|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lampiran 1 Perhitungan Emisi Proses Pengadaan Bahan Baku | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| No | Jenis Bahan Baku | Jarak (km) | Jumlah Pesanan (ton) | Jenis Transport (ton) | Jumlah Truk | Total Jarak | Konsumsi BBM (km/liter) | Jumlah  Pemakaian  BBM (liter) | CO2 | CH4 | | N2O | | SO2 | NOx |
| 1 | Kotoran Sapi | 75 | 8640 | Truk 8 Ton | 1080 | 81000 | 6 | 13500 | 9066172050 | 1223505 | | 73410.3 | | 694319.7447 | 111323.0822 |
| 2 | Blotong | 71 | 5040 | Truk 8 Ton | 630 | 44730 | 6 | 7455 | 5006541677 | 675646.65 | | 40538.799 | | 383418.7924 | 61475.07986 |
| 3 | Dolomite | 36 | 600 | Truk 8 Ton | 75 | 2700 | 6 | 450 | 302205735 | 40783.5 | | 2447.01 | | 23143.99149 | 3710.769408 |
| 4 | Mixtro | 57 | 120 | Truk 8 Ton | 15 | 855 | 6 | 142.5 | 95698482.75 | 12914.775 | | 774.8865 | | 7328.930639 | 1175.076979 |
| Total (kg) | | | | | | | | | 14470617944 | 1952849.925 | 117170.9955 | | 1108211.459 | | 177684.0085 |
| Total dalam Kg CO2-eq | | | | | | | | | 14470617944 | 44915548.28 | 34331101.68 | |  | |  |
| Total dalam Ton CO2-eq | | | | | | | | | 14470617.94 | 44915.54828 | 34331.10168 | |  | |  |
| Total dalam Kg SO2-eq | | | | | | | | |  |  |  | | 1108211.459 | | 124378.8059 |
| Total dalam Ton SO2-eq | | | | | | | | |  |  |  | | 1108.211459 | | 124.3788059 |

Lampiran 2 Hasil Perhitungan Emisi Proses Produksi

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Nama Bahan Baku / Energi | Total Penggunaan | Satuan | CO2 | CH4 | N2O | SO2 | NOx |
| 1 | Kotoran Sapi | 8640000 | kg |  | 1088.64 | 860716.8 |  |  |
| 2 | Blotong | 5040000 | kg | 8819999.98 |  |  | 338060520 |  |
| 3 | *Dolomite* | 600000 | kg | 78000 | 94146 |  |  |  |
| 4 | *Mixtro* | 120 | Ton |  |  |  |  |  |
| 5 | Energi Listrik | 274440 | Kwh | 133103.4 |  |  | 2222964 | 1144414.8 |
| 6 | Solar | 99.03 | m3 | 66505408.75 | 8975.0889 | 538.505334 | 5093.221061 | 816.6166544 |
| TOTAL | | | | 75536512.13 | 104209.7289 | 861255.3053 | 340288577.2 | 1145231.417 |
| Total dalam Kg CO2-eq | | | | 75536512.13 | 2396823.765 | 254931570.4 |  |  |
| Total dalam Ton CO2-eq | | | | 75536.51213 | 2396.823765 | 254931.5704 |  |  |
| Total dalam Kg SO2-eq | | | |  |  |  | 340288577.2 | 801661.9917 |
| Total dalam Ton SO2-eq | | | |  |  |  | 340288.5772 | 801.6619917 |
| Total dalam Ton PO43--eq | | | |  |  |  |  |  |

Lampiran 3 Hasil Perhitungan Emisi Proses Distribusi

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Tujuan | Total Pesanan (ton) | Jarak (km) | Jumlah Truck | Jarak Total | Konsumsi bbm (km/liter) | Jumlah Pemakaian BBM (liter) | CO2 | CH4 | N2O | SO2 | NOx |
| 1. | PT. Petrokimia Gresik | 12000 | 57 | 750 | 42750 | 6 | 256500 | 172257268950 | 23246595 | 1394795.7 | 13192075.15 | 2115138.563 |
| TOTAL (Kg) | | | | | | | | 172257268950 | 23246595 | 1394795.7 | 13192075.15 | 2115138.563 |
| Total dalam Kg CO2-eq | | | | | | | | 172257268950 | 534671685 | 408675140.1 |  |  |
| Total dalam Ton CO2-eq | | | | | | | | 172257269 | 534671.685 | 408675.1401 |  |  |
| Total dalam Kg SO2-eq | | | | | | | |  |  |  | 13192075.15 | 1480596.994 |
| Total dalam Ton SO2-eq | | | | | | | |  |  |  | 13192.07515 | 1480.596994 |

Lampiran 5 Rekapitulasi Data Kuisoner AHP

Hasil Rekapan Data Kuisoner Metode AHP

Tabel Hasil Kuisoner Pembobotan Jarak

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Responden Ke | Pertanyaan Ke | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 0,200 | 3,000 | 4,000 | 0,250 | 0,333 | 0,200 |
| 2 | 3,000 | 4,000 | 3,000 | 0,333 | 0,250 | 0,333 |
| 3 | 0,200 | 0,250 | 3,000 | 5,000 | 0,333 | 0,250 |
| Rata-rata | 1,133 | 2,417 | 3,333 | 1,861 | 0,306 | 0,261 |

Tabel Hasil Pembobotan Waktu

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Responden  Ke | Pertanyaan Ke | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 5,000 | 3,000 | 0,143 | 3,000 | 4,000 | 0,333 | 0,250 | 3,000 | 3,000 | 0,333 |
| 2 | 0,333 | 3,000 | 0,250 | 5,000 | 3,000 | 0,333 | 3,000 | 0,250 | 0,333 | 0,200 |
| 3 | 0,200 | 0,333 | 3,000 | 2,000 | 0,333 | 0,250 | 3,000 | 0,333 | 3,000 | 4,000 |
| Rata-rata | 1,844 | 2,111 | 1,131 | 3,333 | 2,444 | 0,306 | 2,083 | 1,194 | 2,111 | 1,511 |

Tabel Hasil Pembobotan Biaya

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Responden Ke | Pertanyaan Ke | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 0,250 | 5,000 | 3,000 | 4,000 | 0,200 | 2,000 | 0,333 | 0,200 | 4,000 | 6,000 |
| 2 | 0,200 | 0,333 | 0,250 | 4,000 | 0,333 | 4,000 | 5,000 | 5,000 | 4,000 | 3,000 |
| 3 | 0,333 | 3,000 | 0,250 | 4,000 | 3,000 | 0,200 | 5,000 | 0,333 | 0,250 | 3,000 |
| Rata-rata | 0,261 | 2,778 | 1,167 | 4,000 | 1,178 | 2,067 | 3,444 | 1,844 | 2,750 | 4,000 |

Data Hasil Rekapitulasi Kuisoner

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Responden Ke | Pertanyaan Ke | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Jarak | 1,133 | 2,417 | 3,333 | 1,861 | 0,306 | 0,261 |  |  |  |  |
| Waktu | 1,844 | 2,111 | 1,131 | 3,333 | 2,444 | 0,306 | 2,083 | 1,194 | 2,111 | 1,511 |
| Biaya | 0,261 | 2,778 | 1,167 | 4,000 | 1,178 | 2,067 | 3,444 | 1,844 | 2,750 | 4,000 |