

# Citizen Concerns and Interim Fenceline Monitoring Proposal for PAH, Cadmium (Cd), Manganese (Mn), and Nickel (Ni)

Submitted to the 19 April 2023 SCAQMD Working Group Meeting #2 on Rule 1180 Expansion  
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## Introduction

The SCAQMD Presentation Charts for the Working Group Meetings #1 of 25 Jan. 2023 and #2 for 19 April 2023 detail SCAQMD plans and ideas for changes to and potential expansion of Rule 1180 involving Fenceline Monitoring for AQMD covered facilities. Most of those ideas are good but Citizen's main concern is that plans for monitoring several already identified pollutants of concern by the SCAQMD are being deferred because of "difficulties" in establishing real-time optical, laser, or similar long-path methodologies for them. *'Working Group #1 Page 28'* notes that "New Point Source Detectors will be required to measure Particulate Matter (PM), and airborne compounds of Cadmium (Cd), Manganese (Mn), and Nickel (Ni); along with the note that "Staff is not aware of any technology capable of real-time measurements for PAHs (Poly-Aromatic Hydrocarbons)". However, "Point Source Detectors" for PAHs should be implemented in the interim until real-time measurements for PAHs become available.

As far as Citizen is aware of, the Rule 1180 requirements are not limited to only that type of technique. Of critical importance is that Fenceline Point-Monitors (FPM) are already being used for Black Carbon (BC). Citizen proposes that enhanced physical and chemical analysis be done using the already available FPM-BC system, plus using standard mathematical techniques, to create an Near-Real-Time Interim Monitor (NRT-IM) for PAH, Cd, Mn, and Ni.

## Proposal Summary

Two important items represents Citizen's present understanding of the FPM-BC System and its technical basis and goals, and they form the basis for this present Citizen Proposal.

**Item A:** Presently, the FPM-BC System monitors once every 5 minutes. It relies on ingesting an aliquot of fenceline net air pollution through a piece of semi-permeable tape. With proper calibration, optical scanning of the amount of discoloration that is present on that section of tape then identifies the BC amount, which is usually reported as micrograms per liter of ingested fenceline air. As far as Citizen is aware, fresh tape is spooled out of an interior roll inside the point monitor, with the residual post-scan take-up roll; with these tape spools being intermittently changed out as needed, as part of the normal routine maintenance of this FPM-BC System.

**Item B:** Airborne pollutants represent human health hazards primarily by inhalation, including molecular (such as Carbon Monoxide and Benzene); particulate (including BC, PM-2.5, PM-1.0, and smaller PM); water-based aerosols (such as HF-fog and Chlorine-base Fogs); biological aerosols (how CoVID-19 primarily spreads); and macroscopic slowly-settling 'dust' (including pollen, fly-ash, finely-divided industrial catalysts, aggregated diesel and other fume-based pollutants, and other easily airborne particulate matter).

Of critical importance to is that the inhalation human health hazard posed by these airborne pollutants can be two-fold: **(B-1)** The base material that comprises the majority of each dust particle can itself represent an biological hazard (such as asbestos and talc). **(B-2)** The base material itself (including water) provides a substrate for many reactive molecules to settle on and adhere to. This mechanism agglomerates and concentrates these molecules, and provides a convection-based migration pathway, enabling long-range transport far beyond what molecular collision-based diffusion would predict.

It is this B-2 mechanism, where anhydrous HF atoms and clusters emitted during a HF-MHF Refinery accident, almost immediately react with the moisture present in surrounding air, to create an HF-Fog, which can then propagate for miles as a dense ground-hugging cloud.

What (B-2) means for within the context of Rule 1180 enhancements, is that intermittent physical and chemical analysis of the FPM-BC take-up rolls can provide an NRT-IM for PAH, Cd, Mn, and Ni.

## Additional Comments

The SCAQMD *'Working Group #2 Page 7 of 54' Presentation* notes that *'World Oil Refining (Lunday Thagard Refining'* requested "exclusion of certain compounds from monitoring requirement". That list of those proposed "certain compounds" should be publicly disclosed, along with the *'World Oil Refining (Lunday Thagard Refining'* range of amounts that are likely to be generated per week for those compounds, along with their reasons for the requesting the exclusions. Blanket exclusions should not be granted, as it goes against the very heart of the SCAQMD's mission to protect the Public Health and Safety. However, with proper justification and review, going from a real-time open-path monitoring for some compounds, to a point-measurement might be justifiable.

The SCAQMD *'Working Group #2 Page 9 of 54' Presentation* further notes that *'World Oil Recycling'* further requested a blanket exclusion from all Rule 1180 and Rule 1180.1 requirements. It should be clarified and publicly disclosed whether *'World Oil Recycling'* is a small subset of *'World Oil Refining (Lunday Thagard Refining'*, or whether *'World Oil Recycling'* substantially encompasses the entire *'World Oil Refining (Lunday Thagard Refining'* facility.

We note that someone at the SCAQMD appears to be an advocate of *'World Oil Refining (Lunday Thagard Refining'* because the SCAQMD *'Working Group #1 Page 14 of 36' Presentation* already highlighted the exact language that *'World Oil Refining (Lunday Thagard Refining'* uses to justify their exclusion, prior to their request being disclosed *'Working Group #2 Page 9 of 54'* namely:

"Establishments **primarily** re-refining used lubricating oils are classified in Industry 2992."

The minimum interpretation for 'Classified' or 'Categorized' means that at least some of those operations would fall under the Industry 2992 domain. It also means that other of their operations might fall under the Rule 1180 and 1180.1 domain of being an SIC 2911 operation.

They key word is **primarily**. Citizen believes that it is likely that:

"Establishments (that only do) re-refining used lubricating oils are classified in Industry 2992" would be the proper applicability for an Industry 2992 exemption from the Rule 1180 and 1180.1 domain of being an SIC 2911 operation. Citizen believes that for proper operation of the SCAQMD and the USEPA, different portions of a large co-located facility can each be covered under separate permits. Citizen is aware that at least one Torrance Facility had a special USEPA permit for a single large on-site tank. Certainly, that Torrance Facility was not **primarily** engaged in creating and exporting those in-tank materials.

As a result, Citizen finds that portions of the *'World Oil Refining (Lunday Thagard Refining'* that are engaged in re-refining used lubricating oils as classified in Industry 2992 may be exempt from the requirements associated with Rule 1180 and 1180.1. But other parts of their operation may require that those parts need to be considered as a SIC 2911 operation. Instead of the SCAQMD granting a blanket waiver that agrees to not examine a facility, Citizen requests that a special subsection of consideration be devoted to this and follow-on Rule 1180 and 1180.1 Working-Groups to publicly disclose and discuss what potential Public Health and Safety items would potentially be ignored or waived under the rubric: "*(SCAQMD) Staff is revising the Facility Universe to Exclude World Oil Recycling*".

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