Radiation dose reduction by collecting dust and small rubbles at the parking lot in front of Main Anti-Earthquake Building of Fukushima Daiichi Nuclear Power Station

<Full view of dust collector system>
Outline of work

**Period:** January 7 - 30, 2012 (operation period of heavy machinery)

**Scope of work:** Parking space of Main Anti-Earthquake Building’s parking lot excluding bus lane (approx. 6,000㎡)
Procedure of collecting dust (in 2 steps)

1st Step: removing surface soil etc. by man-power (direct management)
- Removing surface soil of planting
- Scraping road by metal spatula and brush
- Mopping/wiping road

<Results>
14 times, 60 persons in the total number
Sandbags: 150

2nd Step: collecting dust and small rubbles by heavy machinery
- Scraping the road with wire brush attached to the bucket of backhoe
- Suctioning dust and small rubbles with dust collector (patent pending)
Comparison of radiation dose distribution before and after dust collecting work

**Before collecting dust**

- **Airborne radiation (1m above ground surface)**
  - Former Administration Office Building: Average 82μSv/h, Maximum 355μSv/h
  - Main Anti-Earthquake Building: Average 254μSv/h, Maximum 240μSv/h

- **Surface radiation (1 cm above ground surface)**
  - Former Administration Office Building: Average 54μSv/h, Maximum 115μSv/h
  - Main Anti-Earthquake Building: Average 68μSv/h, Maximum 181μSv/h

**After collecting dust**

- **Airborne radiation (1m above ground surface)**
  - Former Administration Office Building: Average 54μSv/h, Maximum 115μSv/h
  - Main Anti-Earthquake Building: Average 68μSv/h, Maximum 181μSv/h

- **Surface radiation (1 cm above ground surface)**
  - Former Administration Office Building: Average 68μSv/h, Maximum 181μSv/h
  - Main Anti-Earthquake Building: Average 68μSv/h, Maximum 181μSv/h