

Comments of the Allen County Citizens for the Environment
to the Ohio Environmental Protection Agency (OEPA)
& the U.S. Environmental Protection Agency – Region 5,
Air and Radiation Division
Concerning a Proposed Title V Operating Permit
for BP Chemical, Lima, OH
with a Focus on Provisions Affecting
the Butanediol Production Process

Comments concerning Facility ID 03-02-02-0015 - TVP008

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1 Introduction

By this filing, Allen County Citizens for the Environment (ACCE) submits this comment concerning the proposed Title V Operating Permit for the BP Chemical facility in Lima, OH. The primary focus of this comment is on provisions of the proposed permit affecting the Butanediol production process group at the BP Chemical facility.

Allen County Citizens for the Environment is a non-profit citizen environmental organization founded in 1988. The purpose of ACCE is to serve as a center for citizen volunteer activity to conduct educational and public information activities, research, advocacy, monitoring activities and organizing on the environmental problems of Allen County, Ohio, with a focus on air, water and land resources and public health protection.

This current activity to evaluate and comment upon the Butanediol provisions of the proposed Ohio EPA Title V permit for BP Chemical is an outgrowth of an air permitting appeal settlement agreement between ACCE and BP Chemical.

2 Ohio State Implementation Plan Requirements and the Proposed Title V Permit General Conditions

Ohio State Implementation Plan requirements are binding on BP Chemical and are applicable requirements that must be incorporated into the general conditions for the proposed BP Chemical permit.

Ohio SIP requirements include any provisions that have direct regulatory effect on BP Chemical from the Ohio air pollution statute, including Chapter 3704 of the Ohio Revised Codes, since the statute is an element of the Ohio SIP. The proposed Title V permit general conditions doesn't incorporate compliance with the Ohio air statute as part of the Ohio SIP and this omission should be remedied.

Similarly, the proposed Title V permit doesn't contain a reference to OAC 3745-15-03 (annual emission inventory reports), OAC 3745-15-04 (emission testing)¹, OAC 3745-15-08 (circumvention), OAC 3745-24-01 through 04 (emission statements) and OAC 3745-25 (emergency episodes). These omissions of Ohio approved SIP applicable requirements should be remedied in the general conditions of the proposed permit.

¹ Although the permit has a provision for entry for inspection at section 12(b) this provision fails to mention the SIP approved rule at OAC 3745-15-04.

The proposed permit with its general conditions does not contain sufficient protection for the rights of citizens to obtain disclosure of “emissions data” that is required under 40 CFR Section 2.301 and 42 USC 7414(c). The proposed permit general condition should be amended to specifically preclude the permittee from confidentiality claims involving “emissions data” as per the federal regulatory requirement.

3 Cross-walk Review of Selected Items between the Original BDO New Source Review Permit and the Proposed Title V Permit

Commentors first analyzed the proposed Title V permit Butanediol-applicable sections to determine whether all regulatory requirements included in the original New Source Review permit (as amended) have been, in fact, either directly incorporated into specific provisions of the proposed Title V permit or indirectly incorporated under some type of streamlining approach.

3.1 New Source Review Requirements for and Emission Unit Designation for the Butane Railcar/Truck Unloading Operations (J003) Must be Incorporated into the Final Title V Permit

Although Commenters are aware that the original butanediol process new source review permit was amended to remove the hydrogen plant (P802) because this process was sold by BP Chemical to another party, Commenters are not aware of any other processes that had been previously removed from the original new source review permit. Review of the proposed Title V permit and the BP Chemical Title V application indicates that there is no mention of butane railcar/truck unloading rack which is designated as process J003 in the original new source review permit for the butanediol production process. If an entity that is controlled by, controlling or in common control with BP Chemical still controls this butane loading rack process it must be incorporated into the permit.

Although the original new source review permit states that the “Butane feedstock supply section” is contained in P801, it isn’t clear that this describes the actual loading rack. Nor is the butane loading rack consigned to the section describing insignificant emission units.

3.2 The Proposed Title V Permit Does Not Track Applicable Regulatory Requirements of the New Source Review Permit for Compliance with Applicable Leak Detection and Repair (LDAR) Programs

Special condition A(5) of the BDO NSR permit as well as several of the emission unit specific provisions of that permit specify compliance with LDAR requirements at OAC Rule 3745-21-09(DD), 40 CFR 60 Subpart VV, and 40 CFR 63 Subpart H. The NSR permit makes all of these requirements applicable to emission units P801.

The underlying NSR permit requires compliance with 40 CFR 60 Subpart VV and OAC Rule 3745-21-09(DD) for emission units T094, T095, T096, T097, T098, T099, T100, T101, T102, T103, J001, J002 and N006.

However, Title V permit condition Part II(A)(1000) excludes emissions units P801 from the applicability section for OAC Rule 3745-21-09(DD) without any apparent justification and in apparent contravention of the requirements of the underlying BDO NSR permit. If the basis for this exclusion is streamlining based on compliance with 40 CFR 60 Subpart VV and/or 40 CFR 63 Subpart H, the Statement of Basis should be explicitly amended to make this claim. No claim of streamlining is made for this particular conjunction of LDAR rules in the statement of basis.

Similarly, Title V permit condition Part II(A)(3000) excludes emission unit N006 from compliance with 40 CFR 60 Subpart VV, again without apparent justification and in apparent contravention of the requirements of the underlying BDO NSR permit.

Finally, Title V permit condition Part II(A)(6000) excludes emission unit N006 from compliance with 40 CFR 63 Subpart H when pipes and conveyances for liquid and gaseous wastes to this unit will most likely be conveying substances that are regulated hazardous air pollutants to this unit for combustion. There isn't any clear delineation for purposes of HAP LDAR control requirements of where affected components of P801 end and where N006 begins. The underlying NSR permit implicitly acknowledges that LDAR at N006 is necessary to control criteria pollutants and thus any HAPS it also handles. Ambiguity in this matter is exacerbated by the confusing simultaneous claim that the thermal oxidizer is part of emission unit P801 in the P801 section of the permit and the inherent consideration of the thermal oxidizer as being separate from P801 given the distinct N006 section of the proposed Title V permit.

3.3 The Proposed Title V Permit Doesn't Clearly Track Requirements of the Underlying NSR Permit at Condition F.2 for Continuous Emission Monitoring Requirements for Nitrogen Oxides

Commentors have been conducting a diligent search of Section Part II, 2000), et seq., Section Part III (N006) and Section Part III(P001) in a so-far unsuccessful attempt to clearly and determinately identify where the requirements in the underlying NSR permit for the BDO unit at Special Condition F.2 have been placed in the proposed Title V permit. Special Condition F.2 of the underlying NSR permit sets forth the requirement to install continuous emission monitoring equipment to ensure compliance with the NOX emission limitation of 23.0 lbs/hr and 0.10 lb NOX/MMBtu. This condition also contains procedures for calculating SOGB heat input, quality control/quality assurance requirements, certification requirements, etc.

There is nothing like the specific NSR BDO permit NOX CEM requirements contained at all in Section Part III (N006 or P801). There is a possibility they are buried within all of the conditions contained in Section Part II, 2000, et seq., but we are unable to find any such references at this writing.

Nor can we find anywhere in the proposed Title V permit sections on N006 and P801 a compliance determination method that assures the NOX Continuous Emission Monitoring results can be used to ensure compliance with emission limitations of 23.0 lb/hr and 0.10 lb NOX/MMBtu. NOX CEM operations should allow for compliance determinations with short term NOX mass emission limitations and lb/MMBTU requirements. A NOX stack test should not be required just to determine if the NOX emission limitations are being exceeded to evaluate compliance when a NOX CEM is available.

Since the underlying NSR permit established these as “applicable requirements” pursuant to the NSR determination on the BDO unit, such requirements must be incorporated into the proposed Title V permit, at the very least in streamlined form.

3.4 The Total BDO Process Site-wide Emission Limitations were Not Incorporated

At the end of the section of the underlying BDO NSR permit following all of the listing of individual emission unit emission limitations is an overall emission limitation summary for all of the BDO process group emission units of the BDO facility. This provision of the underlying permit did not become incorporated in the proposed permit, but should be. It will require some modification to account for the hydrogen plant being removed from BP Chemical jurisdiction and coverage under its Title V permit and any other “as built” changes from what was in the underlying New Source Review permit.

4 The Meaning of Condition Part III(P801)A(II)(11) is Unclear

Condition Part III(P801)A(II)(11) is not clear because it doesn't identify what "use" means. If "use" goes just to fundamental feedstocks to the P801 unit, then it would be clear. However, if "use" means the utilization of liquid distillation bottoms as scrubber offgas boiler feed there must be an evaluation of whether the facility will be able to comply with this requirement. Commentors do not have any detailed characterization information on the composition of such liquid distillation bottoms, but it seems reasonable to question whether such liquid distillation bottoms might potentially be considered as photochemically reactive materials within the meaning of OAC Rule 3745-21-01(C)(5)

5 Commentors Interpret both the Specific Sections and the Overall Thrust of the Proposed BP Chemical Title V Permit as Violating the EPA "Credible Evidence" Rule and Part 70 Requirements

Multiple provisions in the BDO section of the proposed Title V permit violate the EPA "Credible Evidence" rule and requirements for Title V permits at 40 CFR Part 70 to consider all relevant information in compliance certifications and enforcement. Commentors also maintain that the Condition 17 credible evidence "saving" clause at the beginning of the permit does not achieve its intended purpose when read together with the permit shield requirement, notwithstanding EPA Region V's interpretation of this language.

5.1 Objectionable Testing and Compliance Provisions of the Proposed Permit in the Context of the Credible Evidence Issue

For Unit J001, the permit provides:

"Compliance with the emission limitations in Section A.1 [sic] of these terms and conditions shall be determined in accordance with the following methods:...."
Condition Part III (J001) (A)(V)(1)

"Applicable Compliance Method: The tons/yr limitation was developed using an emission factor and equation(1), from AP-42, Section 5.2.2.1.1, and a maximum annual throughput of 22,500,000 gallons as follows." Condition Part III (J001) (A)(V)(1.a)

"Operational Restriction: 22,500,000 [sic- no units] of material throughput/yr....Applicable Compliance Method: Compliance with the operational

restriction above shall be based on the record keeping requirements established in section A.III.2 of this permit.” Condition Part III (J001) (A)(V)(1.b)

All three of the above provisions are objectionable because other credible evidence of potential violations of emission limitations would be precluded from consideration. For example, if systems for collection of displaced vapors were malfunctioning or required rack arm to tank seals were not maintained properly for an extended period of time, the fact of these problems would not have a bearing on compliance determination and certifications as to annual emission limitations. Similarly, the compliance method calculation determination does not countenance a circumstance where the actual material throughput exceeds 22,500,000 gallons as to determination of compliance with emission limitations. The calculation method must account for the actual operation rather than what was a projected emission at the time of the NSR permit.

Similar criticisms can be made of the analogous provision in the Section Part III (J002)(V) for Unit J002.

Compliance determination provisions in all of the tank unit sections (Section Part III (T094 – T102)(A)(V) are similar and all are objectionable. For example, language for Unit T094, section Part III (T094)(A)(V) provides:

“Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods: 1.a Emission limitation: 0.04 ton VOC/yr.... Applicable Compliance Method: The permittee may demonstrate compliance with the annual allowable VOC emission limitation by employing the maximum annual material throughput (15,000,000 gallons and Tanks 4.0 computer program.” Section Part III (T094)(A)(V).

Such language is objectionable since Tanks 4.0 will rely on a physical configuration of a properly operated and maintained tank without seal and other failures that may occur. Where the facts indicate that a tank was subject to such failures and allowed, for example, displacement vapors or breathing losses to escape around seals or where the tank was observed with VOC-containing liquids on top of a floating roof from leaks for a significant period of time, then the mandatory compliance determination method from the proposed permit would not allow the latitude to consider such credible evidence of an emission limitation violation.

Moreover, such language as it is quoted above is objectionable for tank emission limitation compliance determination since it doesn't require the use of the actual tank throughput to determine the annual emission to compare with the emission limitation. The provision as written can be interpreted as a paper compliance exercise with a mandatory requirement to use only the throughput operational limitation rather than the

actual throughput (should it exceed the operational requirement provision elsewhere in the permit) to determine compliance with the annual emission limitation.

Similar criticisms can be made of the analogous language in all of the other BDO tank sections of the permit (T094 through T102).

For the thermal oxidizer, Section Part III (N006)(A)(V) introductory language provides:

“Compliance with the emission limitations in Section A.1[sic] of these terms and conditions shall be determined in accordant with the following methods:”

This language is then followed by an exposition of EPA-approved stack testing methods. However, none of the conditions and language following consider evidence of mere non-operation of the SOGB to be credible evidence of a violation of hourly emission limitations for volatile organic compounds, carbon monoxide and the 99% destruction efficiency requirement. It should not take a stack test by an EPA approved method in order to make an affirmative determination of a violation of CO, VOC and control efficient emission limitations from non-operation of the SOGB unit while process activity continues in that portion of P801 which is the fluidized butane oxidation unit reactor.

Similarly, Conditions Part III (N006) (A)(V)(1) and (1.a) appear to objectionably preclude credible evidence determined from using NOX continuous emission monitor results as a basis for compliance determinations on the NOX emission limitations of 23.0 lb/hour and 0.10 lb NOX/MMBtu.

5.2 The General Language Credible Evidence “Savings” Clause does not Achieve its Stated Purpose when Read with the Permit Shield Provisions of the Act and the Proposed Title V Permit

Notwithstanding a recent conversation with an EPA Region V official responsible for oversight of the Title V process in Ohio, Commentors continue to express concern about whether the credible evidence savings clause in condition 17 is sufficient to consider all available credible evidence in compliance and enforcement determinations when read together with the Condition 13 permit shield and the permit shield statutory language in the Clean Air Act.

Ohio EPA has deviated from a prior Ohio EPA/U.S. EPA agreement by adding the following sentence to Condition 17:

“This term is provided for informational purposes only.”

The effect of this addition seems intended to erase the substantive savings effect of Condition 17 to substantively require consideration of credible evidence in compliance determinations in light of the Ohio EPA deterministic compliance language noted in the prior subsection that does not appear to allow for consideration of other credible evidence of emission limitation violations.

6 Problems of Questionable or Missing Reference and Citation

The reference to “Section A.1” [sic] contained in Section Part III (J001)(A)(V)(1) is incorrect as shown and should be changed to “Section A.I.1” in the text. This criticism holds for similar and analogous provisions in permit sections for Units J001, N006, P076, P905 and for Tank Units T094 through T102.

Nothing in the proposed Title V permit indicates a specific requirement for NSPS-affected units to be subject to the entirety of 40 CFR Part 60, Subpart A, the NSPS section preamble requirements. Such a provision must be included in the proposed permit that would include, at a minimum, citation to this federal regulation. Failure to do so means that, for example, the Subpart A requirements governing good air pollution control practice requirements would not be an enforceable provision of the Title V permit. Other binding elements of Subpart A that are in effect because of other NSPS applicable units in the permit would not be permit enforceable and compliance certified if these requirements were not incorporated.

Similarly, nothing the proposed Title V permit indicates a specific requirement for compliance with the preamble at 40 CFR Part 63, Subpart A to National Emission Standards for Hazardous Substances (NESHAPS) with the exception of 40 CFR 63.6(e)(3) on malfunction plans. The entire Subpart A of this NESHAPS section of codified federal regulations must be incorporated into the permit as an enforceable permit provision and may be done by reference rather than incorporating the entire text.

Condition Part III (N006), the State-only enforceable section covering the MAGLC toxics limits on PDF page 451, contains an irrelevant reference to “typically coatings and cleanup materials” in the first paragraph.

PDF pages 40 and 46 contain extraneous question marks in the text.

The last single sentence paragraph of Condition Part III (N006) (A)(V)(1.a) on PDF page 448 erroneously references a NOX emission test when it really should be referring to a CO emission test in the form of Method 10.

In part II of the proposed permit, rote incorporation of portions of the federal rules has imported clearly extraneous, confusing and/or irrelevant boilerplate text that is not applicable to the emission units in question and which merely causes confusion and

unnecessary length to the permit. Where a given section of federal regulations clearly doesn't apply to the subject facility, that section of text should be eliminated. For example, there are sections of text referring to completely different facilities that should be eliminated. Or, since the subject facility doesn't burn coal in the N006 unit, all references in the federal regulation to coal burning can be dropped for clarity and brevity.

Ohio EPA should consider a major revision of Part II of the proposed Title V permit to incorporate only needed citation to federal regulations by reference rather than full inclusion of all federal CFR text in the text of the proposed Title V permit.

7 The Proposed Permit Creates Ambiguity by Considering the Scrubber Offgas Boiler Both as a Separate Emission Unit N006 and as a Portion of Emission Unit P801

Confusion and ambiguity are created by the simultaneous designation of the thermal oxidizer at the BDO plant as being both its own N006 emission unit and also the listing of this oxidizer as part of the BDO process equipment at P801. The permit should put this equipment at one location or another, but not adopt coverage in both places.

Frankly, the readability of the Title V permit could be significantly improved if all thermal oxidizer operating, monitoring, recordkeeping and compliance determination requirements were removed from the P801 section and placed in the N006 section so they were not directly juxtaposed with the flare operating, monitoring, recordkeeping and compliance determination requirements.

8 Proposed Conditions Part III (N006) (II)(3), (III)(3) and (IV)(4) are all in the Wrong Section

Condition Part III (N006) (II)(3), (III)(3) and (IV)(4) address scrubber water supply pressure and flow rate. However, the scrubber following the butane oxidation unit is not part of the SOGB N006 emissions unit. Instead, it is part of the P801 emissions unit and any such operating condition, monitoring and reporting requirements governing scrubber operation should be moved to the analogous sections of Part III (P801) provisions of the permit.

9 Compliance Plan and Enforcement Issues

Commentors are aware that the subject facility has been issued a Notice of Violation and been subject to enforcement on the matter of the particulate emission limitation from emission unit N006. Under OAC 3745-77-07(C), the proposed Title V permit must have a Compliance Plan and enforceable schedule of compliance to address this issue. The proposed Title V permit for BP Chemical contains no such elements and

no public notice of a compliance plan and schedule of compliance. Alternatively, if there is a move to amend the underlying PTI in relax the PM emission limitation for N006, this matter is also one for inclusion in the Title V permit approval proceeding.

10 Compliance Monitoring and Reporting Issues

General condition Part I(A)(1)(c)(ii)(a) appears to require deviation reports to provide “...the magnitude and duration of each deviation” in regard to compliance with emission limitations. Although BP Chemical has been submitting reports on emission limitation deviations for VOC, carbon monoxide and hazardous air pollutants for the SOGB N006 emission point, it isn’t clear to Commentors that the listing of actual deviation emission amounts for all incidents would necessarily be required within the meaning of the word “magnitude.”

Commentors assert that the permit should be explicitly amended to require the prompt reporting of the actual identities and amounts of emissions released during all incidents that cause an atmospheric release. The current language of the proposed permit does not necessarily require this amount of specificity in reporting. For example, if an atmospheric discharge pressure operated relief valve opens in the BDO unit, this constitutes a violation of an operating condition about the required use of N006 as a 99% efficient control device for the butane oxidation reactor scrubber offgas. However, since such an event is not associated with a specific stack vent numerical emission limitation, it is not clear from the current language of the permit contained in sections for emission units N006 and P801 that the facility is required to report the identity and amounts of pollutants released from such a non-numeric emission limitation release point under a reporting requirement going solely to the “magnitude” of the deviation.

11 The Proposed Title V Permit Appears to Countenance a Relaxation in the Stringency of Required Stack Testing Methods Compared to the Underlying Original BDO New Source Review Permit for Volatile Organic Compounds

Special Condition E(2)(c)(ii)(ac) of the original underlying BDO NSR permit required EPA stack testing method 18 from 40 CFR Part 60, Appendix A for evaluating compliance with the volatile organic compound emission limitation for the N006 thermal oxidizer emission unit.

Method 18 VOC testing features a determination and quantification of identifiable VOC chemical constituents of a gaseous VOC mixture through gas chromatography and subsequent detection methods. Such a method was required by the NSR permit in order to properly assess the total mass weight of all VOC species emitted by the N006 unit. In particular, Method 18 will reflect the mass contribution of oxygenated chemical compounds that are likely to be found in the inlet gases to the SOBG as well as the controlled outlet flow.

Condition Part III (N006) (A)(V)(1.a) states in part:

“Compliance with the hourly allowable VOC emission limitation shall be based on the results of stack testing conducted in accordance with 40 CFR, Part 60, Appendix A - Test Methods 1-4 and 18, **25, or 25A, as appropriate.**” (Emphasis added)

By allowing stack test Methods 25 and 25A and the “as appropriate” language, Ohio EPA appears to be granting the permittee the authority to use a test method which will not fully quantify the total mass rate of chemical compound VOCs emitted from the BDO N006 unit, since “as carbon” methods will understate the emissions impact on total VOC emissions of the oxygenated compounds expected to be present in abundance. This is an unacceptable relaxation of the underlying original BDO NSR permit requirements and should be stricken from the Title V permit before issuance.

12 The Matter of Prompt and Specific Reporting and Ohio EPA Practice

The quarterly reporting required under the proposed permit cannot be considered to constitute “prompt” reporting that is required under 3745-15-06 and 3745-77-07(A)(3)(c)(iii) and 70.6(a)(3)(iii)(B).

At the very least, there should be a requirement that a prompt written report should follow a prompt verbal report within 2-3 days following such a verbal report. Such written reports should identify the date and time of the deviation, the identify and amount of emissions released, the process group, emission unit and unit code and equipment and equipment code that caused or is suspected of causing a release, including root cause analysis and future preventive measures.

At the present time, the Ohio EPA NW District office doesn’t file a memorandum of verbal reports in a specific enforcement file, such as the BP Chemical file. Verbal reports are memorialized in a district-wide log book. This book must be searched extensively in order to find evidence of deviation incidents. As such, citizens attempting to establish the nature of deviations and emission incidents cannot just search BP Chemical’s file at the NW District Office to determine what has happened. This is not acceptable government management practice in the handling of important information about the environmental consequences of a large industrial complex.