

BEFORE THE HEARING BOARD
OF THE
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
STATE OF CALIFORNIA

APPLICATION FOR VARIANCE

FILED

FEB 22 2023

HEARING BOARD
BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

In the Matter of the Application of)

Western Digital Technologies)

(Applicant: Insert business or organization
name above))

For a Variance from Regulation(s):)

Plant #15565 ATC #30355 Condition #23227 Part 11)

(Applicant: Insert Regulations in form:
Regulation²____, Rule¹____, Section⁴⁰³____))

DOCKET NO. **3740**

(Assigned by Clerk)

TYPE OF VARIANCE REQUESTED (see Page 3 for further information)

☒ SHORT ☒ INTERIM ☐ REGULAR ☐ GROUP ☐ PRODUCT

VARIANCE PERIOD REQUESTED (see Page 10, No. 20):

From: 2/28/2023 To: To be scheduled once variance is granted

TOTAL NUMBER OF (CALENDAR) DAYS IN VARIANCE PERIOD: TBD, less than 90 days

(Note: Variance relief will not be granted for any period preceding the date of filing of the Application for Variance.)

[ALL DOCUMENTS FILED WITH THE CLERK'S OFFICE BECOME PUBLIC RECORD]

SUMMARY PAGE

NAME OF APPLICANT: Western Digital Technologies

FACILITY ADDRESS: 44100 Osgood Road

City, State, Zip: Fremont, CA 94539

PLANT # or G #: 15565

SOURCE

#(S): A-9 (abating S-28)

CONTACT: Name, title, company (if different than Applicant), address, and phone number of persons authorized to receive notices regarding this Applicant (no more than two authorized persons).

Western Digital Technologies

Richard Follen, EH&S Senior Manager

44200 Osgood Rd, Building 2

Fremont, CA

Zip 94539

☎ 1-510-683-7874

Ext.

Fax ()

E-mail richard.follen@wdc.com

California Bar #

☎ ()

Ext.

Fax ()

E-mail

California Bar #

BRIEFLY SUMMARIZE EQUIPMENT/ACTIVITY SUBJECT TO THIS VARIANCE REQUEST:

A-9 Thermal Oxidizer (abating S-28 Semiconductor Fab Area), Munters IZS-3546-TH 39,200 SCFM, 4.5 MMBtu/hr maximum capacity,

LIST DISTRICT REGULATIONS, RULES AND PERMIT CONDITIONS SUBJECT TO THIS VARIANCE REQUEST:

Plant #15565 ATC #30355 Condition #23227 Part 11	
BAAQMD Regulation 2-1-403	

SUMMARY OF TOTAL EXCESS EMISSIONS:

Pollutants	Net Emissions After Mitigation (lbs/day or Opacity %)
None expected during variance period.	

TYPE OF VARIANCE REQUESTED:

NOTE: The date of filing of the Application for Variance is the earliest allowed starting date for a variance. State law [California Health and Safety Code (H&SC)] imposes requirements on the amount of time to be allowed for notification of the public and air quality regulatory agencies before a hearing on a variance request can be held by the Hearing Board. Review the following descriptions of the types of variances, and select that which is most appropriate for your situation:

SHORT: If compliance with the District Rule(s) can be achieved in **90 (calendar) days or less**, request a short-term variance. *[10-day notice required to Bay Area Air Quality Management District's Air Pollution Control Officer (APCO), Applicant, California State Air Resources Board (ARB), Federal Environmental Protection Agency (EPA).]*

INTERIM: If Applicant requires immediate relief for the period between the date of filing of variance application and the date of the decision on the matter by the Hearing Board, request an interim variance. An interim variance is recommended if significant excess emissions will occur between the date of filing and the date of the fully noticed hearing by the Hearing Board. If an interim variance is required, a hearing will be scheduled as soon as possible. The period of an interim variance shall not exceed 90 days. If an interim variance is requested, Applicant must also request a short or a regular variance on the same application.

REGULAR (OR LONG-TERM): If compliance with District Rule(s) will take **more than 90 (calendar) days**, request a regular variance. *(30-day published notice required. 30 days notice to APCO, Applicant, ARB.)*

GROUP: If non-compliance with District Rule(s) by each individual Applicant comprising a group is based on issues of law and fact common to each Applicant, request a group variance. *(Noticing requirements as for Short or Regular variances depending on period of the Group variance.)*

PRODUCT: Any person who manufactures a product may petition the Hearing Board for a product variance from a District Rule or Regulation. A product variance shall be granted only when a variance is necessary for the sale, supply, distribution, or use of the product. *(Noticing requirements as for Short or Regular variances depending on period of the product variance.)*

BAAQMD Regulation 1-402: **"Status of Violation Notices During Variance Proceedings:** Where a person has applied for a variance, no notices shall be issued during the period between the date of filing for the variance application and the date of decision by the Hearing Board for violations covered by the variance application. However, during the period between the date of the filing for a variance and the date of decision by the Hearing Board, evidence of additional violations shall be collected and duly recorded. Where the variance is denied, evidence of violations collected between the filing date and decision date shall be reviewed and a notice of violation issued for violations occurring during that period shall be served upon said person. Where the variance is granted, no notice of violation shall be issued for violations occurring during that period except in extraordinary circumstances as determined by the APCO."

NOTE: The Environmental Protection Agency (EPA), a federal agency, does not recognize California's variance process, which is established by state law. The EPA considers facilities operating under a variance to be operating in violation of District regulations. Facilities that are in violation and then obtain a variance are advised that the EPA can independently pursue legal action based on federal law against the facility for continuing to be in violation.

1. Briefly describe the type of business and processes at your facility (Attach a map showing location)

Western Digital's Fremont location (Plant #15565) is a semiconductor wafer fabrication facility.

See Small Business Considerations on Page 12, No. 21 before answering the following question:

Is Applicant a "Small Business" as defined by Health & Safety Code Section 42352.5(b)(1)?

Yes ☐ No ☒

Is Applicant a "Major Source" as defined by the applicable provisions of the Federal Clean Air Act, 42 U.S.C. Sec. 7661(2)?

Yes ☐ No ☒

Is Applicant a "public agency" as defined in Health & Safety Code Section 42352(b)?

Yes ☐ No ☒

2. Describe the equipment/activity for which a Variance is being sought (type of equipment/activity, source numbers, purpose, why is it essential to your business). Attach a copy of the BAAQMD Permit to Operate or Authority to construct for the subject equipment and/or facility so long as such Permit is less than 50 pages. If the Permit is greater than 50 pages, all portions relevant to the Application shall be provided.

A variance is being sought for Western Digital's A-9 primary thermal oxidizer (Munters IZS-3546-TH 39,200 SCFM, 4.5 MMBtu/hr maximum capacity), which abates semiconductor fabrication activities at the facility at S-28 (Semiconductor Fab Area). S-28 is essential to Western Digital's business as this is where the semiconductor fabrication operations are conducted. Pursuant to Plant #15565 ATC #30355 Condition #23227 Part 7, S-28 cannot be operated unless it is abated by A-9 (primary RTO) or A-6 (backup RTO), and thus A-9 is also essential to Western Digital's business.

Is there a regular maintenance and/or inspection schedule for this equipment?

☒ No ☐

Yes If Yes, how often?

What was the date of the last maintenance and/or inspection? 12/6/2022

Are maintenance records available? Yes ☒ No ☐

Was there any indication of problems? Yes ☐ No ☒

APPLICANT'S PETITION FOR REQUIRED FINDINGS

California Health and Safety Code (H&S Code) 42352 requires the Hearing Board to make six findings for a variance to be granted. In this Section, Applicant must provide sufficient information to enable the Hearing Board to make a decision on each of the six findings:

Finding # 1: That the Applicant for a variance is, or will be, in violation of Health and Safety Code Section 41701 or of any rule, regulation or order of the District.

3. List all District Regulations, Rules, and/or Permit Conditions from which Applicant is seeking variance relief. Briefly explain how Applicant is or will be in violation of each rule or condition. If Applicant is requesting relief from Regulation 6, and the excess opacity during the variance period will reach or exceed 40% (Ringelmann 2), Applicant should also request relief from California Health and Safety Code Section 41701.

Regulation, Rules, Permit Conditions	Explanation
Plant #15565 ATC #30355 Condition #23227 Part 11	Western Digital is proposing an A-9 stack test while operating below the temperature limits in ATC #30355 Condition #23227 Part 11

4. Has the District issued any Notice(s) of Violation (NOVs) to the Applicant concerning the subject of this variance request? Yes ☐ No ☒ If "Yes", please attach copies of the NOVs.
5. Has the equipment in question or any other equipment at this facility been under variance protection during the last year? Yes ☐ No ☒

Docket #	Variance Period	Nature of Emission	Regulation/Rule/Section

6. List all NOV(s) issued to equipment at the entire facility during the previous 12 months:

Date of Notice	NOV #	Nature of Emission	Regulation/Rule/Section
1/26/2023	A61762	N/A	2-1-307 (late submission of source test report)

Finding # 2: That, due to conditions beyond the reasonable control of the Applicant, requiring compliance would result in either (A) an arbitrary or unreasonable taking of property, or (B) the practical closing and elimination of a lawful business.

7. Describe, in detail, the event leading to the need for a variance:

To date, Western Digital has been unable to demonstrate compliance with A-9's permitted NOx limit from ATC #30355 Condition #23227 Part 9. An initial stack test was conducted in September (test report #22267) and a follow-up test was conducted in December (test report #22385). As a result, Western Digital is working with BAAQMD to evaluate alternative compliance options or agree to new NOx limits. At the suggestion of BAAQMD, the first compliance option Western Digital would like to pursue is to conduct a NOx and VOC stack test on A-9 to evaluate:

- 1) Whether A-9 can be operated at temperatures lower than 1350F while still complying with VOC limits in ATC #30355 Condition #23227 Part 8, and
- 2) Whether operating A-9 at lower temperatures will reduce thermal NOx emissions and allow A-9 to operate in compliance with the ATC #30355 Condition #23227 Part 9 NOx limit.

Western Digital is requesting this variance to obtain BAAQMD's approval to prepare for and conduct this A-9 stack test and temporarily operate A-9 below the the temperature limit of 1350 degrees F in ATC #30355 Condition #23227 Part 11.

8. Has the Applicant received any complaints from the public regarding the operation of the subject equipment or activity within the last year? Yes ☐ No ☒

Date of Complaint	Number of Complaints	Nature of Complaint

9. Explain why it is beyond Applicant's reasonable control to comply with the Regulation(s) and/or Permit Condition(s):

Western Digital is requesting this variance to prepare for and conduct a stack test while operating below the A-9 temperature limit of 1350 degrees F in ATC #30355 Condition #23227 Part 11. This stack test is being proposed to evaluate:

- 1) Whether A-9 can be operated at temperatures lower than 1350F while still complying with VOC limits in ATC #30355 Condition #23227 Part 8, and
- 2) Whether operating A-9 at lower temperatures will reduce thermal NOx emissions and allow A-9 to operate in compliance with the ATC #30355 Condition #23227 Part 9 NOx limit.

It is currently beyond Western Digital's control to comply with the A-9 NOx emissions limits in ATC #30355 Condition #23227 Part 9 because A-9 already employs our vendor's best available burners for reducing NOx emissions.

10. When and how did Applicant first become aware that it was not in compliance with the Rule(s) and/or permit condition(s)?

Western Digital first became aware that a NOx and VOC A-9 stack test should be conducted (at temperatures lower than 1350 F) when BAAQMD suggested this approach to Western Digital via email on January 24th, 2023.

11. What actions has Applicant taken since that time to achieve compliance with the Regulation(s) or permit condition(s)?

Since becoming aware that a NOx and VOC A-9 stack test should be conducted (at temperatures lower than 1350 F) to evaluate NOx compliance options, Western Digital had a conference call with BAAQMD on February 8th to discuss the potential stack test and other alternative compliance options or NOx limits.

Since becoming aware that A-9 does not meet the NOx emissions limits, Western Digital has reached out to their scrubber vendor (Munters) to evaluate retrofit options, has been in consistent communication with BAAQMD to identify alternative compliance options and understand the basis for the NOx limit in ATC #30355 Condition #23227 Part 9, and has engaged an air quality consultant to provide expert support in this matter.

12. What would be the harm to Applicant's business if the variance were not granted?

Economic losses: \$ 0

Number of Employees laid off (if any): 0

Provide detailed information regarding economic losses, if any, (anticipated business closure, breach of contracts, hardship on customers, layoffs and/or similar impacts).

N/A

Briefly explain the basis for these facility emission values:

Plant #15565 permit to operate organic lbs/day annual average emissions estimate (46 lbs/day) extrapolated out to a full year.

Finding # 4: That the Applicant for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance.

17. Explain why the Applicant cannot curtail or terminate operations in lieu of obtaining a variance:

N/A - curtailing operations is not an applicable alternative in lieu of this variance. If this variance is not granted, Western Digital simply would not conduct the proposed source test.

Finding # 5: During the period that the variance is in effect, the Applicant will reduce excess emissions to the maximum extent feasible.

18. Explain how Applicant plans to reduce (mitigate) excess emissions during the variance period to the maximum extent feasible, or why reductions are not feasible (mitigation may include reductions at other sources):

No excess emissions are expected during the variance period.

Finding # 6: During the period the variance is in effect, the Applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the District, and report these emissions levels to the District pursuant to a schedule established by the District.

19. Has the District requested that the Applicant monitor or otherwise quantify emissions during the variance period? Yes ☒ No ☐

If Yes, please describe how Applicant will do so:

During the variance period, a stack test will be performed on A-9 and thus emissions will be monitored continuously.

APPLICANT'S PLAN FOR ACHIEVING COMPLIANCE:

20. How does the Applicant intend to achieve compliance with the Rule(s) and/or permit condition(s)? Include a detailed description of any equipment to be installed and/or modifications or process changes to be made, a list of the dates by which the actions will be completed, and an estimate of total costs:

Detailed Description:

Once the A-9 VOC and NOx stack test (at temperatures lower than 1350 F) is completed, depending on the results of the stack test (i.e. once Western Digital confirms whether 1) A-9 can operate in compliance with its NOx emission limit at temperatures less than 1350 F, and 2) that A-9 can operate at lower temperatures while still maintaining compliance with all VOC emissions limits and destruction efficiency requirements) Western Digital will either bring the RTO back up to temperature immediately to return to compliance or will work with BAAQMD to modify the conditions of ATC #30355 to allow A-9 to operate in compliance with all requirements.

Schedule Of Increments Of Progress:

Increment Description	Completion Date
A-9 VOC and NOx stack test preparation (burner maintenance to begin operating at lower temperatures)	2/28/2023
A-9 VOC and NOx stack test	To be scheduled once variance is granted

Applicant may propose operating conditions for the variance period which may be considered by the Hearing Board in its evaluation of the variance application.

PROPOSED OPERATING CONDITIONS:

During preparation for and execution of the A-9 VOC and NOx stack test, Western Digital is proposing to temporarily operate A-9 at temperatures below the limit of 1350 degrees F in ATC #30355 Condition #23227 Part 11.

Variance Period Requested: From: 2/28/2023 To: To be scheduled once variance is granted

Total Number of (Calendar) Days in Variance Period: TBD, less than 90 days

(Note: Variance relief will not be granted for any period preceding the date of filing of the Application for Variance.)

Date of Application: 2/22/2023

Completed By: Richard Follen Title: EH&S Senior Manager
(Print Name)

The following verification must be signed by the owner, manager, director or other responsible party of the plant, business, factory, or agency requesting the Variance.

VERIFICATION

I, the undersigned, hereby declare under the penalty of perjury, under the laws of the State of California, that I have read the foregoing document, including attachments and the items therein set forth, and that I know its contents, are true.

Dated at 11 AM, on 2/22/2023

Signature 

Print Name RICHARD FOLLEN

Title SR. EHS MGR.

SMALL BUSINESS MATTERS

Small Business Assistance: Assistance in completing the Application for Variance and in developing a compliance schedule is available to small businesses. Contact the office of the Hearing Board Clerk at (415) 749-5073 for assistance.

Small Business Considerations in the Granting of Variances by the Hearing Board: California Health & Safety Code Section 42352.5 directs the Hearing Board to consider additional factors when making the required Findings for the granting of a variance to a small business.

21. Definition of Small Business for purposes of special considerations:

Is Applicant a manufacturing or wholesaling business with fewer than 100 employees?

Yes ☐ No ☐ Number of Employees: _____

OR

Is Applicant a retailing or service business with annual sales under \$5 million?

Yes ☐ No ☐ Annual Sales: \$_____

AND

Does Applicant emit 10 tons or less per year of air contaminants? Yes ☐ No ☐

If the Applicant satisfies the above conditions, the Hearing Board will consider the following special factors:

- (A) In determining the extent to which the petitioner took timely actions to comply or seek a variance, the Hearing Board shall make specific inquiries into, and shall take into account, the reasons for any claimed ignorance of the requirement from which a variance is sought.
- (B) In determining the extent to which the petitioner took reasonable actions to comply, the Hearing Board shall make specific inquiries into, and shall take into account, the petitioner's financial and other capabilities to comply.
- (C) In determining whether or not the burden of requiring immediate compliance would be unreasonable, the Hearing Board shall make specific inquiries into, and shall consider, the impact on the petitioner's business and the benefit to the environment which would result if the petitioner is required to immediately comply.

Reduced Filing and Excess Emission Fees for Small Businesses:

Bay Area Air Quality Management District Regulation 3 allows reduced filing fees and excess emission fees to be charged to small businesses. The definition of a small business for the purpose of these reduced fees is different than the definition used by the State of California for the special considerations listed above.

22. Definition of Small Business for purposes of reduced filing and excess emission fees (District Regulation 3, Section 209; Both the number of employees AND gross annual income must apply);

Does Applicant have no more than 10 employees?

Yes ☐ No ☒ Number of Employees: _____

Does Applicant have a gross annual income of no more than \$600,000?

Yes ☐ No ☐ Gross Annual Income: \$_____

Is Applicant not affiliated with a non-small business? Yes ☐ No ☐

Declaration Regarding Small Business

1. I am an officer, partner or owner of the Applicant herein, or a duly authorized agent of the Applicant authorized to make the representations set forth herein.
2. The Applicant is a business that meets the following definitions of Small Business (check those that are applicable):

Small Business for Purposes of Special Considerations (No. 21) ☐

Small Business for Purposes of Filing and Excess Emission Fees (No. 22) ☐

I declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, at _____, California

Signature

Print Name

Position with Company

Revised 4/4/19



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

July 28, 2022

Western Digital Technologies
44200 Osgood Road
Fremont, CA 94539

Attention: Heidi Lach

Authority to Construct for Permit Application No. 30355, Plant No. 15565

Required Action

Your Authority to Construct is enclosed. This Authority to Construct is not a Permit to Operate. **To receive your Permit to Operate you must:**

1. Complete the Start-up Notification portion of the Authority to Construct.
2. Send the Start-up Notification to the assigned Permit Engineer via e-mail, fax or mail **at least seven days** prior to operating your equipment.

***Note:** Operation of equipment without sending the Start-up Notification to the District may result in enforcement action.*

Authorization of Limited Use

The Authority to Construct authorizes operation during the start-up period from the date of initial operation indicated in your Start-up Notification until the Permit to Operate is issued, up to a maximum of 90 days. All conditions (specific or implied) included in this Authority to Construct will be in effect during the start-up period.

Contact Information

If you have any questions, please contact your assigned Permit Engineer:

Samuel Dennis, Air Quality Engineer I

Tel: (415) 749-4689 **Fax:** (415) 749-5030 **Email:** sdennis@baaqmd.gov



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Authority to Construct

(This is not a Permit to Operate)

Plant No. 15565
Application No. 30355

Western Digital Technologies

44100 Osgood Road, Fremont, CA 94539

is hereby granted an *Authority to Construct* for the following equipment:

A-9 Thermal Oxidizer, Munters IZS-3546-TH 39,200 SCFM, 4.5 MMBtu/hr maximum capacity

Equipment above is subject to attached condition no. 23227.

Issue date: July 27, 2022
Expiration date: July 26, 2024

APPROVED BY GREG SOLOMON (SIGNED)

for

PAMELA J. LEONG
DIRECTOR OF ENGINEERING

Start-up Notification

Instructions: At least **seven days** before the scheduled initial operation contact your assigned Permit Engineer via email or complete and send this Start-up Notification to the District via fax or mail.

Engineer: Samuel Dennis, Air Quality Engineer I
Tel: (415) 749-4689 **Fax:** (415) 749-5030
Email: sdennis@baaqmd.gov

Plant No. 15565
Source No. A-9
Application No. 30355

The initial operation of this equipment is scheduled for _____ (month/day/year)

Print your first and last name _____

Telephone No. _____

Equipment Serial No. _____



Plant Name: Western Digital Technologies

A-9 Thermal Oxidizer, Munters IZS-3546-TH 39,200 SCFM

Condition No. 23227

Plant No. 15565

Application No. 30355

PERMIT CONDITION (#23227)

Modified by Applications 16617, 18110, 26036, and 30355 Conditions for S-28, Semiconductor Fab Area; abated by A-9 (Primary), Thermal oxidizer or, A-6 (Backup), Thermal oxidizer, and A-2, Fume Scrubber:

1. The owner/operator shall limit the permitted equipment in the S-28 fab area to the following:

20 wafer coating applicator/developer tracks, each abated by A-9 (primary thermal oxidizer) or A-6 (backup thermal oxidizer) 10 negative photoresist applicators
11 positive photoresist (dry film) developers using spin track-applied, solvent-based developers, each abated at A-9 or A-6 60 wet chemical stations with more than 100 gallons total capacity, all vented to A-2 21 solvent stations with more than 100 gallons total capacity, all vented to A-9 or A-6 [Regulation 2, Rule 1]

Notes:

- a. The number of wafer coating applicator/developer tracks shall be equal to the number of wafers which may be simultaneously coated or developed on spin tracks (not in spray developers or immersion developers, which are counted as solvent stations).
 - b. Abatement of equipment as described above is required whenever that equipment is in operation.
 - c. Capacity of solvent stations and wet chemical stations refers to the capacity of sinks, excluding capacity of remote reservoirs containing unused fresh solvent or waste solvent, which will not be re-used without treatment.
 - d. Photoresist developers which use solutions with less than 1% VOC by weight are not counted as developers.
2. The owner/operator of S-28 fab area shall ensure that gross throughput of the following materials at wafer coating applicators do not exceed the following limits in any consecutive 12 month period:

Positive photoresist:	2,860 gallons
Lift Off:	666 gallons
Edge bead remover:	23,000 gallons

The owner/operator shall ensure all photoresist developers shall have less than 1% VOC by weight.

All cleanup solvent with less than 10% VOC by weight which is dispensed at wafer coating applicators or used to clean applicators shall be included by the owner/operator under the limits in Parts 2 or 3. [Basis: Cumulative Increase]

3. Except as allowed for in Part 4, the owner/operator of S-28 fab area shall ensure that gross usage of



Plant Name: Western Digital Technologies

A-9 Thermal Oxidizer, Munters IZS-3546-TH 39,200 SCFM

Condition No. 23227

Plant No. 15565

Application No. 30355

solvent at solvent stations do not exceed the following amounts in any consecutive twelve-month period:

Acetone:	15,070 gallons
Isopropanol:	135,930 gallons
n-methyl pyrrolidone:	190,000 gallons
Acetonitrile:	10 gallons
Methanol:	25 gallons
Hexamethyldisilazane (HMDS)	15 gallons

All cleanup solvent with less than 10% VOC by weight which is dispensed at wafer coating applicators or used to clean applicators shall not be included by the owner/operator under the limits in Parts 2 or 3. [Basis: Cumulative Increase]

4. Materials other than the materials specified in Parts 2 and 3, and/or usages in excess of those specified in Parts 2 and 3, may be used at S-28, provided that the owner/operator can demonstrate through recordkeeping and emission calculations that both of the following are satisfied:
 - a) Total POC and NPOC emissions from S-28 do not exceed 9.49 tons and 0.3 tons respectively in any consecutive twelve-month period. For the purposes of emission calculations, 30% of the gross usage at solvent stations shall be assumed to be emitted, 90% of the gross usage at photoresist spinners shall be assumed to be emitted, unless the Air Pollution Control Officer has provided written approval to the owner/operator of this source to use other emission factors.
 - b) The usage of these materials do not increase Toxic Air Contaminants (TACs) emissions above any toxic risk screen trigger level contained in Table 2-5-1 of District Regulation 2, Rule 5, or demonstrate via an Air District approved HRA that the project complies with the risk limits in Regulation 2, Rule 5. [Basis: Cumulative Increase]
5. To determine compliance with Parts 2, 3, and 4 above, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with Parts 2, 3, and 4, including, but not necessarily limited to, the following information:
 - 1) Type and monthly usage of all POC and NPOC containing materials used;
 - 2) If a material other than those specified in Parts 2 and 3 is used or a material specified in Parts 2 and 3 is used in excess of the limit in Parts 2 and 3, POC and toxic component contents of each material used; and mass emission calculations per the procedure described in Part



Plant Name: Western Digital Technologies

A-9 Thermal Oxidizer, Munters IZS-3546-TH 39,200 SCFM

Condition No. 23227

Plant No. 15565

Application No. 30355

4a to demonstrate compliance with Part 4, on a monthly basis;

- 3) Monthly usage and/or emission calculations shall be totaled for each consecutive twelve-month period.

[Basis: Cumulative Increase]

6. The following information shall be maintained by the owner/operator for the equipment included in the S-28 fab area and shall be made available to the District staff upon request:

- 1) a list of all equipment included in S-28, and the chemicals used at each piece of equipment
- 2) the solvent/chemical capacity for each solvent station and chemical station
- 3) composition data for each chemical used [Basis: Cumulative Increase]

7. The owner/operator shall abate S-28 at all times that it is in operation by A-9, primary thermal oxidizer or, A-6, backup thermal oxidizer, and A-2, Fume Scrubber. [Basis: BACT, Cumulative Increase]

8. The owner/operator shall ensure that when operating, thermal oxidizers A-9 and A-6 comply with one the following overall non-methane hydrocarbon (NMHC) emission limits or destruction efficiencies:

- a) outlet NMHC concentration of 10 ppmv or less
- b) NMHC destruction efficiency greater than 98.5% if NMHC concentration at inlet of A-9 or A-6 is greater than or equal to 2,000 ppmv
- c) NMHC destruction efficiency greater than 98% if NMHC concentration at inlet of A-9 or A-6 is less than 2,000 ppmv Destruction efficiencies in parts 8b and 8c shall take into account any solvent bypassing of the zeolyte concentrator by evaluating efficiency between the inlet of the zeolyte concentrator stage and the incinerator stack, downstream of the connection with the concentrator bypass stream. [Basis: BACT]

9. a. The owner/operator of S-28 shall ensure A-9 does not exceed the following emission limits:

NOx: 0.0833 pounds/MMBtu

CO: 0.0833 pounds/MMBtu

- b. The owner/operator of S-28 shall ensure A-6 does not exceed the following emission limits:

NOx: 0.0279 pounds/MMBtu

CO: 0.0750 pounds/MMBtu

[Basis: RACT Avoidance for CO; Application 16617 for NOx]



Plant Name: Western Digital Technologies

A-9 Thermal Oxidizer, Munters IZS-3546-TH 39,200 SCFM

Condition No. 23227

Plant No. 15565

Application No. 30355

10. In order to demonstrate compliance with Parts 4 (POC and NPOC annual emission limits), 8 (NMHC destruction efficiency), and 9 (NO_x RACT avoidance limit for A-9 and CO RACT avoidance limits for A-6 and A-9), the owner/operator of S-28 shall perform a District approved source test within 60 days of the issuance of the

Authority to Construct pursuant to Application 30355 (for A-9), then at 24-month intervals thereafter from the last source test date at whichever thermal oxidizer is serving as S-28's primary abatement device (A-9 or A-6), in accordance with the District's Manual of Procedures.

In addition to the above and in order to ensure compliance with these permit conditions, the owner/operator shall perform a District approved source test at A-6 once every 60 consecutive months from the date it was last source tested.

The owner/operator shall demonstrate compliance with the POC and NPOC "tons per year" emission limit for S-28 in Part 4 shall be demonstrated by extrapolating the source test results (expressed in pound per hour per pollutant) over 8,760 hours per year of operation i.e., annual emissions of pollutant = (pounds of pollutant/hour x 8760 hours/year) ÷ 2000 pounds/ton.

During testing, A-9 and/or A-6 operating temperatures shall be monitored by the owner/operator with the same instruments in the same locations to be used to monitor compliance with Part 11.

The owner/operator shall notify the Manager of the District's Source Test Section at least seven (7) days prior to the test, to provide the District staff the option of observing the testing. Within 45 days of test completion, a comprehensive report of the test results shall be submitted by the owner/operator to the Manager of the District's Source Test Section for review and disposition.

[Basis: Regulation 2-1-403, Cumulative Increase and BACT]

11. The owner/operator shall maintain the operating temperature of the A-9 and A-6 oxidizers at an average temperature of no less than 1350 degrees F during any 3-minute period.

[Basis: Regulation 2-1-403]

12. The temperature limit in Part 11 shall not apply during an "Allowable Temperature Excursion", provided that the owner/operator ensures the temperature controller setpoint complies with the temperature limit. An Allowable Temperature Excursion is one of the following:

- 1) A temperature excursion not exceeding 20 degrees F; or
- 2) A temperature excursion for a period or periods which when combined are less than or equal to 15 in any hour; or
- 3) A temperature excursion for a period or periods which when combined are more than 15 minutes in any hour, provided that all three of the following criteria are met.



Plant Name: Western Digital Technologies

A-9 Thermal Oxidizer, Munters IZS-3546-TH 39,200 SCFM

Condition No. 23227

Plant No. 15565

Application No. 30355

- i. the excursion does not exceed 50 degrees F;
- ii. the duration of the excursion does not exceed 24 hours; and
- iii. the total number of such excursions does not exceed 12 per calendar year (or any consecutive 12 month period). Two or more excursions greater than 15 minutes in duration occurring during the same 24-hour period shall be counted as one excursion toward the 12 excursion limit.

[basis: Regulation 2-1-403]

13. For each Allowable Temperature Excursion that exceeds 20 degrees F and 15 minutes in duration, the owner/operator shall keep sufficient records to demonstrate that they meet the qualifying criteria described above. Records shall be retained by the owner/operator for a minimum of five (or two years) years from the date of entry, and shall be made available to the District upon request. Records shall include at least the following information:
- 1) Temperature controller setpoint;
 - 2) Starting date and time, and duration of each Allowable Temperature Excursion;
 - 3) Measured temperature during each Allowable Temperature Excursion;
 - 4) Number of Allowable Temperature Excursions per month, and total number for the current calendar year; and
 - 5) All digital charts or other temperature records

[basis: Regulation 2-1-403]

14. The A-9 and A-6, thermal oxidizer operating temperature shall be continuously recorded by the owner/operator with a digital recorder. These records shall be retained by the owner/operator for at least two years from date of entry and shall be made available to the District staff upon request.

[Basis: Regulation 1-521]

15. For the purposes of Parts 12 and 13 of this permit condition, a temperature excursion refers only to temperatures below the minimum operating temperature limit in Part 11.

[Basis: Regulation 2-1-403]

16. The owner/operator shall ensure A-6 and A-9 are not concurrently operated to abate emissions from S-28.

[Basis: Regulation 2-1-403]

End of Condition



NOTICE OF VIOLATION

No. **A61762**

ISSUED TO: Western Digital Technologies ☒ P ☐ G ☐ N# A8391
ADDRESS: 44100 Osgood Road
CITY: Fremont STATE: CA ZIP: 94539
PHONE: (510) 583-6100
☒ N# Mailing Address on F61

OCCURRENCE
NAME: _____
ADDRESS: _____ ☒ Same As Above
CITY: _____ ZIP: _____
SOURCE: S# 28 NAME: Semiconductor Fab Area
EMISSION PT: P# _____ NAME: _____
DATE: 11/6/22 TIME: _____ HRS

<input type="checkbox"/> REG 2 RULE 1 SEC 301 No Authority to Construct	<input type="checkbox"/> REG 2 RULE 1 SEC 302 No Permit to Operate
<input type="checkbox"/> REG 1 SEC 301 H & S CODE - 41700 Public Nuisance	<input checked="" type="checkbox"/> REG 2 RULE 1 SEC 307 Failure to Meet Permit Condition
<input type="checkbox"/> REG 5 SEC 301 Prohibited Open Burning	<input type="checkbox"/> REG 6 RULE 1 SEC 301 Excessive Visible Emissions
<input type="checkbox"/> REG _____ RULE _____ SECTION _____ CODE _____	
<input type="checkbox"/> REG _____ RULE _____ SECTION _____ CODE _____	

Details: Late submission of source test report for TO A-9 (Source Test CST-10069 NST-7705)

RECIPIENT NAME: Richard Follen
TITLE: Sr. EHS Manager
SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT ☒ Richard Follen

➔ WITHIN 10 DAYS, RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT CONTINUED OR RECURRENT VIOLATION. **THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY.** YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: Alyssa Espiritu INSP # 879
DATE: 1/26/23 TIME: 0930 HRS ☒ MAILED

PLEASE PRESS HARD