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

July 31, 2021

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

TV Tracking #: 288

1. ☐ RECEIVED IN ENFORCEMENT: 07/31/2021

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, 2021 through June 30, 2021.

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)[1]. 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.

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.

[1] 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..".

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If you have any questions regarding the enclosed information, please contact Hari Krishna Bharadwaj at 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

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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

_____

Signature

January 1, 2021 through June 30, 2021.
Compliance Period

7/31/2021

Date

Facility # E0459

Tesla, Inc.

45500 Fremont Boulevard

Fremont, CA 94538

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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

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ATTACHMENT 3: LIST OF DEVIATIONS DURING THIS PERIOD (JANUARY 1ST, 2021 THRU JUNE 30TH, 2021)

Attachment 3 - Deviations List

Time Period January 1, 2021 through June 30, 2021

Source No	Deviation Summary	Resolution Summary	Date of Discovery	Compliance Status	Shop/Area
S-4006 (S-32006) S-3009 S-4010 (S-32010) S-3008 S-3014 S-3016 S-3015 S-1002/A-30192	On January 13, 2021, there was an unforeseen breakdown/malfunction at the North Paint Shop (NPS) Ovens and South Paint Shop Body Line Ecoat Oven TO due to a voltage sag in PG&E power supply line feeding Fremont Factory.	Tesla would like to state that this deviation was not caused by faulty or improper operation of the oven (s) or TO, rather it was due to external events (PG&E voltage sag) which were beyond the control and purview of Tesla.	1/13/2021	In Compliance	NPS/SPS Body
A-30180 A-30181 A-30182 A-30183	Source test results submitted on Feburary 1, 2021 showed CO emission factors higher than values listed under Tesla's Permit Condition 27161, Part 10 (Application #30204)	Tesla submitted a permit update request to amend the CO emission factors to reflect source test values. Note that CO emissions using the updated EFs are lower than the emissions presented in the public notification for Application #30204.	2/1/2021	In Compliance	SPS Body
S-4046	Source test results from February 3, 2021 showed daily emissions of NOx above permit limit.	Tesla is working with BAAQMD to revise NOx emission limits for S-4046 (Limit originally proposed as BACT avoidance)	2/3/2021	Under Discussion	Castings
S-4038/A-30182	On February 5, 2021, there was an unforeseen malfunction at the Clearcoat Wheel/Thermal Oxidizer (TO) system ((Zone 3)) of the 3 wet-system at the South Paint Shop. The clearcoat zone TO (A-30182) lost temperature during production which triggered an emergency shutdown. This occurred due to a fault on an air flow switch resulting in a production stoppage. During the emergency shutdown noted above, the VOCs were recirculated back to the booth instead of being routed to the clearcoat zone abatement system as designed by closing the damper to the abatement systems and routing all air back to the booth. Further, the emergency safety vents did not open. Consequently, unabated VOCs in booth were not released to the atmosphere.	The maintenance team was dispatched immediately upon occurrence of this event, they validated that the dampers were functioning correctly. Upon identifying this as an issue with the air flow switch, the maintenance techs performed the necessary adjustments and restarted the system.	2/5/2021	In Compliance	SPS Body
S-4036/A-30188 S-4037/A-30189 S-4038/A-30190 S-4039/A-30183 A-30170 & associated booths/ovens S-3008 S-3014 S-3016 S-3009 S-32006 S-4010 & associated wheel/RTO (A-3008)	Delay in Source Testing Report Submission: Tesla requested an extension on February 10th 2021 for submitting the test report for capture efficiency testing (as allowed by the discretion of the APCO under Condition 26027, Part A.1 (d)(viii), Condition 27161, Part 42, - Condition 10320, Part 23 for NPS, SPS Body Line and Plastics Paint Line respectively), as soon as Montrose communicated that it would be unable to complete processing of the test report for submission to the Air District by the February 12th, 2021 due date. The request for extension was denied.	The delay in submitting these source test results were caused by a multitude of factors, which were beyond Tesla's control as outlined in the Title V deviation report. This testing program and data processing were not routine. The testing program was complex and since this is the only auto assembly plant in the area, it took Montrose longer to process the data – which was repeatedly stated by Mr. Kevin Crosby (VP, Montrose) in communications with the District. In addition, Montrose required report-writing assistance from other Montrose offices across the US due to their workload, but since testing in many markets had been postponed earlier in 2020 in response to the pandemic, all of the teams across the country were in the same situation and could not provide necessary assistance. A comprehensive 465-page test report for all three shops was submitted to the Air District Source Testing Division.	2/12/2021	In Compliance	Paint Shops
S-1002/A-30192	On March 5th and 6th, 2021, there were unforeseen controls related malfunctions at the South Paint Shop (SPS) E-coat oven Thermal Oxidizer (A-30192)- Breakdown ID# 07Y56). These malfunctions resulted in the temperature of E-coat oven TO (A-30192) to drop below the permitted temperature of 1400 °F.	During analysis of this event, it was identified that the actuator for this damper might not have closed the damper completely; which might have led to the alarm and consequent shutdown of the TO. The bearing of the actuator was lubricated to prevent future reoccurrences and a monthly preventative maintenance check was implemented as a precautionary measure.	3/6/2021	In Compliance	SPS Body
S-4045	On March 22, 2021 source test results for S-4045 showed that the particulate matter (PM) emission factor (lb/ton aluminum charged) was above the permitted limit.	The furnace was shut down after completion of the engineering test and bringing it to a safe idle state on February 12, 2021. As discussed with, and approved by BAAQMD, the furnace was restarted on March 22, 2021 after removing the protective metallic plates.	3/22/2021	In Compliance	Castings

Attachment 3 - Deviations List

Time Period January 1, 2021 through June 30, 2021

Source No	Deviation Summary	Resolution Summary	Date of Discovery	Compliance Status	Shop/Area
S-4036/A-30180	Technical Deviation - On March 24, 2021, there was an unforeseen malfunction at the Prime Wheel/Thermal Oxidizer (TO) system (Zone 1) of the 3-wet system at the South Paint Shop. The Prime zone TO (A-30180) lost temperature during production which triggered an emergency shutdown. This occurred due to a fault on prime concentrator wheel (A-30188) resulting in a production stoppage.	The maintenance team identified that this event affecting the Prime System (System 1) was due to a concentrator wheel rotor moving fault on the Prime System; i.e. the sensor was probably unable to track that the rotor was moving due to a minor build-up on the sensor. The sensor was cleaned, and the system was restarted. As a preventative measure, a monthly cleaning/periodic checkup of these sensors will be added to the monthly PM (preventative maintenance) schedule.	3/24/2021	In Compliance	SPS Body
S-4037/A-30181	Technical Deviation - On March 26th and March 27th, 2021, there were unforeseen malfunctions at the Basecoat Wheel/Thermal Oxidizer (TO) system ((Zone 2)) of the 3 wet-system at the South Paint Shop. The Basecoat zone TO (A-30181) lost temperature during production which triggered an emergency shutdown. This occurred due to a fault on basecoat concentrator wheel (A-30189) resulting in a production stoppage	The maintenance team identified that this event was due to a concentrator wheel rotor cleaning fault on the Basecoat System, i.e. the sensor was unable to track that the rotor was moving. The sensor was cleaned, and the system was restarted. After some time the fault reoccurred. A new proximity switch/sensor was wired up replacing the older sensor and production was restarted as this appeared to resolve the issue. The last drop in temperature was determined to be related to a loose contact on the amplifier wire to the contactor/sensor, which was quickly resolved.	3/27/2021	In Compliance	SPS Body
S-4037/A-30181	Technical Deviation - On April 5, 2021, there was an unforeseen malfunction at the Basecoat Wheel/Thermal Oxidizer (TO) system (Zone 2) of the 3-wet system at the South Paint Shop. The Basecoat zone TO (A-30181) lost temperature during production which triggered an emergency shutdown. This occurred due to a fault on basecoat concentrator wheel (A-30189) resulting in a production stoppage.	The maintenance team identified that this event affecting the Basecoat System (System 2) was due to a concentrator wheel rotor moving fault on the Basecoat System; i.e. the sensor was probably unable to track that the rotor was moving. Maintenance/Controls identified that ISBU (Intrinsically Safe Barrier Unit – a safety device which is used on a sensor to limit the amount of electric current) on the sensor was the issue. The ISBU was quickly replaced and the system restarted.	4/5/2021	In Compliance	SPS Body
S-4036/A-30180	Technical Deviation - On May 4, 2021, there was an unforeseen malfunction at the Prime Wheel/Thermal Oxidizer (TO) system (Zone 1) of the 3-wet system at the South Paint Shop. The Prime zone TO (A-30180) lost temperature during production which triggered an emergency shutdown.	The maintenance team identified that this event affecting the Prime System (System 1) was probably due to some condensation buildup on the desorb exhaust air flow switch. The condensation was drained/cleaned, and the system was restarted.	5/4/2021	In Compliance	SPS Body
S-4045 S-4046	Analysis of hourly throughput data (performed on May 7, 2021) identified that there were instances of the metal charging throughput exceeding the above limit on February 24, 2021 for S-4046. These instances were from 14:00 to 23:00 on February 24, 2021 and the throughput varied between 7,131 lb/hr to 7,367 lb/hr.	Tesla will submit a separate permit amendment for the Castings furnaces ATC to incorporate revision to the maximum hourly throughput rate (4.40 tons/hr). This amendment application will be submitted to the District expediently upon issuance of existing permit amendment of Condition 27327.	5/7/2021	In Compliance	Castings
S-4039/A-30183	Technical Deviation - On May 8, 2021, there was an unforeseen malfunction at the Prime and Clearcoat Oven Thermal Oxidizer (TO) of the 3 wet-system at the South Paint Shop. The Prime and Clearcoat Oven TO (A-30183) lost temperature during production which triggered an emergency shutdown. This malfunction resulted in the temperature of the TO (A-30183) to drop below the permitted temperature of 1400 °F.	Upon investigation with the controls and maintenance team, it was identified that the actual root cause of this issue was a damper associated with the oven. The damper was inspected during the weekend shutdown and the actuator assembly and linkage was lubricated; along with bracing the actuator mount to prevent movement.	5/8/2021	In Compliance (Breakdown relief granted)	SPS Body
A-30180 A-30181 A-30182	Technical Deviation - On June 9 and 10th 2021, there were unforeseen malfunctions at the Prime Wheel/Thermal Oxidizer (TO) system (Zone 1), BC Wheel/TO system (Zone 2) and CC Wheel/TO system (Zone 3) of the 3 wet-system at the South Paint Shop. The malfunctions included power loss, a bad spark plug, and overheated circuit breaker.	The abatement system controls were subsequently checked by the team (faulty circuit breaker and spark plugs were determined to be the root cause). Preventative/Corrective measures taken to prevent future occurrences included replacement of the transformer at System 2 and adding checks for the ignition rods/spark plugs in the PM checklist.	6/10/2021	In Compliance	SPS Body
A-30180 A-30181 A-30182	Technical Deviation - On June 16th, 2021 - Abatement systems 1-3 lost temperature which triggered an emergency shutdown. Root cause was identified to be circuit breaker temperature exceeding rating causing PLC to dropout.	The circuit breaker exceeded temperature rating due to high outside temperature combined with incinerator heat inside ash unit. To prevent a reoccurrence, electrical component cooling solutions are being considered.	6/16/2021	In Compliance	SPS Body

Note: With all "Technical deviations"; the bypass valves after the wet scrubber (which exhaust to the atmosphere) did not open and instead, the damper to abatement system was closed and all air after the filter house was recirculated back into the 3-wet booth. In essence, there was no bypass to the atmosphere that was open to the atmosphere during these events (no unabated emissions).