"AIA e Ambiente" – Environment Department

Taranto, September 20th, 2017

AIA and Environment: context and rationales

2013

- Italian government put **ILVA Spa under the administration of the commissioner Enrico Bondi**
- **AIA dept.** was set up to monitor the **progress of the AIA plan**

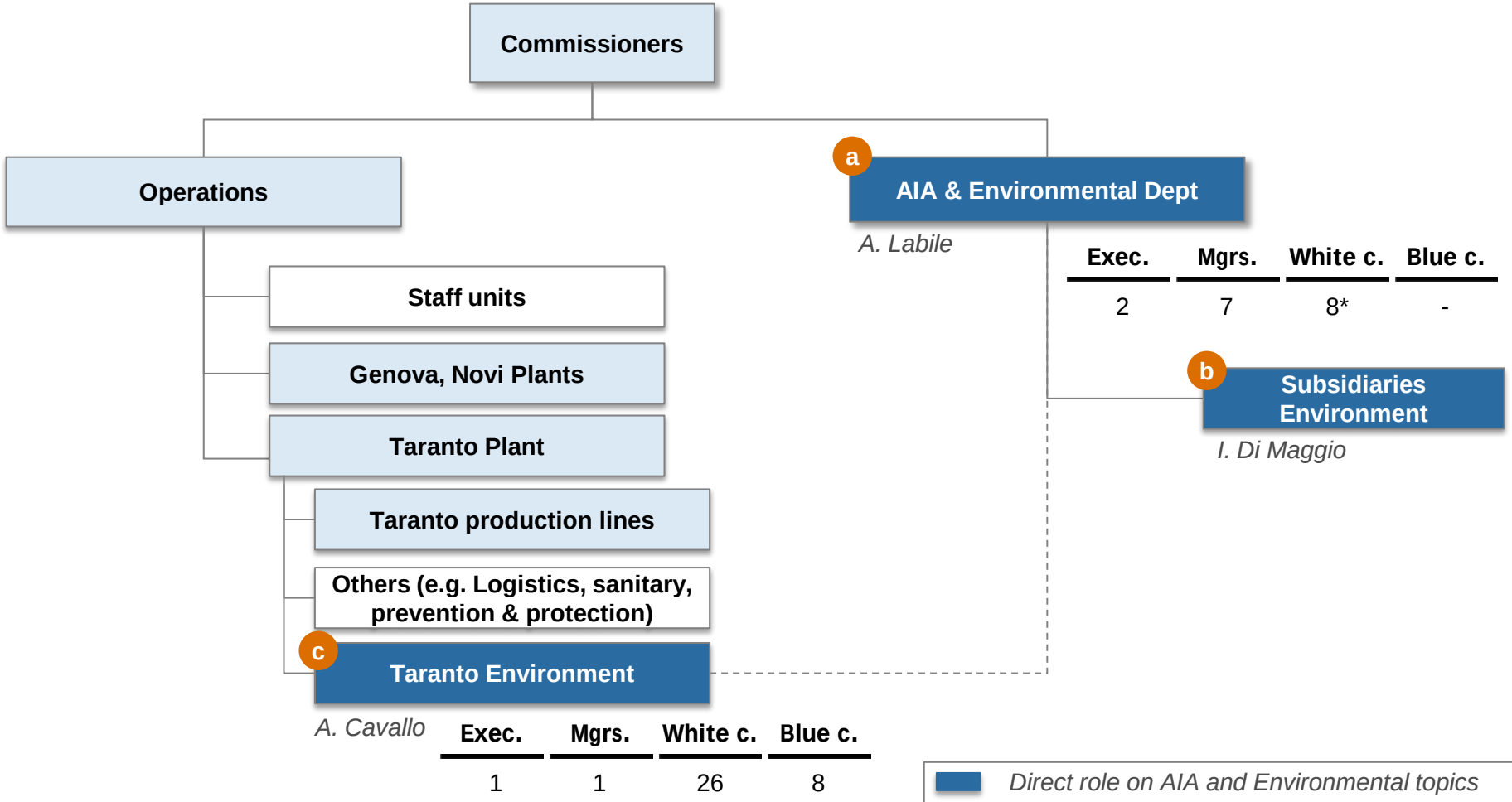
2014

- ILVA and the Italian Government defined the new **Environmental Plan** for Taranto plant's sustainability

2015

- ILVA was admitted to the **Extraordinary Administration status**
- Italian Ministry of Economic Development appointed **Piero Gnudi, Enrico Laghi and Corrado Carrubba** as extraordinary commissioners
- New **direction of AIA and Environment** has been set up to coordinate environmental procedures at group level

AIA and Environment matters tackled at different levels



(*) 7 white collars from May 2017
Source: Management ILVA

Roles & main responsibilities of AIA & Environment

Unit	Main responsibilities
a **AIA & Environmental Department**	**Orchestrate Environmental Plan execution across ILVA Group** • Define environmental policies • Supervise fulfillment of environmental prescriptions • Ensure the availability of required resources for implementation • Push for the integration between environmental management system and the general plant management • Coordinate projects in the Environmental area and in production area with environmental impact
b **Subsidiaries Environment** c **Taranto Environment**	**Support operations to translate policies into concrete actions** • Ensure the collection and implementation of new regulations • Check the compliance with regulation constraints per equipment • Elaborate pollution prevention procedures for new and existing equipment • Monitor key environmental performances • Provide technical reports on monitored themes • Support for water, air pollution, waste and environmental management systems • Manage personnel trainings on environmental topics

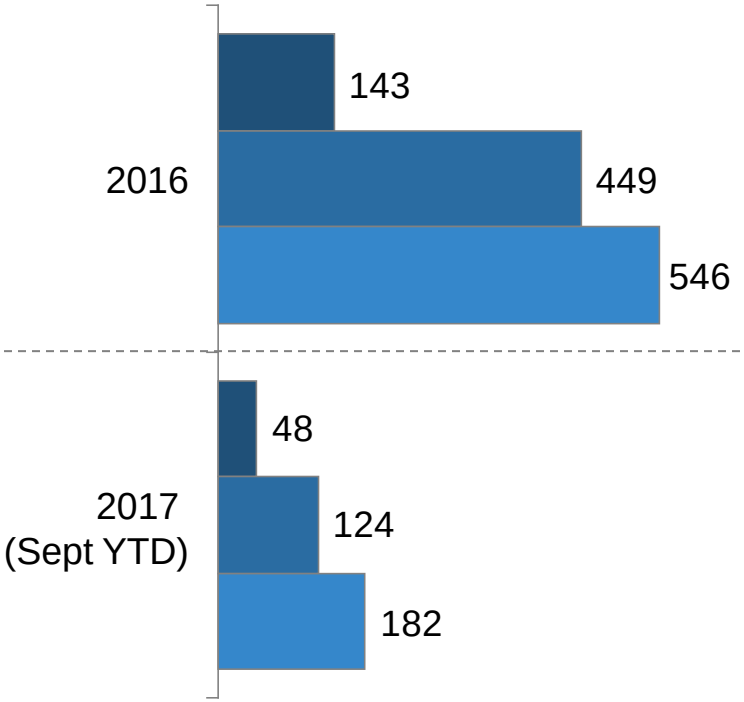
***Support & coordinate inspections** from third parties*

Source: "Procedura Gestionale Sistema di Gestione Ambientale" report, Management ILVA

Key processes of AIA and Environmental Department

Key process	Description
1 **Inspections**	• Support and coordination of inspections by third parties • In 2016, >140 inspections and ~450 different inspectors – By authorities, control and certification units, others
2 **Waste management**	• Manage wastes across different phases – From the classification to the disposal of waste • Support on administrative and controlling activities
3 **Air emission monitoring**	• Monitor at different levels air emissions of the plant • Support to the productive areas • Manage the official communication flows
4 **Water treatment**	• Monitor the water quality in the plant – Civil and industrial discharges – Water supply and landfill
5 **Certification ISO 14001**	• Fulfillment of ISO 14001 requirements in the plant • Coordinate the Internal Audits to check the status of the different prescriptions

of inspections from third parties



Comments

- **449 inspectors across 143 inspections** in 2016, including also
  - Ordinary audits by ARPA/ISPRA, 3-days audit with on average 12 inspectors
  - Inspections by EG-IGQ, Carabinieri, Fiscal Police
- **546 resources** working for environmental departments directly involved in data gathering and requests fulfillment
- The effort required for fulfillment of these inspections is representing a **remarkable part of AIA and environment department workload**
- In addition to the inspection activities, the environmental departments **support daily productive units for monitoring activities**

number of inspections # of inspectors AIA & Env. FTE involved

Source: Management ILVA

Waste management

2

2016 Data

Waste lifecycle

Task	Description	Key features
a **Classification**	• Supporting in the **classification of wastes** • Fulfillment of the **sampling plans** and **reports** • **Analysis** and **registry** management	• **2 305** new test reports • **2 047** sampling plans • **115** approvals for new waste clusters
b **Waste disposal**	In case of **disposal within the plant** • Management of the procedures for landfill or recovery in case of **external disposal** • Collaboration with the procurement department to select and assess providers and disposal equipment • Registry management	• **180kt** of waste disposed in the landfill • **740kt** of waste recovered • **360kt** of waste managed by external providers • **215** providers successfully assessed
c **Other**	• Support for the **new landfill opening** • **Administrative support** – "Ecotassa" payment – Report elaboration	

Source: Management ILVA

3 Air emission monitoring

2016 Data

Task	Description	Key features
a **Discontinuous monitoring of emissions**	• Sampling (different pollutants and parameters) • Analysis and certificates elaboration • Registry management • Support stack emissions monitoring activities	• **185** chimney monitored • **628** samples (**5 340** sampling hours) • **12 165** analysis certificates • **3** external providers on specific analysis
b **Continuous monitoring of emissions (AMS)**	• Monitoring • Equipment assessment • Check of the outliers and unavailability events • Authority reports for outliers and unavailability	• **23** active AMS • **64** outlier data-points • **12** unavailability events • **68** informative reports elaborated
c **Air quality**	• Monitoring • Air sampling • Coordination with the Authority • Certificates elaboration	• **729** PM10 samples • **144** samples of atmospheric deposition • **6** air control units (ILVA network) • **360** analysis certification
d **Fugitive emissions (LDAR Program)**	• Trait-d'union between external provider and productive area for monitoring	• **11 193** components under monitoring • **12** outliers
e **Communication with the authority**	• Quantification and estimation – Channeled and diffuse emissions • Official report elaboration – Data from AIA & Env. area, AFC and Production	• **Update** of the **E-PRTR**[1] • **12 monthly report** for the Wind-days • **Annual** monitoring and controlling report

1. European registry of the emission
Source: Management ILVA

4 Water treatment monitoring

2016 Data

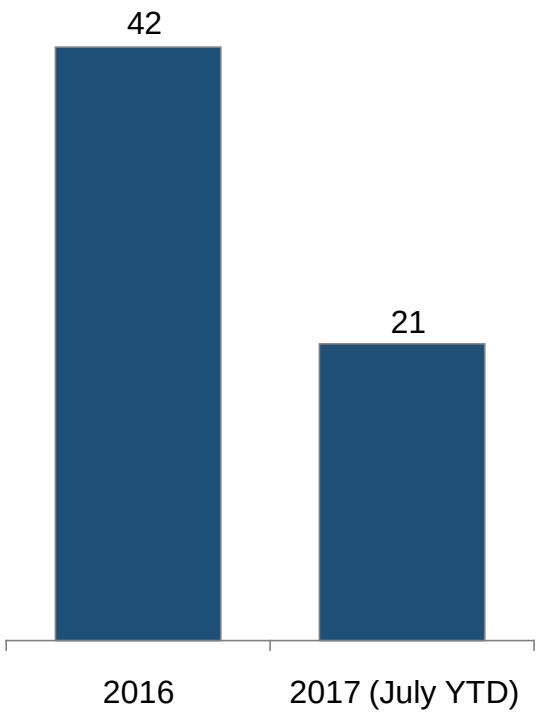
Task	Description	Key features
a **Industrial discharges**	• Daily and monthly **monitoring activity** of industrial discharges • Implementation of **controls** requested by the Monitoring Plan • Assessment of the **compliance with D.lgs. 152/06 limits**	• **47** partial discharges • **2** final discharges
b **Civil discharges**	• Rolling activity of **monitoring** of the civil discharges both partials and finals • **Assessment** of the water quality **with D.lgs. 152/06**	• **~675** partial discharges • **4** final discharges
c **Water supply**	• **Monitoring activity** of the wells to avoid **aquifer pollution** • **Assessment** of the **drinkable water** from the aqueduct	• **31** wells • **16** different aqueduct sampling points
d **Landfill water**	• **Sampling** of the water in the landfill system • **Analysis** of the samples • **Compliance** activities with the Controlling Plan	• **12** piezometers • **16** tanks for the rainwater • **8** sampling points for leaching residues

Source: Management ILVA

ISO 14001 certification

5

Number of internal audits



Activities

- Ensuring the **roll out** and active maintenance of the **Environmental management system of Taranto** productive plant checking the status through periodic internal audits
- Assessment of the **implementation of recovery actions** for specific non-compliances
- **Analysis of the results** through environmental monitoring systems to respect the regulation duties
- Evaluation of **continuous improvement** actions and rolling **assessment of resources**
- Management of the **communication flows**, including complaints

Source: Management ILVA

Key challenges looking forward

In pipeline

- **Environmental plan revision** in coordination with the Italian Government
- **Management** of the environmental impact of the **project pipeline in the plant**
- Requirement fulfillment for the **EMAS certification** (Eco-Management and Audit Scheme)

Upcoming activities

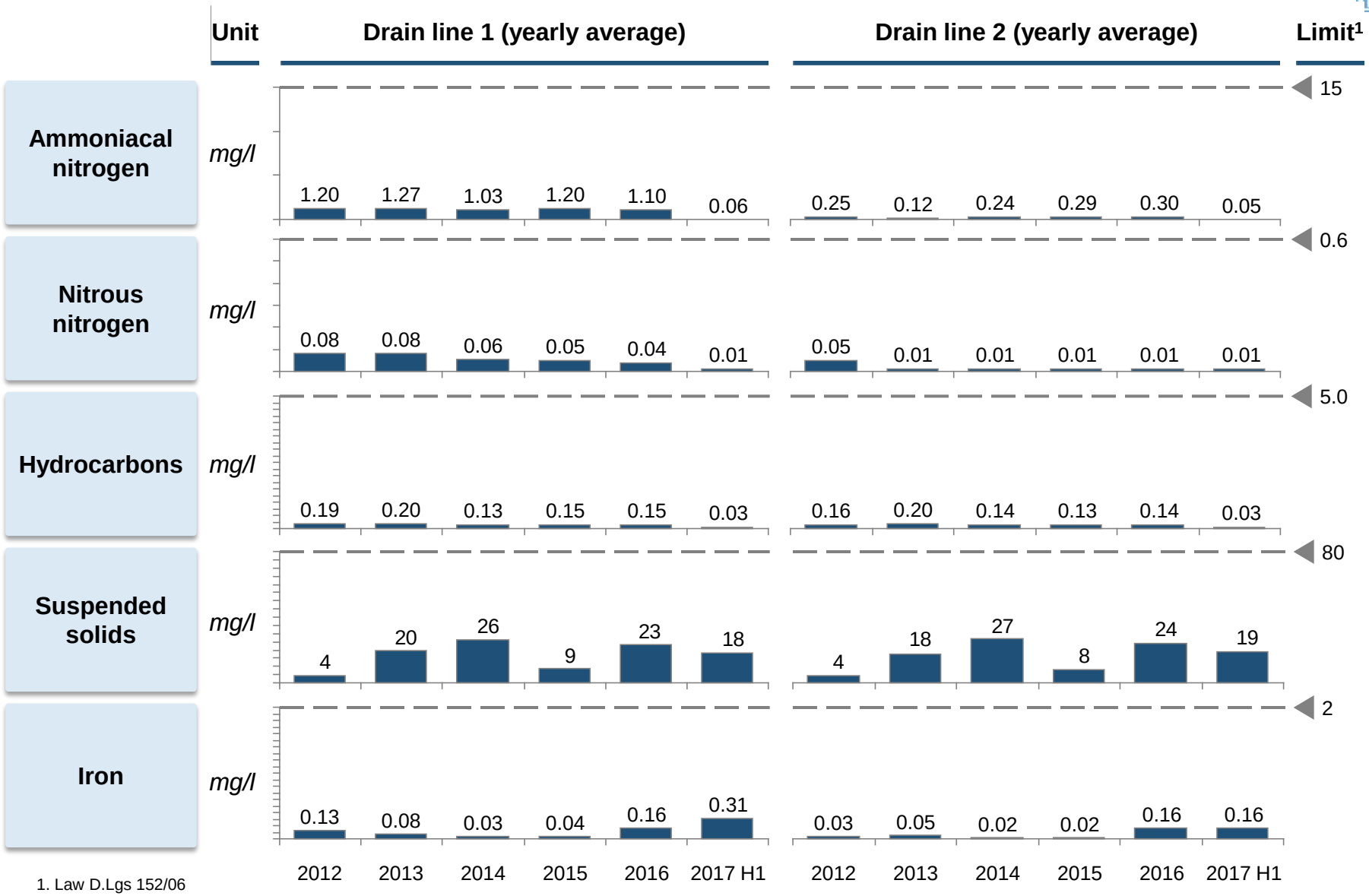
- Articulation of Environmental Plan' s **prescriptions across different areas**
- Adjustment of the **Monitoring Plan** accordingly with the Environmental Plan
- Best practice sharing and support on the **Environmental** challenges **across Group's plants**

Source: Management ILVA


ILVA

Unused slides

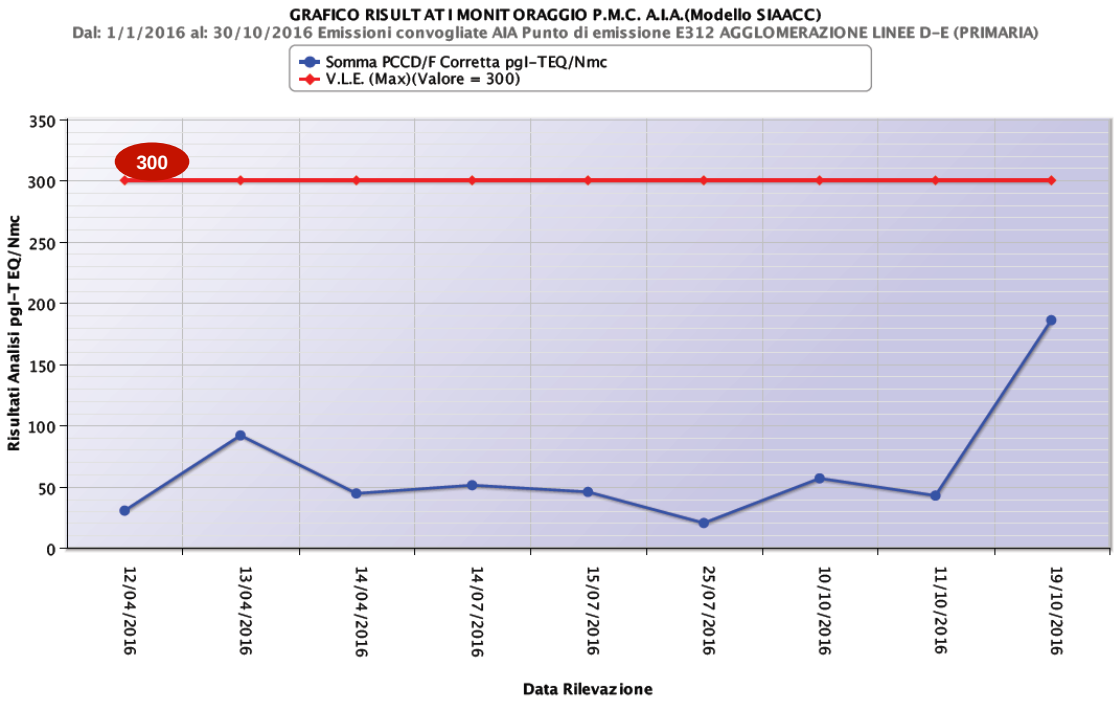
Water treatment monitoring: yearly average below the limit



1. Law D.Lgs 152/06

Channeled emissions: E312 chimney (I/II)

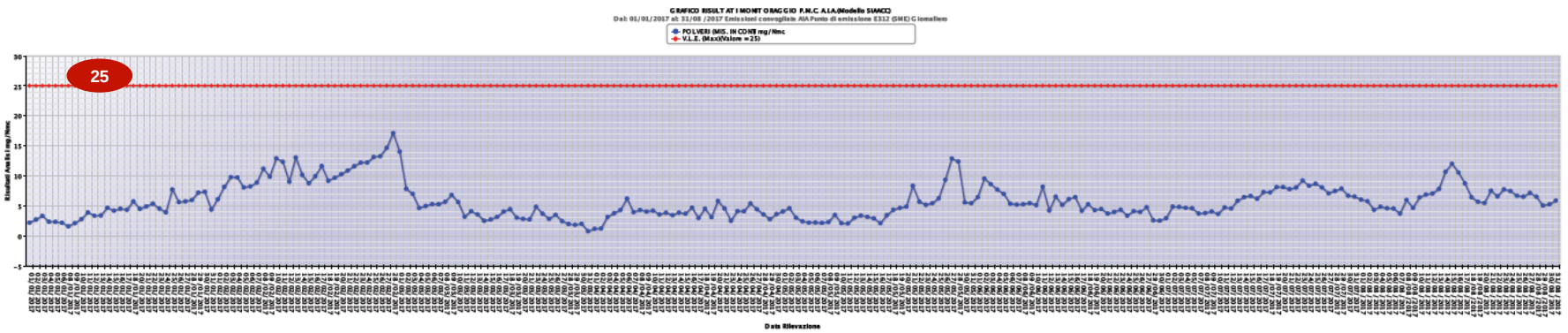
PCDD/F
(Plant AGL/2 – Line D-E, Discontinues monitoring, 2016)



Future limit with MEROS filters : 100 pg – TEQ/Nmc (0,1ng-TEQ/Nmc)

Channeled emissions: E312 chimney (II/II)

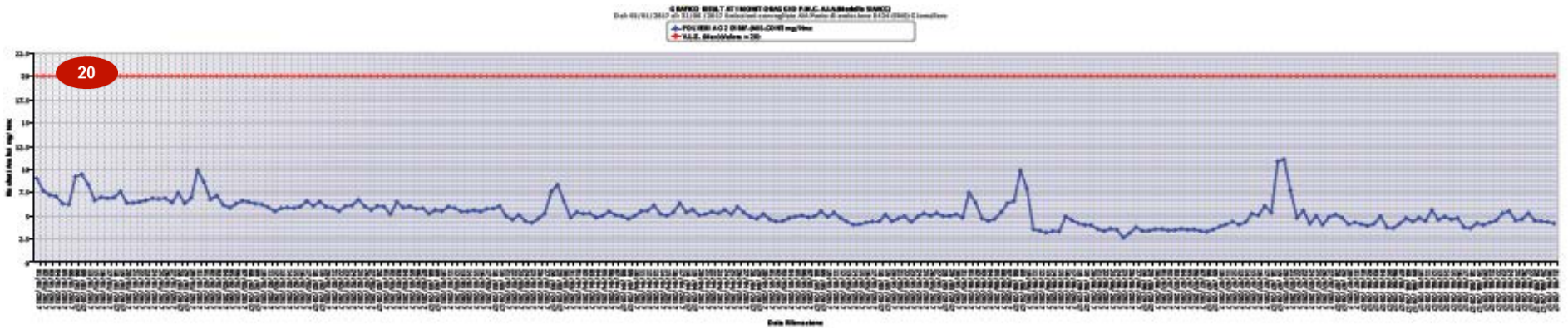
Total dust
(Plant AGL/2 – Line D-E, continuous monitoring, Daily averages 01/01/2017-31/08/2017)



Future limit with MEROS filters : 10mg/Nmc

Channeled emissions: E424 chimney

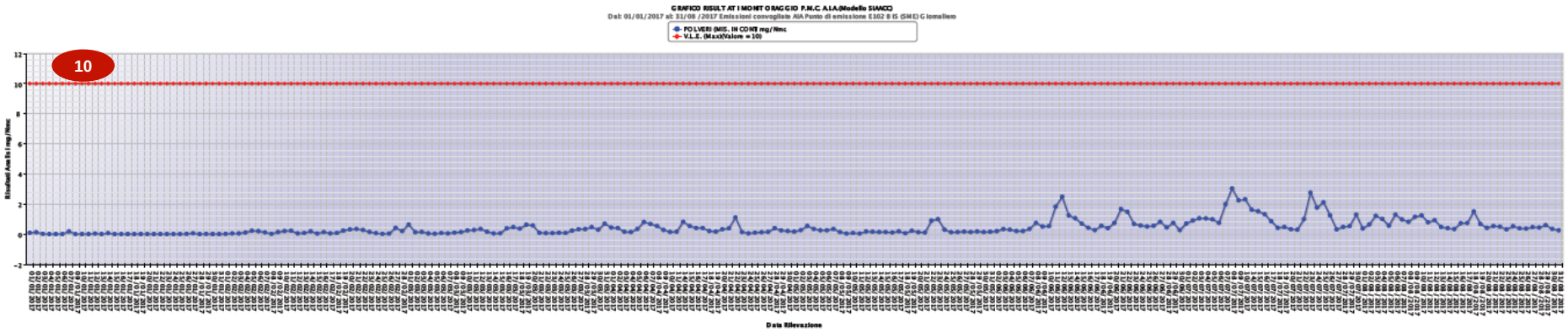
Total dust
(Coke Plant / 7-8 batteries, continuous monitoring, daily averages 01/01/2017-31/08/2017)



Future limit with Alstom filters: 8mg/Nmc

Channeled emissions: E102/bis chimney

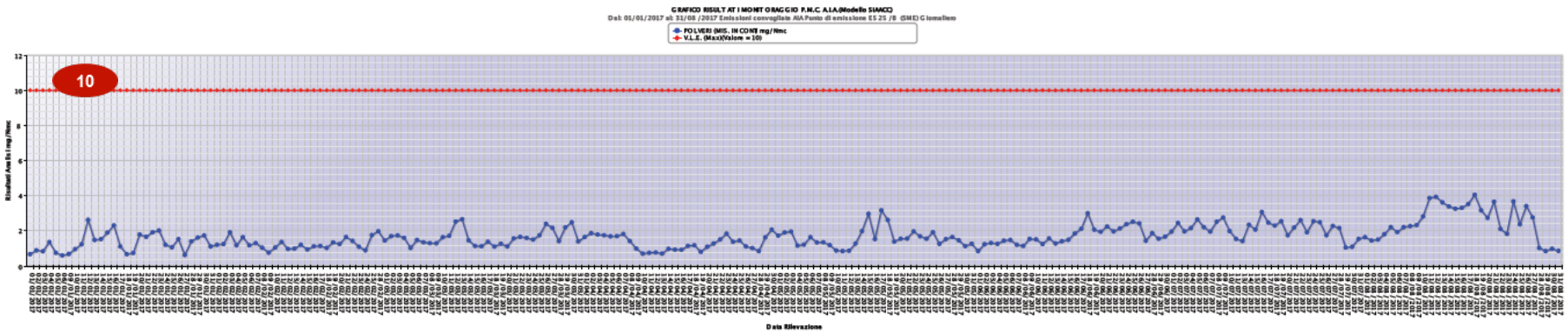
Total dust
(Stock-house Blast furnace 1, continuous monitoring, daily averages 01/01/2017-31/08/2017)



A new abatement system with a fabric filter has been implemented to be compliant with AIA prescriptions

Channeled emissions: E525/b chimney

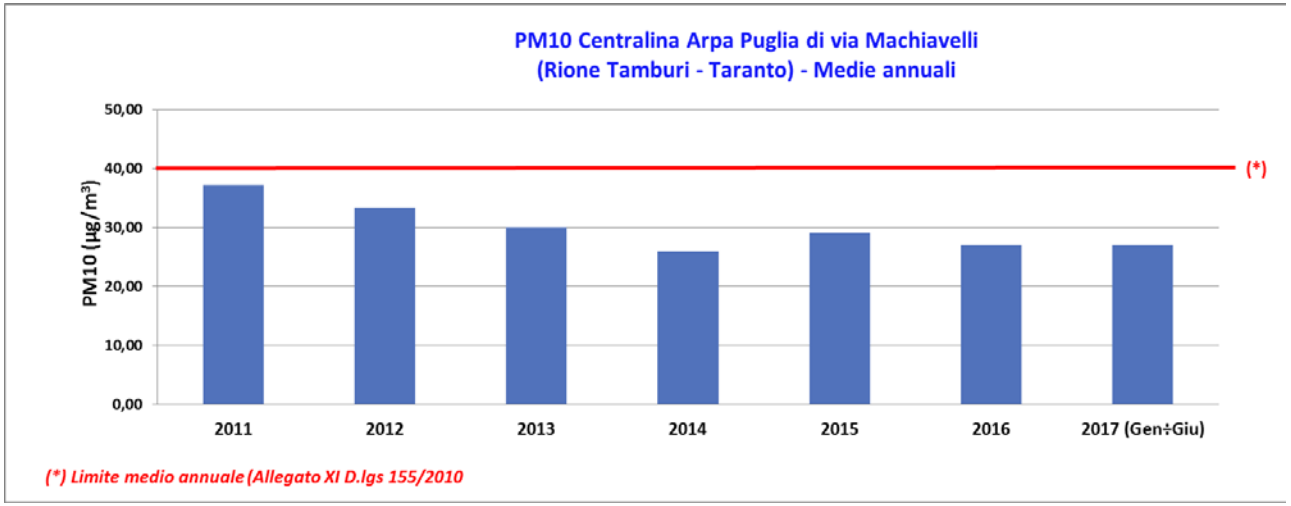
Total dust
(New secondary de-dusting system Steelshop1, continuous monitoring, daily averages 01/01/2017-31/08/2017)



A new abatement system with a fabric filter has been implemented to be compliant with AIA prescriptions

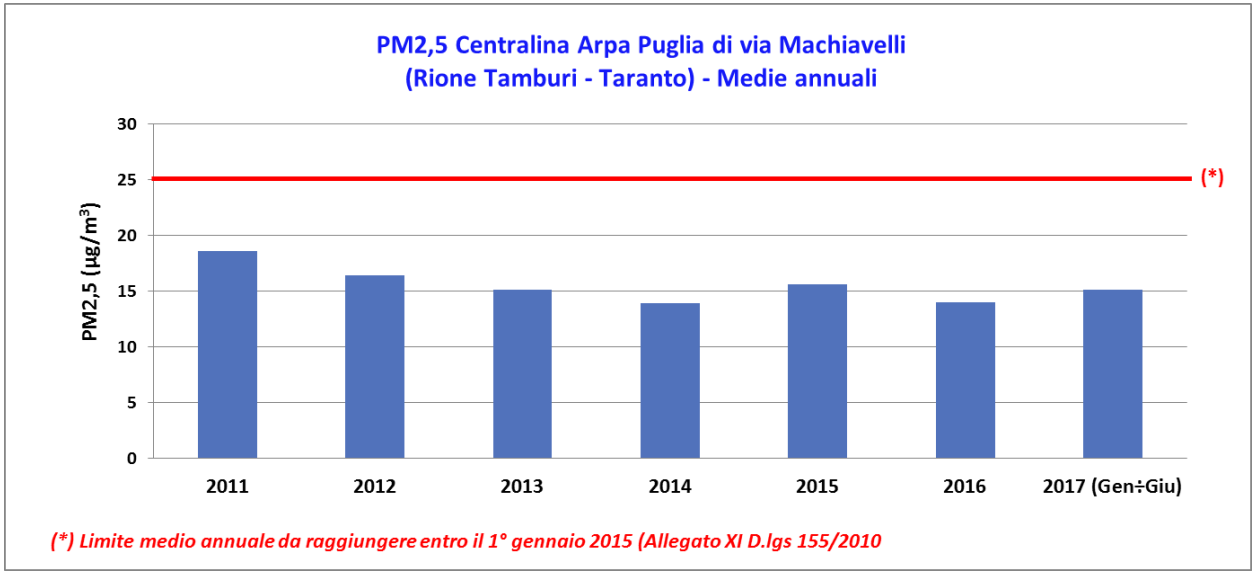
Air quality (I/III)

PM10 (µg/m^3)
Yearly averages



Air quality (II/III)

PM2.5 (µg/m^3)
Yearly averages



Air quality (III/III)

BaP (µg/m^3)
Yearly averages