

U.S. Department of Labor

Occupational Safety and Health Administration
138 River Road
Suite 102, Shattuck Office Center
Andover, MA 01810
Phone: 978-837-4460 Fax: 978-837-4455



Citation and Notification of Penalty

To:
Rohm-Haas Electronics Material, LLC, dba Dow
Chemical Company
and its successors
60 Willow Street
North Andover, MA 01845

Inspection Site:
60 Willow Street
North Andover, MA 01845

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016

The violation(s) described in this Citation and Notification of Penalty is (are) alleged to have occurred on or about the day(s) the inspection was made unless otherwise indicated within the description given below.

This Citation and Notification of Penalty (this Citation) describes violations of the Occupational Safety and Health Act of 1970. The penalty(ies) listed herein is (are) based on these violations. You must abate the violations referred to in this Citation by the dates listed and pay the penalties proposed, unless within 15 working days (excluding weekends and Federal holidays) from your receipt of this Citation and Notification of Penalty you either call to schedule an informal conference (see paragraph below) or you mail a notice of contest to the U.S. Department of Labor Area Office at the address shown above. Please refer to the enclosed booklet (OSHA 3000) which outlines your rights and responsibilities and which should be read in conjunction with this form. Issuance of this Citation does not constitute a finding that a violation of the Act has occurred unless there is a failure to contest as provided for in the Act or, if contested, unless this Citation is affirmed by the Review Commission or a court.

Posting - The law requires that a copy of this Citation and Notification of Penalty be posted immediately in a prominent place at or near the location of the violation(s) cited herein, or, if it is not practicable because of the nature of the employer's operations, where it will be readily observable by all affected employees. This Citation must remain posted until the violation(s) cited herein has (have) been abated, or for 3 working days (excluding weekends and Federal holidays), whichever is longer.

Informal Conference - An informal conference is not required. However, if you wish to have such a conference you may request one with the Area Director during the 15 working day contest period. During such an informal conference you may present any evidence or views which you believe would support an adjustment

to the citation(s) and/or penalty(ies).

If you are considering a request for an informal conference to discuss any issues related to this Citation and Notification of Penalty, you must take care to schedule it early enough to allow time to contest after the informal conference, should you decide to do so. Please keep in mind that a written letter of intent to contest must be submitted to the Area Director within 15 working days of your receipt of this Citation. The running of this contest period is not interrupted by an informal conference.

If you decide to request an informal conference, please complete, remove and post the Notice to Employees next to this Citation and Notification of Penalty as soon as the time, date, and place of the informal conference have been determined. Be sure to bring to the conference any and all supporting documentation of existing conditions as well as any abatement steps taken thus far. If conditions warrant, we can enter into an informal settlement agreement which amicably resolves this matter without litigation or contest.

Right to Contest – You have the right to contest this Citation and Notification of Penalty. You may contest all citation items or only individual items. You may also contest proposed penalties and/or abatement dates without contesting the underlying violations. Unless you inform the Area Director in writing that you intend to contest the citation(s) and/or proposed penalty(ies) within 15 working days after receipt, the citation(s) and the proposed penalty(ies) will become a final order of the Occupational Safety and Health Review Commission and may not be reviewed by any court or agency.

Penalty Payment – Penalties are due within 15 working days of receipt of this notification unless contested. (See the enclosed booklet and the additional information provided related to the Debt Collection Act of 1982.) Make your check or money order payable to "DOL-OSHA". Please indicate the Inspection Number on the remittance. You can also make your payment electronically on www.pay.gov. On the left side of the pay.gov homepage, you will see an option to Search Public Forms. Type "OSHA" and click Go. From the results, click on OSHA Penalty Payment Form. The direct link is:

<https://www.pay.gov/paygov/forms/formInstance.html?agencyFormId=53090334>.

You will be required to enter your inspection number when making the payment. Payments can be made by credit card or Automated Clearing House (ACH) using your banking information. Payments of \$25,000 or more require a Transaction ID, and also must be paid using ACH. If you require a Transaction ID, please contact the OSHA Debt Collection Team at (202) 693-2170.

OSHA does not agree to any restrictions or conditions or endorsements put on any check, money order, or electronic payment for less than the full amount due, and will process the payments as if these restrictions or conditions do not exist.

Notification of Corrective Action – For each violation which you do not contest, you must provide *abatement certification* to the Area Director of the OSHA office issuing the citation and identified above. This abatement certification is to be provided by letter within 10 calendar days after each abatement date. Abatement certification includes the date and method of abatement. If the citation indicates that the violation was corrected during the inspection, no abatement certification is required for that item. The abatement certification letter must be posted at the location where the violation appeared and the corrective action took place or employees must otherwise be effectively informed about abatement activities. A sample abatement certification letter is enclosed with this Citation. In addition, where the citation indicates that *abatement documentation* is necessary, evidence of the purchase or repair of equipment, photographs or video, receipts, training records, etc., verifying that abatement has occurred is required to be provided to the Area Director.

Employer Discrimination Unlawful – The law prohibits discrimination by an employer against an employee for filing a complaint or for exercising any rights under this Act. An employee who believes that he/she has been discriminated against may file a complaint no later than 30 days after the discrimination occurred with the U.S. Department of Labor Area Office at the address shown above.

Employer Rights and Responsibilities – The enclosed booklet (OSHA 3000) outlines additional employer rights and responsibilities and should be read in conjunction with this notification.

Notice to Employees – The law gives an employee or his/her representative the opportunity to object to any abatement date set for a violation if he/she believes the date to be unreasonable. The contest must be mailed to the U.S. Department of Labor Area Office at the address shown above and postmarked within 15 working days (excluding weekends and Federal holidays) of the receipt by the employer of this Citation and Notification of Penalty.

Inspection Activity Data – You should be aware that OSHA publishes information on its inspection and citation activity on the Internet under the provisions of the Electronic Freedom of Information Act. The information related to these alleged violations will be posted when our system indicates that you have received this citation. You are encouraged to review the information concerning your establishment at www.osha.gov. If you have any dispute with the accuracy of the information displayed, please contact this office.



NOTICE TO EMPLOYEES OF INFORMAL CONFERENCE

An informal conference has been scheduled with OSHA to discuss the citation(s) issued on 07/05/2016. The conference will be held by telephone or at the OSHA office located at 138 River Road, Suite 102, Shattuck Office Center, Andover, MA 01810 on _____ at _____. Employees and/or representatives of employees have a right to attend an informal conference.

CERTIFICATION OF CORRECTIVE ACTION WORKSHEET

Inspection Number: 1116416

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company

Inspection Site: 60 Willow Street, North Andover, MA 01845

Issuance Date: 07/05/2016

List the specific method of correction for each item on this citation in this package that does not read "Corrected During Inspection" and return to: **U.S. Department of Labor – Occupational Safety and Health Administration, 138 River Road, Suite 102, Shattuck Office Center, Andover, MA 01810**

Citation Number _____ and Item Number _____ was corrected on _____
By (Method of Abatement): _____

Citation Number _____ and Item Number _____ was corrected on _____
By (Method of Abatement): _____

Citation Number _____ and Item Number _____ was corrected on _____
By (Method of Abatement): _____

Citation Number _____ and Item Number _____ was corrected on _____
By (Method of Abatement): _____

Citation Number _____ and Item Number _____ was corrected on _____
By (Method of Abatement): _____

Citation Number _____ and Item Number _____ was corrected on _____
By (Method of Abatement): _____

I certify that the information contained in this document is accurate and that the affected employees and their representatives have been informed of the abatement.

Signature _____

Date _____

Typed or Printed Name _____

Title _____

NOTE: 29 USC 666(g) whoever knowingly makes any false statements, representation or certification in any application, record, plan or other documents filed or required to be maintained pursuant to the Act shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment of not more than 6 months or both.

POSTING: A copy of completed Corrective Action Worksheet should be posted for employee review



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 1 Type of Violation: **Serious**

OSH ACT of 1970 Section (5)(a)(1): The employer did not furnish employment and a place of employment which was free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to fire and explosion hazards while working with pyrophoric liquids.

Location: Cylinder Prep 1

On or about January 7, 2016, the employer failed to adequately design, inspect, maintain and operate the trimethyl aluminum cylinder reclaim process to prevent oxygen (e.g. in air or water) from contacting and igniting trimethyl aluminum, a pyrophoric chemical, resulting in fire and to explosion hazards to employees

Among other methods, feasible and acceptable abatement method to correct this hazardous condition include the following:

1. Performing non-destructive testing on the welds to ensure they are full thickness welds and are of the appropriate materials. The American Welding Society D1.1/D1.1M:2010, Structural Welding Code Steel The requirement for welding procedures is in Part A, Section 3. The requirement for NDT (non-destructive) inspection is in Part C, Paragraph 6.11.1 which states, 6.11.1 Tubular Connection Requirements. For Complete Joint Penetrations groove butt welds welded from one side without backing, the entire length of all completed tubular production welds shall be examined by either RT (radiographic) or UT (ultrasonic). The acceptance criteria shall conform to 6.12.1 or 6.13.3 as applicable.
2. Implement a regular inspection schedule for all items used with pyrophoric chemicals. NFPA 400, Hazardous Materials Code, Section 6.1.16 states, "Equipment, machinery, and required detection and alarm systems associated with hazardous materials shall be maintained in an operable condition. The following shall apply to defective containers, cylinders, and tanks: (1) They shall be removed from service, repaired, or disposed of in an approved manner." Center for Chemical Process Safety (CCPS), Guidelines for Mechanical Integrity Systems, states, "In many respects the Inspection, Testing and

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Preventive Maintenance (ITPM) program is the core of the mechanical integrity program. The ITPM's objective is to identify and implement maintenance tasks needed to ensure the ongoing integrity of the equipment." CCPS, Guidelines for Safe Storage and Handling of Reactive Materials, states, "A management system is needed to ensure that all parts of a reactive materials containment system is constructed and maintained to a high degree of mechanical integrity for obvious reasons. The components of such a management system include preventive maintenance, inspection and testing"

3. Thoroughly investigate any incident of smoke, fire or explosion and ensure similar controls are implemented for all processes where pyrophoric liquids are handled. CCPS, Guidelines for Safe Storage and Handling of Reactive Materials, states, "Prompt and careful investigation of such accidents should identify the underlying management system failures, develop necessary corrective actions, and effectively communicate the results of the investigation to all affected parties and regulatory authorities as required by law." CCPS, Guidelines for Process Safety Fundamentals in General Plant Operations, states, "In an ongoing safety program, incidents and accidents are investigated and analyzed to reduce the likelihood of recurrence. The information gained from these investigations is used to develop corrective action. An assigned group should investigate both personal injury and property damage incidents. The seriousness or potential of the incident will dictate the extent of the investigation. Such an investigation identifies and locates principle hazards and outdated or inefficient processes and procedures. The analysis should produce recommendations for changes to work methods, equipment, processes and training programs."

4. Perform all work with pyrophoric chemicals in an inert atmosphere such as a glove box. The U.S. Department of Energy PNNL-18668 states "Therefore, it is highly recommended that reagents (liquids or solids) be used whenever possible within the confines of the glovebox or equivalent. Caution must be exercised when removing pyrophoric contaminated glassware, wipes, spatulas, gloves, or septa from the glovebox. When possible, the contaminated equipment should be neutralized inside the glovebox prior to removal."

5. Create procedures to troubleshoot a rate-of-rise test and for trap change out. NFPA 400, Hazardous Materials Code, Section 7.3.1 states, "Operating procedures shall be developed for processes regulated by this chapter and implemented in accordance with Section 7.3. Operating procedures shall address the following: (1) Each operating phase including, but not limited to, startup, operation, shutdown, and startup after unscheduled shutdown (2) Operating limits (3) Safety and health controls (4) Safety systems." CCPS, Guidelines for Safe Storage and Handling of Reactive Materials, states, "Due to the

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

hazardous nature of reactive materials, they are often handled in smaller quantities and container sizes than bulk commodity chemicals. For this reason, manual handling of containers ranging from small cartons to drums and tote bins is commonly required. However, manual handling inherently has different incident potentials than piping system transfers. In particular, the close proximity of the operator to the reactive material and the potential for dropping or collision. Therefore, some companies avoid all manual handling of certain highly reactive materials." CCPS, Guidelines for Process Safety Fundamentals in General Plant Operations, states, "Process equipment and procedures A group of common considerations applies Design safe operating limits must be defined. Materials of construction and seals must be appropriate for the application Operations. The equipment must be operated within design conditions. Operating procedures must be available and scrupulously observed"

6. Ensure the design of the system considers the various failure points outlined in consensus standards. NFPA 400, Hazardous Materials Code, Section 6.1.6 states, "Containers, cylinders, and tanks shall be designed and constructed in accordance with approved standards. Containers, cylinders, tanks, and other means used for containment of hazardous materials shall be of an approved type." Section 6.2.1.7.2 states, "Stationary tanks and equipment containing hazardous material liquids that can generate pressures exceeding design limits due to exposure fires or internal reaction shall have some form of construction or other approved means that will relieve excessive internal pressure." The Center for Chemical Process Safety (CCPS), Guidelines for Engineering Design for Process Safety, lists common causes of loss of containment for different process equipment. Included in their list are absence of relief, incorrect material specification, incorrect gasket installed, incorrect welding procedures, failure to stress relieve welds, incorrect weld inspection and testing, incorrect specification of design code, etc. The Center for Chemical Process Safety Guidelines for Safe Storage and Handling of Reactive Materials states "Screwed connections should be avoided whenever possible, along with potentially vulnerable points such as sight glasses."

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:
Proposed Penalty:

08/05/2016
\$7000.00

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 2 Type of Violation: **Serious**

29 CFR 1910.106(d)(4)(ii): Storage in inside storage rooms did not comply with Table H-13:

Location: Cylinder Prep 1

On or about January 7, 2016, the storage of flammable liquids in containers was not in accordance with 1910.106(d)(4)(ii) as the quantity stored, over 35 gallons of flammable liquids, exceeded the maximum allowable storage quantity of 10 gallons per square foot in a room of approximately 1056 square feet.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:
Proposed Penalty:

08/05/2016
\$5500.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 3 Type of Violation: **Serious**

29 CFR 1910.106(e)(3)(iv)(a): Emergency drainage systems were not provided to direct flammable liquid leakage and fire protection water to a safe location.

Location: Cylinder Prep 1

On or about January 7, 2016, emergency drainage systems were not provided to direct any flammable liquids or fire protection water to a safe location.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

| | |
|---|------------|
| Date By Which Violation Must be Abated: | 08/05/2016 |
| Proposed Penalty: | \$6600.00 |

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 4 Type of Violation: **Serious**

29 CFR 1910.106(e)(6)(i): Adequate precautions were not taken to prevent the ignition of flammable vapors:

Location: Cylinder Prep 1

On or about January 7, 2016, adequate precautions were not taken to prevent the ignition of flammable vapors in the trimethyl aluminum cylinder reclaim process. Sources of ignition found in this process were hot surfaces.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

| | |
|---|------------|
| Date By Which Violation Must be Abated: | 08/05/2016 |
| Proposed Penalty: | \$5500.00 |

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 5 Type of Violation: **Serious**

29 CFR 1910.106(e)(9)(ii): Adequate aisles were not maintained for unobstructed movement of personnel and fire protection equipment:

Location: Cylinder Prep 1

On or about January 7, 2016, the aisle between the cylinder login area and the storage racks was 27" wide which was not adequate for the movement of personnel and fire protection equipment during an emergency.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:

08/05/2016

Proposed Penalty:

\$5500.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 6 Type of Violation: **Serious**

29 CFR 1910.106(e)(9)(iii): Combustible waste material and residues in a building or unit operating area were not kept to a minimum and/or disposed of daily:

1) Location: Cylinder Prep 1

On or about January 7, 2016, the waste trimethyl aluminum in the trap was not kept to a minimum and was not emptied on a daily basis.

2) Location: Cylinder Prep 1

On or about January 7, 2016, a trap containing combustible material was stored in the trimethyl aluminum fume hood.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:

08/05/2016

Proposed Penalty:

\$7000.00

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 7 Type of Violation: **Serious**

29 CFR 1910.106(h)(4)(iv)(b): Where the vapor space of equipment is usually within the flammable range, the probability of explosion damage to equipment was not limited by inerting, by providing an explosion suppression system, or by designing the equipment to contain the peak explosion pressure which may be modified by explosion relief:

Location: Cylinder Prep 1

On or about January 7, 2016, the trimethyl aluminum reclaim process was not protected against the probability of explosion damage as the system was not inerted prior to drawing the vacuuming, the equipment did not contain the peak explosion pressure and no explosion suppression system or explosion relief systems were in place.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:
Proposed Penalty:

08/05/2016
\$7000.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 1 Item 8 Type of Violation: **Serious**

29 CFR 1910.110(f)(2)(i): Containers in storage were not located so as to minimize exposure to excessive temperature rise, physical damage, or tampering from unauthorized persons:

Location: Outside of cylinder prep 1

On or about January 7, 2016, propane cylinders were stored outside of cylinder prep 1.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:
Proposed Penalty:

08/05/2016
\$7000.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 2 Item 1 Type of Violation: **Repeat**

29 CFR 1910.132(a): Protective equipment was not used when necessary whenever hazards capable of causing injury and impairment were encountered:

Location: Cylinder Prep 1

On or about January 7, 2016, the employer failed to provide and require the use of the appropriate personal protective equipment, such as but not limited to fire protective coats, face shields and hand protection.

The Rohm and Haas Electronic Materials, LLC was previously cited for a violation of this occupational safety and health standard, which was contained in OSHA inspection number 943083, citation number 1, item number 2 and was affirmed as a final order on September 17, 2014, with respect to a workplace located at 60 Willow Street, North Andover, MA 01845.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

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|---|------------|
| Date By Which Violation Must be Abated: | 08/05/2016 |
| Proposed Penalty: | \$38500.00 |

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 2 Item 2 Type of Violation: **Repeat**

29 CFR 1910.132(d)(1): The employer did not assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE):

1) Location: Cylinder Prep 1

On or about January 7, 2016, the employer had not assessed the workplace to determine the hazards present and the appropriate ppe for employees to wear when troubleshooting the system.

2) Location: Cylinder Prep 1

On or about January 7, 2016, the employer had not assessed the workplace to determine the hazards present and the appropriate ppe for employees to wear when changing a trap.

The Rohm and Haas Electronic Materials, LLC was previously cited for a violation of an equivalent standard, 1910.132(d)(2), which was contained in OSHA inspection number 943083, citation number 1, item number 3 and was affirmed as a final order on September 17, 2014, with respect to a workplace located at 60 Willow Street, North Andover, MA 01845.

ABATEMENT DOCUMENTATION REQUIRED FOR THIS ITEM

Date By Which Violation Must be Abated:
Proposed Penalty:

08/05/2016
\$38500.00

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration

Inspection Number: 1116416
Inspection Date(s): 01/07/2016 - 01/07/2016
Issuance Date: 07/05/2016



Citation and Notification of Penalty

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845

Citation 3 Item 1 Type of Violation: **Other-than-Serious**

29 CFR 1904.29(b)(3): Each recordable injury or illness were not recorded on the OSHA 300 Log and 301 Incident Report within seven (7) calendar days of receiving information that a recordable injury or illness has occurred:

Location: Facility

On or about January 15, 2016, recordable injuries employees sustained on January 7, 2016, were not recorded on the OSHA 301 incident reports.

Date By Which Violation Must be Abated:
Proposed Penalty:

07/11/2016

\$1100.00

A handwritten signature in black ink, appearing to read 'Anthony Covello', written over a horizontal line.

Anthony Covello
Area Director

See pages 1 through 4 of this Citation and Notification of Penalty for information on employer and employee rights and responsibilities.

U.S. Department of Labor
Occupational Safety and Health Administration
138 River Road
Suite 102, Shattuck Office Center
Andover, MA 01810
Phone: 978-837-4460 Fax: 978-837-4455



INVOICE / DEBT COLLECTION NOTICE

Company Name: Rohm-Haas Electronics Material, LLC, dba Dow Chemical Company
Inspection Site: 60 Willow Street, North Andover, MA 01845
Issuance Date: 07/05/2016

| | |
|---|---------------------|
| Summary of Penalties for Inspection Number | 1116416 |
| Citation 1, Serious | \$51,100.00 |
| Citation 2, Repeat | \$77,000.00 |
| Citation 3, Other-than-Serious | \$1,100.00 |
| TOTAL PROPOSED PENALTIES | \$129,200.00 |

To avoid additional charges, please remit payment promptly to this Area Office for the total amount of the uncontested penalties summarized above. Make your check or money order payable to: "DOL-OSHA". Please indicate OSHA's Inspection Number (indicated above) on the remittance. You can also make your payment electronically on www.pay.gov. On the left side of the pay.gov homepage, you will see an option to Search Public Forms. Type "OSHA" and click Go. From the results, click on **OSHA Penalty Payment Form**. The direct link is <https://www.pay.gov/paygov/forms/formInstance.html?agencyFormId=53090334>. You will be required to enter your inspection number when making the payment. Payments can be made by credit card or Automated Clearing House (ACH) using your banking information. Payments of \$25,000 or more require a Transaction ID, and also must be paid using ACH. If you require a Transaction ID, please contact the OSHA Debt Collection Team at (202) 693-2170.

OSHA does not agree to any restrictions or conditions or endorsements put on any check, money order, or electronic payment for less than the full amount due, and will cash the check or money order as if these restrictions or conditions do not exist.

If a personal check is issued, it will be converted into an electronic fund transfer (EFT). This means that our bank will copy your check and use the account information on it to electronically debit your account for the amount of the check. The debit from your account will then usually occur within 24 hours and will be shown on your regular account statement. You will not receive your original check back. The bank will destroy your

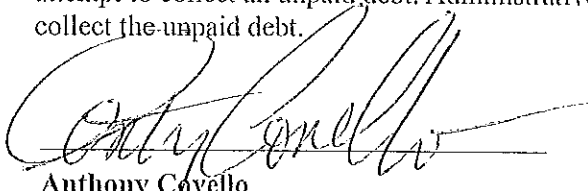
original check, but will keep a copy of it. If the EFT cannot be completed because of insufficient funds or closed account, the bank will attempt to make the transfer up to 2 times.

Pursuant to the Debt Collection Act of 1982 (Public Law 97-365) and regulations of the U.S. Department of Labor (29 CFR Part 20), the Occupational Safety and Health Administration is required to assess interest, delinquent charges, and administrative costs for the collection of delinquent penalty debts for violations of the Occupational Safety and Health Act.

Interest: Interest charges will be assessed at an annual rate determined by the Secretary of the Treasury on all penalty debt amounts not paid within one month (30 calendar days) of the date on which the debt amount becomes due and payable (penalty due date). The current interest rate is one percent (1%). Interest will accrue from the date on which the penalty amounts (as proposed or adjusted) become a final order of the Occupational Safety and Health Review Commission (that is, 15 working days from your receipt of the Citation and Notification of Penalty), unless you file a notice of contest. Interest charges will be waived if the full amount owed is paid within 30 calendar days of the final order.

Delinquent Charges: A debt is considered delinquent if it has not been paid within one month (30 calendar days) of the penalty due date or if a satisfactory payment arrangement has not been made. If the debt remains delinquent for more than 90 calendar days, a delinquent charge of six percent (6%) per annum will be assessed accruing from the date that the debt became delinquent.

Administrative Costs: Agencies of the Department of Labor are required to assess additional charges for the recovery of delinquent debts. These additional charges are administrative costs incurred by the Agency in its attempt to collect an unpaid debt. Administrative costs will be assessed for demand letters sent in an attempt to collect the unpaid debt.



Anthony Covello

Area Director

Date

U.S. Department of Labor

Occupational Safety and Health Administration

Shattuck Office Center

138 River Road, Suite 102

Andover, MA 01810-1083

Phone 978-837-4460, fax 978-837-4455

<http://www.osha.gov>



July 6, 2016,

Rohm and Haas Electronics Material, L.L.C.
60 Willow Street
North Andover, MA 01845

Re: OSHA Inspection No. 1116416

Dear Employer:

As you are aware, OSHA conducted an inspection of your workplace at 60 Willow Street, North Andover, MA starting on January 7, 2016 related to an industrial explosion/catastrophe that sent four employees to the hospital. Several items of concern are related to the emergency response actions taken by the company on January 7, 2016. During the incident, and in the time afterwards, the following things were observed on the video:

- 1) An employee leaving by one door and then turning around and coming back past the room where the incident occurred.
- 2) An employee who was injured going back into the incident room to look for the employees that hadn't emerged.
- 3) An employee performing emergency response activities solo when the standard requires the buddy system to be used.
- 4) The same employee performing the emergency response activities solo was also not wearing gloves.

At this time OSHA is not pursuing citations for these items but is informing the company that there appears to be deficiencies in the emergency response plan. The emergency response plan needs to be evaluated and updated to ensure that employees are aware of the exit routes, the procedures to be followed in a chemical emergency, the appropriate personal protective equipment to wear in an emergency, etc. Training for employees must be updated to ensure that it covers all the required information and employees know how to respond in an emergency.

OSHA also has concerns under the Hazard Communication standard with regard to the classification of trimethyl aluminum (TMAI). The Safety Data Sheet from the company lists TMAI as a pyrophoric chemical and does not discuss the flammable nature of TMAI. In 29 1910.1200(d)(1), manufacturers are required to determine the hazard

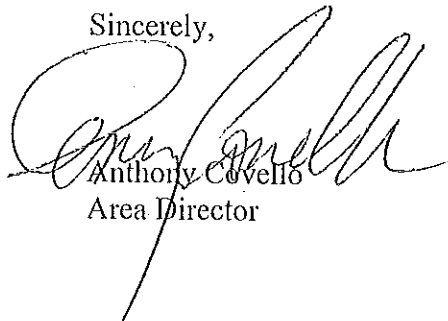
classes, and any applicable categories, for each chemical they manufacture. In addition, in CPL 02-02-079: Inspection Procedures for the Hazard Communication Standard (HCS 2012), section X, Inspection Procedures, subsection D, Hazard Classification, sub-subsection 1, General Information on Classification, sub-sub-subsection b, General Information on Classification, bullet 2 it states:

"The classification of hazards is to be performed based on the criteria provided for each individual hazard class. Manufacturers or importers who are evaluating the hazards of the chemicals must consider all available data on the hazards."

The requirements for classification of flammable liquids is in Appendix B of the Hazard Communication standard, subsection B.6.1. Using all the available data, TMAI would be classified as a Category 2 Flammable liquid and the appropriate information must be conveyed on the label and on the SDS.

You may voluntarily provide this Area Office with progress reports on your efforts to improve safety in these matters. If you have any questions, please feel free to call Mary Reynolds at 978-837-4462.

Sincerely,



Anthony Covello
Area Director