0.000            | 0.005             | 0.004              | 27.480           | 0.002            | 0.014            |
| Dump Trucks   |      |    | 0.006                  | 0.020           | 0.048            | 0.000            | 0.002             | 0.001              | 9.160            | 0.001            | 0.005            |
| Crane   |      |    | 0.006                  | 0.019           | 0.047            | 0.000            | 0.002             | 0.002              | 7.924            | 0.001            | 0.004            |
| <b>Subtotal</b>   |      |    | <b>0.043</b>           | <b>0.162</b>    | <b>0.318</b>     | <b>0.001</b>     | <b>0.014</b>      | <b>0.012</b>       | <b>54.615</b>    | <b>0.004</b>     | <b>0.030</b>     |
| <b>Capistrano Substation Site Development - 230 kV</b>              |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Bulldozer   |      |    | 0.148                  | 0.617           | 1.182            | 0.001            | 0.048             | 0.043              | 139.853          | 0.013            | 0.112            |
| Road Grader/Blade   |      |    | 0.083                  | 0.292           | 0.654            | 0.001            | 0.024             | 0.021              | 121.168          | 0.008            | 0.062            |
| Scraper   |      |    | 0.144                  | 0.534           | 1.171            | 0.002            | 0.045             | 0.040              | 169.714          | 0.013            | 0.111            |
| Compactor   |      |    | 0.028                  | 0.091           | 0.263            | 0.000            | 0.009             | 0.008              | 40.416           | 0.002            | 0.025            |
| Loader  |      |    | 0.028                  | 0.089           | 0.235            | 0.000            | 0.008             | 0.007              | 39.330           | 0.003            | 0.022            |
| Backhoe   |      |    | 0.014                  | 0.091           | 0.093            | 0.000            | 0.007             | 0.006              | 13.656           | 0.001            | 0.009            |
| Water Truck   |      |    | 0.008                  | 0.024           | 0.057            | 0.000            | 0.002             | 0.002              | 10.992           | 0.001            | 0.005            |
| Dump/Haul Truck   |      |    | 0.031                  | 0.096           | 0.229            | 0.000            | 0.008             | 0.007              | 43.968           | 0.003            | 0.022            |
| Excavator   |      |    | 0.030                  | 0.096           | 0.203            | 0.000            | 0.007             | 0.006              | 46.280           | 0.003            | 0.019            |
| <b>Subtotal</b>   |      |    | <b>0.513</b>           | <b>1.930</b>    | <b>4.088</b>     | <b>0.006</b>     | <b>0.157</b>      | <b>0.140</b>       | <b>625.376</b>   | <b>0.046</b>     | <b>0.388</b>     |
| <b>Capistrano Substation Below Grade - 230 kV</b>                   |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| CAT 416 Rubber Tire Backhoe   |      |    | 0.041                  | 0.215           | 0.255            | 0.000            | 0.020             | 0.018              | 31.106           | 0.004            | 0.024            |
| Drill Rig   |      |    | 0.002                  | 0.021           | 0.015            | 0.000            | 0.001             | 0.000              | 3.393            | 0.000            | 0.001            |
| Front Loader  |      |    | 0.028                  | 0.089           | 0.235            | 0.000            | 0.008             | 0.007              | 39.330           | 0.003            | 0.022            |
| Dump Trucks   |      |    | 0.156                  | 0.482           | 1.146            | 0.002            | 0.038             | 0.034              | 219.840          | 0.014            | 0.109            |
| Skid Steer Loaders  |      |    | 0.009                  | 0.055           | 0.052            | 0.000            | 0.002             | 0.002              | 6.737            | 0.001            | 0.005            |
| Crane   |      |    | 0.017                  | 0.058           | 0.142            | 0.000            | 0.005             | 0.005              | 23.773           | 0.002            | 0.013            |
| 4000 Gallon Water Truck   |      |    | 0.016                  | 0.048           | 0.115            | 0.000            | 0.004             | 0.003              | 21.984           | 0.001            | 0.011            |
| Concrete Trucks   |      |    | 0.350                  | 1.084           | 2.577            | 0.006            | 0.086             | 0.077              | 494.640          | 0.032            | 0.245            |
| Ditch Witch   |      |    | 0.038                  | 0.309           | 0.309            | 0.001            | 0.015             | 0.014              | 56.240           | 0.003            | 0.029            |
| Handheld Compactor  |      |    | 0.002                  | 0.009           | 0.011            | 0.000            | 0.000             | 0.000              | 1.518            | 0.000            | 0.001            |
| <b>Subtotal</b>   |      |    | <b>0.658</b>           | <b>2.371</b>    | <b>4.855</b>     | <b>0.010</b>     | <b>0.181</b>      | <b>0.161</b>       | <b>898.563</b>   | <b>0.059</b>     | <b>0.461</b>     |
| <b>Capistrano Substation Construction - 230 kV</b>                  |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Boom Truck  |      |    | 0.132                  | 0.429           | 0.906            | 0.002            | 0.030             | 0.027              | 197.856          | 0.012            | 0.086            |
| Manlift   |      |    | 0.065                  | 0.411           | 0.491            | 0.001            | 0.034             | 0.030              | 67.006           | 0.006            | 0.047            |
| Crane   |      |    | 0.025                  | 0.084           | 0.192            | 0.000            | 0.007             | 0.006              | 35.660           | 0.002            | 0.018            |
| Skid Steer Loaders  |      |    | 0.038                  | 0.271           | 0.246            | 0.000            | 0.010             | 0.009              | 33.685           | 0.003            | 0.023            |
| Line Truck  |      |    | 0.039                  | 0.127           | 0.268            | 0.001            | 0.009             | 0.008              | 58.624           | 0.004            | 0.025            |
| Cable Dolly   |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            | 0.000            |
| Stringing Rigs  |      |    | 0.010                  | 0.042           | 0.080            | 0.000            | 0.003             | 0.002              | 22.373           | 0.001            | 0.008            |
| Oil Rig   |      |    | 0.010                  | 0.032           | 0.067            | 0.000            | 0.002             | 0.002              | 14.656           | 0.001            | 0.006            |
| Oil Rig   |      |    | 0.015                  | 0.048           | 0.101            | 0.000            | 0.003             | 0.003              | 21.984           | 0.001            | 0.010            |
| SF6 Trailer   |      |    | 0.022                  | 0.071           | 0.151            | 0.000            | 0.005             | 0.005              | 32.976           | 0.002            | 0.014            |
| <b>Subtotal</b>   |      |    | <b>0.355</b>           | <b>1.515</b>    | <b>2.502</b>     | <b>0.005</b>     | <b>0.104</b>      | <b>0.093</b>       | <b>484.821</b>   | <b>0.032</b>     | <b>0.238</b>     |
| <b>Capistrano Substation Relay Testing - 230 kV</b>                 |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Relay/Telecommunication Van   |      |    | 0.012                  | 0.040           | 0.084            | 0.000            | 0.003             | 0.003              | 18.320           | 0.001            | 0.008            |
| <b>Subtotal</b>   |      |    | <b>0.012</b>           | <b>0.040</b>    | <b>0.084</b>     | <b>0.000</b>     | <b>0.003</b>      | <b>0.003</b>       | <b>18.320</b>    | <b>0.001</b>     | <b>0.008</b>     |
| <b>Capistrano Substation DeEnergize Temporary TL 13835 - 230 kV</b> |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Relay/Telecommunication Van   |      |    | 0.001                  | 0.002           | 0.004            | 0.000            | 0.000             | 0.000              | 0.833            | 0.000            | 0.000            |
| Line Truck  |      |    | 0.009                  | 0.029           | 0.061            | 0.000            | 0.002             | 0.002              | 13.324           | 0.001            | 0.006            |
| Cable Dolly   |      |    | 0.000                  | 0.000           | 0.000            | 0.000            | 0.000             | 0.000              | 0.000            | 0.000            | 0.000            |
| Boom Truck  |      |    | 0.005                  | 0.016           | 0.034            | 0.000            | 0.001             | 0.001              | 7.328            | 0.000            | 0.003            |
| <b>Subtotal</b>   |      |    | <b>0.014</b>           | <b>0.047</b>    | <b>0.098</b>     | <b>0.000</b>     | <b>0.003</b>      | <b>0.003</b>       | <b>21.484</b>    | <b>0.001</b>     | <b>0.009</b>     |
| <b>Capistrano Substation Energization - 230 kV</b>                  |      |    |                        |                 |                  |                  |                   |                    |                  |                  |                  |
| Relay/Telecommunication Van   |      |    | 0.002                  | 0.008           | 0.017            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| Line Truck  |      |    | 0.002                  | 0.008           | 0.017            | 0.000            | 0.001             | 0.001              | 3.664            | 0.000            | 0.002            |
| <b>Subtotal</b>   |      |    | <b>0.005</b>           | <b>0.016</b>    | <b>0.034</b>     | <b>0.000</b>     | <b>0.001</b>      | <b>0.001</b>       | <b>7.328</b>     | <b>0.000</b>     | <b>0.003</b>     |

Table A-11  
Construction and Operations Worker Commute Emission Calculations  
South Orange County Reliability Project

| Construction Phase   | Vehicle Class              | No. of Daily Workers<br>Per Construction Phase | Speed<br>(mph) | VMT<br>(mi/vehicle-day) | CO                     |                          | NO <sub>x</sub>        |                          | ROG                    |                          |                          |                              |                        | SO <sub>x</sub>          |                                     | PM10                   |                          |                        |                          | PM2.5            |                   |                        |                          | CO2              |                   | CH4                    |                          | N2O                    |                          |                        |
|--|----------------------------|--|----------------|-------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|--------------------------|------------------------------|------------------------|--------------------------|-------------------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------|-------------------|------------------------|--------------------------|------------------|-------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|
|  |                            |  |                |                         | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Hot-Soak (g/vehicle-day) | Resting Loss (g/vehicle-day) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Diurnal Evaporative (g/vehicle-day) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Tire Wear (g/mi) | Brake Wear (g/mi) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Tire Wear (g/mi) | Brake Wear (g/mi) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Running Exhaust (g/mi) | Start-Up (g/vehicle-day) | Running Exhaust (g/mi) |
| Transmission Segment 4 69kV and 138 kV                       | Light-Duty Truck, catalyst | 36   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Transmission Segment 1 138 kV                                | Light-Duty Truck, catalyst | 16   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Transmission Segment 3: Talega to Rancho San Juan 230 kB     | Light-Duty Truck, catalyst | 26   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Transmission Segment 2: Rancho San Juan 230 kV               | Light-Duty Truck, catalyst | 20   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Transmission Segment 1: 230 kV                               | Light-Duty Truck, catalyst | 28   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Transmission Segment 4: 230 kV                               | Light-Duty Truck, catalyst | 24   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Transmission Segment 2: 138/230 kV                           | Light-Duty Truck, catalyst | 20   | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Talega Substation - Below Grade                              | Light-Duty Truck, catalyst | 8  | 35             | 80                      | 3.0975                 | 38.14685                 | 0.301284               | 2.236171                 | 0.094167               | 3.031413                 | 1.876347                 | 0.796436                     | 0.20051                | 1.078687                 | 0.004048                            | 0.005841               | 0.004371                 | 0.03404                | 0.008                    | 0.03675          | 0.004             | 0.031111               | 0.002                    | 0.01575          | 372.0084          | 488.7328               | 0.0177                   | 0.02407547             | 0.03                     | 0.01059328             |
| Talega Substation - Substation Construction                  | Light-Duty Truck, catalyst | 6  | 35             | 80                      | 2.808256               | 35.06012                 | 0.274142               | 2.063512                 | 0.081266               | 2.751298                 | 1.816825                 | 0.776334                     | 0.189515               | 1.029591                 | 0.004048                            | 0.005781               | 0.004027                 | 0.031825               | 0.008                    | 0.03675          | 0.003695          | 0.029174               | 0.002                    | 0.01575          | 362.6021          | 477.8171               | 0.0177                   | 0.02353775             | 0.03                     | 0.01035669             |
| Capistrano Substation - Below Grade - Lower Yard             | Light-Duty Truck, catalyst | 15   | 35             | 80                      | 2.808256               | 35.06012                 | 0.274142               | 2.063512                 | 0.081266               | 2.751298                 | 1.816825                 | 0.776334                     | 0.189515               | 1.029591                 | 0.004048                            | 0.005781               | 0.004027                 | 0.031825               | 0.008                    | 0.03675          | 0.003695          | 0.029174               | 0.002                    | 0.01575          | 362.6021          | 477.8171               | 0.0177                   | 0.02353775             | 0.03                     | 0.01035669             |
| Capistrano Substation - Substation Construction - Lower Yard | Light-Duty Truck, catalyst | 8  | 35             | 80                      | 2.541377               | 32.18303                 | 0.249617               | 1.900388                 | 0.069493               | 2.492537                 | 1.757791                 | 0.756987                     | 0.18078                | 0.982373                 | 0.00404                             | 0.005727               | 0.003731                 | 0.030196               | 0.008                    | 0.03675          | 0.003433          | 0.027764               | 0.002                    | 0.01575          | 350.3236          | 463.963                | 0.0177                   | 0.02285528             | 0.03                     | 0.0100564              |
| Capistrano Substation - Below Grade - Upper Yard             | Light-Duty Truck, catalyst | 15   | 35             | 80                      | 2.315873               | 29.59808                 | 0.228406               | 1.751224                 | 0.059679               | 2.261624                 | 1.700598                 | 0.739637                     | 0.172907               | 0.939511                 | 0.004041                            | 0.005678               | 0.003515                 | 0.029018               | 0.008                    | 0.03675          | 0.003242          | 0.026761               | 0.002                    | 0.01575          | 338.8968          | 449.9828               | 0.0177                   | 0.02216661             | 0.03                     | 0.00975338             |
| Capistrano Substation - Substation Construction - Upper Yard | Light-Duty Truck, catalyst | 8  | 35             | 80                      | 2.315873               | 29.59808                 | 0.228406               | 1.751224                 | 0.059679               | 2.261624                 | 1.700598                 | 0.739637                     | 0.172907               | 0.939511                 | 0.004041                            | 0.005678               | 0.003515                 | 0.029018               | 0.008                    | 0.03675          | 0.003242          | 0.026761               | 0.002                    | 0.01575          | 338.8968          | 449.9828               | 0.0177                   | 0.02216661             | 0.03                     | 0.00975338             |

EMFAC2011 emission factors for 2013 - 2017  
Assume startup after 8 hours  
Assume 45 minutes run time total

| Construction Phase   | Vehicle Class              | No. of Daily Workers<br>Per Construction Phase | Speed<br>(mph) | VMT<br>(mi/vehicle-day) | Emissions, lbs/day |                 |      |                 |      |       |                               |                                |         |      |      | Total Emissions, tons |      |                 |         |                 |         |         |                               |                                |     |         |         |
|--|----------------------------|--|----------------|-------------------------|--------------------|-----------------|------|-----------------|------|-------|-------------------------------|--------------------------------|---------|------|------|-----------------------|------|-----------------|---------|-----------------|---------|---------|-------------------------------|--------------------------------|-----|---------|---------|
|  |                            |  |                |                         | CO                 | NO <sub>x</sub> | VOCs | SO <sub>x</sub> | PM10 | PM2.5 | Paved Road Fugitive Dust PM10 | Paved Road Fugitive Dust PM2.5 | CO2     | CH4  | N2O  | Construction Days     | CO   | NO <sub>x</sub> | VOCs    | SO <sub>x</sub> | PM10    | PM2.5   | Paved Road Fugitive Dust PM10 | Paved Road Fugitive Dust PM2.5 | CO2 | CH4     | N2O     |
| Transmission Segment 4 69kV and 138 kV                       | Light-Duty Truck, catalyst | 36   | 35             | 80                      | 22.69              | 2.09            | 1.15 | 0.03            | 0.31 | 0.14  | 0.30                          | 0.12                           | 2400.80 | 0.11 | 0.21 | 132                   | 0.75 | 0.07            | 0.03802 | 8.63E-04        | 0.01038 | 0.00464 | 0.01003                       | 0.00411                        | 79  | 0.00377 | 0.00686 |
| Transmission Segment 1 138 kV                                | Light-Duty Truck, catalyst | 16   | 35             | 80                      | 10.09              | 0.93            | 0.51 | 0.01            | 0.14 | 0.06  | 0.14                          | 0.06                           | 1067.02 | 0.05 | 0.09 | 132                   | 0.33 | 0.03            | 0.01690 | 3.84E-04        | 0.00461 | 0.00206 | 0.00446                       | 0.00183                        | 35  | 0.00168 | 0.00305 |
| Transmission Segment 3: Talega to Rancho San Juan 230 kB     | Light-Duty Truck, catalyst | 26   | 35             | 80                      | 16.39              | 1.51            | 0.83 | 0.02            | 0.23 | 0.10  | 0.22                          | 0.09                           | 1733.91 | 0.08 | 0.15 | 132                   | 0.54 | 0.05            | 0.02746 | 6.24E-04        | 0.00750 | 0.00335 | 0.00724                       | 0.00297                        | 57  | 0.00272 | 0.00495 |
| Transmission Segment 2: Rancho San Juan 230 kV               | Light-Duty Truck, catalyst | 20   | 35             | 80                      | 12.61              | 1.16            | 0.64 | 0.01            | 0.17 | 0.08  | 0.17                          | 0.07                           | 1333.78 | 0.06 | 0.12 | 132                   | 0.42 | 0.04            | 0.02112 | 4.80E-04        | 0.00577 | 0.00258 | 0.00557                       | 0.00228                        | 44  | 0.00210 | 0.00381 |
| Transmission Segment 1: 230 kV                               | Light-Duty Truck, catalyst | 28   | 35             | 80                      | 17.65              | 1.63            | 0.90 | 0.02            | 0.24 | 0.11  | 0.24                          | 0.10                           | 1867.29 | 0.09 | 0.16 | 132                   | 0.58 | 0.05            | 0.02957 | 6.72E-04        | 0.00807 | 0.00361 | 0.00780                       | 0.00320                        | 62  | 0.00293 | 0.00533 |
| Transmission Segment 4: 230 kV                               | Light-Duty Truck, catalyst | 24   | 35             | 80                      | 15.13              | 1.39            | 0.77 | 0.02            | 0.21 | 0.09  | 0.20                          | 0.08                           | 1600.53 | 0.08 | 0.14 | 132                   | 0.50 | 0.05            | 0.02535 | 5.76E-04        | 0.00692 | 0.00309 | 0.00668                       | 0.00274                        | 53  | 0.00251 | 0.00457 |
| Transmission Segment 2: 138/230 kV                           | Light-Duty Truck, catalyst | 20   | 35             | 80                      | 12.61              | 1.16            | 0.64 | 0.01            | 0.17 | 0.08  | 0.17                          | 0.07                           | 1333.78 | 0.06 | 0.12 | 132                   | 0.42 | 0.04            | 0.02112 | 4.80E-04        | 0.00577 | 0.00258 | 0.00557                       | 0.00228                        | 44  | 0.00210 | 0.00381 |
| Talega Substation - Below Grade                              | Light-Duty Truck, catalyst | 8  | 35             | 80                      | 5.04               | 0.46            | 0.26 | 0.01            | 0.07 | 0.03  | 0.07                          | 0.01                           | 533.51  | 0.03 | 0.05 | 66                    | 0.17 | 0.02            | 0.00845 | 1.92E-04        | 0.00231 | 0.00103 | 0.00223                       | 0.00047                        | 18  | 0.00084 | 0.00152 |
| Talega Substation - Substation Construction                  | Light-Duty Truck, catalyst | 6  | 35             | 80                      | 3.44               | 0.32            | 0.17 | 0.00            | 0.05 | 0.02  | 0.05                          | 0.01                           | 390.03  | 0.02 | 0.03 | 66                    | 0.11 | 0.01            | 0.00570 | 1.44E-04        | 0.00172 | 0.00076 | 0.00167                       | 0.00035                        | 13  | 0.00063 | 0.00114 |
| Capistrano Substation - Below Grade - Lower Yard             | Light-Duty Truck, catalyst | 15   | 35             | 80                      | 8.59               | 0.79            | 0.43 | 0.01            | 0.13 | 0.06  | 0.13                          | 0.03                           | 975.09  | 0.05 | 0.09 | 66                    | 0.28 | 0.03            | 0.01426 | 3.60E-04        | 0.00429 | 0.00190 | 0.00418                       | 0.00088                        | 32  | 0.00157 | 0.00286 |
| Capistrano Substation - Substation Construction - Lower Yard | Light-Duty Truck, catalyst | 8  | 35             | 80                      | 4.15               | 0.39            | 0.21 | 0.01            | 0.07 | 0.03  | 0.07                          | 0.01                           | 502.48  | 0.03 | 0.05 | 66                    | 0.14 | 0.01            | 0.00683 | 1.91E-04        | 0.00227 | 0.00100 | 0.00223                       | 0.00047                        | 17  | 0.00084 | 0.00152 |
| Capistrano Substation - Below Grade - Upper Yard             | Light-Duty Truck, catalyst | 15   | 35             | 80                      | 7.11               | 0.66            | 0.35 | 0.01            | 0.13 | 0.06  | 0.13                          | 0.03                           | 911.45  | 0.05 | 0.09 | 66                    | 0.23 | 0.02            | 0.01156 | 3.59E-04        | 0.00425 | 0.00186 | 0.00418                       | 0.00088                        | 30  | 0.00157 | 0.00286 |
| Capistrano Substation - Substation Construction - Upper Yard | Light-Duty Truck, catalyst | 8  | 35             | 80                      | 3.79               | 0.35            | 0.19 | 0.01            | 0.07 | 0.03  | 0.07                          | 0.01                           | 486.11  | 0.03 | 0.05 | 66                    | 0.13 | 0.01            | 0.00616 | 1.91E-04        | 0.00226 | 0.00099 | 0.00223                       | 0.00047                        | 16  | 0.00084 | 0.00152 |

| Operations                 | Vehicle Class              | No. of Daily Workers<br>Per Construction Phase | Speed<br>(mph) | VMT<br>(mi/vehicle-day) | Emissions, lbs/day |                 |      |                 |      |       |                               |                                |        |      |      | Total Emissions, tons |      |                 |         |                 |         |         |                               |                                |     |         |         |
|----------------------------|----------------------------|--|----------------|-------------------------|--------------------|-----------------|------|-----------------|------|-------|-------------------------------|--------------------------------|--------|------|------|-----------------------|------|-----------------|---------|-----------------|---------|---------|-------------------------------|--------------------------------|-----|---------|---------|
|                            |                            |  |                |                         | CO                 | NO <sub>x</sub> | VOCs | SO <sub>x</sub> | PM10 | PM2.5 | Paved Road Fugitive Dust PM10 | Paved Road Fugitive Dust PM2.5 | CO2    | CH4  | N2O  | Work Days             | CO   | NO <sub>x</sub> | VOCs    | SO <sub>x</sub> | PM10    | PM2.5   | Paved Road Fugitive Dust PM10 | Paved Road Fugitive Dust PM2.5 | CO2 | CH4     | N2O     |
| Inspection and Maintenance | Light-Duty Truck, catalyst | 10   | 35             | 40                      | 3.57               | 12.50           | 0.24 | 1.28            | 0.04 | 0.02  | 0.05                          | 0.02                           | 338.83 | 0.02 | 0.03 | 250                   | 0.22 | 0.78            | 0.01481 | 7.98E-02        | 0.00275 | 0.00124 | 0.00282                       | 0.00116                        | 21  | 0.00101 | 0.00181 |





Table A-13  
Helicopter Emissions  
South Orange County Reliability Enhancement Project

**Helicopter Emissions Calculation**

Assumptions

1 structure/day

|                         |    |                     |
|-------------------------|----|---------------------|
| - heavy lift helicopter | 2  | hours per structure |
| - light lift helicopter | 10 | hours per structure |

| NOX<br>(lbs/day) | VOC/ROG<br>(lbs/day) | PM<br>(lbs/day) | CO<br>(lbs/day) | SOX<br>(lbs/day) | CO2<br>(lbs/day) | NOX<br>(tons) | VOC/ROG<br>(tons) | PM<br>(tons) | CO<br>(tons) | SOX<br>(tons) | CO2<br>(tons) |
|------------------|----------------------|-----------------|-----------------|------------------|------------------|---------------|-------------------|--------------|--------------|---------------|---------------|
| 66.8874          | 12.8308              | 22.1092         | 66.8874         | 12.3147          | 30084.6428       | 0.6689        | 0.1283            | 0.2211       | 0.6689       | 0.1231        | 300.8464      |

**Transmission Line**

Structures 5

| Primary Equipment Description | HP Estimate | Fuel Type | Activity Schedule Estimate (Days) | Duration of Use (Hours/ Day) | Work Flight Cycles/ Day | Refuel Flight Cycles/ Day | Total Flight Cycles |
|-------------------------------|-------------|-----------|-----------------------------------|------------------------------|-------------------------|---------------------------|---------------------|
|                               |             |           |                                   |                              |                         |                           | 339                 |
| Light Duty/Crew Helicopter    | 1200        | Jet A     | 140                               | 10                           | 40                      | 10                        | 303                 |
| Heavy Lift Helicopter         | 9000        |           | 140                               | 2                            | 5                       | 2                         | 37                  |

| NOX<br>(lbs) | VOC/ROG<br>(lbs) | PM<br>(lbs) | CO<br>(lbs) | SOX<br>(lbs) | CO2<br>(lbs) | NOX<br>(tons) | VOC/ROG<br>(tons) | PM<br>(tons) | CO<br>(tons) | SOX<br>(tons) | CO2<br>(tons) |
|--------------|------------------|-------------|-------------|--------------|--------------|---------------|-------------------|--------------|--------------|---------------|---------------|
| 27.9230      | 6.8125           | 10.4579     | 27.9230     | 6.5795       | 16073.5950   | 0.2792        | 0.0681            | 0.1046       | 0.2792       | 0.0658        | 160.7360      |
| 38.9644      | 6.0183           | 11.6513     | 38.9644     | 5.7352       | 14011.0478   | 0.3896        | 0.0602            | 0.1165       | 0.3896       | 0.0574        | 140.1105      |



Table A-15  
Fugitive Dust Emission Calculations  
South Orange County Reliability Project  
Substation Construction

**Activity Assumptions for Fugitive Dust Sources**

**Phase 1 Substation Below Grade**

|   |                        |             |
|---|------------------------|-------------|
| Amount total import fill material       | 9600 cubic yards total |             |
| Amount per day                          | 1920 cubic yards/day   |             |
|   | PM10                   | PM2.5       |
| Maximum Emission Factor, lbs/cubic yard | 0.0045768              | 0.001438424 |
| Emissions, lbs/day                      | 26.362388              | 8.285321855 |
| Average Emission Factor, lbs/cubic yard | 0.0010405              | 0.000327026 |
| Emissions, tons/year                    | 0.0149837              | 0.00470917  |

**Phase 2 Substation Below Grade**

|   |                         |             |
|---|-------------------------|-------------|
| Amount total cut/fill material          | 11900 cubic yards total |             |
| Amount per day                          | 2380 cubic yards/day    |             |
|   | PM10                    | PM2.5       |
| Maximum Emission Factor, lbs/cubic yard | 0.0045768               | 0.001438424 |
| Emissions, lbs/day                      | 32.678376               | 10.27034688 |
| Average Emission Factor, lbs/cubic yard | 0.0010405               | 0.000327026 |
| Emissions, tons/year                    | 0.0185736               | 0.005837409 |

Material Loading/Handling (AP-42, p. 13.2.4-3)

$$E = (k)(0.0032)[(U/5)^{1.3}]/[(M/2)^{1.4}]$$

E = lb/ton

k = Particle Size Constant (0.35 for PM10 and 0.11 for PM2.5)  
 U = average wind speed = 25 MPH worst day, 8 MPH avg daytime (engineering assumption)  
 M = moisture content = 10% (mitigated)  
 Three separate drops are assumed  
 Assume 1.6 tons/cubic yard

Emission Factors and Emissions

Emission Factors

|  |                            |                             |
|--|----------------------------|-----------------------------|
|  | <b>PM10 Daily</b>          | <b>PM2.5 Daily</b>          |
|  | 0.00286                    | 0.00090                     |
|  | <b>PM10 Annual Average</b> | <b>PM2.5 Annual Average</b> |
|  | 0.00065                    | 0.00020                     |

**Substation Grading**

|                                       |         |          |
|---------------------------------------|---------|----------|
| Amount total disturbed                | 5 acres |          |
| Amount per day                        | 5 Acres |          |
| Control - watering 3 x daily          | 0.61    |          |
|                                       | PM10    | PM2.5    |
| Maximum Emission Factor, lbs/acre-day | 20      | 4.2      |
| Emissions, lbs/day                    | 39      | 8.19     |
| Average Emission Factor, lbs/acre-day | 20      | 4.2      |
| Emissions, tons/year                  | 0.0195  | 0.004095 |

A) Dozing (AP-42 Section 11.9 for overburden)

$$E = k \times (s)^{1.5} / (M)^{1.4} \text{ For PM10 and } k \times 5.7 \times (s)^{1.2} / (M)^{1.3} \text{ for PM2.5}$$

E = lb/hr  
 k = Scaling Constant (0.75 for PM10 and 0.105 for PM2.5)  
 s = Silt Content (assumed to be 16% - SCAQMD Handbook for Farm Roads)  
 M = Moisture Content = 10% (assumes watering when necessary for mitigation)

PM10 Emission Factor  
1.910914419 lb/hr

PM2.5 Emission Factor  
0.835618668 lb/hr

Maximum Daily Dozer Use

|  |         |
|--|---------|
|  | Hrs/day |
|  | 12      |

Dozer Emissions

|         |       |       |
|---------|-------|-------|
| Lbs/Day | PM10  | PM2.5 |
|         | 22.93 | 10.03 |

B) Grading

|                                       |         |          |
|---------------------------------------|---------|----------|
| Amount total disturbed                | 5 acres |          |
| Amount per day                        | 5 Acres |          |
| Control - watering 3 x daily          | 0.61    |          |
|                                       | PM10    | PM2.5    |
| Maximum Emission Factor, lbs/acre-day | 20      | 4.2      |
| Emissions, lbs/day                    | 39      | 8.19     |
| Average Emission Factor, lbs/acre-day | 20      | 4.2      |
| Emissions, tons/year                  | 0.0195  | 0.004095 |

**Fugitive Dust Grading Emission Totals**

|         |             |              |
|---------|-------------|--------------|
|         | Maximum Day |              |
|         | PM10 lb/day | PM2.5 lb/day |
| Dozer   | 22.93       | 10.03        |
| Grading | 39.00       | 8.19         |

|                                  |          |       |       |
|----------------------------------|----------|-------|-------|
| Maximum Daily                    | Totals   | 61.93 | 18.22 |
| Talega Substation                | Ton/year | 4.09  | 1.20  |
| Capistrano Substation Lower Yard | Ton/year | 8.17  | 2.40  |
| Capistrano Substation Upper Yard | Ton/year | 6.81  | 2.00  |

**Fugitive Dust Emissions - Maximum Daily, Transmission Line Construction**

**Emission Categories**

- 1) Earthmoving
- 2) Road Dust Paved/Unpaved

**1) Earthmoving**

Emission Types

- A) Dozing
- B) Grading
- C) Material Loading/Handling

A) Dozing (AP-42 Section 11.9 for overburden)

$E = k \times (s)^{1.5} / (M)^{1.4}$  For PM10 and  $k \times 5.7 \times (s)^{1.2} / (M)^{1.3}$  for PM2.5

E = lb/hr

k = Scaling Constant (0.75 for PM10 and 0.105 for PM2.5)

s = Silt Content (assumed to be 16% - SCAQMD Handbook for Farm Roads)

M = Moisture Content = 10% (assumes watering when necessary for mitigation)

PM10 Emission Factor  
1.910914419 lb/hr

PM2.5 Emission Factor  
0.835618668 lb/hr

| Maximum Daily Dozer Use |         |
|-------------------------|---------|
|                         | Hrs/day |
|                         | 12      |

Dozer Emissions

| Lbs/Day | PM10  | PM2.5 |
|---------|-------|-------|
|         | 22.93 | 10.03 |

B) Grading

**Transmission Grading**

Amount total disturbed 3.43 acres

Amount per day 0.343 Acres

Control - watering 3 x daily 0.61

Maximum Emission Factor, lbs/acre-day PM10 20 PM2.5 4.2

Emissions, lbs/day 2.6754 0.561834

Average Emission Factor, lbs/acre-day 20 4.2

Emissions, tons/year 0.013377 0.00280917

A) Dozing (AP-42 Section 11.9 for overburden)

$E = k \times (s)^{1.5} / (M)^{1.4}$  For PM10 and  $k \times 5.7 \times (s)^{1.2} / (M)^{1.3}$  for PM2.5

E = lb/hr

k = Scaling Constant (0.75 for PM10 and 0.105 for PM2.5)

s = Silt Content (assumed to be 16% - SCAQMD Handbook for Farm Roads)

M = Moisture Content = 10% (assumes watering when necessary for mitigation)

$E = k \times 0.051 \times (S)^{2.0}$  for PM10 and  $k \times 0.040 \times (S)^{2.5}$  for PM2.5

E = lb/VMT

k = Scaling Constant (0.60 for PM10 and 0.031 for PM2.5)

S = Mean Vehicle Speed assumed to be 3 mph

Assumes VMT = 3 x hours in use

PM10 Emission Factor  
0.2754 lb/VMT

PM2.5 Emission Factor  
0.019329687 lb/VMT

| Maximum Daily Grader VMT |         |         |
|--------------------------|---------|---------|
|                          | Hrs/day | VMT/day |
|                          | 4       | 12      |

Grading Emissions

| Lbs/Day | PM10 | PM2.5 |
|---------|------|-------|
|         | 3.30 | 0.23  |

C) Material Loading/Handling (AP-42, p. 13.2.4-3)

$E = (k)(0.0032)[(U/5)^{1.3}]/[(M/2)^{1.4}]$

E = lb/ton

k = Particle Size Constant (0.35 for PM10 and 0.11 for PM2.5)

U = average wind speed = 26.5 MPH worst day, 6.4 MPH avg from Norco Met File

M = moisture content = 10% (mitigated)

Three separate drops are assumed

Max Daily 54 Maximum daily tons

Emission Factors and Emissions

| Emission Factors |             | Emissions lbs/day |       |
|------------------|-------------|-------------------|-------|
| PM10 Daily       | PM2.5 Daily | PM10              | PM2.5 |
| 0.00103          | 0.00032     | 0.06              | 0.02  |

**Transmission Earthmoving**

Amount total import/export fill material 11655 cubic yards total

Amount per day 2330 cubic yards/day

Maximum Emission Factor, lbs/cubic yard PM10 0.004576803 PM2.5 0.001438424

Emissions, lbs/day 31.99185593 10.05458329

Average Emission Factor, lbs/cubic yard 0.001040536 0.000327026

Emissions, tons/year 0.018191176 0.005717227

Material Loading/Handling (AP-42, p. 13.2.4-3)

$E = (k)(0.0032)[(U/5)^{1.3}]/[(M/2)^{1.4}]$

E = lb/ton

k = Particle Size Constant (0.35 for PM10 and 0.11 for PM2.5)

U = average wind speed = 25 MPH worst day, 8 MPH avg daytime (engineering assumption)

M = moisture content = 10% (mitigated)

Three separate drops are assumed

Assume 1.6 tons/cubic yard

Material Loading/Handling (AP-42, p. 13.2.4-3)

$E = (k)(0.0032)[(U/5)^{1.3}]/[(M/2)^{1.4}]$

E = lb/ton

k = Particle Size Constant (0.35 for PM10 and 0.11 for PM2.5)

U = average wind speed = 25 MPH worst day, 8 MPH avg daytime (engineering assumption)

M = moisture content = 10% (mitigated)

Three separate drops are assumed

Assume 1.6 tons/cubic yard

Emission Factors and Emissions

| Emission Factors    |                      | Emissions lbs/day |       |
|---------------------|----------------------|-------------------|-------|
| PM10 Daily          | PM2.5 Daily          | PM10              | PM2.5 |
| 0.00286             | 0.00090              |                   |       |
| PM10 Annual Average | PM2.5 Annual Average | PM10              | PM2.5 |
| 0.00065             | 0.00020              |                   |       |

**2) Disturbed Area Windblown Emissions**

Assumption

| PM10 | PM2.5 |
|------|-------|
| 29   | 6     |

**Fugitive Dust Emission Totals**

|                 | Maximum Day |              |
|-----------------|-------------|--------------|
|                 | PM10 lb/day | PM2.5 lb/day |
| Dozer           | 22.93       | 10.03        |
| Grading         | 5.98        | 0.79         |
| Soil Handling   | 31.99       | 10.05        |
| Wind Blown Dust | 28.87       | 5.91         |

|  | Totals |       |
|--|--------|-------|
| Total, tons/year   | PM10   | PM2.5 |
| Transmission Segment 4 69kV and 138 kV                   | 6.91   | 2.06  |
| Transmission Segment 1 138 kV                            | 5.92   | 1.77  |
| Transmission Segment 3: Talega to Rancho San Juan 230 kV | 1.97   | 0.59  |
| Transmission Segment 2: Rancho San Juan 230 kV           | 3.95   | 1.18  |
| Transmission Segment 1: 230 kV                           | 2.96   | 0.88  |
| Transmission Segment 4: 230 kV                           | 3.95   | 1.18  |
| Transmission Segment 2: 138/230 kV                       | 3.95   | 1.18  |

Table A-17  
Construction Emission Summary  
South Orange County Reliability Project  
Substation Construction

| Summary  | Emissions    |               |               |             |              |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |  |  |
|--|--------------|---------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|--|--|
|  | ROG lbs/day  | CO lbs/day    | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |  |  |
| <b>Talega Substation Site Development</b>                  |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 0.00         | 0.00          | 0.00          | 0.00        | 0.00         | 0.00          | 0.00            | 0.00        | 0            | 0                | 0                      | 0                | 0                | 0                 | 0                  | 0                | 0                | 0                |  |  |
| Worker Vehicles  | 0.26         | 5.04          | 0.46          | 0.01        | 0.14         | 0.05          | 533.51          | 0.03        | 0.05         | 0.17             | 0.02                   | 0.01             | 0.00             | 0.00              | 0.00               | 18               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.05         | 0.20          | 1.38          | 0.00        | 0.07         | 0.05          | 196.04          | 0.01        | 0.01         | 0.00             | 0.01                   | 0.05             | 0.00             | 0.00              | 0.00               | 6                | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 61.93        | 18.22         |                 |             |              |                  |                        |                  | 4.09             | 1.20              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>0.31</b>  | <b>5.24</b>   | <b>1.85</b>   | <b>0.01</b> | <b>62.14</b> | <b>18.31</b>  | <b>729.56</b>   | <b>0.04</b> | <b>0.05</b>  | <b>0.17</b>      | <b>0.02</b>            | <b>0.05</b>      | <b>0.00</b>      | <b>4.09</b>       | <b>1.21</b>        | <b>24.08</b>     | <b>0.00</b>      | <b>0.00</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Talega Substation Below Grade</b>                       |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 4.27         | 17.37         | 35.27         | 0.05        | 1.67         | 1.49          | 4456.85         | 0.39        | 3.35         | 0.072791         | 0.307398               | 0.603561         | 0.000872         | 0.028042          | 0.024958           | 76.79114         | 0.006568         | 0.057338         |  |  |
| Worker Vehicles  | 0.26         | 5.04          | 0.46          | 0.01        | 0.14         | 0.05          | 533.51          | 0.03        | 0.05         | 0.17             | 0.02                   | 0.01             | 0.00             | 0.00              | 0.00               | 18               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.52         | 1.97          | 13.81         | 0.02        | 0.73         | 0.48          | 1960.45         | 0.11        | 0.05         | 0.01             | 0.02                   | 0.15             | 0.00             | 0.01              | 0.01               | 22               | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 26.36        | 8.29          |                 |             |              |                  |                        |                  | 0.01             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>5.05</b>  | <b>24.39</b>  | <b>49.54</b>  | <b>0.08</b> | <b>28.90</b> | <b>10.31</b>  | <b>6950.81</b>  | <b>0.52</b> | <b>3.45</b>  | <b>0.24</b>      | <b>0.34</b>            | <b>0.76</b>      | <b>0.00</b>      | <b>0.06</b>       | <b>0.04</b>        | <b>115.96</b>    | <b>0.01</b>      | <b>0.06</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Talega Substation Construction</b>                      |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 2.45         | 8.25          | 18.09         | 0.03        | 0.78         | 0.69          | 2637.41         | 0.22        | 1.72         | 0.092724         | 0.336943               | 0.654107         | 0.000972         | 0.032835          | 0.029224           | 87.94302         | 0.008777         | 0.06214          |  |  |
| Worker Vehicles  | 0.17         | 3.44          | 0.32          | 0.00        | 0.10         | 0.03          | 390.03          | 0.02        | 0.03         | 0.11             | 0.01                   | 0.01             | 0.00             | 0.00              | 0.00               | 13               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.02         | 0.11          | 0.24          | 0.00        | 0.05         | 0.03          | 117.18          | 0.01        | 0.00         | 0.00             | 0.00                   | 0.00             | 0.00             | 0.00              | 0.00               | 1                | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 39.00        | 8.19          |                 |             |              |                  |                        |                  | 0.02             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>2.64</b>  | <b>11.79</b>  | <b>18.65</b>  | <b>0.03</b> | <b>0.93</b>  | <b>0.75</b>   | <b>3144.63</b>  | <b>0.25</b> | <b>1.76</b>  | <b>0.21</b>      | <b>0.35</b>            | <b>0.66</b>      | <b>0.00</b>      | <b>0.04</b>       | <b>0.03</b>        | <b>102.10</b>    | <b>0.01</b>      | <b>0.06</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Capistrano Substation Building Removal - Lower Yard</b> |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 3.76         | 11.90         | 32.00         | 0.05        | 1.22         | 1.09          | 4368.97         | 0.34        | 3.04         | 0.072434         | 0.226848               | 0.610133         | 0.000894         | 0.023413          | 0.020838           | 84.2306          | 0.006536         | 0.057963         |  |  |
| Worker Vehicles  | 0.21         | 0.01          | 0.07          | 0.03        | 0.14         | 0.04          | 502.48          | 0.03        | 0.05         | 0.14             | 0.01                   | 0.01             | 0.00             | 0.00              | 0.00               | 17               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.47         | 1.78          | 12.43         | 0.02        | 0.65         | 0.44          | 1764.40         | 0.10        | 0.05         | 0.01             | 0.04                   | 0.27             | 0.00             | 0.01              | 0.01               | 39               | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 39.00        | 8.19          |                 |             |              |                  |                        |                  | 0.02             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>4.44</b>  | <b>13.68</b>  | <b>44.50</b>  | <b>0.09</b> | <b>41.01</b> | <b>9.76</b>   | <b>6635.85</b>  | <b>0.47</b> | <b>3.13</b>  | <b>0.22</b>      | <b>0.28</b>            | <b>0.89</b>      | <b>0.00</b>      | <b>0.02</b>       | <b>0.04</b>        | <b>139.63</b>    | <b>0.01</b>      | <b>0.06</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Capistrano Substation Site Development - Lower Yard</b> |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 40.76        | 128.91        | 360.93        | 0.50        | 12.82        | 11.41         | 45756.51        | 3.68        | 34.29        | 2.391771         | 7.33631                | 21.20645         | 0.029807         | 0.744153          | 0.662296           | 2722.489         | 0.215806         | 2.014613         |  |  |
| Worker Vehicles  | 0.43         | 8.59          | 0.79          | 0.01        | 0.26         | 0.08          | 975.09          | 0.05        | 0.09         | 0.28             | 0.03                   | 0.01             | 0.00             | 0.01              | 0.00               | 32               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 1.57         | 5.92          | 41.42         | 0.06        | 2.18         | 1.45          | 5881.34         | 0.34        | 0.15         | 0.10             | 0.39                   | 2.73             | 0.00             | 0.14              | 0.10               | 388              | 0.02             | 0.01             |  |  |
| Fugitive Dust  |              |               |               |             | 61.93        | 18.22         |                 |             |              |                  |                        |                  | 8.17             | 2.40              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>42.76</b> | <b>143.42</b> | <b>403.14</b> | <b>0.56</b> | <b>77.19</b> | <b>31.17</b>  | <b>52612.94</b> | <b>4.06</b> | <b>34.53</b> | <b>2.78</b>      | <b>7.75</b>            | <b>23.95</b>     | <b>0.03</b>      | <b>9.07</b>       | <b>3.17</b>        | <b>3142.84</b>   | <b>0.24</b>      | <b>2.03</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Capistrano Substation Below Grade - Lower Yard</b>      |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 12.55        | 42.66         | 103.07        | 0.17        | 3.95         | 3.52          | 15026.87        | 1.13        | 9.79         | 0.63224          | 2.189933               | 5.080315         | 0.008075         | 0.209834          | 0.186752           | 713.2262         | 0.057046         | 0.48073          |  |  |
| Worker Vehicles  | 0.43         | 8.59          | 0.79          | 0.01        | 0.26         | 0.08          | 975.09          | 0.05        | 0.09         | 0.28             | 0.03                   | 0.01             | 0.00             | 0.01              | 0.00               | 32               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 3.22         | 12.10         | 129.93        | 0.19        | 5.51         | 3.24          | 19578.76        | 1.12        | 5.50         | 0.20             | 0.75                   | 8.00             | 0.01             | 0.34              | 0.20               | 1206             | 0.07             | 0.03             |  |  |
| Fugitive Dust  |              |               |               |             | 26.36        | 8.29          |                 |             |              |                  |                        |                  | 0.01             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>16.21</b> | <b>63.35</b>  | <b>233.79</b> | <b>0.37</b> | <b>36.08</b> | <b>15.13</b>  | <b>35580.71</b> | <b>2.30</b> | <b>10.38</b> | <b>1.11</b>      | <b>2.96</b>            | <b>13.08</b>     | <b>0.02</b>      | <b>0.57</b>       | <b>0.39</b>        | <b>1951.46</b>   | <b>0.13</b>      | <b>0.51</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Capistrano Substation Construction - Lower Yard</b>     |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 12.74        | 40.28         | 102.40        | 0.19        | 3.65         | 3.25          | 16949.36        | 1.15        | 9.73         | 0.601196         | 2.073288               | 4.930517         | 0.008763         | 0.194846          | 0.173413           | 783.293          | 0.054245         | 0.468399         |  |  |
| Worker Vehicles  | 0.21         | 4.15          | 0.39          | 0.01        | 0.14         | 0.04          | 502.48          | 0.03        | 0.05         | 0.14             | 0.01                   | 0.01             | 0.00             | 0.00              | 0.00               | 17               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.02         | 0.13          | 0.31          | 0.00        | 0.07         | 0.03          | 152.32          | 0.01        | 0.00         | 0.00             | 0.02                   | 0.04             | 0.00             | 0.01              | 0.00               | 22               | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 26.36        | 8.29          |                 |             |              |                  |                        |                  | 0.01             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>12.97</b> | <b>44.56</b>  | <b>103.09</b> | <b>0.20</b> | <b>3.85</b>  | <b>3.32</b>   | <b>17604.16</b> | <b>1.18</b> | <b>9.78</b>  | <b>0.74</b>      | <b>2.10</b>            | <b>4.98</b>      | <b>0.01</b>      | <b>0.21</b>       | <b>0.18</b>        | <b>821.66</b>    | <b>0.06</b>      | <b>0.47</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Capistrano Substation Relay Testing - Lower Yard</b>    |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 0.24         | 0.73          | 1.74          | 0.00        | 0.06         | 0.05          | 333.09          | 0.02        | 0.16         | 0.015566         | 0.048196               | 0.114552         | 0.000247         | 0.039334          | 0.003412           | 21.98399         | 0.001404         | 0.010882         |  |  |
| Worker Vehicles  | 0.21         | 4.15          | 0.39          | 0.01        | 0.14         | 0.04          | 502.48          | 0.03        | 0.05         | 0.14             | 0.01                   | 0.01             | 0.00             | 0.00              | 0.00               | 17               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.01         | 0.07          | 0.15          | 0.00        | 0.03         | 0.02          | 76.16           | 0.00        | 0.00         | 0.00             | 0.00                   | 0.01             | 0.00             | 0.00              | 0.00               | 5                | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 26.36        | 8.29          |                 |             |              |                  |                        |                  | 0.01             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>0.45</b>  | <b>4.95</b>   | <b>2.27</b>   | <b>0.01</b> | <b>0.23</b>  | <b>0.11</b>   | <b>911.73</b>   | <b>0.05</b> | <b>0.21</b>  | <b>0.15</b>      | <b>0.07</b>            | <b>0.13</b>      | <b>0.00</b>      | <b>0.01</b>       | <b>0.01</b>        | <b>43.59</b>     | <b>0.00</b>      | <b>0.01</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |
| <b>Capistrano Substation Energization - Lower Yard</b>     |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Emissions, lbs/day   |              |               |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Heavy Construction Equipment                               | 0.47         | 1.46          | 3.47          | 0.01        | 0.12         | 0.10          | 666.18          | 0.04        | 0.33         | 0.005189         | 0.016065               | 0.038184         | 8.25E-05         | 0.001278          | 0.001137           | 7.327998         | 0.000468         | 0.003627         |  |  |
| Worker Vehicles  | 0.21         | 4.15          | 0.39          | 0.01        | 0.14         | 0.04          | 502.48          | 0.03        | 0.05         | 0.14             | 0.01                   | 0.01             | 0.00             | 0.00              | 0.00               | 17               | 0.00             | 0.00             |  |  |
| Construction Trucks  | 0.01         | 0.07          | 0.15          | 0.00        | 0.03         | 0.02          | 76.16           | 0.00        | 0.00         | 0.00             | 0.00                   | 0.00             | 0.00             | 0.00              | 0.00               | 1                | 0.00             | 0.00             |  |  |
| Fugitive Dust  |              |               |               |             | 26.36        | 8.29          |                 |             |              |                  |                        |                  | 0.01             | 0.00              |                    |                  |                  |                  |  |  |
| <b>Total Daily</b>   | <b>0.69</b>  | <b>5.68</b>   | <b>4.01</b>   | <b>0.01</b> | <b>0.29</b>  | <b>0.16</b>   | <b>1244.82</b>  | <b>0.07</b> | <b>0.38</b>  | <b>0.14</b>      | <b>0.03</b>            | <b>0.05</b>      | <b>0.00</b>      | <b>0.01</b>       | <b>0.00</b>        | <b>24.75</b>     | <b>0.00</b>      | <b>0.01</b>      |  |  |
| Significance Threshold                                     | 75           | 550           | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |  |  |
| Above Threshold?   | No           | No            | No            | No          | No           | No            | No              | No          | No           | No               | No                     | No               | No               | No                | No                 | No               | No               | No               |  |  |

Table A-17  
Construction Emission Summary  
South Orange County Reliability Project  
Substation Construction

|  | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|--|----------------|---------------|----------------|----------------|-----------------|------------------|----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Energize Temporary TL 13835 - L</b> |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day   |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                                 | 1.13           | 5.23          | 8.31           | 0.01           | 0.47            | 0.42             | 1275.33        | 0.10           | 0.79           | 0.01245             | 0.057522           | 0.091362            | 0.000161            | 0.005132                | 0.004568                 | 14.02864               | 0.001123               | 0.008679               |  |
| Worker Vehicles  | 0.21           | 4.15          | 0.39           | 0.01           | 0.14            | 0.04             | 502.48         | 0.03           | 0.05           | 0.01                | 0.01               | 0.01                | 0.00                | 0.00                    | 0.00                     | 17                     | 0.00                   | 0.00                   |  |
| Construction Trucks  | 0.01           | 0.07          | 0.15           | 0.00           | 0.03            | 0.02             | 76.16          | 0.00           | 0.00           | 0.00                | 0.00               | 0.00                | 0.00                | 0.00                    | 0.00                     | 1                      | 0.00                   | 0.00                   |  |
| <b>Total Daily</b>   | <b>1.35</b>    | <b>9.45</b>   | <b>8.84</b>    | <b>0.02</b>    | <b>0.64</b>     | <b>0.48</b>      | <b>1853.97</b> | <b>0.13</b>    | <b>0.84</b>    | <b>0.15</b>         | <b>0.07</b>        | <b>0.10</b>         | <b>0.00</b>         | <b>0.01</b>             | <b>0.01</b>              | <b>31.45</b>           | <b>0.00</b>            | <b>0.01</b>            |  |
| Significance Threshold                                       | 75             | 550           | 100            | 150            | 150             | 55               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?   | No             | No            | No             | No             | No              | No               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|  | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|--|----------------|---------------|----------------|----------------|-----------------|------------------|----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Remove RFS 138/12kV Equipment</b> |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day   |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                               | 3.91           | 13.67         | 29.56          | 0.06           | 1.15            | 1.03             | 5228.58        | 0.35           | 2.81           | 0.042664            | 0.162008           | 0.317869            | 0.000608            | 0.013874                | 0.012348                 | 54.61541               | 0.00385                | 0.030198               |  |
| Worker Vehicles  | 0.21           | 4.15          | 0.39           | 0.01           | 0.14            | 0.04             | 502.48         | 0.03           | 0.05           | 0.01                | 0.01               | 0.01                | 0.00                | 0.00                    | 0.00                     | 17                     | 0.00                   | 0.00                   |  |
| Construction Trucks  | 0.00           | 0.00          | 0.00           | 0.00           | 0.00            | 0.00             | 0.00           | 0.00           | 0.00           | 0.00                | 0.00               | 0.00                | 0.00                | 0.00                    | 0.00                     | 0                      | 0.00                   | 0.00                   |  |
| <b>Total Daily</b>   | <b>4.12</b>    | <b>17.83</b>  | <b>29.95</b>   | <b>0.06</b>    | <b>1.29</b>     | <b>1.07</b>      | <b>5731.06</b> | <b>0.38</b>    | <b>2.85</b>    | <b>0.18</b>         | <b>0.17</b>        | <b>0.32</b>         | <b>0.00</b>         | <b>0.02</b>             | <b>0.01</b>              | <b>71.20</b>           | <b>0.00</b>            | <b>0.03</b>            |  |
| Significance Threshold                                     | 75             | 550           | 100            | 150            | 150             | 55               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?   | No             | No            | No             | No             | No              | No               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|  | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day  | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|--|----------------|---------------|----------------|----------------|-----------------|------------------|-----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Site Development - 230 kV</b> |                |               |                |                |                 |                  |                 |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day                                     |                |               |                |                |                 |                  |                 |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                           | 15.55          | 58.48         | 123.87         | 0.19           | 4.76            | 4.24             | 18950.79        | 1.40           | 11.77          | 0.513106            | 1.929862           | 4.087554            | 0.006358            | 0.157098                | 0.139817                 | 625.376                | 0.046297               | 0.388318               |  |
| Worker Vehicles  | 0.35           | 7.11          | 0.66           | 0.01           | 0.26            | 0.08             | 911.45          | 0.05           | 0.09           | 0.23                | 0.02               | 0.01                | 0.00                | 0.01                    | 0.00                     | 30                     | 0.00                   | 0.00                   |  |
| Construction Trucks                                    | 0.42           | 1.58          | 11.05          | 0.02           | 0.58            | 0.39             | 1568.36         | 0.09           | 0.04           | 0.01                | 0.05               | 0.36                | 0.00                | 0.02                    | 0.01                     | 52                     | 0.00                   | 0.00                   |  |
| Fugitive Dust  |                |               |                |                | 61.93           | 18.22            |                 |                |                |                     |                    |                     |                     | 6.81                    | 2.00                     |                        |                        |                        |  |
| <b>Total Daily</b>                                     | <b>16.32</b>   | <b>67.17</b>  | <b>135.57</b>  | <b>0.22</b>    | <b>67.53</b>    | <b>22.93</b>     | <b>21430.60</b> | <b>1.54</b>    | <b>11.89</b>   | <b>0.76</b>         | <b>2.00</b>        | <b>4.46</b>         | <b>0.01</b>         | <b>7.00</b>             | <b>2.16</b>              | <b>707.21</b>          | <b>0.05</b>            | <b>0.39</b>            |  |
| Significance Threshold                                 | 75             | 550           | 100            | 150            | 150             | 55               | N/A             | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?                                       | No             | No            | No             | No             | No              | No               | N/A             | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|   | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day  | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|---|----------------|---------------|----------------|----------------|-----------------|------------------|-----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Below Grade - 230 kV</b> |                |               |                |                |                 |                  |                 |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day                                |                |               |                |                |                 |                  |                 |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                      | 11.63          | 43.74         | 86.53          | 0.18           | 3.18            | 2.83             | 16155.06        | 1.05           | 8.22           | 0.657925            | 2.370653           | 4.855198            | 0.010111            | 0.180761                | 0.160877                 | 898.5626               | 0.059363               | 0.461244               |  |
| Worker Vehicles                                   | 0.35           | 7.11          | 0.66           | 0.01           | 0.26            | 0.08             | 911.45          | 0.05           | 0.09           | 0.23                | 0.02               | 0.01                | 0.00                | 0.01                    | 0.00                     | 30                     | 0.00                   | 0.00                   |  |
| Construction Trucks                               | 2.42           | 9.08          | 97.45          | 0.14           | 4.13            | 2.43             | 14684.07        | 0.84           | 0.38           | 0.14                | 0.52               | 5.57                | 0.01                | 0.24                    | 0.14                     | 840                    | 0.05                   | 0.02                   |  |
| Fugitive Dust                                     |                |               |                |                | 32.68           | 10.27            |                 |                |                |                     |                    |                     |                     | 0.02                    | 0.01                     |                        |                        |                        |  |
| <b>Total Daily</b>                                | <b>14.39</b>   | <b>59.92</b>  | <b>184.64</b>  | <b>0.34</b>    | <b>40.25</b>    | <b>15.62</b>     | <b>31750.58</b> | <b>1.94</b>    | <b>8.68</b>    | <b>1.03</b>         | <b>2.91</b>        | <b>10.44</b>        | <b>0.02</b>         | <b>0.44</b>             | <b>0.31</b>              | <b>1768.57</b>         | <b>0.11</b>            | <b>0.49</b>            |  |
| Significance Threshold                            | 75             | 550           | 100            | 150            | 150             | 55               | N/A             | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?                                  | No             | No            | No             | No             | No              | No               | N/A             | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|  | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day  | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|--|----------------|---------------|----------------|----------------|-----------------|------------------|-----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Construction - 230 kV</b> |                |               |                |                |                 |                  |                 |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day                                 |                |               |                |                |                 |                  |                 |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                       | 11.95          | 42.90         | 83.88          | 0.20           | 3.02            | 2.69             | 18019.71        | 1.08           | 7.97           | 0.35525             | 1.515376           | 2.502256            | 0.00546             | 0.104352                | 0.092874                 | 484.8205               | 0.032054               | 0.237714               |  |
| Worker Vehicles                                    | 0.19           | 3.79          | 0.35           | 0.01           | 0.14            | 0.04             | 486.11          | 0.03           | 0.05           | 0.13                | 0.01               | 0.01                | 0.00                | 0.00                    | 0.00                     | 16                     | 0.00                   | 0.00                   |  |
| Construction Trucks                                | 0.02           | 0.13          | 0.31           | 0.00           | 0.07            | 0.03             | 152.32          | 0.01           | 0.00           | 0.00                | 0.01               | 0.03                | 0.00                | 0.01                    | 0.00                     | 17                     | 0.00                   | 0.00                   |  |
| <b>Total Daily</b>                                 | <b>12.16</b>   | <b>46.82</b>  | <b>84.54</b>   | <b>0.21</b>    | <b>3.22</b>     | <b>2.76</b>      | <b>18658.14</b> | <b>1.11</b>    | <b>8.02</b>    | <b>0.48</b>         | <b>1.54</b>        | <b>2.54</b>         | <b>0.01</b>         | <b>0.12</b>             | <b>0.10</b>              | <b>517.62</b>          | <b>0.03</b>            | <b>0.24</b>            |  |
| Significance Threshold                             | 75             | 550           | 100            | 150            | 150             | 55               | N/A             | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?                                   | No             | No            | No             | No             | No              | No               | N/A             | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|   | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|---|----------------|---------------|----------------|----------------|-----------------|------------------|----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Relay Testing - 230 kV</b> |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day                                  |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                        | 0.22           | 0.72          | 1.53           | 0.00           | 0.05            | 0.05             | 333.09         | 0.02           | 0.14           | 0.012197            | 0.039692           | 0.083877            | 0.000206            | 0.00282                 | 0.00251                  | 18.31999               | 0.0011                 | 0.007968               |  |
| Worker Vehicles                                     | 0.19           | 3.79          | 0.35           | 0.01           | 0.14            | 0.04             | 486.11         | 0.03           | 0.05           | 0.13                | 0.01               | 0.01                | 0.00                | 0.00                    | 0.00                     | 16                     | 0.00                   | 0.00                   |  |
| Construction Trucks                                 | 0.01           | 0.07          | 0.15           | 0.00           | 0.03            | 0.02             | 76.16          | 0.00           | 0.00           | 0.00                | 0.00               | 0.01                | 0.00                | 0.00                    | 0.00                     | 4                      | 0.00                   | 0.00                   |  |
| <b>Total Daily</b>                                  | <b>0.42</b>    | <b>4.58</b>   | <b>2.03</b>    | <b>0.01</b>    | <b>0.22</b>     | <b>0.11</b>      | <b>895.36</b>  | <b>0.05</b>    | <b>0.19</b>    | <b>0.14</b>         | <b>0.05</b>        | <b>0.10</b>         | <b>0.00</b>         | <b>0.01</b>             | <b>0.00</b>              | <b>38.55</b>           | <b>0.00</b>            | <b>0.01</b>            |  |
| Significance Threshold                              | 75             | 550           | 100            | 150            | 150             | 55               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?                                    | No             | No            | No             | No             | No              | No               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|  | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|--|----------------|---------------|----------------|----------------|-----------------|------------------|----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation DeEnergize Temporary TL 13835</b> |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day   |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                               | 2.77           | 9.02          | 19.06          | 0.05           | 0.64            | 0.57             | 4163.63        | 0.25           | 1.81           | 0.014303            | 0.046548           | 0.098365            | 0.000242            | 0.003307                | 0.002944                 | 21.48435               | 0.001291               | 0.009345               |  |
| Worker Vehicles  | 0.19           | 3.79          | 0.35           | 0.01           | 0.14            | 0.04             | 486.11         | 0.03           | 0.05           | 0.13                | 0.01               | 0.01                | 0.00                | 0.00                    | 0.00                     | 16                     | 0.00                   | 0.00                   |  |
| Construction Trucks  | 0.01           | 0.07          | 0.15           | 0.00           | 0.03            | 0.02             | 76.16          | 0.00           | 0.00           | 0.00                | 0.00               | 0.00                | 0.00                | 0.00                    | 0.00                     | 4                      | 0.00                   | 0.00                   |  |
| <b>Total Daily</b>   | <b>2.97</b>    | <b>12.88</b>  | <b>19.57</b>   | <b>0.05</b>    | <b>0.81</b>     | <b>0.63</b>      | <b>4725.90</b> | <b>0.28</b>    | <b>1.86</b>    | <b>0.14</b>         | <b>0.06</b>        | <b>0.11</b>         | <b>0.00</b>         | <b>0.01</b>             | <b>0.00</b>              | <b>37.91</b>           | <b>0.00</b>            | <b>0.01</b>            |  |
| Significance Threshold                                     | 75             | 550           | 100            | 150            | 150             | 55               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Above Threshold?   | No             | No            | No             | No             | No              | No               | N/A            | N/A            | N/A            |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

|  | ROG<br>lbs/day | CO<br>lbs/day | NOX<br>lbs/day | SOX<br>lbs/day | PM10<br>lbs/day | PM2.5<br>lbs/day | CO2<br>lbs/day | CH4<br>lbs/day | N2O<br>lbs/day | ROG tons<br>(total) | CO tons<br>(total) | NOX tons<br>(total) | SOX tons<br>(total) | PM10<br>tons<br>(total) | PM2.5<br>tons<br>(total) | CO2<br>tons<br>(total) | CH4<br>tons<br>(total) | N2O<br>tons<br>(total) |  |
|--|----------------|---------------|----------------|----------------|-----------------|------------------|----------------|----------------|----------------|---------------------|--------------------|---------------------|---------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|--|
| <b>Capistrano Substation Energization - 230 kV</b> |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Emissions, lbs/day                                 |                |               |                |                |                 |                  |                |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |
| Heavy Construction Equipment                       | 0.44           | 1.44          | 3.05           | 0.01           | 0.10            | 0.09             | 666.18         | 0.04           | 0.29           | 0.004879            | 0.015877           | 0.033551            | 8.25E-05            | 0.001128                | 0.001004                 | 7.327996               | 0.00044                | 0.003187               |  |
| Worker Vehicles                                    | 0.19           | 3.79          | 0.35           | 0.01           | 0.14            | 0.04             | 486.11         | 0.03           | 0.05           | 0.13                | 0.01               | 0.01                | 0.00                | 0.00                    | 0.00                     | 16                     | 0.00                   | 0.00                   |  |
| Construction Trucks                                | 0.01           | 0.07          | 0.15           | 0.00           | 0.03            | 0.02             | 76.16          | 0.00           | 0.00           | 0.00                | 0.00               | 0.00                | 0.00                | 0.00                    | 0.00                     | 1                      | 0.00                   | 0.00                   |  |
| <b>Total Daily</b>                                 | <b>0.64</b>    | <b>5.30</b>   | <b>3.56</b>    | <b>0.01</b>    | <b>0.27</b>     | <b>0.15</b>      | <b>1228.4</b>  |                |                |                     |                    |                     |                     |                         |                          |                        |                        |                        |  |

Table A-18  
Construction Emission Summary  
South Orange County Reliability Project  
Transmission Line Construction

Summary - Maximum Emissions

| Emissions, lbs/day   | Emissions    |               |               |             |               |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|---------------|---------------|-------------|---------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day    | NOX lbs/day   | SOX lbs/day | PM10 lbs/day  | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 4: Talega Hub to Talega Substation 69kV and 138kV</b> |              |               |               |             |               |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment                                     | 34.90        | 129.10        | 289.54        | 0.42        | 12.13         | 10.79         | 39806.10        | 3.15        | 27.51        | 0.97             | 3.55                   | 7.70             | 0.01             | 0.34              | 0.30               | 1077.55          | 0.09             | 0.73             |
| Worker Vehicles  | 1.15         | 22.69         | 2.09          | 0.03        | 0.62          | 0.27          | 2400.80         | 0.11        | 0.21         | 0.75             | 0.07                   | 0.04             | 0.00             | 0.02              | 0.01               | 79               | 0.00             | 0.01             |
| Construction Trucks  | 0.78         | 3.02          | 19.89         | 0.03        | 1.14          | 0.74          | 3018.04         | 0.17        | 0.08         | 0.02             | 0.09                   | 0.56             | 0.00             | 0.03              | 0.02               | 91               | 0.01             | 0.00             |
| Fugitive Dust  |              |               |               |             | 89.77         | 26.79         |                 |             |              |                  |                        |                  |                  | 6.91              | 2.06               |                  |                  |                  |
| <b>Total Daily</b>   | <b>36.83</b> | <b>154.81</b> | <b>311.53</b> | <b>0.48</b> | <b>103.65</b> | <b>38.58</b>  | <b>45224.94</b> | <b>3.44</b> | <b>27.79</b> | <b>1.75</b>      | <b>3.71</b>            | <b>8.30</b>      | <b>0.01</b>      | <b>7.30</b>       | <b>2.39</b>        | <b>1247.29</b>   | <b>0.10</b>      | <b>0.74</b>      |
| Significance Threshold   | 75           | 550           | 100           | 150         | 150           | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?   | No           | No            | No            | No          | No            | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

| Emissions, lbs/day                                     | Emissions    |              |               |             |              |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 1: Capistrano Substation Getaways 138kV</b> |              |              |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment                           | 21.55        | 80.05        | 168.16        | 0.26        | 7.49         | 6.67          | 24243.10        | 1.94        | 15.97        | 0.49             | 1.76                   | 3.71             | 0.01             | 0.17              | 0.16               | 541.37           | 0.04             | 0.35             |
| Worker Vehicles  | 0.51         | 10.09        | 0.93          | 0.01        | 0.27         | 0.12          | 1067.02         | 0.05        | 0.09         | 0.33             | 0.03                   | 0.02             | 0.00             | 0.01              | 0.00               | 35               | 0.00             | 0.00             |
| Construction Trucks                                    | 0.52         | 2.03         | 12.99         | 0.02        | 0.77         | 0.50          | 2037.82         | 0.12        | 0.05         | 0.02             | 0.08                   | 0.49             | 0.00             | 0.03              | 0.02               | 83               | 0.00             | 0.00             |
| Fugitive Dust  |              |              |               |             | 89.77        | 26.79         |                 |             |              |                  |                        |                  |                  | 5.92              | 1.77               |                  |                  |                  |
| <b>Total Daily</b>                                     | <b>22.58</b> | <b>92.16</b> | <b>182.08</b> | <b>0.29</b> | <b>98.31</b> | <b>34.07</b>  | <b>27347.94</b> | <b>2.11</b> | <b>16.12</b> | <b>0.84</b>      | <b>1.87</b>            | <b>4.22</b>      | <b>0.01</b>      | <b>6.14</b>       | <b>1.95</b>        | <b>659.32</b>    | <b>0.05</b>      | <b>0.36</b>      |
| Significance Threshold                                 | 75           | 550          | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?                                       | No           | No           | No            | No          | No           | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

| Emissions, lbs/day                                 | Emissions    |               |               |             |               |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|---------------|---------------|-------------|---------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day    | NOX lbs/day   | SOX lbs/day | PM10 lbs/day  | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 3: Talega to Rancho San Juan 230 kV</b> |              |               |               |             |               |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment                       | 26.36        | 99.44         | 209.98        | 0.34        | 8.78          | 7.81          | 31682.14        | 2.38        | 19.95        | 1.00             | 3.81                   | 7.53             | 0.01             | 0.34              | 0.30               | 1140.11          | 0.09             | 0.72             |
| Worker Vehicles                                    | 0.83         | 16.39         | 1.51          | 0.02        | 0.45          | 0.19          | 1733.91         | 0.08        | 0.15         | 0.54             | 0.05                   | 0.03             | 0.00             | 0.01              | 0.01               | 57               | 0.00             | 0.00             |
| Construction Trucks                                | 0.71         | 2.71          | 18.27         | 0.03        | 1.01          | 0.66          | 2704.82         | 0.15        | 0.07         | 0.03             | 0.11                   | 0.75             | 0.00             | 0.04              | 0.03               | 114              | 0.01             | 0.00             |
| Fugitive Dust                                      |              |               |               |             | 89.77         | 26.79         |                 |             |              |                  |                        |                  |                  | 1.97              | 0.59               |                  |                  |                  |
| <b>Total Daily</b>                                 | <b>27.89</b> | <b>118.54</b> | <b>229.76</b> | <b>0.38</b> | <b>100.01</b> | <b>35.45</b>  | <b>36100.87</b> | <b>2.61</b> | <b>20.17</b> | <b>1.57</b>      | <b>3.98</b>            | <b>8.31</b>      | <b>0.01</b>      | <b>2.37</b>       | <b>0.92</b>        | <b>1311.15</b>   | <b>0.10</b>      | <b>0.72</b>      |
| Significance Threshold                             | 75           | 550           | 100           | 150         | 150           | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?                                   | No           | No            | No            | No          | No            | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

| Emissions, lbs/day                       | Emissions    |              |               |             |              |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 2: Rancho San Juan 230 kV</b> |              |              |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment             | 18.03        | 70.67        | 132.99        | 0.24        | 5.96         | 5.30          | 22487.91        | 1.63        | 12.63        | 0.26             | 1.07                   | 2.00             | 0.00             | 0.09              | 0.08               | 354.27           | 0.02             | 0.19             |
| Worker Vehicles                          | 0.64         | 12.61        | 1.16          | 0.01        | 0.34         | 0.15          | 1333.78         | 0.06        | 0.12         | 0.42             | 0.04                   | 0.02             | 0.00             | 0.01              | 0.00               | 44               | 0.00             | 0.00             |
| Construction Trucks                      | 0.55         | 2.12         | 14.13         | 0.02        | 0.79         | 0.52          | 2116.68         | 0.12        | 0.05         | 0.01             | 0.03                   | 0.19             | 0.00             | 0.01              | 0.01               | 29               | 0.00             | 0.00             |
| Fugitive Dust                            |              |              |               |             | 89.77        | 26.79         |                 |             |              |                  |                        |                  |                  | 3.95              | 1.18               |                  |                  |                  |
| <b>Total Daily</b>                       | <b>19.22</b> | <b>85.39</b> | <b>148.28</b> | <b>0.28</b> | <b>96.86</b> | <b>32.76</b>  | <b>25938.37</b> | <b>1.81</b> | <b>12.80</b> | <b>0.69</b>      | <b>1.14</b>            | <b>2.21</b>      | <b>0.00</b>      | <b>4.06</b>       | <b>1.27</b>        | <b>427.60</b>    | <b>0.03</b>      | <b>0.19</b>      |
| Significance Threshold                   | 75           | 550          | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?                         | No           | No           | No            | No          | No           | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

| Emissions, lbs/day                                       | Emissions    |               |               |             |               |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|---------------|---------------|-------------|---------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day    | NOX lbs/day   | SOX lbs/day | PM10 lbs/day  | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 1: Rancho San Juan to San Juan Capistrano</b> |              |               |               |             |               |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment                             | 22.89        | 87.28         | 181.25        | 0.30        | 7.44          | 6.62          | 28416.66        | 2.07        | 17.22        | 0.75             | 2.86                   | 5.58             | 0.01             | 0.24              | 0.22               | 898.57           | 0.07             | 0.53             |
| Worker Vehicles  | 0.90         | 17.65         | 1.63          | 0.02        | 0.48          | 0.21          | 1867.29         | 0.09        | 0.16         | 0.58             | 0.05                   | 0.03             | 0.00             | 0.02              | 0.01               | 62               | 0.00             | 0.01             |
| Construction Trucks                                      | 0.54         | 2.08          | 14.05         | 0.02        | 0.78          | 0.51          | 2077.63         | 0.12        | 0.05         | 0.02             | 0.09                   | 0.56             | 0.00             | 0.03              | 0.02               | 85               | 0.00             | 0.00             |
| Helicopters  | 12.83        | 66.89         | 66.89         | 12.31       | 22.11         | 22.11         | 30084.64        | 0.00        | 0.00         | 0.13             | 0.67                   | 0.67             | 0.12             | 0.22              | 0.22               | 301              | 0.00             | 0.00             |
| Fugitive Dust  |              |               |               |             | 89.77         | 26.79         |                 |             |              |                  |                        |                  |                  | 2.96              | 0.88               |                  |                  |                  |
| <b>Total Daily</b>                                       | <b>37.16</b> | <b>173.90</b> | <b>263.81</b> | <b>0.28</b> | <b>120.57</b> | <b>56.23</b>  | <b>62446.22</b> | <b>2.27</b> | <b>17.43</b> | <b>1.49</b>      | <b>3.67</b>            | <b>6.84</b>      | <b>0.13</b>      | <b>3.47</b>       | <b>1.35</b>        | <b>1346.40</b>   | <b>0.08</b>      | <b>0.54</b>      |
| Significance Threshold                                   | 75           | 550           | 100           | 150         | 150           | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?   | No           | No            | No            | No          | No            | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

| Emissions, lbs/day   | Emissions    |              |               |             |              |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 4: Talega Hub to Talega Substation 230 kV 230kV</b> |              |              |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment                                   | 19.07        | 74.56        | 147.96        | 0.25        | 6.18         | 5.50          | 23553.79        | 1.72        | 14.06        | 0.50             | 1.91                   | 3.57             | 0.01             | 0.16              | 0.14               | 598.60           | 0.05             | 0.34             |
| Worker Vehicles  | 0.77         | 15.13        | 1.39          | 0.02        | 0.41         | 0.18          | 1600.53         | 0.08        | 0.14         | 0.50             | 0.05                   | 0.03             | 0.00             | 0.01              | 0.01               | 53               | 0.00             | 0.00             |
| Construction Trucks  | 0.55         | 2.12         | 14.13         | 0.02        | 0.79         | 0.52          | 2116.68         | 0.12        | 0.05         | 0.02             | 0.09                   | 0.57             | 0.00             | 0.03              | 0.02               | 88               | 0.01             | 0.00             |
| Fugitive Dust  |              |              |               |             | 89.77        | 26.79         |                 |             |              |                  |                        |                  |                  | 3.95              | 1.18               |                  |                  |                  |
| <b>Total Daily</b>   | <b>20.38</b> | <b>91.81</b> | <b>163.48</b> | <b>0.29</b> | <b>97.16</b> | <b>32.99</b>  | <b>27271.01</b> | <b>1.92</b> | <b>14.25</b> | <b>1.02</b>      | <b>2.05</b>            | <b>4.16</b>      | <b>0.01</b>      | <b>4.16</b>       | <b>1.35</b>        | <b>739.36</b>    | <b>0.05</b>      | <b>0.35</b>      |
| Significance Threshold   | 75           | 550          | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?   | No           | No           | No            | No          | No           | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

| Emissions, lbs/day                                     | Emissions    |              |               |             |              |               |                 |             |              |                  | Emission, tons (total) |                  |                  |                   |                    |                  |                  |                  |
|--|--------------|--------------|---------------|-------------|--------------|---------------|-----------------|-------------|--------------|------------------|------------------------|------------------|------------------|-------------------|--------------------|------------------|------------------|------------------|
|  | ROG lbs/day  | CO lbs/day   | NOX lbs/day   | SOX lbs/day | PM10 lbs/day | PM2.5 lbs/day | CO2 lbs/day     | CH4 lbs/day | N2O lbs/day  | ROG tons (total) | CO tons (total)        | NOX tons (total) | SOX tons (total) | PM10 tons (total) | PM2.5 tons (total) | CO2 tons (total) | CH4 tons (total) | N2O tons (total) |
| <b>Segment 2: Rancho San Juan 138/230kV North Runs</b> |              |              |               |             |              |               |                 |             |              |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Heavy Construction Equipment                           | 19.03        | 74.39        | 132.92        | 0.28        | 5.65         | 5.03          | 27020.59        | 1.72        | 12.63        | 0.37             | 1.49                   | 2.61             | 0.01             | 0.11              | 0.10               | 570.56           | 0.03             | 0.25             |
| Worker Vehicles  | 0.64         | 12.61        | 1.16          | 0.01        | 0.34         | 0.15          | 1333.78         | 0.06        | 0.12         | 0.42             | 0.04                   | 0.02             | 0.00             | 0.01              | 0.00               | 44               | 0.00             | 0.00             |
| Construction Trucks                                    | 0.50         | 1.92         | 12.75         | 0.02        | 0.72         | 0.47          | 1920.64         | 0.11        | 0.05         | 0.01             | 0.04                   | 0.24             | 0.00             | 0.01              | 0.01               | 38               | 0.00             | 0.00             |
| Fugitive Dust  |              |              |               |             | 89.77        | 26.79         |                 |             |              |                  |                        |                  |                  | 3.95              | 1.18               |                  |                  |                  |
| <b>Total Daily</b>                                     | <b>20.17</b> | <b>88.92</b> | <b>146.83</b> | <b>0.32</b> | <b>96.49</b> | <b>32.44</b>  | <b>30275.01</b> | <b>1.89</b> | <b>12.79</b> | <b>0.79</b>      | <b>1.56</b>            | <b>2.87</b>      | <b>0.01</b>      | <b>4.09</b>       | <b>1.29</b>        | <b>652.08</b>    | <b>0.04</b>      | <b>0.25</b>      |
| Significance Threshold                                 | 75           | 550          | 100           | 150         | 150          | 55            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |
| Above Threshold?                                       | No           | No           | No            | No          | No           | No            | N/A             | N/A         | N/A          |                  |                        |                  |                  |                   |                    |                  |                  |                  |

Total GHG Emissions, metric tons  
Metric tons CO2e 5780 0.40 2.86  
Total GHG Emissions, metric tons CO2e 5780 8 887  
6675

Table A-19  
 Maximum Simultaneous Construction Emissions  
 South Orange County Reliability Project

Maximum Daily Emissions - Simultaneous Emission Calculations

|  | ROG           | CO            | NOX            | SOX          | PM10          | PM2.5         | CO2              | CH4          | N2O          | ROG tons    | CO tons      | NOX tons     | SOX tons    | PM10 tons    | PM2.5 tons  | CO2 tons       | CH4 tons    | N2O tons    |  |
|--|---------------|---------------|----------------|--------------|---------------|---------------|------------------|--------------|--------------|-------------|--------------|--------------|-------------|--------------|-------------|----------------|-------------|-------------|--|
|  | lbs/day       | lbs/day       | lbs/day        | lbs/day      | lbs/day       | lbs/day       | lbs/day          | lbs/day      | lbs/day      | (total)     | (total)      | (total)      | (total)     | (total)      | (total)     | (total)        | (total)     | (total)     |  |
| <b>San Juan Capistrano Substation</b>            |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Emissions, lbs/day                               |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Heavy Construction Equipment                     | 11.95         | 42.90         | 83.88          | 0.20         | 3.02          | 2.69          | 18019.71         | 1.08         | 7.97         | 0.36        | 1.52         | 2.50         | 0.01        | 0.10         | 0.09        | 484.82         | 0.03        | 0.24        |  |
| Worker Vehicles                                  | 0.19          | 3.79          | 0.35           | 0.01         | 0.14          | 0.04          | 486.11           | 0.03         | 0.05         | 0.13        | 0.01         | 0.01         | 0.00        | 0.00         | 0.00        | 16.04          | 0.00        | 0.00        |  |
| Construction Trucks                              | 0.02          | 0.13          | 0.31           | 0.00         | 0.07          | 0.03          | 152.32           | 0.01         | 0.00         | 0.00        | 0.01         | 0.03         | 0.00        | 0.01         | 0.00        | 16.76          | 0.00        | 0.00        |  |
| <b>Total Daily</b>                               | <b>12.16</b>  | <b>46.82</b>  | <b>84.54</b>   | <b>0.21</b>  | <b>3.22</b>   | <b>2.76</b>   | <b>18658.14</b>  | <b>1.11</b>  | <b>8.02</b>  | <b>0.48</b> | <b>1.54</b>  | <b>2.54</b>  | <b>0.01</b> | <b>0.12</b>  | <b>0.10</b> | <b>517.62</b>  | <b>0.03</b> | <b>0.24</b> |  |
| <b>Transmission Segment 1</b>                    |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Emissions, lbs/day                               |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Heavy Construction Equipment                     | 7.82          | 29.73         | 53.24          | 0.09         | 2.68          | 2.38          | 8419.67          | 0.71         | 5.06         | 0.15        | 0.59         | 1.01         | 0.00        | 0.05         | 0.05        | 165.42         | 0.01        | 0.10        |  |
| Worker Vehicles                                  | 0.51          | 10.09         | 0.93           | 0.01         | 0.27          | 0.12          | 1067.02          | 0.05         | 0.09         | 0.33        | 0.03         | 0.02         | 0.00        | 0.01         | 0.00        | 35.21          | 0.00        | 0.00        |  |
| Construction Trucks                              | 0.52          | 2.03          | 12.99          | 0.02         | 0.77          | 0.50          | 2037.82          | 0.12         | 0.05         | 0.02        | 0.08         | 0.49         | 0.00        | 0.03         | 0.02        | 82.74          | 0.00        | 0.00        |  |
| Fugitive Dust                                    | 0.00          | 0.00          | 0.00           | 0.00         | 89.77         | 26.79         | 0.00             | 0.00         | 0.00         | 0.00        | 0.00         | 0.00         | 0.00        | 5.92         | 1.77        | 0.00           | 0.00        | 0.00        |  |
| <b>Total Daily</b>                               | <b>22.58</b>  | <b>92.16</b>  | <b>182.08</b>  | <b>0.29</b>  | <b>98.31</b>  | <b>34.07</b>  | <b>27347.94</b>  | <b>2.11</b>  | <b>16.12</b> | <b>0.84</b> | <b>1.87</b>  | <b>4.22</b>  | <b>0.01</b> | <b>6.14</b>  | <b>1.95</b> | <b>659.32</b>  | <b>0.05</b> | <b>0.36</b> |  |
| <b>Transmission Segment 3</b>                    |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Emissions, lbs/day                               |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Heavy Construction Equipment                     | 9.09          | 35.79         | 61.90          | 0.10         | 3.15          | 2.80          | 8962.08          | 0.82         | 5.88         | 0.60        | 2.36         | 4.09         | 0.01        | 0.21         | 0.18        | 591.50         | 0.05        | 0.39        |  |
| Worker Vehicles                                  | 0.83          | 16.39         | 1.51           | 0.02         | 0.45          | 0.19          | 1733.91          | 0.08         | 0.15         | 0.54        | 0.05         | 0.03         | 0.00        | 0.01         | 0.01        | 57.22          | 0.00        | 0.00        |  |
| Construction Trucks                              | 0.71          | 2.71          | 18.27          | 0.03         | 1.01          | 0.66          | 2704.82          | 0.15         | 0.07         | 0.03        | 0.11         | 0.75         | 0.00        | 0.04         | 0.03        | 113.82         | 0.01        | 0.00        |  |
| Fugitive Dust                                    | 0.00          | 0.00          | 0.00           | 0.00         | 89.77         | 26.79         | 0.00             | 0.00         | 0.00         | 0.00        | 0.00         | 0.00         | 0.00        | 1.97         | 0.59        | 0.00           | 0.00        | 0.00        |  |
| <b>Total Daily</b>                               | <b>27.89</b>  | <b>118.54</b> | <b>229.76</b>  | <b>0.38</b>  | <b>100.01</b> | <b>35.45</b>  | <b>36100.87</b>  | <b>2.61</b>  | <b>20.17</b> | <b>1.57</b> | <b>3.98</b>  | <b>8.31</b>  | <b>0.01</b> | <b>2.37</b>  | <b>0.92</b> | <b>1311.15</b> | <b>0.10</b> | <b>0.72</b> |  |
| <b>Transmission Segment 2</b>                    |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Emissions, lbs/day                               |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Heavy Construction Equipment                     | 5.54          | 19.73         | 45.41          | 0.07         | 1.69          | 1.51          | 6871.44          | 0.50         | 4.31         | 0.07        | 0.29         | 0.61         | 0.00        | 0.02         | 0.02        | 91.89          | 0.01        | 0.06        |  |
| Worker Vehicles                                  | 0.64          | 12.61         | 1.16           | 0.01         | 0.34          | 0.15          | 1333.78          | 0.06         | 0.12         | 0.42        | 0.04         | 0.02         | 0.00        | 0.01         | 0.00        | 44.01          | 0.00        | 0.00        |  |
| Construction Trucks                              | 0.55          | 2.12          | 14.13          | 0.02         | 0.79          | 0.52          | 2116.68          | 0.12         | 0.05         | 0.01        | 0.03         | 0.19         | 0.00        | 0.01         | 0.01        | 29.32          | 0.00        | 0.00        |  |
| Fugitive Dust                                    | 0.00          | 0.00          | 0.00           | 0.00         | 89.77         | 26.79         | 0.00             | 0.00         | 0.00         | 0.00        | 0.00         | 0.00         | 0.00        | 3.95         | 1.18        | 0.00           | 0.00        | 0.00        |  |
| <b>Total Daily</b>                               | <b>19.22</b>  | <b>85.39</b>  | <b>148.28</b>  | <b>0.28</b>  | <b>96.86</b>  | <b>32.76</b>  | <b>25938.37</b>  | <b>1.81</b>  | <b>12.80</b> | <b>0.69</b> | <b>1.14</b>  | <b>2.21</b>  | <b>0.00</b> | <b>4.06</b>  | <b>1.27</b> | <b>427.60</b>  | <b>0.03</b> | <b>0.19</b> |  |
| <b>Transmission Segment 1 230 kV</b>             |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Emissions, lbs/day                               |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Heavy Construction Equipment                     | 5.09          | 19.21         | 31.57          | 0.05         | 1.60          | 1.43          | 4888.09          | 0.46         | 3.00         | 0.34        | 1.27         | 2.08         | 0.00        | 0.11         | 0.09        | 322.61         | 0.03        | 0.20        |  |
| Worker Vehicles                                  | 0.90          | 17.65         | 1.63           | 0.02         | 0.48          | 0.21          | 1867.29          | 0.09         | 0.16         | 0.58        | 0.05         | 0.03         | 0.00        | 0.02         | 0.01        | 61.62          | 0.00        | 0.01        |  |
| Construction Trucks                              | 0.54          | 2.08          | 14.05          | 0.02         | 0.78          | 0.51          | 2077.63          | 0.12         | 0.05         | 0.02        | 0.09         | 0.56         | 0.00        | 0.03         | 0.02        | 85.37          | 0.00        | 0.00        |  |
| Helicopters                                      | 12.83         | 66.89         | 66.89          | 12.31        | 22.11         | 22.11         | 30084.64         | 0.00         | 0.00         | 0.13        | 0.67         | 0.67         | 0.12        | 0.22         | 0.22        | 300.85         | 0.00        | 0.00        |  |
| Fugitive Dust                                    | 0.00          | 0.00          | 0.00           | 0.00         | 89.77         | 26.79         | 0.00             | 0.00         | 0.00         | 0.00        | 0.00         | 0.00         | 0.00        | 2.96         | 0.88        | 0.00           | 0.00        | 0.00        |  |
| <b>Total Daily</b>                               | <b>37.16</b>  | <b>173.90</b> | <b>263.81</b>  | <b>12.65</b> | <b>120.57</b> | <b>56.23</b>  | <b>62446.22</b>  | <b>2.27</b>  | <b>17.43</b> | <b>1.49</b> | <b>3.67</b>  | <b>6.84</b>  | <b>0.13</b> | <b>3.47</b>  | <b>1.35</b> | <b>1346.40</b> | <b>0.08</b> | <b>0.54</b> |  |
| <b>Transmission Segment 4 230 kV</b>             |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Emissions, lbs/day                               |               |               |                |              |               |               |                  |              |              |             |              |              |             |              |             |                |             |             |  |
| Heavy Construction Equipment                     | 4.97          | 21.27         | 30.51          | 0.05         | 1.61          | 1.43          | 4524.79          | 0.45         | 2.90         | 0.21        | 0.82         | 1.15         | 0.00        | 0.07         | 0.06        | 161.08         | 0.02        | 0.11        |  |
| Worker Vehicles                                  | 0.77          | 15.13         | 1.39           | 0.02         | 0.41          | 0.18          | 1600.53          | 0.08         | 0.14         | 0.50        | 0.05         | 0.03         | 0.00        | 0.01         | 0.01        | 52.82          | 0.00        | 0.00        |  |
| Construction Trucks                              | 0.55          | 2.12          | 14.13          | 0.02         | 0.79          | 0.52          | 2116.68          | 0.12         | 0.05         | 0.02        | 0.09         | 0.57         | 0.00        | 0.03         | 0.02        | 87.95          | 0.01        | 0.00        |  |
| Fugitive Dust                                    | 0.00          | 0.00          | 0.00           | 0.00         | 89.77         | 26.79         | 0.00             | 0.00         | 0.00         | 0.00        | 0.00         | 0.00         | 0.00        | 3.95         | 1.18        | 0.00           | 0.00        | 0.00        |  |
| <b>Total Daily</b>                               | <b>20.38</b>  | <b>91.81</b>  | <b>163.48</b>  | <b>0.29</b>  | <b>97.16</b>  | <b>32.99</b>  | <b>27271.01</b>  | <b>1.92</b>  | <b>14.25</b> | <b>1.02</b> | <b>2.05</b>  | <b>4.16</b>  | <b>0.01</b> | <b>4.16</b>  | <b>1.35</b> | <b>739.36</b>  | <b>0.05</b> | <b>0.35</b> |  |
| <b>Simultaneous Construction, December 2014</b>  | <b>139.39</b> | <b>608.62</b> | <b>1071.95</b> | <b>14.09</b> | <b>516.14</b> | <b>194.26</b> | <b>197762.53</b> | <b>11.84</b> | <b>88.79</b> | <b>6.09</b> | <b>14.25</b> | <b>28.28</b> | <b>0.17</b> | <b>20.32</b> | <b>6.94</b> | <b>5001.45</b> | <b>0.34</b> | <b>2.40</b> |  |
| Significance Thresholds                          | 75            | 550           | 100            | 150          | 150           | 55            | NA               | NA           | NA           | NA          | NA           | NA           | NA          | NA           | NA          | NA             | NA          | NA          |  |
| <b>Simultaneous On-site Construction, Decemb</b> | <b>44.45</b>  | <b>168.62</b> | <b>306.52</b>  | <b>0.57</b>  | <b>462.61</b> | <b>146.18</b> |                  |              |              |             |              |              |             |              |             |                |             |             |  |