



## Use of Materials Native to Tama

One top priority for Tachikawa City Clean Center TACHIMNey is to gain the affection of the community it serves. On May 18 and 26 and June 1, 2022, TACHIMNey invited all pupils attending two nearby schools, Oyama Primary School and No. 9 Primary School, to experience painting the wood produced in Tama that adorns the walls at the 1st-floor entrance to the Administrative Building.

Before conducting the hands-on painting exercise, Tachikawa community studies lessons are used to teach students about the procedures by which TACHIMNey processes waste. These lessons deepen pupils' appreciation for the facility's operations.

As part of efforts to gain the affection of the community, Tachikawa City Clean Center TACHIMNey exhibits this artwork in the 1st-floor lobby of the Administrative Building.

## Nickname and Logo

Candidates for the facility's nickname were canvassed from the public.

Later a selection committee, composed of people of learning and experience as well as representatives of the area around the construction site, deliberated on the candidates to make a selection. In April 2022, the nickname "TACHIMNey" was announced.

By combining the words "Tachikawa" and "chimney," "TACHIMNey" expresses the desire that the Clean Center's stack, reaching toward the sky from the lush forest that surrounds it, will be regarded as a new landmark for the community, rather than a negative-sounding "smokestack."

The logo for the nickname was created by Tachikawa Revitalization Project 2022, a joint project of the City of Tachikawa and the School of Design, Meisei University.



The three lines represent the facility's stacks.



The face is friendly and lovable.

## Tachikawa City Clean Center TACHIMNey

2002 Izumicho, Tachikawa-shi, Tokyo 190-0015

Tel. 042-519-5319

- **General admission** 9:00 AM to 5:00 PM except closed days  
(no appointment necessary)
- **Group admission** 9:00 AM to 5:00 PM Monday to Friday except closed days and public holidays (appointment required)
- **Closed days** First Monday of each month (or next day if the first Monday is a public holiday)  
Year-end/New Year holiday
- **Access** 15-minute walk from JR Higashinakagami Station  
7-minute walk from Oyama Danchi Orikaeshijo bus stop  
8-minute walk from Nishimusashino bus stop
- **Operator** Tachikawa City
- **Design and construction supervision** Pacific Consultants Co., Ltd.
- **Design and construction** Ebara-Yoshikawa Special Construction Consortium
- **Operation** Tachikawa E-Service Co., Ltd.



Version 1 March 2023



立川市クリーンセンター  
 煙たちむにい  
 Tachikawa City Clean Center TACHIMNey



## The TACHIMNey Declaration

(Basic operating policy of Tachikawa City Clean Center TACHIMNey)

Through its operations, Tachikawa City Clean Center TACHIMNey takes pride in fostering mutual understanding, not only with nearby residents but with the people of the City of Tachikawa, cultivating their trust and meeting their expectations. To fulfill its duties to the City, Tachikawa City Clean Center TACHIMNey not only complies strictly with all laws and regulations but also outperforms mandated standards and sets its own demanding restrictions on flue gases, vigorously protecting the environment. To maintain highly transparent facility operation, the Center actively publishes information on a regular basis.

To provide opportunities for residents and many others to deepen their understanding of waste treatment, TACHIMNey promotes communication with the regional community, by opening the facility for people to visit at their leisure, providing environmental education and through other initiatives.

Before launching operations at TACHIMNey, the City of Tachikawa announced its basic approach in the Tachikawa City Clean Center Basic Operating Policy in June, 2022.

### Tachikawa City Clean Center TACHIMNey's autonomous regulatory standards on flue gases

	Unit	Autonomous regulatory standards	(Reference) Mandated standards, etc.
Dust	g/m <sup>3</sup> N	0.005 or less	0.08 or less
Hydrogen chloride (HCl)	ppm	10 or less	Approx. 430 or less
Sulphur oxide (Sox)	ppm	10 or less	Approx. 890 or less
Nitrogen oxide (Nox)	ppm	40 or less	250 or less
Dioxins	ng-TEQ/m <sup>3</sup> N	0.01 or less	1.0 or less
Mercury	mg/m <sup>3</sup> N	0.03 or less	0.03 or less

Note: Each of the above values is calculated based on 12% oxygen concentration.

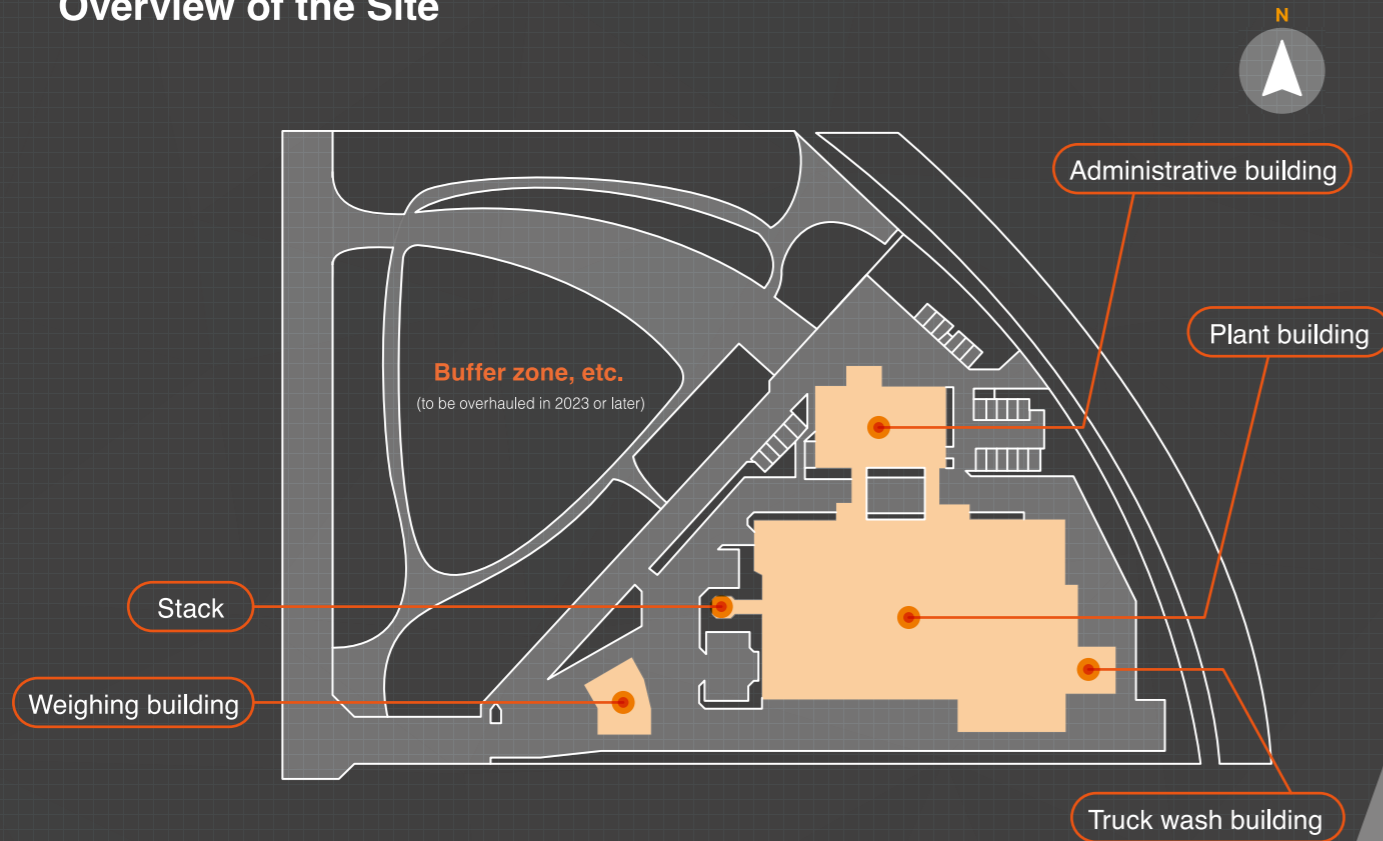
## The Five Aims of the Facility

- 01 To preserve the global and regional environments and the living environment of the area surrounding the facility, we aim to minimize the facility's emissions of substances that impact the environment.
- 02 By taking full and prudent measures to prevent accidents, we aim to create a waste treatment facility that is safe and secure now and in the future.
- 03 We aim to create a facility that can efficiently recover thermal and other energy obtained in the waste-treatment phase and put it to effective use.
- 04 By implementing measures against earthquakes and flooding, we aim to create a facility that can maintain operation even during disasters, supplying energy to the region as a disaster-preparedness base.
- 05 We aim to create a facility that is loved by residents, as a facility that not only treats (incinerates) waste, but also provides environmental education and harmonizes with the region and its scenery.

### Overview of the Facility

Name of the Facility	Tachikawa City Clean Center	Receiving and supply equipment	Pit-and-crane system
Location	2002 Izumicho, Tachikawa-shi, Tokyo	Incineration equipment	Grate-type incinerator
Land area	24,354 m <sup>2</sup>	Incineration-gas cooling equipment	Heat recovery boiler system
Building area	4,412.36 m <sup>2</sup>	Exhaust-gas treatment equipment	Filtration dust collectors, HCl & SO <sub>x</sub> scrubbers, catalytic denitrification equipment, dioxin scrubbers (activated charcoal)
Floor area	7,952.66 m <sup>2</sup>	Draft equipment	Balanced-draft system
Height of stack	59 m	Excess-heat utilization equipment	Steam turbine generator (maximum output: 2,390 kW) Hot-water supply equipment
Materials processed	Burnable waste, large burnable waste, burnable residue	Fly-ash treatment equipment	Treated fly ash: Pit-and-crane system
Treatment capacity	120 tons/day (60 tons/24 hours × 2 furnaces)		Untreated fly ash: Silo system
Operational format	Design, build, operate (DBO) (publicly built and privately operated)		
Construction period	From June 27, 2019 to February 28, 2023		
Operation period	From March 1, 2023 to March 31, 2043		Fly-ash treatment: Chemical-treatment system

## Overview of the Site



## Overview of Facilities

The facility consists broadly of two areas: a **plant administrative area**, consisting of waste receiving, temporary storage for incineration, incineration and rooms for control of operations; and a **visitor administrative area**, where visitors study the environment by learning about waste-treatment processes. Generally, visitors are free to walk around with no preset route, within observation hours. Due to concerns of facility safety and information management, visitors are prohibited from entering the plant administrative area.

In this way the site plan clearly demarcates secure areas, to secure the safety of both visitors and the facility.

Visitors can follow the route indicated by the arrows to learn about the sequence of steps in waste treatment. In this way visitors can learn about each step in order: Starting at the platform, where waste is received, then proceeding to the combustible waste pit & Waste crane, which store and stir the waste; then on to the central control room, from which facility operation is managed; the furnace, which incinerates the waste; and finally to the steam turbine generator, which uses steam from excess heat to generate electricity.

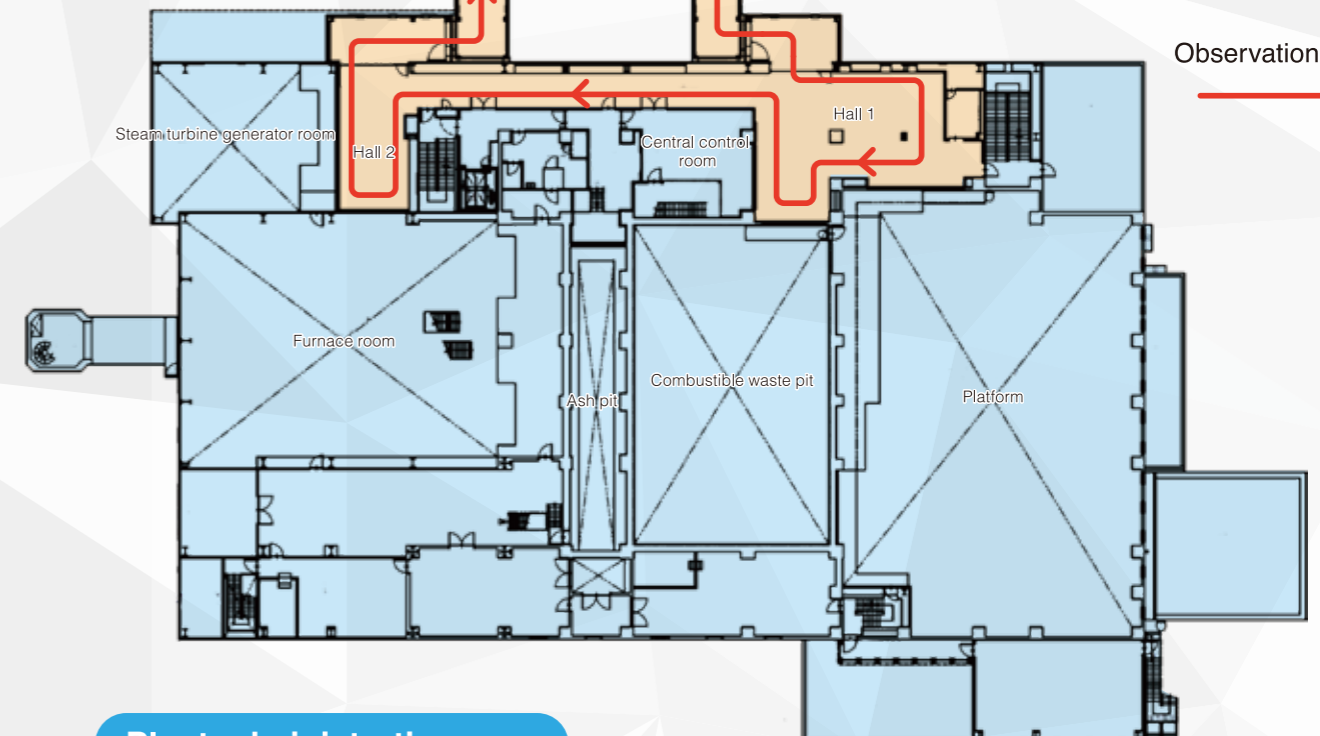
### Visitor administrative area

2<sup>nd</sup> floor



1<sup>st</sup> floor

Observation route



### Plant administrative area

3<sup>rd</sup>-floor roof, Administrative Building



Hall 1, 2<sup>nd</sup> floor, Plant Building



Hall 2, 2<sup>nd</sup> floor, Plant Building



1<sup>st</sup>-floor entrance hall, Administrative Building



Informative-materials area, 2<sup>nd</sup> floor, Administrative Building



Visitor briefing room, 2<sup>nd</sup> floor, Administrative Building



## Sequence of Steps in Waste Treatment

Burnable waste is weighed on a truck scale, then moved to the platform, to be stored in the combustible waste pit (5,000-sqm capacity). The waste in the combustible waste pit is moved to the incineration furnace by waste cranes (60 tons/day × two incineration furnaces) and incinerated. The hot exhaust gases emitted from the incineration furnace are sent to the heat recovery boiler. Coiled around the inside of the boiler are countless pipes, through which water flows. As the hot gas comes into contact with the pipes, it heats the water within, making steam. After thermal energy has been recovered from it in the boiler, the exhaust gas is sent to a cooling tower, where it is cooled to a temperature suitable for treatment. Filtration dust collectors and catalytic denitrification equipment strip out hazardous substances from the flue gas, so it can be outgassed from the stack at or above the autonomous standards for cleanliness.

### Incineration furnace

By adjusting the waste transport speed and incineration airflow for each of a wide range of waste components, the waste is incinerated at over 900°C to break down dioxins.



### Heat recovery boiler

The heat from the exhaust gas sent from the incineration furnace is used to generate steam. Electricity and hot water are generated from this steam.



### Steam turbine generator

The steam generated by the boiler is used to turn a steam turbine, generating up to 2,390kW of electricity. The electricity generated powers the facility; any excess electricity is sold.



### Steam condenser

The exhaust steam from the steam turbine is cooled and condensed, to be reused as boiler water.



### Central control room

All plant operations are monitored and controlled. All equipment is run automatically by computers.



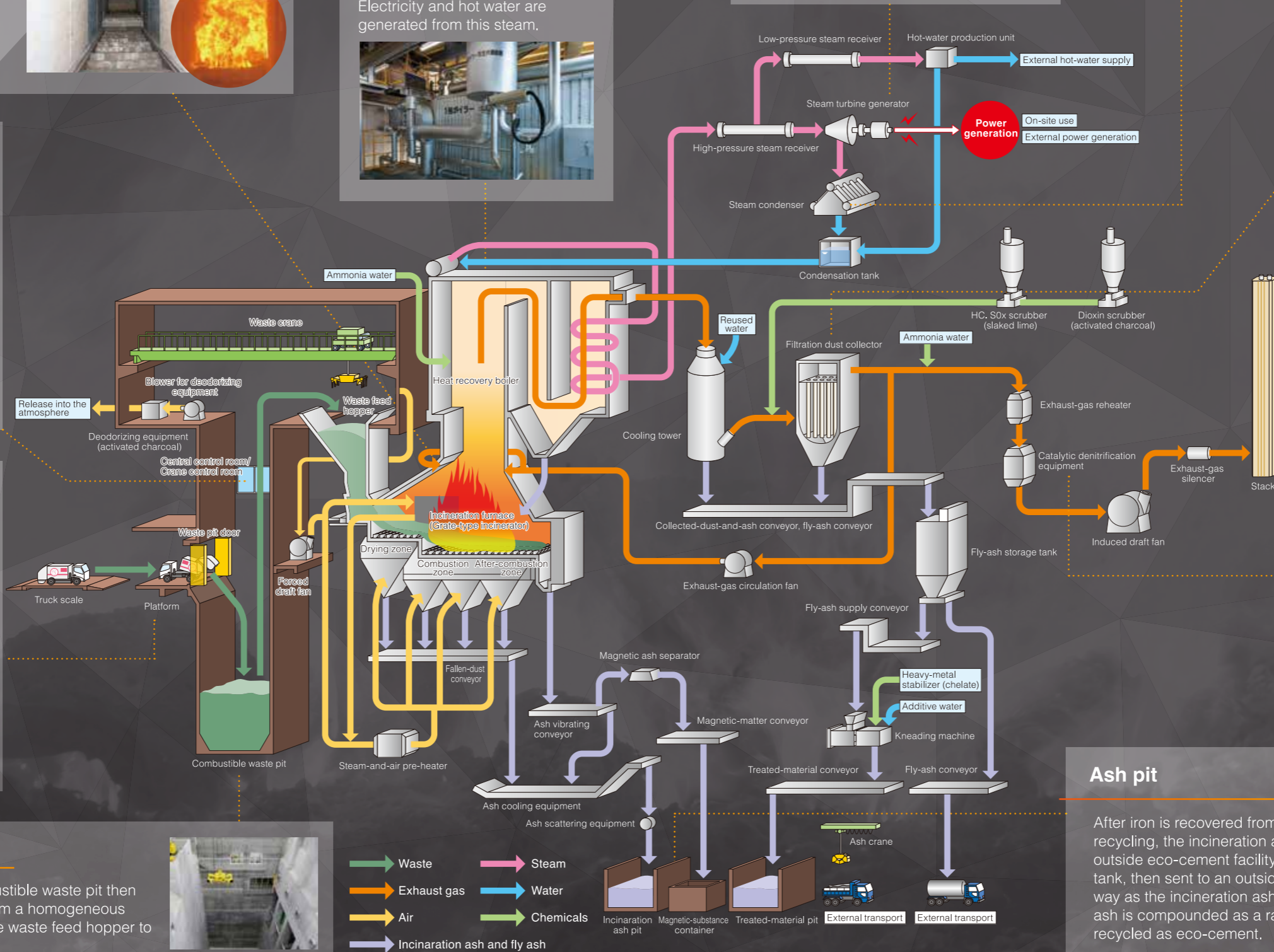
### Platform

Garbage trucks are weighed on a truck scale. They then proceed to the platform, where they deposit their waste into a combustible waste pit.



### Combustible waste pit

Waste is first stored in the combustible waste pit then stirred by the waste cranes to form a homogeneous mix. It is then transferred from the waste feed hopper to the incineration furnace.



### Filtration dust collector

Filters installed in the filtration dust collector remove hazardous substances from the exhaust gas, leaving the gas clean.



### Catalytic denitrification equipment

Trace amounts of dioxin and nitrogen oxide remaining in the exhaust gas are broken down by catalysts.



### Ash pit

After iron is recovered from the incineration furnace for recycling, the incineration ash is water-cooled and sent to an outside eco-cement facility. Fly ash is first stored in a fly-ash tank, then sent to an outside eco-cement facility in the same way as the incineration ash. At the eco-cement facility, the all ash is compounded as a raw material for cement, to be recycled as eco-cement.