



## Waste Management

The company has categorized the management of waste or discarded materials into two main types: industrial waste and solid waste. The management of these waste or discarded materials is as follows:

### Industrial Waste Management

Managing industrial waste is crucial for environmental protection and sustainability. The company focuses on production efficiency by minimizing waste through optimizing production processes, recycling, and reuse. This involves waste segregation, promoting recycling development, proper storage, and handling of hazardous materials, and maintaining equipment to prevent leaks, among other things. Reducing and reusing waste are also key materiality issues in 2024, highly prioritized by the company's stakeholders.

For 2024, the company has the following waste management plan:

1. Review and re-evaluate all waste generated from the company's operations to analyze both hazardous and non-hazardous waste.
2. Transition to more automated production processes to reduce the number of chemical containers used in manual production systems.
3. Implement source reduction by collaborating with the purchasing department to reduce waste from raw material packaging supplied by vendors.
4. Systematically segregate waste to create value and facilitate easy management.
5. Train employees, communicate, and campaign to raise awareness about waste reduction and segregation within the factory.
6. Monitor and evaluate in conjunction with 5S activities and occupational health under the ISO 45001 system.
7. Collaborate between the production department and the research and development department to reduce losses and find appropriate methods for reuse (re-process).



The company set a target to reduce industrial waste (hazardous waste) by more than 2% (2.3 tons) in 2024 from the base year (2022). As a result of implementing the plan in 2024, the company's disposed industrial waste was 100.25 tons, achieving a reduction of 12.84%, which is significantly more than the set target. This success is due to the company's transition to more automated weighing and dispensing systems in production lines to reduce the use of chemical division containers in manual systems. Furthermore, collaboration with chemical suppliers, through the use of returnable containers and ordering chemicals via tank-cars, helped reduce contaminated packaging that would otherwise be disposed of as hazardous waste.

### Solid Waste Management

Solid waste management is another crucial issue that the company focuses on to ensure efficient operations. The primary goal is to reduce the volume of solid waste and promote the application of the 3Rs principle (Reduce, Reuse, Recycle) in daily operations.

Table 1: Volume of Waste Over the Past 3 Years

| Category                                    | Years      |            |            |
|---------------------------------------------|------------|------------|------------|
|                                             | 2022       | 2023       | 2024       |
| Total Waste or Unused Materials (kg)        | 337,160.00 | 250,432.00 | 494,868.00 |
| Total Non-Hazardous Waste (kg)              | 222,145.00 | 138,680.00 | 365,009.00 |
| - Landfilling (kg)                          | 89,545.00  | 33,288.00  | 34,323.00  |
| - Incineration with energy recovery (kg)    | 0.00       | 0.00       | 0.00       |
| - Incineration without energy recovery (kg) | 0.00       | 0.00       | 0.00       |
| - Other (kg)                                | 132,600.00 | 105,392.00 | 330,686.00 |
| Total Hazardous Waste (kg)                  | 115,015.00 | 111,752.00 | 129,859.00 |
| - Landfilling (kg)                          | 0.00       | 0.00       | 0.00       |
| - Incineration with energy recovery (kg)    | 115,015.00 | 111,752.00 | 100,250.00 |
| - Incineration without energy recovery (kg) | 0.00       | 0.00       | 0.00       |
| - Other (kg)                                | 0.00       | 0.00       | 100,250.00 |



| Category                                                              | Years  |        |         |
|-----------------------------------------------------------------------|--------|--------|---------|
|                                                                       | 2022   | 2023   | 2024    |
| Industrial Waste (kg)                                                 | 85,010 | 95,870 | 100,250 |
| -Factory 260                                                          | 45,180 | 53,640 | 75,490  |
| -Factory 271                                                          | 39,830 | 42,230 | 24,760  |
| Industrial Waste Disposed per Product                                 | 0.0071 | 0.01   | 0.0045  |
| -Factory 260                                                          | 0.0027 | 0.0044 | 0.0054  |
| -Factory 271                                                          | 0.0044 | 0.0056 | 0.0030  |
| Industrial Waste Disposal Rate Reduction compared to 2022<br>(Target) | -      | 40.85% | 37%     |
| -Factory 260                                                          | -      | 60.84% | -99%    |
| -Factory 271                                                          | -      | 25.88% | 33%     |

Table 2: Volume of Waste Reused / Recycled Over the Past 3 Years

| Category                                                                        | Years      |            |            |
|---------------------------------------------------------------------------------|------------|------------|------------|
|                                                                                 | 2022       | 2023       | 2024       |
| Total Reused / Recycled Waste or Unused Materials (kg)                          | 132,600.00 | 105,392.00 | 360,295.00 |
| Non-Hazardous Waste (kg)                                                        | 132,600.00 | 105,392.00 | 330,686.00 |
| - Reuse (kg)                                                                    | 123,070.00 | 73,492.00  | 140,799.00 |
| - Recycle (kg)                                                                  | 9,530.00   | 31,900.00  | 189,887.00 |
| Hazardous Waste (kg)                                                            | 0.00       | 0.00       | 29,609.00  |
| - Reuse (kg)                                                                    | 0.00       | 0.00       | 0.00       |
| - Recycle (kg)                                                                  | 0.00       | 0.00       | 29,609.00  |
| Percentage of Reused / Recycled Waste or Unused Materials to<br>Total Waste (%) | 39.33      | 42.03      | 72.81      |
| - Non-Hazardous Waste                                                           | 59.69      | 76.00      | 90.60      |
| - Hazardous Waste                                                               | 0.00       | 0.00       | 22.80      |



Table 3: Cost of Waste Disposal Over the Past 3 Years

| Category                            | Years      |            |            |
|-------------------------------------|------------|------------|------------|
|                                     | 2022       | 2023       | 2024       |
| Total Cost of Waste Disposal (Baht) | 349,325.00 | 495,309.00 | 338,643.00 |
| Total Industrial Waste (Baht)       | 265,325.00 | 411,309.00 | 242,643.00 |
| -Factory 260 (Baht)                 | 126,518.00 | 175,530.00 | 181,275.00 |
| -Factory 271 (Baht)                 | 138,807.00 | 235,779.00 | 61,368.00  |
| Total Solid Waste (Baht)            | 84,000.00  | 84,000.00  | 96,000.00  |
| -Factory 260 (Baht)                 | 42,000.00  | 42,000.00  | 48,000.00  |
| -Factory 271 (Baht)                 | 42,000.00  | 42,000.00  | 48,000.00  |