UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUL - 9 2014

IN THE MATTER OF:
The Dow Chemical Company
Building B-13
P.O. 186
Port Lavaca, TX 77979

ATTENTION:
Russell Wozniak, Regulatory Services

Request to Provide Information Pursuant to the Clean Air Act

The United States Environmental Protection Agency (EPA) is requiring The Dow Chemical Company (Dow or you) to submit certain information about your facilities in Freeport, TX, Plaquemine, LA, and St. Charles (Hahnville), LA. Appendix B specifies the information that you must submit and a schedule for that submittal.

We are issuing this information request under section 114(a) of the Clean Air Act (the Act), 42 U.S.C. § 7414(a) which authorizes the Administrator of EPA to require the submission of information. The Administrator has delegated this authority to Phillip A. Brooks, Director of the Air Enforcement Division, Office of Civil Enforcement.

Dow owns and operates emission sources at its Freeport, TX, Plaquemine, LA, and St. Charles (Hahnville), LA facilities. We are requesting this information to determine whether your emission sources are complying with the Act.

You must send all requested information to:

Robert Parrish, Attorney-Advisor
USEPA - Air Enforcement Division
MC 2242-A, Room 2119C
1200 Pennsylvania Ave., NW
Washington, DC 20002
(202) 564-6946
parrish.robert@epa.gov

Under 40 C.F.R. Part 2, Subpart B, you may assert a claim of business confidentiality for any portion of the submitted information. You must specify the page, paragraph, and sentence when identifying the information subject to your claim. Appendix A specifies the assertion and substantiation requirements for business confidentiality claims.

You must submit all requested information under an authorized signature with the following certification:

> I certify under penalty of law that I have examined and am familiar with the information in the enclosed Documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to section 113(c)(2) of the Act, and 18 U.S.C. §§ 1001 and 1341.

We may use any information submitted in response to this request in an administrative, civil, or criminal action.

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative action or investigation. To the extent that you respond with non-electronic media, to aid in our electronic record keeping efforts, please provide such Documents without staples. Paper clips, binder clips, and 3-ring binders are acceptable.

Failure to comply fully with this request for information may subject Dow to an enforcement action under section 113 of the Act, 42 U.S.C. § 7413.

You should direct any questions about this request for information to Robert Parrish at (202) 564-6946 or Patrick W. Foley at (202) 564-7978.

7/9/2014
Date

Phillip A. Brooks, Director
Air Enforcement Division
Office of Civil Enforcement
U.S. EPA

APPENDIX A

Confidential Business Information (CBI)

You may assert a business confidentiality claim covering all or part of the information you provide in response to this information request for any business information entitled to confidential treatment under Section 114(c) of the Clean Air Act (the Act), 42 U.S.C. § 7414, and 40 C.F.R. Part 2, subpart B. Under Section 114(c) of the Act, you are entitled to confidential treatment of information that would divulge methods or processes entitled to protection as trade secrets. Under 40 C.F.R. Part 2, subpart B, business confidentiality means "the concept of trade secrecy and other related legal concepts which give (or may give) a business the right to preserve the confidentiality of business information and to limit its use or disclosure by others in order that the business may obtain or retain business advantages it derives from its rights in the information." See 40 C.F.R. § 2.201(e).

Information covered by a claim of business confidentiality will be disclosed by EPA only to the extent, and by means of the procedures, set forth in Section 114(c) of the Act and 40 C.F.R. Part 2, subpart B. EPA will construe your failure to furnish a business confidentiality claim with your response to this information request as a waiver of that claim, and the information may be made available to the public without further notice to you.

To assert a business confidentiality claim, you must place on (or attach to) all information you desire to assert as business confidential either a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential" at the time you submit your response to this information request. Allegedly confidential portions of otherwise non-confidential Documents should be clearly identified, and may be submitted separately to facilitate identification and handling by EPA. You should indicate if you desire confidential treatment only until a certain date or until the occurrence of a certain event.

The criteria EPA will use in determining whether material you claim as business confidential is entitled to confidential treatment are set forth at 40 C.F.R. §§ 2.208 and 2.301. These regulations provide, among other things, that you must satisfactorily show that: (1) the information is within the scope of business confidentiality as defined at 40 C.F.R. § 2.201(e), (2) that you have taken reasonable measures to protect the confidentiality of the information and that you intend to continue to do so, (3) the information is not and has not been reasonably obtainable by legitimate means without your consent, and (4) the disclosure of the information is likely to cause substantial harm to your business's competitive edge. See 40 C.F.R. § 2.208 (a)-(d). Emission data, as defined at 40 C.F.R. § 2.301(a)(2), is expressly not entitled to confidential treatment under 40 C.F.R. Part 2, subpart B. See 42 U.S.C. § 7414(c); 40 C.F.R. § 2.301(e).

If you assert a claim of business confidentiality in connection with information and Documents forwarded in response to this request for information, in accordance with 40 C.F.R. § 2.204(e)(4), EPA is requesting that you answer the following questions with respect to any information or Document for which you assert a claim of business confidentiality:

1. What specific portions of the information are alleged to be entitled to confidential treatment? Specify by page, paragraph, and sentence when identifying the information subject to your claim.

2. For what period of time do you request that the information be maintained as confidential, e.g., until a certain date, until the occurrence of a specified event, or permanently? If the occurrence of a specific event will eliminate the need for confidentiality, specify that event. Additionally, explain why the information should be protected for the time period you've specified.

3. What measures have you taken to protect the information claimed as confidential from undesired disclosure? Have you disclosed the information to anyone other than a governmental body or someone who is bound by an agreement not to disclose the information further? If so, why should the information still be considered confidential?

4. Is the information contained in any publicly available material such as the Internet, publicly available databases, promotional publications, annual reports, or articles? Is there any means by which a member of the public could obtain access to the information? Is the information of a kind that you would customarily not release to the public?

5. Has any governmental body made a determination as to the confidentiality of the information? If so, please attach a copy of the determination.

6. For each category of information claimed as confidential, explain with specificity whether disclosure of the information is likely to result in substantial harm to your competitive position. Explain the specific nature of those harmful effects, why they should be viewed as substantial, and the causal relationship between disclosure and such harmful effects. How could your competitors make use of this information to your detriment?

7. Is there any other explanation you deem relevant to EPA's determination of your business confidentiality claim that is not covered in the preceding questions? If so, you may provide such additional explanation.

You must furnish comments to the above questions concurrent with your response to this information request if you have claimed any information as business confidential. See 40 C.F.R. § 2.204(e)(2). Pursuant to 40 C.F.R. § 2.205(b)(2), you may request an extension of this deadline. EPA will construe your failure to furnish timely comments as a waiver of your confidentiality claim, consistent with 40 C.F.R. § 2.204(e)(1). Please submit your comments to:

Robert Parrish, Attorney-Advisor
USEPA - Air Enforcement Division
MC 2242-A, Room 2119C

1200 Pennsylvania Ave., NW
Washington, DC 20002
(202) 564-6946 (phone)
parrish.robert@epa.gov

Pursuant to 40 C.F.R. § 2.205(c), you are hereby advised that information you submit as part of your comments may be regarded by EPA as entitled to confidential treatment if, when it is received by EPA, it is marked in accordance with 40 C.F.R. § 2.203(b). As required by 40 C.F.R. § 2.204(e)(6), you may assert a business confidentiality claim covering all or part of your response to these questions, as provided in 40 C.F.R. § 2.203(b). Information covered by such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in Section 114(c) of the Clean Air Act (the Act) and 40 C.F.R. Part 2. EPA will construe the failure to furnish a confidentiality claim with your comments as a waiver of that claim, and the information may be made available to the public without further notice to you.

APPENDIX B

Request to Provide Information

I. INSTRUCTIONS

If information or Documents not known or not available to you as of the date of submission of a response to this Request should later become known or available to you, you must supplement your response to EPA. Moreover, should you find, at any time after the submission of your response that any portion of the submitted information is false or misrepresents the truth, you must notify EPA of this fact as soon as possible and provide EPA with a corrected response. There are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Pursuant to the Clean Air Act, the Dow Chemical Company (Dow) must provide the following information within thirty (30) days of its receipt of this Request. EPA requests that the non-narrative information be provided in editable form, in spreadsheet format, preferably in Excel and that narrative Documents be provided in searchable pdf format or in Word. For each Document produced in response to this Information Request, indicate on the Document, or in some other reasonable manner, the number of the Question to which it responds. Please submit all information for each question in a logically titled and sequenced manner.

If the information requested was previously submitted to EPA in response to another Section 114 Request, Dow may either resubmit the information or may for each specific request, identify the date and addressee of the prior submittal and identify the location of the specific information within the prior submittal.

II. DEFINTIONS

"Ambient Air" or "air" shall mean that portion of the atmosphere, external to buildings, to which persons have access.

"Assist Air" shall mean all air that intentionally is introduced into an air-assisted Flare to assist in combustion.

"Company" includes any officer, director, agent, or employee of Dow, including any merged, consolidated, or acquired predecessor or parent, subsidiary, division, or affiliate thereof.

"Document" and "Documents" shall mean any object that records, stores, or presents information, and includes writings of any kind, formal or informal, whether or not wholly or partially in handwriting, including documentation solely in electronic form, including by way of illustration and not by way of limitation, any invoice, manifest, bill of lading, receipt, endorsement, check, bank draft, canceled check, deposit slip, withdrawal slip, order,

correspondence, record book, minutes, memorandum of telephone and other conversations, including meetings, agreements and the like, diary, calendar, desk pad, scrapbook, notebook, bulletin, circular, form, pamphlet, statement, journal, postcard, letter, telegram, telex, report, notice, message, analysis, comparison, graph, chart, interoffice or intra office communications, photo stat or other copy of any documents, microfilm or other film record, any photograph, sound recording on any type of device, any punch card, disc or disc pack; any tape or other type of memory generally associated with computers and data processing (together with the programming instructions and other written material necessary to use such punch card, disc, or disc pack, tape or other type of memory and together with printouts of such punch card, disc, or disc pack, tape or other type of memory); and (a) every copy of each document which is not an exact duplicate of a document which is produced, (b) every copy which has any writing, figure or notation, annotation or the like on it, (c) drafts, (d) attachments to or enclosures with any document, and (e) every document referred to in any other document.

"Facilities" or "Facility" means Dow's facilities in Freeport, TX, Plaquemine, LA, and St. Charles (Hahnville), LA.

"Flare" means an open combustion device that uses an uncontrolled volume of ambient air to burn gases. A Flare may be partially enclosed (such as an enclosed ground flare) or equipped with a radiant heat shield (with or without a refractory lining), but is not equipped with a system to limit the volume of combustion air. A Flare may use auxiliary fuel. A Flare may be elevated or at ground level.

"Person" or "Persons" shall have the meaning set forth in Section 302(e) of the Act, 42 U.S.C. § 7602 (e), and includes an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof.

"Pilot Gas" shall mean all gas introduced through the pilot tip(s) of a Flare to maintain a flame.

"Purge Gas" shall mean the minimum amount of gas introduced between a Flare header's water seal and the Flare tip to prevent oxygen infiltration (backflow) into the Flare tip. Purge Gas is typically introduced at the base of the Flare. For a Flare with no water seal, the function of Purge Gas is performed by Sweep Gas, and therefore, by definition, such a Flare has no Purge Gas, although Sweep Gas may be introduced at different locations, including at the base of the Flare.

"Supplemental Gas" shall mean all gas introduced to a Flare to raise the heating value of Waste Gas.

"Sweep Gas" shall mean: <u>For a Flare with a Water Seal:</u> The minimum amount of gas introduced into a Flare header in order to: (a) prevent oxygen buildup, corrosion, and/or freezing in the Flare header; and (b) maintain a safe flow of gas through the Flare header, including a higher flow during hot taps. Sweep Gas in these Flares is introduced prior to and is intended to

be recovered by the Flare Gas Recovery System; and For a Flare without a Water Seal: The minimum amount of gas introduced into a Flare header in order to: (a) prevent oxygen buildup, corrosion, and/or freezing in the Flare header; (b) maintain a safe flow of gas through the Flare header, including a higher flow during hot taps; and (c) prevent oxygen infiltration (backflow) into the Flare tip.

"Vent Gas" shall mean the mixture of all gases found just prior to the Flare tip. This gas includes all Waste Gas, Sweep Gas, Purge Gas, and Supplemental Gas, but does not include Pilot Gas, steam, or Assist Air.

"Waste Gas" shall mean the mixture of all gases from facility operations that is directed to a Flare for the purpose of disposing of the gas. "Waste Gas" does not include Sweep Gas, Purge Gas, Supplemental Gas, Pilot Gas, steam, or Assist Air.

"You" or "Yours", as used in each of the questions set forth in Section III of this Information Request, refers to, and shall mean, the company or corporation with which each addressee of this Section 114 letter is affiliated including its subsidiaries, division, affiliates, predecessors, successors, assigns, and its former and present officers, directors, agents, employees, representatives, attorneys, consultants, accountants, and all other persons acting on its behalf.

All terms used in this Request will have their ordinary meaning unless such terms are defined in the CAA, 42 U.S.C. § 7401 et seq., and the implementing regulations.

Words in the masculine shall be construed in the feminine, and vice versa, and words in the singular shall be construed in the plural, and vice versa, where appropriate in the context of a particular question or questions.

III. QUESTIONS

All requests seek information regarding all devices at each Facility meeting the definition of "Flare." If any Flares have been taken out of service or added into service during the time period specified in the request below, provide the information for the time period the Flare was in service.

1. For each Flare, for each hour of each day from January 1, 2009, through June 30, 2014, provide the measured, calculated, or estimated Vent Gas (i.e., the mixture of Waste Gas, Sweep Gas, Purge Gas, and/or Supplemental Gas) mass and volumetric flow rates in pounds per hour and wet standard cubic feet per minute that was routed to each Flare. If Vent Gas flow is not measured directly, use the best method(s) available to estimate or calculate the requested information on an hourly basis, which would include but not be limited to, the use of pressure measurements. Provide a narrative explanation and example calculations describing how you arrived at your response. If Vent Gas flow was not measured or cannot be calculated or estimated, (e.g., lack of equipment or equipment malfunction and/or maintenance at a Flare) provide an explanation of why no data is

available explaining why the flow cannot be calculated or estimated.

2. For each Flare, for each hour required in response to Question 1, provide the hourly average concentration of each constituent in the Vent Gas vented to each Flare, with their respective molecular weights and BTU/scf values. If the constituents in the Vent Gas were not measured directly, use the best method(s) available to estimate or calculate the requested information on an hourly basis. Such methods of estimation/calculation would include, but would not be limited to, the use of calculations from an online, intermittent, or continuous gas chromatograph (whether at the Flare or upstream of the Flare), one-time or periodic samples/analysis of gas constituents flowing to the Flare (whether at the Flare or upstream of the Flare), and/or process knowledge. Provide a narrative explanation and example calculations describing how you arrived at your response.

3. Provide a copy of the results of every measurement of the concentration of constituents of Vent Gas sent to any Flare that was undertaken from January 1, 2009, through June 30, 2014.

4. For each Flare, for each hour required in response to Question 1, provide the hourly average heating value, in BTU/scf, of the Vent Gas vented to each Flare. If the heating value was not measured/calculated, use the best means available to estimate/calculate the requested information on an hourly basis. Such methods of estimation/calculation would include, but would not be limited to, the use of calculations from an online, intermittent, or continuous gas chromatograph (whether at the Flare or upstream of the Flare), one-time or periodic samples/analysis of the Vent Gas flowing to the Flare (whether at the Flare or upstream of the Flare), and/or process knowledge. Provide a narrative explanation and example calculations describing how you arrived at your response.

5. For each Flare, for each hour required in response to Question 1, provide the hourly average rate at which steam and/or Assist Air was being added to each Flare, in pounds per hour for steam and/or scf/hour for Assist Air, at all locations on the Flare (i.e., the sum of seal, upper, lower, winterizing, etc.) during each Venting Period. If the steam and/or Assist Air flow was not measured, use the best means available to estimate it on an hourly basis. Such methods of estimation/calculation would include, but would not be limited to, estimating flow from pressure measurements or estimating steam flow from valve position data. Provide a narrative explanation and example calculations, if appropriate, describing how you arrived at your response.

6. For each Flare, for each hour required in response to Question 1, provide the hourly average steam-to-Vent-Gas or Assist Air-to-Vent-Gas ratio (pound of steam/pound of Vent Gas or scf of Assist Air/pound of Vent Gas) for each Flare. Provide a narrative explanation and example calculations, if appropriate, describing how you arrived at your response.

7. For each Flare, provide the minimum steam or Assist Air addition rate, in pound/hour for

steam and/or scf/hour for Assist Air, at all locations on the Flare (i.e., the sum of seal, upper, lower, winterizing, etc.). To the extent that the minimum steam or Assist Air addition rate changes on a seasonal basis, state the minimum rate for each season and the time periods during which each season's minimum rate applies.

8. Provide copies of any and all Documents in your possession, custody, or control that prescribe or recommend the amount of steam or Assist Air to be added to each Flare. Identify in your narrative response the location in each Document(s) that refers to the maximum steam or Assist Air rate; the minimum steam or Assist Air rate; the steam or Assist Air addition rate associated with particular venting scenarios; any general steam-to-Vent-Gas ratios, steam-to-specific-organic-gas ratios, Assist-Air-to-Vent-Gas ratios, or Assist-Air-to specific-organic-gas ratios; or any other reference to steam or Assist Air addition.

9. For each Flare, provide the date of installation, the manufacturer, and the model number.

10. For each Flare, provide copies of all manuals and/or operating instructions that were provided by the Flare manufacturer or vendor at any time. If no such Documents are in your possession, state whether you never received any such Documents or whether the Documents were lost or discarded.

11. Describe in detail any research or studies conducted or reviewed by Facility personnel or at the direction of Facility personnel regarding the operation of Flares, including, but not limited to research or studies relating to steam and/or Assist Air addition to Flares.

12. Provide copies of any and all Documents in your possession, custody, or control acquired or generated as the result of the research or studies that are the subject of Question 11.

13. In addition to the Documents sought in Question 10, describe in detail how each Flare operator is instructed on the level of steam, Assist Air and/or Supplemental Gas to be added to the Flares. Include the specifics of such instructions, including any Documents generated that are responsive to this request

14. Provide the average firing rate in mmbtu per hour each heater at the Facility for the year 2013.

15. Provide the volume of natural gas purchased by the Facility in 2013.

16. Does the Facility recover and do they use any gas as fuel? If so, provide the annual average of recovered gas burned and the average heating value of the gas.

17. For each Flare, state with specificity which, if any, federal and/or state regulations regulate/apply to each Flare. If any Flare is listed in a permit issued under federal and/or state regulations, provide an electronic copy, preferably in pdf, of each currently effective

permit.

18. For each Flare, state whether the Flare and its associated closed vent system is used as the method of compliance with any federal regulation, including without limitation, the New Sources Performance Standards found at 40 C.F.R. Part 60, the National Emission Standards for Hazardous Air Pollutants found at 40 C.F.R. Part 61, and the National Emission Standards for Hazardous Air Pollutants for Source Categories found at 40 C.F.R. Part 63, (specifically including without limitation any leak detection and repair (LDAR) provisions promulgated under these Parts such as 40 C.F.R. § 60.482-4(c), or 40 C.F.R. § 63.165(c)). In each such case, identify the process unit or equipment that is/are the "affected facility" under the applicable Part and the specific Subpart that applies to the "affected facility."

19. Provide block process flow diagrams for the Facility as a whole, and for each process unit at the Facility, including units under construction or planned for construction, and a detailed plot plan of the Facility.

20. Provide copies of Title V permit annual or semi-annual compliance certifications submitted to a local agency, State, and/or EPA for the Facility since April 1, 2009.

21. Provide a list and copies of all engineering and/or feasibility studies of actual or possible changes for all other process units at the Facility since January 1, 2000, whether such changes were implemented or not.

22. Provide a list of all permits to construct, permits to operate, and/or orders from all State and/or local agencies regarding any air pollutant emissions for the Facility issued since January 1, 2000. In such list, include the following information:

    a. Specify the date of permit or order issuance;
    b. Provide a list of equipment that was modified or constructed pursuant to the permit or order;
    c. State whether the permit is minor new source review (minor NSR), prevention of significant deterioration (PSD), major non-attainment NSR permit or other type of permit; and
    d. If a permit is a PSD or major non-attainment NSR permit, specify the pollutants for which such permit was issued.

23. Provide copies of all of the following documents submitted to or from all local agencies, the State, and/or EPA for the Facility since January 1, 2000:

    a. All air permits or orders;
    b. All air permit or order applications; and
    c. All correspondence related to such permit applications, including all supporting documentation.

24. Provide a list of all documents that estimate the air pollutant emissions changes for any project undertaken at the Facility since January 1, 2000.

25. Provide a list of all authorizations for expenditure (AFE), capital appropriation requests (CAR), and/or any other such documents that authorize expenditures for the Facility since January 1, 2000. Please provide this list in electronic format and include at least the following details:

    a. The internal number used to identify the AFE or CAR;
    b. The date that the AFE or CAR was submitted;
    c. Cost of the project proposed by the AFE or CAR; and
    d. A brief description of the project proposed by the AFE or CAR.

26. Provide copies of all AFEs, CARs, and/or any other such Document that authorized expenditures on any cracking furnace, Flare, Flare tip, Flare header, Flare knock out drum, Flare gas recovery system, and other component of a Flare system, since January 1, 2000.

27. Provide a list of each instance where new piping or larger piping was physically connected to a Flare header since January 1, 2000. The list must identify the following:

    a. The header and the Flares that are fed by the header;
    b. The maximum and average flows of gas added to the header in scfm;
    c. An estimate of the average concentration of each constituent of the the gas added to the header; and
    d. The date that the new or larger piping was physically connected to the Flare header.

28. Provide copies of the last five annual emission inventories submitted to a local or state agency, and/or EPA and all documents that are or were used to prepare the Facility's annual emissions inventory. Provide a detailed description of how the annual emissions inventory is prepared.

29. Provide a diagram of each Flare system at the Facility that shows the locations of each pressure, flow, net heating value, molecular weight or constituent concentration measurement, knockout drum, water seal, purge gas, sweep gas, and supplemental gas injection point. In addition, for each Flare, provide a list of all gas streams that are routed to the flare on a continuous or intermittent basis. In this list, include, at a minimum, the actual volume of each stream that is burned in the flare.