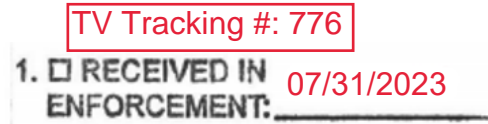


July 31, 2023

Mr. Jeff Gove  
Director of Enforcement  
Bay Area Air Quality Management District  
375 Beale Street, Suite 600  
San Francisco, CA 94105



Re: Tesla, Inc. Fremont Factory Site E0459  
Semi-annual Reports for 40 CFR 63 (MACT) Subpart IIII,  
NSPS Subpart MM, and  
Title V Standard Condition I.F

Dear Mr. Gove:

This report satisfies the semi-annual reporting requirements for Tesla, Inc.(Tesla) Fremont Factory Site E0459 for NSPS Subpart MM 60.395, MACT Subpart IIII 63.3120, and Title V Standard Condition I.F for reporting period January 1, 2023 through June 30, 2023.

For MACT Subpart IIII, the semi-annual MACT report covers the specific general requirements identified in Part 63.3120 which include the following:

- A. Company name and address
- B. Statement by responsible official with official's name, title and signature certifying the truth, accuracy, and completeness of report.
- C. Date of report and beginning and ending dates of the reporting period.
- D. Identification of compliance option specified in § 63.3082(c)
- E. Certification of deviation occurrence during reporting period.

For MACT Subpart IIII, the Site E0459 (Fremont Factory), is subject to compliance option 40 CFR 63.3091(a)<sup>1</sup>. Note that the North Paint Shop (NPS) is subject to the limits under 40 C.F.R. 63.3090(b) only to satisfy Best Available Control Technology for Toxics ("TBACT") requirements, not Subpart IIII.

For NSPS MM, the required VOC standards as specified under 40 CFR 60.392 for EDP prime, Guide coat and Topcoat were met during each month of operation for this reporting period under consideration for the North paint shop and South paint shop (body line).

Unless otherwise noted, the Site E0459 had no instances of exceeding limits, operating limits, or work practices as applicable and as specified under §§63.3090, 63.3091, 63.3092, 63.3093, and 63.3094 (See Attachment 2 for applicability).

Unless otherwise noted, site E0459 had no instances of deviation from NSPS Subpart MM or Title V permit requirements during the reporting period.

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<sup>1</sup> 40 CFR 63.3091: "Limit combined organic HAP ... to no more than 0.072 kg/liter (0.60 lb/gal) of coating solids deposited during each month..".

If you have any questions regarding the enclosed information, please contact Hari Krishna Bharadwaj at [HBharadwaj@tesla.com](mailto:HBharadwaj@tesla.com).

Sincerely,



Rob McCafferty  
Director - Environmental, Health, and Safety

cc: USEPA Region IX

Attachment 1: Signed certification by Responsible Official  
Attachment 2: MACT IIII Applicability  
Attachment 3: List of Deviations under the Title V permit

ATTACHMENT 1: SIGNED CERTIFICATION

**Semi-annual Title V and MACT Compliance Certification pursuant to Standard Condition I.F and 63.3120**

Based upon the information and belief formed after a reasonable inquiry, I, as responsible Official of the Tesla, Inc. facility in Fremont, CA, submit the information contained in the semiannual Title V report and semiannual MACT Subpart IIII [§63.3110(c)(2) & (c)(5)] report as accurate and true to the best of my knowledge.

Rob McCafferty (Director, EHS)

Name of Responsible Official Signature



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Signature

January 1, 2023 through June 30, 2023.  
Compliance Period

Date

Facility # E0459

Tesla, Inc.

45500 Fremont Boulevard

Fremont, CA 94538



45500 Fremont BLVD., Fremont CA 94578  
P 650 681 5100 F 650 681 5101

## ATTACHMENT 2: MACT IIII APPLICABILITY TABLE

Citation	Brief Summary	Tesla Response
40 CFR 63.3090	Emission limits for a new or reconstructed affected source	Not applicable. The Fremont Factory is an existing source.
40 CFR 63.3091	Emission limits for existing affected source	Applicable - In Compliance
40 CFR 63.3092	Control emissions from electrodeposition primer system if I want to comply with the combined primer-surfacer, topcoat, final repair, glass bonding primer, and glass bonding adhesive emission limit	Electrodeposition primer system, as provided by the manufacturer (BASF) - has 0.00 wt% HAP, therefore these requirements are not applicable (Notwithstanding the fact that emissions from the Ecoat ovens are always controlled)
40 CFR 63.3093	Operating Limits	Pursuant to 40 CFR 63.3093(a) - As no emission capture systems and add-on controls are required to comply with the emission limits, no operating limit requirements outlined under 40 CFR 63.3093 are applicable
40 CFR 63.3094	Work practice Standards	Applicable - In Compliance



45500 Fremont BLVD., Fremont CA 94578  
P 650 681 5100 F 650 681 5101

ATTACHMENT 3: LIST OF DEVIATIONS DURING THIS PERIOD (JANUARY 1<sup>ST</sup>, 2023 THRU JUNE 30<sup>TH</sup>, 2023)

Attachment 3 - Deviations List

Time Period January 1, 2023 through June 30, 2023

Source No.	Deviation Summary	Resolution Summary	Date of Discovery	Compliance Status	Shop/Area
S-1007/A-1007	Unforeseen malfunction at the Sealer Oven and TO (S-1007/A-1007) at the South Paint Shop. The Sealer Oven TO (A-1007) lost temperature during production which triggered an emergency shutdown. This malfunction resulted in the temperature of TO to drop below 1400°F. The root cause of the event is a faulty flame detector on the sealer TO which was intermittently reading a flame when no flame was present.	As a corrective action the flame detector was replaced with an available spare. The flame detector was last switched out approximately 2 years ago, the average life span of a flame detector is expected to be 5 years. As a preventative action Tesla will conduct more frequent inspections of the flame detector and conduct change outs as necessary.	1/5/2023	In compliance	SPS
S-4045	S-4045 was not tested for NOx and CO in CY2022 due to issues with equipment and source test scheduling.	Tesla plans to source test S-4045 for CO and NOx early in 2023 based on the availability of source testers and equipment maintenance schedule.	1/6/2023	In compliance (Source Test Completed)	Castings
A-30181	Unforeseen malfunction at the System 2 of the 3 wet-system at the South Paint Shop caused bypass dampers at A-30181 to open momentarily. The shutdown was triggered by a technician who restarted the system instead of resetting a fault at the air flow switch.	Improved training for technicians; Tesla believes emissions related to solvent laden air within the booth at the time of the damper opening to be minimal. Tesla also notes that the South Paint Shop body line are under the permitted emission limits of 36.36 tons/month and 290.87 tons/year inclusive of these events.	1/10/2023	In compliance	SPS
A-30192	Unforeseen malfunction at the E coat oven TO (A-30192) of the 3 wet system at the SPS. This malfunction resulted the temperature of TO to drop below 1400°F. The shutdown was due to troubleshooting events at E-coat oven to improve production and product quality.	To prevent any additional shutdowns due to trouble shooting, the controls team changed the pressure differential set point to allow operation of the system at the minimum pressure differential value without triggering alarm or system shutdown.	1/19/2023	In compliance	SPS
A-30192	Unforeseen malfunction at the E coat oven TO (A-30192) of the 3 wet system at the SPS. This malfunction resulted the temperature of TO to drop below 1400°F. The shutdown was triggered by a mechanical obstruction on the pressure differential signal.	The controls team cleaned out the air supply line, inspected the wiring and removed the filter. The pressure was increased to 7.0 inWC and the system was able to restart afterwards. As a preventative action, the controls team is going to implement additional monitoring by adding different setpoints of pressure differential to the controls system for early detection.	2/6/2023	In compliance	SPS
A-30183	A-30183 exceeds permitted NOx Emissions of 0.1 lb/MMBtu per source test submitted on February 13, 2023	Tesla sourced and replaced the A-30183 TO burner with a new burner and conducted a source re-test. An application has been submitted in December 2022 to permit a back-up TO which would then enable A-30183 to be taken down for maintenance	2/13/2023	Pending changeover to back-up TO (Source retest with new burner showed in compliance for NO <sub>x</sub> and not in compliance for CO)	SPS
S-4045/S-4046	Tesla conducted Air District approved source testing for metals & PM on Furnace 1/Abatement Filter (S-4045/A-30193) and NOx & CO on Furnace 2 (S-4046) during December 2022. Non compliance with the permitted metal limits for As (Hourly) and As, Be, Cd, Mg and Se were observed (Annual) in addition to NOx daily limit exceedance for S-4046	Tesla will be conducting a follow up source test for metals from Furnace-1 (S-4045) in March 2023 using another source testing vendor (Montrose) to validate these results, evaluate if updates to permitted limits for metals are required and evaluate further fixes to the filter house in the interim. Tesla is also in the process of finalizing a vendor to replace these filter houses with baghouses	2/17/2023	Pending Source Test Review	Castings
A-30183 / S-4039	Unforeseen malfunction at the Prime and Clear Coat Oven TO (A-30183) of the 3 wet oven (S-4039) at the South Paint Shop. External contractors were working on installing a new device for automated pressure drop monitoring across the filters at the 3 wet oven. The air flow switch and the filter pressure drop monitor uses the same airline, therefore during the installation - the system faulted and shutdown the oven/TO system. The contractors were not aware of the configuration of the system and that it could result in a shutdown	As an immediate corrective action, the team inspected the air flow switch and restarted the 3 wet oven and incinerator. As a preventative action, all future installations will be scheduled only during periods of downtime and not during production.	4/2/2023	In compliance	SPS
S-4037	Unforeseen malfunction at the basecoat booth (S-4037) at the South Paint Shop. Tesla had external contractors installing devices for automated pressure drop monitoring across the various filters at SPS Body Line, around the vicinity of ASH (Air Supply House) #3. The ventilation at ASH #3 was found off, which is the only way to shut the system off. A probable cause is that an external contractor may have turned off the recirculating fan for the basecoat booth by mistake thereby forcing a complete system restart by the maintenance/controls team	The bypass damper of the basecoat booth opened as part of the restart process. As a preventative action, all future installations will be scheduled only during periods of downtime and not during production.	4/2/2023	In compliance	SPS
S-4037	Unforeseen malfunction at the Basecoat Booth (S-4037) of the 3 wet process at the South Paint Shop. The shutdown was triggered by a VFD fault which caused a loss of the production release to the 3 wet system. The cause of this fault was due to an internal issue with the PLC rack	Maintenance is not a factor due to the nature of the equipment (no moving parts/motors). Replacing the entire PLC rack would prevent similar fault events from occurring due to this PLC rack - which was completed during the weekend shutdown. Tesla would like to reiterate that the breakdown was not a result of negligence or improper operation of the equipment from Tesla team.	4/6/2023	In compliance	SPS
S-4038	Unforeseen malfunction at the CC Booth (S-4038) of the 3 wet booth system. Overload fault on a (VFD) associated with the CC ASH (#4). This shut off the supply fan which automatically shuts off two additional exhaust motors for safety reasons. The entire system was restarted which caused the bypass damper on the Clearcoat booth to open for less than one minute. TO temperature was not affected during this event.	Tesla has incorporated the following immediate and preventative corrective action: Contracted with ACE electrical who performed a site inspection and worked on the supply fan which included tensioning the fan belts, switching out the motor, and aligning the sheaves; Tesla's internal SPS team deactivated the "Zone Start" function from the logic, which will prevent future zone restart sequences from the control panel; and Implemented training for Technicians to run specific restart sequences in responses to similar faults, instead of zone restarts.	4/18/2023	In compliance	SPS
S-4045	Source testing on Furnace 1 (NO <sub>x</sub> Exceedance)	Tesla had a third-party vendor install and test an oxy-fuel burner at Furnace 1 (S-4045), as authorized under the temporary permit (App #31592). Tesla is also in discussions with Striko and additional third-party vendors to evaluate the burners and potentially trial a different burner at Furnace-1/or install a wet scrubber system at Furnace-1.	4/21/2023	Interim Compliance	Castings (Source Test)

**Attachment 3 - Deviations List**

**Time Period** January 1, 2023 through June 30, 2023

Source No.	Deviation Summary	Resolution Summary	Date of Discovery	Compliance Status	Shop/Area
A-3008	The RTO bed temperature sensor lost signal which caused the RTO to shut down. As a result, the Ecoat oven (S-4006/S-32006), Clearcoat oven (S-4010/S-32010), and Prime oven (S-3009) along with booths lost production release and the bypass dampers opened for each oven along with the desorb damper	During the following weekend's shutdown, the faulty I/O card was replaced with a new card to prevent potential future faults that may occur due to this I/O card. A photo of the I/O card that was replaced was included in the response to BAAQMD's follow-up data request sent via e-mail on May 4th, 2023. In this instance, a PM check will be instituted for inspecting the housing of the mid bed thermocouple on a semi-annual basis to check for condensation.	4/25/2023	In compliance	NPS
S-3009,S-3008					
S-4006					
S-4010, S-3014, S-3015 and S-3016					
S-1002 / A-30192	Thermal event and smoke was observed from the roof of the Ecoat oven at the South Paint Shop. Tesla's internal fire safety team instructed the team to shutdown the TO for inspection. A probable root cause was investigated due to a new installation on the E-coat oven (additional fans were installed to provide recirculated heat to a section of the e-coat oven along with installation of cladding)).	Since the event, Durr (external vendor for the new installation project) and Tesla have actively evaluated the event and determined that there were no changes to oven and thermal oxidizer setpoints i.e. no process changes made to the temperatures or air flow in/out of oven system. Additional corrective action taken following the event were to replace or repair insulation and cladding where thermal event occurred, surrounding areas of "bulb turn" on the ceiling and around the newly installed ducts. The fans have not been turned on post this event.	5/3/2023	In compliance	SPS
S-4006	The E-coat oven lost production release. Extensive troubleshooting determined the suspected root cause was a faulty communication port that led to loss of control voltage feedback signals and subsequent loss of production release	The Controls team reengaged communications as an immediate corrective action. Due to the nature of the root cause, it would not be possible to implement future preventative maintenance. However, the likelihood of a similar event occurring is exceptionally low. Tesla would like to reiterate that this deviation was not caused by faulty or improper operation of the booths, ovens, or abatement devices.	5/3/2023	In compliance	NPS
A-3008	The RTO bed temperature sensor lost signal which caused the RTO to shut down. As a result, the Ecoat oven (S-4006/S-32006), Clearcoat oven (S-4010/S-32010), and Prime oven (S-3009), along with booths lost production release and the bypass dampers opened for each oven along with the desorb damper	This correlates to the deviation on 4/25/2023, but replacing the I/O card did not fix the issue. The team moved onto inspect the WA511 temperature sensor. The temperature sensor housing was removed to inspect the wiring and condensation was observed which had damaged the wiring. The wiring was fixed and the issue resolved. In this instance, a PM check will be instituted for inspecting the housing of the mid bed thermocouple on a semi-annual basis to check for condensation.	5/8/2023	In compliance	NPS
S-3009,S-3008					
S-4006					
S-4010, S-3014, S-3015 and S-3016					
S-1002 / A-30192	Ecoat TO went into emergency shutdown due to an overcurrent fault on the combustion fan VFD. The overcurrent shorted housing to the blower's motor.	Performed immediate troubleshooting protocol, including: reset and restart of the TO that resulted in an immediate fault, placed the unit in disconnect and locked out, removed the peckerhead cover to find a burnt terminal connection, megged the motor (good), tested continuity (passed), tested short to ground (passed). Immediate corrective actions: the burnt part of wiring was cut off and wiring was stripped back. Motor and power leads were reconnected using an insulation lug. Connections were taped. Reset and restarted the TO. TO went through purge reignited with no issues. Preventative corrective action: a new motor was staged near the TO for rapid lineside repair if needed in the future.	6/3/2023	In compliance	SPS
S-4036	Prime Booth - Actuator had a loose linkage going to a valve that controls volume of gas going into the burner. Insufficient gas volume was going into the burner.	Tesla implemented immediate corrective action by tightening the nuts on the linkage. SPS has not previously encountered loose linkage resulting in a burner fault, and will implement inspections of nuts/linkages into preventative maintenance moving forward.	6/4/2023	In compliance	SPS
S-4045/A-30193	Retest was conducted on Furnace-1 (S-4045/A-30193) in March 2023 using another source testing contractor (Montrose Air Quality Services, LLC) and results submitted to the source test Division on June 14, 2023. Source test results show marked improvement to the metal emission limits outlined under Part 4 and Part 5 of the permit condition 27327; however, the exceedance in the PM limit was observed for Furnace-1	The exceedance to the PM limit when the metal limits were in compliance is surprising and does seem to be an unexplained outlier, as prior source testing values were below the permitted PM limit of 0.040 lb PM10/ton Al (December 2022 testing; a value of 0.0120 lb PM10/ton Al was observed). A further round of source testing for PM (at both inlet and outlet of the filter-house) will be scheduled in the upcoming quarter for Furnace-1 to evaluate the root-cause of the PM exceedance along with further filter house checks. Tesla has also received quotes from vendors to replace these filter houses with baghouses and is waiting on one more quote to proceed with finalizing the vendor	6/14/2023	Pending Source Test Review	Castings
S-4036	ASH-1 (Air supply house for prime booth) experienced a fault, which necessitated a reset of the system and the bypass damper for the prime booth opening.	Immediate inspection found the motor for the prime booth exhaust fan (BEF 101) was down and the associated breaker had been tripped. Typically, a ground VFD fault indicated damage to the motor which would require a replacement. However, a physical inspection of BEF 101 found no mechanical or electrical issues. During the following weekend's shutdown, an insulation test was performed on both the motor and connected cable, which both passed.	6/25/2023	In compliance	SPS

**Notes**

1. No active production during any malfunction events associated with the paint shops which have been reported above (residual offgassing only)