



## Press Release



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### **The Ministry of Environment to take intensive control measures during summer when the ozone level is typically high (May – Aug)**

- ME to intensively monitor, inspect, and provide technical support to businesses that emit ozone precursors -

**Sejong, May 06** - The Ministry of Environment (ME, Minister Han Jeoung Ae) will take intensive control measures on high ozone concentrations during summer when the ozone level is typically high (May - Aug), including reducing ozone precursors and publishing behavioral guidelines against ozone. Ozone is formed when chemical compounds, such as nitrogen oxide (NO<sub>x</sub>) and volatile organic compounds (VOCs), react with solar radiation. It has three atoms. As repeated exposure to high-concentration ozone can negatively impact respiratory organs such as the lungs, intensive control is required from May to August, during which sunlight is strong.

The details of the intensive control measures on high ozone concentration include:

1. Special inspection of businesses that emit air pollutants such as NO<sub>x</sub>.
2. Technical support for fugitive emission facilities<sup>1</sup> of VOCs.
3. Publicizing harmful effects and actions to be taken against ozone.

Such measures will help alleviate the generation of high-concentration ultra-fine dust<sup>2</sup> as the concentration of NO<sub>x</sub> and VOCs, which are substances causing ozone and ultra-fine dust, can be reduced.

<sup>1</sup> Fugitive emission facilities refer to facilities that emit (leak) air pollutants directly into the air without an outlet, unlike a point source emission (e.g., chimney)

<sup>2</sup> In connection with the reduction goal of NO<sub>x</sub> and VOCs by 64% and 32%, respectively, of the "Comprehensive Plans for Fine Dust Management (2020–2024)."

[Key Contents of 2022 High Ozone Concentration Control Measures]

**(Management of ozone precursors emitters)** The Ministry of Environment and its affiliates, including regional environmental offices, the Metropolitan Air Quality Management Office, the National Institute of Environmental Research, the Korea Environment Corporation, and local governments, will closely inspect the businesses that emit Nox and VOCs. For fifty companies<sup>3</sup> that emit a large amount of NOx, they will examine whether the companies properly operate discharge and prevention facilities and how they manage and operate the automatic smokestack measuring device. They will also check whether 160 facilities discharging VOCs in large quantities, such as petrochemical businesses among registered businesses for fugitive emission facilities of VOCs, comply with the Facility Management Standards for Fugitive-Emission Facilities<sup>4</sup>. The Ministry of Environment will also examine whether sixty businesses that manufacture or import paints and ninety businesses that sell paints follow the containers' VOC content level and labeling standards. In addition, it will provide technical support for forty SMEs that find the management of fugitive emission facilities difficult and fifty gas stations where gasoline vapor recovery system is not thoroughly managed.

※ (For SMEs) The Ministry of Environment will select businesses among those who failed the inspection or did not comply with the Facility Management Standards and support measuring pollutants, installing sealing/collecting facilities, and optimal management plans.

※ (For gas station) The Ministry of Environment will select businesses among those who have received an improvement order for unconformity during the regular inspection of the gasoline vapor recovery system and check if the recovery system is properly operated. The Ministry will also suggest ways to improve and provide them with training for the satisfactory operation of the recovery system.

**(Management for industrial complex)** The Ministry of Environment will intensively monitor using the latest equipment the areas where large-scale emissions plants such as major industrial complexes and petrochemical industrial complexes are located.

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<sup>3</sup> Top 50 businesses that emit the most NOx in 2021 among 1,204 business entities subject to total emission control within the air control zones (amounting to 88,846 tons (approx. 47%) out of the total 189,588 tons in the NOx emission)

<sup>4</sup> Flare stack optical gas imaging (OGI) camera monitoring (once a day), external floating roof tank monitoring (once a week), leak control for cooling water heat exchanger, etc.

The Ministry will measure air pollutants using portable high-tech equipment<sup>5</sup> and inspect the businesses suspected of illegally emitting substances. In addition, the Ministry encourages the companies to reduce ozone-causing substances in case of high ozone concentration. It promotes the actions to be taken against ozone around the subway stations and restaurants near the industrial complexes with large moving populations.

**(Publicity)** In order to protect public health from ozone pollution, the Ministry of Environment will provide information on high ozone concentrations and publicize the behavioral strategy to minimize exposure to ozone. Using the mobile app (Air Korea) and the electronic display on the road, the Ministry will promptly inform the ozone forecast and warning. The Ministry will also publicize the six major behavioral strategies in booklets and through advertisements in subways. As ozone is highly reactive, it quickly reacts with other gases indoors where sunlight is low, and thus, it is recommended for people to move indoors when there is a high ozone concentration.

<Behavioral guidelines to Ozone Alerts>

1. Check the ozone forecasts and warning
2. Refrain from outdoor activities and strenuous exercises
3. Refrain from outdoor activities for children and students of daycare centers, kindergartens, and schools
4. Refrain from using automobiles and use public transportation
5. Reduce the use of spray, dry cleaning, painting, and thinner
6. Refuel the vehicle in the morning and the evening, avoiding the heat of the day

Park Yeon-Jae, Director-General of the Air Quality Policy Bureau, said, "The ozone concentration tends to be higher as summer approaches with stronger sunlight and higher temperature. We will do our best to protect the public health from ozone with intensive control measures and periodic reduction of ozone-causing substances including NOx."

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<sup>5</sup> Regular monitoring through cutting-edge portable equipment includes drones, VOC mobile measurement vehicles, spectrometers (SOF, UV-DOAS, OGI, etc.), and Solar Occultation Flux (SOF) installed on the measurement vehicle and UV-DOAS.