

west virginia department of environmental protection

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Response to Public Comments

Roxul USA, Inc. Ranson Facility

Permit Application No. R14-0037A Facility ID No. 037-00108

Date: November 14, 2023

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BACKGROUND INFORMATION

On September 6, 2023 (*Spirit of Jefferson*), pursuant to §45-13-8, the West Virginia Division of Air Quality (DAQ) provided notice to the public of an open comment period for Permit Application Number R14-0037A submitted by Roxul USA, Inc (Roxul) for the modification of a mineral wool manufacturing facility located in Ranson, WV. At that time, the draft permit and Engineering Evaluation/Fact Sheet were made available to the public for review. The permit application had previously been available for public review and remained so during the public comment period. As a result of the previous interest expressed in the facility the Director determined that a public meeting was warranted. Therefore, the advertisement included the date, time, and location of an in person public meeting in Charlestown on September 19, 2023 and an additional virtual meeting, to accept comments, on September 26, 2023.

During the public comment period, the DAQ accepted comments on its preliminary determination to issue permit R14-0037A to Roxul and on all documents related thereto. All documents submitted by the company and that were used by the DAQ in its review were and are available to the public on the DAQ webpage and on the DEP Public database.

OVERVIEW OF COMMENTS RECEIVED

The DAQ received 166 written comments during this public comment period. Eight other comments were received after the comment period expired. An additional thirteen (13) oral comments were made during the virtual public meeting on September 26, 2023. There was also overlap in the individuals providing written comments and oral comments. Additionally, many of the written comments were "form letters" submitted by multiple commenters. Pursuant to §45-13-8.8, all submitted comments (relevant to applicable air quality issues) received during the public comment period have been reviewed and are addressed in this document. All comments received have been made part of the official file for R14-0037A and can be viewed by the public as part of that file.

ORGANIZATION OF COMMENT RESPONSE

The DAQ's response to the submitted comments includes both a general and specific response section. The general response will define issues over which the DAQ has authority and by contrast, identify those issues that are beyond the purview of the DAQ. The general response will also describe the statutory basis for the issuance/denial of a permit, discuss the role of the NSR permitting process in the larger divisional goal of maintaining air quality in WV, and detail the current status of the ambient air quality of Jefferson County.

The specific response will summarize each comment that falls within the purview of the DAQ and provide a response to it. This document will not reproduce the comments here (they are available for review in the R14-0037A file). Instead, comments will be summarized (and sometimes consolidated) and key points will be listed. The DAQ makes no claim that the summaries are

Response to Comments: R14-0037A Roxul USA, Inc. complete; they are provided only to place the responses in a proper context. For a complete understanding of submitted comments, please see the original documents in the file. Comments (or portions of comments) that are not directly identified and responded to in the specific response section of this document are assumed to be answered under the general response section.

GENERAL RESPONSE TO COMMENTS

Statutory Authority of the DAQ

The statutory authority of the of the DAQ is given under the Air Pollution Control Act (APCA) - West Virginia Code §22-5-1, *et. seq.* - which states, under §22-5-1 ("Declaration of policy and purpose"), that:

It is hereby declared the public policy of this state and the purpose of this article <u>to</u> <u>achieve and maintain such levels of air quality</u> *as will* [underlining and emphasis added] protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state and facilitate the enjoyment of the natural attractions of this state.

Therefore, while the code states that the intent of the rule includes the criteria outlined in the latter part of the above sentence, it is clear by the underlined and bolded section of the above sentence that the scope of the delegated authority does not extend beyond the impact of air quality on these criteria. Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as job creation, economic viability of a proposed project, strategic energy issues, non-air quality environmental impacts, etc. Beyond the DAQ's position that the code does not grant us the authority to take into consideration such issues, it is also self-evident that these issues are beyond the expertise of the Division of Air Quality and that most are regulated by other bodies with the mandates and expertise to do so.

Statutory Basis for Permit Denial

The basis for issuance or denial of an air quality permit is given under WV Legislative Rule 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation." Pursuant to §45-13-5.7, the DAQ shall issue a permit unless:

a determination is made that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be inconsistent with the intent and purpose of this rule or W. Va. Code §22-5-1 et seq., in which case an order denying such construction, modification, relocation and operation shall be issued.

Response to Comments: R14-0037A Roxul USA, Inc. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship.

It is clear under 45CSR13 that denial of a permit must be based on one of the above explicitly stated criteria or, as noted, is inconsistent with the intent of 45CSR13 or §22-5-1, *et. seq.* As is stated above, it is the DAQ's position that the intent of both the APCA and 45CSR13 is to restrict the authority of the DAQ to air quality issues as outlined in the APCA and in West Virginia's State Implementation Plan (SIP).

The air quality issues evaluated relating to Roxuls's application to modify a mineral wool insulation production facility are outlined in the DAQ's Engineering Evaluation/Fact Sheet made public on September 6, 2023. The issues covered under that document represent the extent of the substantive air quality issues over which the DAQ believes it has authority to evaluate under 45CSR13 and the APCA as relating to Roxul's Permit Application R14-0037A.

DAQ Permitting Process in Context

It is important to note here that the DAQ permitting process is but one part of a system that works to meet the intent of the APCA in WV. The DAQ maintains a Compliance/Enforcement (C/E) Section, an Air Monitoring Section, a Planning Section, *etc.* to effect this. Most pertinent to the permitting process, the C/E Section inspects permitted sources to determine the compliance status of the facility including compliance with all testing, parametric monitoring, record-keeping, and reporting requirements.

Other Permitted Facilities

The subject of this permitting action is Roxul's application to modify a mineral wool insulation production facility. Comments regarding other facilities are not addressed herein.

Ambient Air Quality Status of Jefferson County

The regulatory air quality of a defined local area - in this case for Jefferson County - is determined by its status with respect to the National Ambient Air Quality Standards (NAAQS). The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called criteria pollutants. They are listed at https://www.epa.gov/criteria-air-pollutants

Counties that are known to be violating these standards are, for specific pollutants, designated by the EPA as in "non-attainment" with the NAAQS. Counties that are not known to be violating these standards are, for specific pollutants, designated by the EPA as in "attainment" with the

NAAQS. Jefferson County is designated by EPA as in attainment with all of the NAAQS. WVDAQ does not expect that status to change as a result of this permit nor any other recently issued permits.

General Response Conclusion

In response to all commenters who referenced substantive non-air quality issues, the APCA and 45CSR13 does not grant the DAQ the authority to take into consideration such issues in determining to issue or deny the permit. Further, the requirements of 45CSR13 require the DAQ to, when denying a permit, explicitly state the reason pursuant to §45-13-5.7. Additionally, the permit is but the beginning of the involvement of the DAQ with a source. After issuance, the facility will receive inspections to determine compliance with the requirements as outlined in the applicable permit. Finally, with respect to the quality of the ambient air of Jefferson County, the EPA has designated the county as in attainment with the NAAQS.

SPECIFIC RESPONSES TO COMMENTS

Comment #1

Commenter states that the Engineering Evaluation does not contain any analysis of the data provided in Rockwools application. Specifically, the commenter seems to be asking for an analysis of the method in which Rockwool determined their proposed emission limits.

DAQ Response

For the smaller sources at the facility (e.g. boilers, haul roads, storage tanks, fire water pump and material handling etc.) emission calculations were based almost entirely on AP-42 as can be noted from the footnotes in Attachment N of the applications. AP-42 is a well established compilation of emission factors used by both industry and regulatory agencies across the country.

For the larger sources (e.g Furnace IMF01 and the WESP), Roxul based their estimates (with the exception of certain individual HAPs which were not tested for or monitored) on either stack testing performed at the Ranson facility or data from the Continuous Emissions Monitoring system installed at the Ranson facility. Roxul then applied certain engineering judgements to that data in order to develop, proposed limits that included what they believed to be a reasonable compliance margin. Roxul did not submit this analysis to WVDAQ. In order to determine whether or not Roxuls proposed emission limits were reasonable, WVDAQ simply compared the proposed limits to existing stack testing results. After exhaustive conversations with Roxul and internal deliberations, WVDAQ largely accepted Roxuls final proposed limits. The sole exception was the proposed PM limit from the WESP. WVDAQ believes Roxuls proposed emission limit of 12 pounds per hour and 50.39 tons per year is unreasonable. Stack testing done at the facility showed emissions of 4.62 pounds per hour (19.4 tons per year based on Roxuls proposed 8,400 hours per year of operation). It is DAQ's opinion that Roxul did not submit a sufficient explanation showing that a compliance margin of 2.6x is justified in this case. Therefore, DAQ is utilizing an emission limit of 8 pounds per hour and 33.6 tons per year. This limit is based on a safety factor of 1.2 times the highest of the three individual runs of the November 2021 stack test. Given that compliance with the limit is demonstrated with an average of three runs, DAQ believes a limit of 1.2 times the highest run should provide a reasonable compliance margin.

Stated that the permit needs to specifically prohibit the use of coal.

DAQ Response

Although DAQ believes the original draft permit already effectively prohibited the use of coal, condition 4.1.3 was added, specifically prohibiting coals use at the facility.

Comment #3

Commenter states that clearer permit limits for operational limits and monitoring of those limits need to be included in the permit.

DAQ Response

In response to this comment conditions 4.1.4.e, 4.1.5.d, 4.1.6.d and 4.2.5 were added to the final permit.

Comment #4

Commenter states that Roxul has required "more than the average amount of scrutiny".

DAQ Response

In response to multiple complaints, DAQs enforcement section has visited the facility performing inspections, visual emission and odor checks. None of those inspections have resulted in enforcement personnel finding any violations. One stack test (CO emissions from the WESP) showed emissions greater than permitted. That situation is addressed in the permit.

Comment #5

Commenter thanked DAQ for the September 19, 2023 public meeting and encouraged DEP to continue protecting citizens.

DAQ Response

No response necessary.

Comment #6

Commenter states that they want to see the change in emissions for each individual change proposed by Roxul.

DAQ Response

The change in emissions resulting from each modification at the facility is somewhat dependent upon how one groups the changes. For example, Roxul is removing 10 tanks, adding 3 tanks and changing the size of 10 tanks. The permit limits emissions from the tanks in the aggregate. However, one could also look at the change in emissions from each individual tank. Nevertheless, the change in emissions from each emission point due to the proposed modification can be determined by comparing any two emission points in the two tables under the "Estimate of Emissions by Reviewing Engineer" section of the Engineering Evaluation.

Commenter states that fact sheet doesn't specify which combustion sources changed sizes and what those size changes were.

DAQ Response

The fact sheet mentions the updated sizes of each combustion source and the previous sizes of the boilers. It does not specify the previously permitted sizes of the fire water pump or afterburner. That information is available in both the permit application and the power point slides from the September 19 public meeting. Both of those documents are available on DAQs website.

Comment #8

Commenter stated that Roxul originally was proposed and permitted "in a very unpublic fashion".

DAQ Response

The commenter is referring to the original, 2018, permitting process. That process is complete and does not effect the current permitting action. However, all required public notice procedures were followed during the 2018 permitting process.

Comment #9

Commenter states that there is a general lack of transparency and says that Rockwool continues to withhold certain information as confidential business information (CBI).

DAQ Response

Rockwools revised application contains no information claimed as CBI. All information provided to the DAQ for application R14-0037A is publicly available on our webpage under Air Quality Permit applications, Popular Searches.

Comment #10

Commenter states that their elderly mother lives near the facility and is concerned about the air quality because she has emphysema.

DAO Response

The Primary NAAQS provide protection for sensitive populations. Jefferson County is currently designated as in attainment with all NAAQS. Based on knowledge of emissions density and monitored air quality throughout the state, WVDAQ fully expects Jefferson County to remain in attainment with the NAAQS.

Comment #11

Commenter states WVDAQ should require Rockwool to install and operate Best Available Control Technology (BACT) based on the use of natural gas as a fuel source.

With the changes proposed in this application, the facility will become a non-major source under the definitions in 45CSR14. Therefore, the facility is not required to perform any BACT analysis. However, the original permitting action in 2018 included a BACT analysis which assumed the furnace would fire either coal OR natural gas. BACT for Natural Gas has already been installed and will continue to be used at the facility.

Comment #12

Commenter requests a prohibition of outdoor storage of material and building venting not expressly permitted in the permit.

DAQ Response

Any storage of material resulting in emissions and not allowed in the permit would be considered a violation of the permit. This specific comment was made by many commenters and appears to be the result of either one of two incidents.

The first incident was a case of "punking". Punking is a term used in the mineral wool industry that describes a rare product quality issue where a piece of molten material is carried through the process and becomes embedded in the final product. When punking occurs, the molten material continues to give off heat even when packaged as a final product. Although the mineral wool itself is fire retardant, the packaging material and pallets the product is stored on is not. To date, punking has only occurred once at the facility. Roxul notified WVDEP which conducted a facility inspection. Although punking is a rare event and is not a part of the ordinary facility processes, WVDAQ added condition 4.2.8 to the permit.

The second incident was a case where bauxite was dumped on storage pad B70. The storage of bauxite on that pad is not permitted and was due to a trucking error.

Regarding the venting of buildings, any venting of a building that would result in any increase in emissions above what is included in the permit would be a violation of the permit. However, in order to be abundantly clear, condition 4.1.11 was added to the permit.

Comment #13

Commenter requests that a section on accidental releases be added to the permit. Specifically, the commenter seems to be referring to large, accidental releases that would pose an immediate danger to those in the area.

DAQ Response

Accidental release prevention and Risk Management Plans are regulated under section 112r of the Clean Air Act and not through WVDAQs minor source permitting program.

Comment #14

Commenter requests a section to detect radioactivity be added to the permit.

Radioactivity is not regulated by WVDAQ except that radionuclides are considered Hazardous Air Pollutants. Hazardous Air Pollutants emitted from mineral wool production facilities are regulated under 40 CFR 63 Subpart DDD. The Roxul facility is subject to all applicable requirements of Subpart DDD.

Comment #15

Commenter requests a section in the permit to require downwind collection of pollutants.

DAQ Response

DAQ utilizes ambient air quality monitors across the state. The monitors are sited in accordance with US EPA guidelines and regulations, including 40 CFR Part 58. It should also be noted that regardless of the location of any ambient air quality monitor, said monitor would not be able to determine which portion of any pollutant is due to any particular facility.

Comment #16

Commenter requests that penalties for violation of the permit be spelled out in the permit.

DAQ Response

Penalties for violations of state and federal rules or permit conditions are established by WVDAQs compliance and enforcement section and/or USEPA, not WVDAQs permitting section.

Comment #17

Commenter states that he and his wife are over 80 and have respiratory issues.

DAQ Response

The Primary NAAQS provide protection for sensitive populations. Jefferson County is currently designated as in attainment with all NAAQS. Based on knowledge of emissions density and monitored air quality throughout the state, WVDAQ fully expects Jefferson County to remain in attainment with the NAAQS.

Comment #18

Commenter states that she is selling her home and moving out due to heavy industry coming to the area. Commenter also states that heavy industry threatens the tourism and agricultural industries in the area.

DAQ Response

Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as job creation, economic viability of a proposed project, strategic energy issues, non-air quality environmental impacts, etc. Additionally, as indicated above under "Statutory Authority of the DAQ", WVDAQ has no authority to restrict industry to or from certain counties or areas.

Commenter states that she is a teacher at North Jefferson Elementary and is concerned about her students and local families around the facility and wants to make sure "the air is clean and won't harm our more vulnerable populations"

DAQ Response

The Primary NAAQS provide protection for sensitive populations. Jefferson County is currently designated as in attainment with all NAAQS. Based on knowledge of emissions density and monitored air quality throughout the state, WVDAQ fully expects Jefferson County to remain in attainment with the NAAQS.

Comment #20

Commenter states she has asthma and doesn't want heavy industry polluting her community.

DAQ Response

The Primary NAAQS provide protection for sensitive populations. Jefferson County is in attainment of those standards and WVDAQ fully expects that to remain the case. Additionally, as indicated above under "Statutory Authority of the DAQ", WVDAQ has no authority to restrict industry to or from certain counties or areas.

Comment #21

Commenter states that they are frustrated that "Rockwool has been able to manipulate the system to get around pollution requirements"

DAQ Response

Roxul is subject to all applicable state and federal air quality rules and has not "gotten around" any pollution requirements.

Comment #22

Commenter states that Roxul isn't complying with air pollution limits and would never be able to operate with its current emission levels in Denmark. Commenter also statess that Roxul isn't providing "that many jobs".

DAQ Response

Roxul is currently in compliance with all state and federal air quality rules. With the issuance of the new permit, they will be in compliance with all permit requirements. WVDAQ has no authority to hold any company to standards of another country. Additionally, based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as job creation.

Comment #23

Commenter asks why we are weakening environmental protection laws and states the Ranson facility doesn't meet the requirements of other Roxul facilities in other areas.

Issuance of the permit does not change any environmental protection laws. Additionally, WVDAQ has no authority to hold any company to standards of another area.

Comment #24

Commenter is concerned about the emissions effecting nearby school children and herself since she has been diagnosed with chemical sensitivities.

DAQ Response

The Primary NAAQS provide protection for sensitive populations. Jefferson County is in attainment of those standards and WVDAQ fully expects that to remain the case.

Comment #25

Commenter states that WVDEP never should have approved the initial air permit.

DAQ Response

The basis for issuance or denial of an air quality permit is given under WV Legislative Rule 45CSR13-"Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation." Pursuant to §45-13-5.7, the DAQ shall issue a permit unless:

a determination is made that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be inconsistent with the intent and purpose of this rule or W. Va. Code §22-5-1 et seq., in which case an order denying such construction, modification, relocation and operation shall be issued. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship.

It is clear under 45CSR13 that denial of a permit must be based on one of the above explicitly stated criteria or, as noted, is inconsistent with the intent of 45CSR13 or §22-5-1, *et. seq.* As is stated above, it is the DAQ's position that the intent of both the APCA and 45CSR13 is to restrict the authority of the DAQ to air quality issues as outlined in the APCA and in West Virginia's State Implementation Plan (SIP).

Comment #26

Commenter cites WV State Board of Education policies regarding school construction.

DAQ Response

WVDAQ has no authority to enforce Board of Education policies.

Commenter complains about truck traffic and noise.

DAQ Response

Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as truck traffic or noise.

Comment #28

Commenter states that Roxuls application is based on emissions from their Mississippi facility which burns coal.

DAQ Response

The commenter is possibly confusing the original application with the current application which (with very few, minor exceptions) bases emissions on information from the Ranson facility.

Comment #29

Commenter is worried about groundwater contamination since the facility is located on "karst topography"

DAQ Response

Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as non-air quality environmental impacts.

Comment #30

Commenter is concerned about "fires, chemical leaks and explosions".

DAQ Response

Accidental release prevention and Risk Management Plans are regulated under section 112r of the Clean Air Act and not through WVDAQs minor source permitting program. USEPA has retained primacy over this portion of the Clean Air Act.

Comment #31

Commenter states that permit conditions 4.1.4.a, 4.1.5.a, 4.1.8.b and 4.1.9.d should be modified to specify that the procedures identified as "good combustion practices" should be required to be performed at a frequency in accordance with manufacturer recommendations or good engineering practices. USEPA also states that the facility record the time and date all such procedures are performed.

DAQ Response

These changes were made to the permit.

Commenter wants the permit denied because the public was "exluded from facts which later came to light" in the original permit.

DAQ Response

The basis for issuance or denial of an air quality permit is given under WV Legislative Rule 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation." Pursuant to §45-13-5.7, the DAQ shall issue a permit unless:

a determination is made that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be inconsistent with the intent and purpose of this rule or W. Va. Code §22-5-1 et seq., in which case an order denying such construction, modification, relocation and operation shall be issued. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship.

It is clear under 45CSR13 that denial of a permit must be based on one of the above explicitly stated criteria or, as noted, is inconsistent with the intent of 45CSR13 or §22-5-1, *et. seq.* As is stated above, it is the DAQ's position that the intent of both the APCA and 45CSR13 is to restrict the authority of the DAQ to air quality issues as outlined in the APCA and in West Virginia's State Implementation Plan (SIP).

Comment #33

Commenter asserts that Roxul has "give nothing to the school children, whose air they pollute, the farmers and landowners, whose water quality they threaten on a daily basis, the local economy, to which they promised much and offered merely a few jobs"

DAQ Response

Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under 45CSR13, does not take into consideration substantive non-air quality issues such as truck traffic, noise or job creation.

Comment #34

Commenter requests that a specific condition prohibiting the use of coal be added to the permit.

DAQ Response

Condition 4.1.3 was added to the final permit.

Commenter requests that conditions be added to the permit specifically limiting hours of operation to the number of hours per year upon which annual calculations are based.

DAQ Response

Conditions 4.1.4.e, 4.1.5.d, 4.1.6.d and 4.2.5 were added to the final permit.

Comment #36

Commenter states that required testing of the WESP should occur during fleece operation since "emissions resulting from the Fleece Application process are also included in emission streams sent to the WESP".

DAQ Response

Emissions from the fleece coating operations are vented from the fleece application vents CM12 and CM13. While it is certainly possible that some of the VOCs from the fleece application will be controlled by the afterburner and subsequently emitted at the WESP, Roxul chose a more conservative approach in calculating emissions due to fleece application. They performed a material balance and assumed that 100% of VOCs and organic HAPs contained in the fleece coating is emitted to the atmosphere through vents CM12 and CM13.

Comment #37

Commenter asserts that a determination of whether the facility is a minor source or major source cannot be made because Roxul did not submit their methodology for determining their proposed emission limits.

DAQ Response

For the smaller sources at the facility (e.g. boilers, haul roads, storage tanks, fire water pump and material handling etc.) emission calculations were based almost entirely on AP-42 as noted in the footnotes in Attachment N of the applications. AP-42 is a well established compilation of emission factors used by both industry and regulatory agencies across the country.

For the larger sources (e.g Furnace IMF01 and the WESP), Roxul based their estimates (with the exception of certain HAPs at certain sources which were not tested for or monitored) on either stack testing performed at the Ranson facility or data from the Continuous Emissions Monitoring system installed at the Ranson facility. Roxul then applied certain engineering judgements to that data in order to develop proposed limits that included what they believed was a reasonable compliance margin. Roxul did not submit this analysis to WVDAQ. In order to determine whether or not Roxuls proposed emission limits were reasonable, WVDAQ simply compared the proposed limits to existing stack testing results. After exhaustive conversations with Roxul and internal deliberations, WVDAQ largely accepted Roxuls final proposed limits. The sole exception was the proposed PM limit from the WESP as discussed earlier.

It should be noted that ALL of Roxuls proposed limits for the main emission sources at the facility are significantly larger than the results of the actual emissions testing performed. Additionally, there seems to be some confusion based on the fact that Attachment J of the application references

"Engineering Estimate" as Roxuls basis of emission calculations. Roxul chose to label the emission estimate basis in this way because they did not simply transcribe the emission testing results into their proposed limits. They performed their own engineering analysis to INCREASE the proposed limits above the stack testing results to include a compliance margin they were comfortable with.

Comment #38

Commenter points out that page 36 of the permit application indicates that the reallocation of CO emissions from the furnace to the WESP is based on testing "from a similar facility"

DAQ Response

That statement in the application is erroneous. WVDAQ has reviewed the stack testing upon which the reallocation request was based and it was from the Ranson facility.

Comment #39

Commenter appears to want all emission calculations to be broken down so they can attribute each reduction to a particular change in process. For example, emissions from the furnace are being reduced. The furnace will no longer be permitted to fire coal and will have its operating hours reduced from 8,760 hours per year to 8,400 hours per year. However, JCF is unable to allocate which portion of the reductions is due to the reduction in operating hours and which is due to the prohibition to fire coal. Commenter goes on to assert that because each reduction can't be specifically attributed to a given process change, WVDAQ cannot properly classify the facility as major or non-major.

DAQ Response

Ascribing each change in emissions to a particular change in the process isn't necessary. As long as the new emission limits are accurate, then WVDAQ can correctly classify the facility as either a major or non-major source under 45CSR14 and 45CSR30. The final permit contains sufficient monitoring, recordkeeping and testing requirements to ensure that the facility is and will remain a non-major source under 45CSR14.

Comment #40

Commenter states that the emission estimates provided in the May application "do not appear to be derived from Ranson specific emissions or stack test data." The commenter specifically mentions that HAP emissions from the WESP are not based on site specific data and state that the source of the estimates are not addressed.

DAQ Response

Most emission estimates for the large sources at the facility are based on data obtained from the Ranson plant. As for the HAPs from the WESP specifically, those calculations are indeed based on stack testing performed at the Ranson facility. This is noted in the footnotes on page 130 of the application. This fact is also mentioned on page 20 of the Engineering Evaluation where it notes "All emissions" from the WESP "are based on stack testing performed at the RAN Facility. A compliance safety margin was then added."

Commenter again reiterates previous statements that emission calculation data is missing.

DAQ Response

As previously mentioned, there seems to be some confusion based on the fact that Attachment J of the application references "Engineering Estimate" as Roxuls basis of emission calculations. Roxul chose to label the emission estimate basis in this way because they did not simply transcribe the emission testing results into their proposed limits. They performed their own engineering analysis to INCREASE the proposed limits above the stack testing results to include a compliance margin they were comfortable with. The DAQ reviewed the results of these engineering judgements and either found them to be reasonable, based on our engineering expertise, or in the case of PM emissions reduced the compliance margin to a safety factor we found to be more reasonable.

Comment #42

Commenter states that the application should be deemed incomplete because Roxul did not supply the Maximum Potential Uncontrolled Emissions in Attachment J (Emissions Points Data Summary Sheet) of the application.

DAQ Response

DAQ made the determination that this information was not necessary to the review of the application. The facility is in operation and is using (permitted and required) emission controls. Uncontrolled emissions are used to determine if a source will trigger permitting requirements. That determination has already been made.

Comment #43

Commenter states that it is impossible to determine emissions from the facility without more information about the raw materials used at the facility. Commenter goes on to state that said information is defined in the Clean Air Act as emissions data.

DAQ Response

As previously mentioned, the emission estimates included in the Engineering Evaluation and draft permit are based on well established methodologies such as stack testing and AP-42 and do not require detailed information on which raw materials are used. Therefore, that information would not be considered "emissions data". The Raw materials have been reviewed to determine which regulated pollutants (under the CAA) they contain. It is expected that Roxul will use different suppliers of raw materials to make its products and each supplier may have a slightly different formulation – but contain the same regulated pollutants.

Comment #44

Commenter states that the stack testing cannot be relied upon to establish emission limits unless it can be shown that the testing was performed during operation scenarios that would result in worst case emissions. Specifically, the commenter states that "representative mineral wool manufacturing and fleece application was operating when such testing was conducted."

Prior to performing the stack tests, Roxul submitted testing protocols that were reviewed and approved by WVDAQ. The testing performed at the Ranson facility was conducted with production at maximum achievable loads on the day of each test. Per the Mineral Wool MACT, performance testing of HE01 was conducted while manufacturing a product with a binder formulation made with the resin containing the highest free-formaldehyde content specification range (§63.1183(b)).

Comment #45

Commenter states that Roxul did not identify the specific test or provide the "engineering estimates" applied to arrive at the VOC emissions from the WESP.

DAQ Response

Copies of the stack test results are available on DAQs website through the "AX" system and on the webpage under "Popular Searches". The results identify the EPA Methods used to determine the emission rate of each pollutant at each source. Specifically for VOC emissions from the WESP, the testing company used EPA Method 25A.

Comment #46

Commenter repeats its claim that emissions cannot be determined without detailed information about the raw mineral inputs.

DAQ Response

As previously mentioned, the emission estimates included in the Engineering Evaluation and draft permit are based on well-established methodologies such as stack testing and AP-42 and do not require detailed information on which raw materials are used.

Comment #47

Commenter states that the appropriateness of NOx emissions from the Furnace cannot be determined because Roxul based them on CEMs data without submitting said CEMs data.

DAQ Response

Roxul proposed a NOx emission limit from the furnace of 37.37 pounds per hour (which results in 156.95 tons per year). Stack testing performed at the facility and reviewed by DAQ show emissions of 17.27 pounds per hour (which results in 72.53 tons per year). In order to determine whether or not Roxuls proposed emission limits were reasonable, WVDAQ simply compared the proposed limits to existing stack testing results. After exhaustive conversations with Roxul and internal deliberations, WVDAQ accepted Roxuls final proposed Furnace emission limits.

Comment #48

Commenter states that tank emissions were based on the use of "unspecified 'emission masters".

DAQ Response

As can be found on the footnotes of page 138 of the permit application, Roxul actually used AP-42 methodologies using Mitchell Scientific's "Emission Master" software.

Commenter states that curing oven capacity is emissions data under the Clean Air Act.

DAQ Response

Page 63 of the permit application plainly lists the Maximum Design Heat Input of the curing oven as 9.86 mmbtu/hr. Additionally, all emissions from the curing oven are vented to the WESP. Emissions from the WESP are based upon stack testing, not the capacity of the curing oven. Therefore, even if this information had been witheld, it wouldn't have been emissions data under the Clean Air Act. Basically the capacity of the curing oven is not used when determining emissions from the curing oven.

Comment #50

Commenter states that low quality AP-42 emission factors should not be relied upon.

DAQ Response

Use of AP-42 emission factors are appropriate and commonly used by state and federal agencies as well as manufacturing industries.

Comment #51

Commenter states that PTE emission estimates from the WESP are not reliable because Roxul did not supply residence time in the afterburner combustion chamber (the afterburner vents to the WESP).

DAQ Response

The draft permit requires that the afterburner be operated using good combustion practices including proper combustion tuning, temperature, and air/fuel mixing and activities such as maintaining operating logs and record-keeping, conducting training, ensuring maintenance knowledge, performing routine and preventive maintenance, conducting burner and control adjustments, monitoring fuel quality, etc. Additionally, condition 4.1.12.f of the draft permit specifies conditions which must be met by the afterburner. These conditions are largely based on 40 CFR 63 Subpart DDD and contain all appropriate monitoring and recordkeeping necessary to ensure proper operation of the afterburner. Residence time can change as part of applying good combustion practices and is not a specific condition in the permit.

Comment #52

Commenter points out that although the application indicates a maximum heat input of 9.86 mmbtu/hr (comment actually erroneously states 9.88 mmbtu/hr), condition 4.1.12.f.1 still references the original limit of 6.83 mmbtu/hr. Commenter then states that "Because Rockwool and WVDEP have failed to show that the facility is no longer subject to PSD requirements ... WVDEP must require Rockwool to show that this change in the emission limit still represents BACT for this facility."

The MDHI limit in condition 4.1.12.f.1 has been corrected to reference 9.86 mmbtu/hr. Additionally, WVDEP has shown definitively that the facility is no longer a major source and is not subject to BACT limits.

Comment #53

Commenter states that Roxul did not provide a discussion of how the "settling factor" was applied to conveyor transfer point IMF11.

DAQ Response

Roxul utilized an 80% settling factor. The use of this factor was described in footnote 3 on page 134 of the application and is appropriate.

Comment #54

Commenter questions the use of 50% and 75% control efficiencies for enclosures when calculating material handling emissions.

DAQ Response

In the comment itself, the commenter acknowledges that the use of the control efficiencies is based on control efficiencies utilized in DAQ general permits. Their utilization is appropriate.

Comment #55

Commenter states that "In computing the PM PTE of the Baghouse (CE01-BH), the May Application claims that PM10 outlet emissions are 0.002 grain/scf while PM2.5 outlet emissions are 0.006 grain/scf. It is not clear how the outlet concentration of PM2.5 can be greater (by a factor of 3) than the concentration of PM10, since PM2.5 emissions are a subset of PM10 emissions."

DAQ Response

Commenter is correct. This issue was brought to Roxuls attention in August and their response was; "our submittal incorrectly contained a mix of data based upon pre and post-performance testing. In review, we should have completed an update for CE01 to represent that Filterable PM = PM10Fil = PM2.5 Fil=Mineral Fiber=HAPs, all at the levels of 0.21 lb/hr and 0.94 tons per year. This would represent a concentration of 1.37 mg/Nm3 and 0.0006 gr/scf. The same issue with gr/scf concentrations noted above applies here but was further confounded by the PM speciation breakdown."

Comment #56

Commenter repeats comment #38 above.

DAQ Response

See response to comment #38.

Commenter states that the application uses climate data from Harrisburg, PA for calculations of storage tank emissions.

DAQ Response

As indicated above, Roxul used Mitchell Scientifics Emission Master software to calculate tank emissions based upon AP-42 methodology. That particular software comes with climate information from specific cities. It is unclear to DAQ whether or not the software has access to climate information from Ranson, WV. However, given the fact that total emissions from all tanks total only 0.12 tons per year of VOCs, the use of climate data from Harrisburg vs Ranson would not result in any significant difference in emissions.

Comment #58

Commenter identifies three circumstances (storing material at heights above enclosure walls, storing materials in a parking lot, and operations with doors open) which they contend constitutes violations of the existing permit. Commenter proposes specific language be added to the permit to make it clear that these activities are not permitted.

DAQ Response

Conditions 4.1.7 and 4.1.11 were added to the permit.

Comment #59

Commenter substantially repeats comment #37.

DAQ Response

See response to comment #37.

Comment #60

Commenter substantially repeats comment #37.

DAQ Response

See response to comment #37.

Comment #61

Commenter states that the draft permit does not require CO testing from the WESP. Commenter goes on to suggest that the permit should require either CEMS for CO emissions from the WESP or an annual stack test.

DAQ Response

Conditions 4.3.2 and 4.3.3 require initial and periodic stack testing of CO from the WESP.

Commenter is concerned that VOC and HAP emissions would be uncontrolled when the curing oven is not in operation because condition 4.1.12.f.1 only requires the afterburner to be in operation when the curing oven is in operation. Commenter goes on to state that other controls should be considered.

DAQ Response

The permit only requires that emissions from the curing oven be controlled by the afterburner. If the curing oven is not in operation it is not producing emissions.

Comment #63

Commenter requests that the filter outlet concentrations be removed from condition 4.1.2 since the facility is no longer subject to BACT.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable.

Comment #64

Commenter states that Footnote 5 of condition 4.1.4 should be removed since the facility is no longer subject to BACT.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable. Additionally, USEPA has commented on that requirement and requested that it actually be made more stringent by specifying that the procedures defined as "good combustion practices" be performed per manufacturer recommendations or good engineering practices. The DAQ made those requested EPA changes in condition 4.1.4 footnote 5.

Comment #65

Commenter states that the proposed CO limit established in condition 4.1.5 is based on a single stack test and does not account for any potential variation in operating conditions.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable. Additionally, during application review, DAQ offered to put the application on hold to allow Roxul time to perform additional stack testing if they felt one source test was insufficient.

Commenter states that the requirements for good combustion practices in conditions 4.1.5 and 4.1.8 should be removed since the facility is no longer subject to BACT.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable. Additionally, USEPA has commented on that very requirement and requested that it actually be made more stringent by specifying that the procedures defined as "good combustion practices" be performed per manufacturer recommendations or good engineering practices.

Comment #67

Commenter states the throughput limits in condition 4.1.9 should be removed for any tank less than 10,000 gallons per WVDAQ's policy for permitting low emitting sources.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable. As specifically mentioned in the policy, "This policy is to be applied on a case-by-case basis and may be trumped by permitting situations..."

Comment #68

Commenter states that condition 4.1.13 ("The emission point stack parameters (Inner Diameter, Emission Point Elevation, and UTM Coordinates) of each source identified under the Emission Units Table 1.0 shall be in accordance with the specifications as given on the Emission Points Data Sheet in the most updated version of Permit Applications R14-0037 and R14-0037A") should be removed since the information is only used for modeling purposes and the facility is no longer subject to PSD modeling.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable.

Comment #69

Commenter states that condition 4.2.15 ("The permittee shall prepare and maintain an emission point map of the facility. This map shall consist of a diagram of the location and identification of all emission points at the facility that vent to ambient air. A legend shall be prepared with the map that identifies the emission point type and source(s) contributing to that emission point. This map shall be prepared within 180 days of startup and thereafter be updated as necessary to reflect current facility operations. The map(s) shall be retained on-site and be made available to the Director or

his/her duly authorized representative upon request)" should be removed since the information is only used for modeling purposes and the facility is no longer subject to PSD modeling.

DAQ Response

45CSR§13-5.10 allows the Director to impose "any reasonable condition as part of a granted administrative update, construction, modification, existing stationary source operating permit or relocation permit". DAQ believes this requirement to be reasonable.

Comment #70

Commenter updated emission calculations as they apply to condition 4.1.4 per WVDAQs request.

DAQ Response

H₂SO₄ and HCl emission limits under condition 4.1.4 were lowered to reflect the correct 45SCR7 limit.

Comment #71

Commenter states that the original air permit did not "fully consider the impact of particulate matter on these children, especially in the context of the inversion of air in our valley, resulting in pollution becoming trapped here."

DAQ Response

The original air dispersion modeling has no effect on the permitting action for R14-0037A.

Comment #72

Commenter asks if Rockwool is being required to use ultra low NOx natural gas burners.

DAQ Response

The furnace utilizes an integrated SNCR system using ammonia injection to promote a de-NOx reaction to occur. The oxy-fuel burners are specially designed to fire with O_2 instead of ambient air.

Comment #73

- (1) Commenter states that the Engineering Evaluation does not contain any analysis of the data provided in Rockwools application. Specifically, the commenter seems to be asking for an analysis of the method in which Rockwool determined their proposed emission limits.
- (2) Commenter states that they want to see the change in emissions for each individual change proposed by Roxul.

DAQ Response

(1) For the smaller sources at the facility (e.g. boilers, haul roads, storage tanks, fire water pump and material handling etc.) emission calculations were based almost entirely on AP-42 as noted in the footnotes in Attachment N of the applications. AP-42 is a well-established compilation of emission factors used by both industry and regulatory agencies across the country.

For the larger sources (e.g Furnace IMF01 and the WESP), Roxul based their estimates (with the exception of certain HAPs which were not tested for or monitored) on either stack testing performed at the Ranson facility or data from the Continuous Emissions Monitoring system installed at the Ranson facility. Roxul then applied certain engineering judgements to that data in order to develop proposed limits that included what they belived to be a reasonable compliance margin. Roxul did not submit this analysis to WVDAQ. In order to determine whether or not Roxuls proposed emission limits were reasonable, WVDAQ simply compared the proposed limits to existing stack testing results. After exhaustive conversations with Roxul and internal deliberations, WVDAQ largely accepted Roxuls final proposed limits. The sole exception was the proposed PM limit from the WESP. WVDAQ believes Roxuls proposed emission limit of 12 pounds per hour and 50.39 tons per year is unreasonable. Stack testing done at the facility showed emissions of 4.62 pounds per hour (19.4 tons per year based on Roxuls proposed 8,400 hours per year of operation). It is DAQ's opinion that Roxul did not submit a sufficient explanation showing that a compliance margin of 2.6x is justified in this case. Therefore, DAQ is utilizing an emission limit of 8 pounds per hour and 33.6 tons per year. This limit is based on a safety factor of 1.2 times the highest of the three individual runs of the November 2021 stack test. Given that compliance with the limit is demonstrated with an average of three runs, DAQ believes a limit of 1.2 times the highest run should provide a reasonable compliance margin.

(2) As explained during the September 19 meeting, the change in emissions resulting from each modification at the facility is somewhat dependent upon how one groups the changes. For example, Roxul is removing 10 tanks, adding 3 tanks and changing the size of 10 tanks. The permit limits emissions from the tanks in the aggregate. However, one could also look at the change in emissions from each individual tank. Nevertheless, the change in emissions from each emission point due to the proposed modification can easily be ascertained by comparing any two emission points in the two tables under the "Estimate of Emissions by Reviewing Engineer" section of the Engineering Evaluation.

Comment #74

Commenter states that clearer permit limits for operational limits and monitoring of those limits need to be included in the permit.

DAQ Response

Conditions 4.1.4.e, 4.1.5.d, 4.1.6.d and 4.2.5 were added to the final permit.

Comment #75

Stated that the permit needs to specifically prohibit the use of coal.

DAO Response

Although DAQ believes the original draft permit already effectively prohibited the use of coal, condition 4.1.3 was added, specifically prohibiting coals use at the facility.

Comment #76

Commenter states that all emission limits should be based on data from the Ranson facility.

For the larger sources (e.g Furnace IMF01 and the WESP), Roxul based their estimates (with the exception of certain HAPs which were not tested for or monitored) on either stack testing performed at the Ranson facility or data from the Continuous Emissions Monitoring system installed at the Ranson facility. Roxul then applied certain engineering judgements to that data in order to develop proposed limits that included what they believed to be a reasonable compliance margin. Roxul did not submit this analysis to WVDAQ. In order to determine whether or not Roxul's proposed emission limits were reasonable, WVDAQ simply compared the proposed limits to existing stack testing results. There seems to be some confusion based on the fact that Attachment J of the application references "Engineering Estimate" as Roxul's basis of emission calculations. Roxul chose to label the emission estimate basis in this way because they did not simply transcribe the emission testing results into their proposed limits. They performed their own engineering analysis to INCREASE the proposed limits above the stack testing results to include a compliance margin they were comfortable with.

Comment #77

Commenter wants an air monitor placed across the road from the facility at the elementary school.

DAQ Response

DAQ utilizes monitors across the state. The monitors are sited in accordance with US EPA guidance and regulation, including 40 CFR Part 58.

Comment #78

- (1) Commenter states that clearer permit limits for operational limits and monitoring of those limits need to be included in the permit.
- (2) Commenter states that the use of coal needs to be expressly prohibited.
- (3) Commenter states that DAQ should do its own analysis of emissions.

DAQ Response

- (1) Conditions 4.1.4.e, 4.1.5.d, 4.1.6.d and 4.2.5 were added to the final permit.
- (2) Although DAQ believes the original draft permit already effectively prohibited the use of coal, condition 4.1.3 was added, specifically prohibiting coals use at the facility.
- (3) For the larger sources (e.g Furnace IMF01 and the WESP), Roxul based their estimates (with the exception of certain HAPs which were not tested for or monitored) on either stack testing performed at the Ranson facility or data from the Continuous Emissions Monitoring system installed at the Ranson facility. Roxul then applied certain engineering judgements to that data to develop proposed limits that included what they believed to be a reasonable compliance margin. Roxul did not submit this analysis to WVDAQ. In order to determine whether or not Roxuls proposed emission limits were reasonable, WVDAQ simply compared the proposed limits to existing stack testing results.

Commenter states that both the Engineering Evaluation and existing permit seem to apply the pre 1970 45CSR7 mineral acid limits to the facility instead of the post 1970 limits.

DAQ Response

Commenter is correct. The wrong requirements were included in both the existing permit and the draft permit. Therefore, condition 4.1.4 was changed to reflect emissions resulting from the correct requirement. It should also be noted that stack testing performed on the furnace show that both HCl and H_2SO_4 emissions are well below the correct 45CSR7 limits.

Comment #80

Commenter states that the permit should expressly list what is allowed to be burned in the furnace.

DAQ Response

As previously mentioned, the emission estimates included in the Engineering Evaluation and draft permit for the furnace are based on stack testing and do not require detailed information on which raw materials are used.

Comment #81

- (1) Commenter states that the use of coal needs to be expressly prohibited.
- (2) Commenter states that clearer permit limits for operational limits and monitoring of those limits need to be included in the permit.

DAQ Response

- (1) Although DAQ believes the original draft permit already effectively prohibited the use of coal, condition 4.1.3 was added, specifically prohibiting coals use at the facility.
- (2) Conditions 4.1.4.e, 4.1.5.d, 4.1.6.d and 4.2.5 were added to the final permit.

Comment #82

Commenter states that a 50% control for a partial enclosure is unsubstantiated.

DAQ Response

The use of 50% as a PM control efficiency for a partial enclosure is based upon application instructions for General Permit G40-C by the WVDEP.

Comment #83

Commenter states that Roxul was supposed to install and operate an ambient air monitor at the elementary school across the street for 3 years. Commenter goes on to state that Roxul shut down this monitor before the 3 years was up.

WVDAQ was not part of any agreement and did not require Roxul to install any ambient air monitors.

Comment #84

Commenter states that in the event of an emergency requiring the nearby school to shelter in place, the HVAC system would continue to operate.

DAQ Response

Accidental release prevention and Risk Management Plans are regulated under section 112r of the Clean Air Act and not through WVDAQs minor source permitting program. The DAQ notes that all Shelter in place orders in response to Air Quality related issues would require the shutting down of HVAC systems.