

## Providing Essential Services – Manufacturing Carbon Fertilizer – Benefiting Host Communities & Environment

## **SBS Water & Wastewater Requirements**

Note: SBS intends to recycle the wastewater from the ammonia scrubber into the carbon fertilizer to avoid nutrient discharge to the sewer. The wastewater replaces water that would otherwise be consumed from the municipality to hydrate the carbon fertilizer.

| SBS Water                     |         |         |         |        |       |  |  |  |
|-------------------------------|---------|---------|---------|--------|-------|--|--|--|
|                               | Phase 1 | Phase 2 | Phase 3 | Total  | Units |  |  |  |
| Process                       | 368     | 368     | 368     | 1,103  | GPH   |  |  |  |
| Venturi Scrubber              | 259     | 259     | 259     | 778    | GPH   |  |  |  |
| Sulfur Dioxide (SO2) Scrubber | 74      | 74      | 74      | 223    | GPH   |  |  |  |
| Ammonia (NH4) Scrubber        | 13      | 13      | 13      | 39     | GPH   |  |  |  |
| Bioscrubber                   | 21      | 21      | 21      | 63     | GPH   |  |  |  |
| Office                        | 30      | 5       | 5       | 40     | GPH   |  |  |  |
| Truck Wash                    | 60      | 25      | 25      | 110    | GPH   |  |  |  |
| Total, hourly                 | 458     | 398     | 398     | 1,253  | GPH   |  |  |  |
| Total, daily                  | 10,986  | 9,546   | 9,546   | 30,079 | GPD   |  |  |  |

| SBS Wastewater                                                   |         |         |         |        |       |  |  |  |
|------------------------------------------------------------------|---------|---------|---------|--------|-------|--|--|--|
|                                                                  | Phase 1 | Phase 2 | Phase 3 | Total  | Units |  |  |  |
| Process                                                          | 391     | 391     | 391     | 1,174  | GPH   |  |  |  |
| Venturi Scrubber                                                 |         |         |         |        |       |  |  |  |
| Discharge                                                        | 259     | 259     | 259     | 778    | GPH   |  |  |  |
| Dust (biosolids)                                                 | 2.2     | 2.2     | 2.2     | 6.7    | lbs/h |  |  |  |
| Sulfur Dioxide (SO2) Scrubber                                    |         |         |         |        |       |  |  |  |
| Discharge                                                        | 92      | 92      | 92      | 276    | GPH   |  |  |  |
| Calcium Sulfite CaSO3·x(H2O)                                     | 147     | 147     | 147     | 440    | lbs/h |  |  |  |
| Ammonia (NH4) Scrubber                                           |         |         |         |        |       |  |  |  |
| Discharge                                                        | 19      | 19      | 19      | 57     | GPH   |  |  |  |
| Ammonium Sulfate (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> | 49      | 49      | 49      | 146    | lbs/h |  |  |  |
| Bioscrubber                                                      |         |         |         |        |       |  |  |  |
| Discharge                                                        | 21      | 21      | 21      | 64     | GPH   |  |  |  |
| Office                                                           | 25      | 5       | 5       | 35     | GPH   |  |  |  |
| Truck Wash                                                       | 25      | 25      | 25      | 75     | GPH   |  |  |  |
| Total, hourly                                                    | 441     | 421     | 421     | 1,284  | GPH   |  |  |  |
| Total, daily                                                     | 10,593  | 10,113  | 10,113  | 30,819 | GPD   |  |  |  |
| Total, minus NH4 Scrubber, hourly                                | 422     | 402     | 402     | 1,227  | GPH   |  |  |  |
| Total, minus NH4 Scrubber, daily                                 | 10,139  | 9,659   | 9,659   | 29,456 | GPD   |  |  |  |