Prevention of Significant Air Quality Deterioration Review

Preliminary Determination

May 2014

Facility Name: Blue Bird Body Company
City: Fort Valley
County: Peach
AIRS Number: 04-13-22500001
Application Number: 22073
Date Application Received: August 13, 2013

Review Conducted by:
State of Georgia - Department of Natural Resources
Environmental Protection Division - Air Protection Branch
Stationary Source Permitting Program

Prepared by: Ginger Payment – VOC Unit
Modeling Approved by: Henian Zhang - Data and Modeling Unit
Reviewed and Approved by: Manny Patel – VOC Unit Coordinator Eric Cornwell – Stationary Source Permitting Program Manager Keith Bentley – Chief, Air Protection Branch

SUMMARY

The Environmental Protection Division (EPD) has reviewed the application submitted by Blue Bird Body Company for a permit to increase production on existing lines to produce more buses. The proposed project will allow more buses to manufactured and painted in the existing paint booths. There is no additional equipment proposed to be constructed with this application.

The proposed project will result in an increase in emissions from the facility. The sources of these increases in emissions include the All American Touchup Booth (PB10), Overflow Paint Booth (PB11), Undercoat Paint Booth (PB27), Black and Primer Paint Booth (PB28), Yellow Paint Booth (PB29), BBCV Touchup Booth (PB30), White Paint Booth (PB31), Black and Primer Bake Oven (BO06), Yellow Booth Bake Oven (BO07), White Booth Bake Oven 1 (BO08), White Booth Bake Oven 2 (BO09) and Wipe Down Stations No. 1 through No. 11 (CS01 through CS11).

The modification of the Blue Bird Body Company due to this project will result in an emissions increase in carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM), particulate matter of 10 micrometers or less (PM_{10}), volatile organic compounds (VOC), total hazardous air pollutants (HAPs), and greenhouse gas (GHGs). A Prevention of Significant Deterioration (PSD) analysis was performed for the facility for all pollutants to determine if any increase was above the "significance" level. The VOC emissions increase was above the PSD significant level threshold.

The Blue Bird Body Company is located in Peach County, which is classified as "attainment" or "unclassifiable" for SO_2, $PM_{2.5}$ and PM_{10}, NO_X, CO, and ozone (VOC).

The EPD review of the data submitted by Blue Bird Body Company related to the proposed modifications indicates that the project will be in compliance with all applicable state and federal air quality regulations.

It is the preliminary determination of the EPD that the proposal provides for the application of Best Available Control Technology (BACT) for the control of VOC, as required by federal PSD regulation 40 CFR 52.21(j).

It has been determined through approved modeling techniques that the estimated emissions will not cause or contribute to a violation of any ambient air standard or allowable PSD increment in the area surrounding the facility. It has further been determined that the proposal will not cause impairment of visibility or detrimental effects on soils or vegetation. Any air quality impacts produced by project-related growth should be inconsequential.

This Preliminary Determination concludes that an Air Quality Permit should be issued to Blue Bird Body Company for the modifications necessary to increase production on existing lines to produce more buses. Various conditions have been incorporated into the current Title V operating permit to ensure and confirm compliance with all applicable air quality regulations. A copy of the draft permit amendment is included in Appendix A. This Preliminary Determination also acts as a narrative for the Title V Permit.

1.0 INTRODUCTION – FACILITY INFORMATION AND EMISSIONS DATA

On August 6, 2013, Blue Bird Body Company (hereafter Blue Bird Body Company) submitted an application for an air quality permit to increase production on existing lines to produce more buses. The facility is located at 402 Blue Bird Blvd. in Fort Valley, Peach County.

Table 1-1: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓			✓
PM_{10}	✓			✓
$PM_{2.5}$	✓			✓
SO_2	✓			✓
VOC	✓	✓		
NO_x	✓			✓
CO	✓			✓
TRS	N/A			
H_2S	N/A			
Individual HAP	✓	✓		
Total HAPs	✓	✓		
Total GHGs	✓			✓

Table 1-2 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a review of the "Permit" file(s) on the facility found in the Air Branch office.

Table 1-2: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
Permit No. 3713-225-0001-V-05-0	December 21, 2012	Title V Renewal

Based on the proposed project description and data provided in the permit application, the estimated incremental increases of regulated pollutants from the facility are listed in Table 1-3 below:

Table 1-3: Emissions Increases from the Project

Pollutant	Baseline Years	Potential Emissions Increase (tpy)	PSD Significant Emission Rate (tpy)	Subject to PSD Review
PM	N/A	0	25	No
PM_{10}	N/A	0	15	No
VOC	N/A	157	40	Yes
NO_X	N/A	0	40	No
CO	N/A	0	100	No
SO_2	N/A	0	40	No
TRS	N/A	0	10	No
Pb	N/A	0	0.6	No
Fluorides	N/A	0	3	No
H_2S	N/A	0	10	No
SAM	N/A	0	7	No

Blue Bird Body Company's proposed modification to relax PSD avoidance limits, as specified per Georgia Air Quality Application No. 22073, will make the facility a major source for VOC under PSD because the potential emissions of VOC exceeding 250 tpy. Condition 2.1.1 of Permit No. 3713-225-0001-V-05-0 had contained a PSD avoidance limit which limited VOC to less than 250 tpy. Due to proposed increase in production on existing lines to produce more buses, the new potential VOC emissions will be 407 tpy.

Through its new source review procedure, EPD has evaluated Blue Bird Body Company's proposal for compliance with State and Federal requirements. The findings of EPD have been assembled in this Preliminary Determination.

2.0 PROCESS DESCRIPTION

Blue Bird Body Company specializes in the fabrication and assembly of bus chassis and complete school and shuttle buses. Production processes at the facility include material and parts receiving and handling, chassis manufacturing, assembly of wheels, axles, and engines onto the chassis, shell fabrication and installation, paint application and drying, and trimming/finishing.

According to Application No. 22073, Blue Bird Body Company) has proposed to increase production at the facility. The increased production will require an increase in paint usage for the buses consequently increasing emissions. There is no physical modification or change in the method of operation. The production increase will be accommodated by adding additional work shifts.

The Blue Bird Body Company permit application and supporting documentation are included in Appendix A of this Preliminary Determination and can be found online at www.georgiaair.org/airpermit.

3.0 REVIEW OF APPLICABLE RULES AND REGULATIONS

State Rules

Georgia Rule for Air Quality Control (Georgia Rule) 391-3-1-.03(1) requires that any person prior to beginning the construction or modification of any facility which may result in an increase in air pollution shall obtain a permit for the construction or modification of such facility from the Director upon a determination by the Director that the facility can reasonably be expected to comply with all the provisions of the Act and the rules and regulations promulgated thereunder. Georgia Rule 391-3-1-.03(8)(b) continues that no permit to construct a new stationary source or modify an existing stationary source shall be issued unless such proposed source meets all the requirements for review and for obtaining a permit prescribed in Title I, Part C of the Federal Act [i.e., Prevention of Significant Deterioration of Air Quality (PSD)], and Section 391-3-1-.02(7) of the Georgia Rules (i.e., PSD).

- Georgia Rule (b) [391-3-1-.02(2)(b)] – The existing paint booths and bake ovens will continue to be subject to the 40% opacity limit which is Condition 3.4.1 in Air Quality Permit No. 3713-225-0001-V-05-0. Compliance with the opacity limit is achieved through the exclusive use of natural gas usage in the bake ovens and the use of fabric filters to control the exhaust from each paint booth.

- Georgia Rule (e) [391-3-1-.02(2)(e)] – The existing paint booths, bake ovens and hanging furnaces will continue to be subject to the particulate matter emission which is Condition 3.4.4 in Air Quality Permit No. 3713-225-0001-V-05-0. Compliance with the particulate matter emission limit is achieved through the exclusive use of natural gas usage in the bake ovens and hanging furnaces and the use of fabric filters to control the exhaust from each paint booth. Facility wide particulate matter emissions are calculated to be 1.98 tpy and are in compliance with Georgia Rule (e).

- Georgia Rule (g) [391-3-1-.02(2)(g)] – The bake ovens and the hanging furnaces will continue to be subject to the sulfur dioxide limit which is Condition 3.4.5 in Air Quality Permit No. 3713-225-0001-V-05-0. Compliance with the sulfur dioxide limit is achieved through limit the sulfur content of fuel. The bake ovens and the hanging furnaces are in compliance with Georgia Rule (g) by limiting the fuel combusted to only natural gas.

- Georgia Rule (ii) [391-3-1-.02(2)(ii)] – The paint booths will continue to be subject to the limitation of VOC emissions from surface metal coating of miscellaneous metal parts and products which is in Conditions 3.4.1 and 3.4.2 5 in Air Quality Permit No. 3713-225-0001-V-05-0. Compliance with Georgia Rule (ii) is achieved by limiting the VOC content of any coating delivered to a coating applicator to no more than 3.0 .b/gal (or solids equivalence of 5.06 lb/gal). Compliance is demonstrated by using compliant materials, daily averages of single line coating operations, daily averages of facility-wide coating operations, or control technology that reduces the emitted VOC to below the acceptable limits. Blue Bird Body Company currently uses compliant coatings.

Federal Rule - PSD

The regulations for PSD in 40 CFR 52.21 require that any new major source or modification of an existing major source be reviewed to determine the potential emissions of all pollutants subject to regulations under the Clean Air Act. The PSD review requirements apply to any new or modified source which belongs to one of 28 specific source categories having potential emissions of 100 tons per year or more of any regulated pollutant, or to all other sources having potential emissions of 250 tons per year or more of any regulated pollutant. They also apply to any modification of a major stationary source which results in a significant net emission increase of any regulated pollutant.

Georgia has adopted a regulatory program for PSD permits, which the United States Environmental Protection Agency (EPA) has approved as part of Georgia's State Implementation Plan (SIP). This regulatory program is located in the Georgia Rules at 391-3-1-.02(7). This means that Georgia EPD issues PSD permits for new major sources pursuant to the requirements of Georgia's regulations. It also means that Georgia EPD considers, but is not legally bound to accept, EPA comments or guidance. A commonly used source of EPA guidance on PSD permitting is EPA's Draft October 1990 New Source Review Workshop Manual for Prevention of Significant Deterioration and Nonattainment Area Permitting (NSR Workshop Manual). The NSR Workshop Manual is a comprehensive guidance document on the entire PSD permitting process.

The PSD regulations require that any major stationary source or major modification subject to the regulations meet the following requirements:

- Application of BACT for each regulated pollutant that would be emitted in significant amounts;
- Analysis of the ambient air impact;
- Analysis of the impact on soils, vegetation, and visibility;
- Analysis of the impact on Class I areas; and
- Public notification of the proposed plant in a newspaper of general circulation

Definition of BACT

The PSD regulation requires that BACT be applied to all regulated air pollutants emitted in significant amounts. Section 169 of the Clean Air Act defines BACT as an emission limitation reflecting the maximum degree of reduction that the permitting authority (in this case, EPD), on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such a facility through application of production processes and available methods, systems, and techniques. In all cases BACT must establish emission limitations or specific design characteristics at least as stringent as applicable New Source Performance Standards (NSPS). In addition, if EPD determines that there is no economically reasonable or technologically feasible way to measure the emissions, and hence to impose and enforceable emissions standard, it may require the source to use a design, equipment, work practice or operations standard or combination thereof, to reduce emissions of the pollutant to the maximum extent practicable.

EPA's NSR Workshop Manual includes guidance on the 5-step top-down process for determining BACT. In general, Georgia EPD requires PSD permit applicants to use the top-down process in the BACT analysis, which EPA reviews. The five steps of a top-down BACT review procedure identified by EPA per BACT guidelines are listed below:

Step 1: Identification of all control technologies;
Step 2: Elimination of technically infeasible options;
Step 3: Ranking of remaining control technologies by control effectiveness;
Step 4: Evaluation of the most effective controls and documentation of results; and
Step 5: Selection of BACT.

The following is a discussion of the applicable federal rules and regulations pertaining to the equipment that is the subject of this preliminary determination, which is then followed by the top-down BACT analysis.

New Source Performance Standards

The increase in production will not subject Blue Bird Body Company to any additional NSPS.

National Emissions Standards For Hazardous Air Pollutants

The increase in production will not subject Blue Bird Body Company to any additional NESHAP. The paint booths will continue to be subject to 40 CFR 63 Subpart A, *General Provisions* and 40 CFR 63, Subpart MMMM, *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products.* Applicability to this standard is stated in Conditions 3.3.1 through 3.3.4 in Air Quality Permit No. 3713-225-0001-V-05-0.

State and Federal – Startup and Shutdown and Excess Emissions

Excess emission provisions for startup, shutdown, and malfunction are provided in Georgia Rule 391-3-1-.02(2)(a)7. Excess emissions from the paint booths and the wipe down stations associated with the proposed project would most likely results from a malfunction of the associated control equipment. The facility cannot anticipate or predict malfunctions. However, the facility is required to minimize emissions during periods of startup, shutdown, and malfunction.

Federal Rule – 40 CFR 64 – Compliance Assurance Monitoring

Under 40 CFR 64, the *Compliance Assurance Monitoring* Regulations (CAM), facilities are required to prepare and submit monitoring plans for certain emission units with the Title V application. The CAM Plans provide an on-going and reasonable assurance of compliance with emission limits. Under the general applicability criteria, this regulation applies to units that use a control device to achieve compliance with an emission limit and whose pre-controlled emissions levels exceed the major source thresholds under the Title V permitting program. Although other units may potentially be subject to CAM upon renewal of the Title V operating permit, such units are not being modified under the proposed project and need not be considered for CAM applicability at this time.

Therefore, this applicability evaluation only addresses the paint booths and the wipe down stations, which does not employ any air pollution control devices; therefore, the CAM requirements are not triggered by the proposed modification.

4.0 CONTROL TECHNOLOGY REVIEW

The proposed project will result in emissions that are significant enough to trigger PSD review for the following pollutants: Volatile Organic Compounds (VOCs).

Undercoating Paint Booth - Background

The Undercoating Paint Booth (Source Code PB27) is a paint spray booth. Once assembled, buses are first transferred to the Undercoating Paint Booth where an undercoating is applied to the chassis.

Undercoating Paint Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-1: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

Rank	Control Technology	Potential Control Efficiency (%)
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $32,171 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $31,608 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $34,129 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $29,126 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $66,576 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $26,816 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $36,351 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $29,039 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

Step 5 – Selection of BACT:

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers.

The applicant will have a BACT emission limit of 14.18 tons of VOC emissions during any twelve months from the Undercoating Paint Booth (Source Code PB27).

EPD Review – VOC Control

Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the Undercoating Paint Booth (Source Code PB27). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 14.18 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the Undercoating Paint Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

Conclusion – VOC Control

The BACT selection for the Undercoating Paint Booth (Source Code PB27) is summarized below in Table 4-2:

Table 4-2: BACT Summary for the Undercoating Paint Booth

Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
VOC	BACT emission limit	14.18 tons per every 12 months	Recordkeeping
		Airless spray guns	
		Good work practices	
		Low VOC material usage	

White Paint Booth - Background

The White Paint Booth (Source Code PB31) is a paint spray booth. Once the undercoating has been applied, buses are then transferred to the White Paint Booth where the roof is primed with an undercoat and then painted white. The painted buses then proceed to the White Booth Bake Oven Nos. 1 and 2 (BO08 and BO09).

White Paint Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation

- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-3: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $13,501 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $13,300 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $14,295 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $12,271 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $20,991 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $15,552 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $15,181 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $12,234 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

Step 5 – Selection of BACT:

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers.

The applicant will have a BACT emission limit of 31 tons of VOC emissions during any twelve months from the White Paint Booth (Source Code PB31).

EPD Review – VOC Control

Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the White Paint Booth (Source Code PB31). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 31 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the White Paint Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

Conclusion – VOC Control

The BACT selection for the White Paint Booth (Source Code PB31) is summarized below in Table 4-4:

Table 4-4: BACT Summary for the White Paint Booth

<table>
<tr><th>Pollutant</th><th>Control Technology</th><th>Proposed BACT Limit</th><th>Compliance Determination Method</th></tr>
<tr><td rowspan="4">VOC</td><td rowspan="4">BACT emission limit</td><td>31 tons per every 12 months</td><td rowspan="4">Recordkeeping</td></tr>
<tr><td>HVLP electrostatic guns</td></tr>
<tr><td>Good work practices</td></tr>
<tr><td>Low VOC material usage</td></tr>
</table>

Black and Primer Paint Booth - Background

The Black and Primer Paint Booth (Source Code PB28) is a paint spray booth. After the buses are finished in the White Booth Bake Ovens, the buses are then sent to the Black and Primer Paint Booth where they are primed and painted. This booth applies all black paint to the buses. The painted buses then proceed to the Black and Primer Bake Oven (BO06).

Black and Primer Paint Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-4: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $17,123 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $14,097 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $18,179 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $12,238 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $31,123 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $16,943 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $19,473 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $12,180 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

Step 5 – Selection of BACT:

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers. The Black and Primer Paint Booth utilizes HVLP applicators.

The applicant will have a BACT emission limit of 56 tons of VOC emissions during any twelve months from the Black and Primer Paint Booth (Source Code PB28).

EPD Review – VOC Control

Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the Black and Primer Paint Booth (Source Code PB28). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 56 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the Black and Primer Paint Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

Conclusion – VOC Control

The BACT selection for the Black and Primer Paint Booth (Source Code PB28) is summarized below in Table 4-6:

Table 4-6: BACT Summary for the Black and Primer Paint Booth

Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
VOC	BACT emission limit	56 tons per every 12 months	Recordkeeping
		HVLP electrostatic guns	
		Good work practices	
		Low VOC material usage	

Yellow Paint Booth - Background

The Yellow Paint Booth (Source Code PB29) is a paint spray booth. After the buses are finished in the Black and Primer Bake Oven, the buses are then transferred to the Yellow Paint Booth where they are cleaned, primed and painted with yellow paint. The painted buses then proceed to the Yellow Booth Bake Oven (BO07).

Yellow Paint Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-7: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%

Rank	Control Technology	Potential Control Efficiency (%)
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $16,354 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $13,902 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $17,430 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $12,199 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $32,329 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $16,708 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $18,750 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $12,145 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

Step 5 – Selection of BACT:

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers. The Yellow Paint Booth utilizes HVLP applicators.

The applicant will have a BACT emission limit of 50 tons of VOC emissions during any twelve months from the Yellow Paint Booth (Source Code PB29).

EPD Review – VOC Control

Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the Yellow Paint Booth (Source Code PB29). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 50 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the Yellow Paint Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

Conclusion – VOC Control

The BACT selection for the Yellow Paint Booth (Source Code PB29) is summarized below in Table 4-8:

Table 4-8: BACT Summary for the Yellow Paint Booth

Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
VOC	BACT emission limit	50 tons per every 12 months	Recordkeeping
		HVLP electrostatic guns	
		Good work practices	
		Low VOC material usage	

BBCV Touchup Booth - Background

The BBCV Touchup Booth (Source Code PB30) is a paint spray booth. If the buses require additional painting or touchup work, larger touchup work is performed in the BBCV Touchup Booth. No primers are used in the touchup paint booth. The BBCV Touchup Booth utilizes air assisted applicators to apply paint. After application of the paint in the BBCV Touchup Booth, the buses are sent through a dryer tunnel to dry the final coating of paint.

BBCV Touchup Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-9: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $13,482 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $13,303 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $14,178 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $12,318 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $14,803 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $15,009 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $14,932 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $12,285 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

Step 5 – Selection of BACT:

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers. The BBCV Touchup Booth utilizes HVLP applicators.

The applicant will have a BACT emission limit of 27 tons of VOC emissions during any twelve months from the BBCV Touchup Booth (Source Code PB30).

EPD Review – VOC Control

Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the BBCV Touchup Booth (Source Code PB30). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 27 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the BBCV Touchup Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

Conclusion – VOC Control

The BACT selection for the BBCV Touchup Booth (Source Code PB30) is summarized below in Table 4-10:

Table 4-10: BACT Summary for the BBCV Touchup Booth

Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
VOC	BACT emission limit	27 tons per every 12 months	Recordkeeping
		High efficiency applicators	
		Good work practices	
		Low VOC material usage	

American Touchup Booth - Background

The American Touchup Booth (Source Code PB10) is a paint spray booth. If the buses require additional painting or touchup work, detailed touchup work is performed in the American Touchup Booth. No primers are used in the touchup paint booth. The American Touchup Booth utilizes air assisted applicators to apply paint. After application of the paint in the American Touchup Booth, the buses are sent through a dryer tunnel to dry the final coating of paint.

American Touchup Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-11: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes “Good Work Practices / Low-VOC Materials / High Efficiency Applicators”. The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $14,855 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $13,640 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $15,649 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $12,504 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $14,083 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $14,567 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $16,512 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $12,470 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

<u>Step 5 – Selection of BACT:</u>

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers.

The applicant will have a BACT emission limit of 25 tons of VOC emissions during any twelve months from the American Touchup Booth (Source Code PB10).

<u>EPD Review – VOC Control</u>
Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the American Touchup Booth (Source Code PB10). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 25 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the American Touchup Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

<u>Conclusion – VOC Control</u>
The BACT selection for the American Touchup Booth (Source Code PB10) is summarized below in Table 4-12:

Table 4-12: BACT Summary for the American Touchup Booth

Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
VOC	BACT emission limit	25 tons per every 12 months	Recordkeeping
		High efficiency applicators	
		Good work practices	
		Low VOC material usage	

<u>Overflow Booth - Background</u>

The Overflow Booth (Source Code PB11) is a paint spray booth. If the buses require additional painting or touchup work, detailed touchup work is performed in the Overflow Booth. No primers are used in the touchup paint booth. The Overflow Booth utilizes air assisted applicators to apply paint. After application of the paint in the Overflow Booth, the buses are sent through a dryer tunnel to dry the final coating of paint.

Overflow Booth – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-13: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized costs of the regenerative thermal oxidizer without the use of a rotary concentrator as $37,093 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $36,079 per ton of VOC removed.

The applicant calculated the annualized costs of the recuperative thermal oxidizer without the use of a rotary concentrator as $39,684 per ton of VOC removed. The applicant calculated the annualized costs of the regenerative thermal oxidizer with the use of a rotary concentrator as $32,785 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized costs of the carbon adsorption without the use of a rotary concentrator as $55,165 per ton of VOC removed. The applicant calculated the annualized costs of the carbon adsorption with the use of a rotary concentrator as $29,886 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized costs of the catalytic oxidation without the use of a rotary concentrator as $42,375 per ton of VOC removed. The applicant calculated the annualized costs of the catalytic oxidation with the use of a rotary concentrator as $32,668 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

Step 5 – Selection of BACT:

The applicant has determined BACT as Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers.

The applicant will have a BACT emission limit of 13.80 tons of VOC emissions during any twelve months from the Overflow Booth (Source Code PB11).

EPD Review – VOC Control
Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the Overflow Booth (Source Code PB11). GA EPD agrees that Good Work Practices/Low-VOC Materials/High Efficiency Applicators and a BACT emission limit of 13.80 tons of VOC emissions per year are the best available technology for controlling VOC emissions for the Overflow Booth. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

Conclusion – VOC Control
The BACT selection for the Overflow Booth (Source Code PB11) is summarized below in Table 4-14:

Table 4-14: BACT Summary for the Overflow Booth

Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
VOC	BACT emission limit	13.80 tons per every 12 months	Recordkeeping
		High efficiency applicators	
		Good work practices	
		Low VOC material usage	

Wipedown Stations - Background

The Wipedown Stations (Source Codes CS01-CS11) are various locations where cleaning solvents are applied prior to coating activities. Wipedown activities occur in the open areas of the facility and emissions are not vented through any stacks. Different sections of each bus are manually wiped clean depending on the location of the bus on the assembly line.

Wipedown Stations – VOC Emissions

Applicant's Proposal

Step 1 – Identification of Potential Control Techniques:

The applicant has suggested the following BACT for control of VOC emissions. An analysis of these technologies can be found in Attachment C (pages 3 through 5) of the application.

- Regenerative/Recuperative Thermal Oxidation
- Carbon Adsorption
- Biofiltration
- Catalytic Oxidation
- Good Work Practices/Low-VOC Materials/High Efficiency Applicators

The Division has reviewed Step 1 of the applicant's analysis and the Division agrees with the findings.

Step 2 – Elimination of Technically Infeasible Control Options:

The applicant stated biofiltration is infeasible due to the batch nature of production. As a result of this type of production, the biofilters would be subject to rapidly changing concentrations of VOC. The applicant's analysis can be found on page 4 of Attachment C. The Division agrees with the applicant that the use of biofiltration is technically infeasible.

Step 3 – Rank of Remaining Control Technologies:

The following is a ranking of the control technologies based on control effectiveness found on page 5 of Attachment C of the application. The use of a rotary concentrator was evaluated separately. Though the use of a rotary concentrator will reduce the cost per ton VOC reduced, it also reduces the control efficiency since rotary concentrators are not 100% efficient at concentrating the entire VOC fraction from the waste gas stream.

Table 4-15: Efficiency Ranking of Feasible Control Technologies

Rank	Control Technology	Potential Control Efficiency (%)
Without a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	95%
1 (tie)	Carbon Adsorption	95%
1 (tie)	Catalytic Oxidation	95%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case
With a Rotary Concentrator		
1 (tie)	Regenerative/Recuperative Thermal Oxidizer	98%
1 (tie)	Carbon Adsorption	98%
1 (tie)	Catalytic Oxidation	98%
2	Good Work Practices / Low-VOC Materials / High Efficiency Applicators	Base Case

The list also includes "Good Work Practices / Low-VOC Materials / High Efficiency Applicators". The efficiency of this method varies according to industry.
The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are equally ranked as the most effective control technologies to use with the paint booth for VOC control.

Step 4 – Evaluation of Most Stringent Controls:

The applicant provided an analysis of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) on pages 7-9 of Appendix C of the application.

The applicant calculated the annualized cost of the regenerative thermal oxidizer without the use of a rotary concentrator ranges from $18,205 to $40,567 per ton of VOC removed. The applicant calculated the annualized cost of the regenerative thermal oxidizer with the use of a rotary concentrator ranges from $19,949 to $44,514 per ton of VOC removed.

The applicant calculated the annualized cost of the recuperative thermal oxidizer without the use of a rotary concentrator ranges from $16,901 to $22,486 per ton of VOC removed. The applicant calculated the annualized cost of the regenerative thermal oxidizer with the use of a rotary concentrator ranges from $16,438 to $36,668 per ton of VOC removed.

The cost of the regenerative/recuperative thermal oxidizer (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of carbon adsorption (with and without the rotary concentrator) on pages 9-11 of Appendix C of the application. The applicant calculated the annualized cost of the carbon adsorption without the use of a rotary concentrator ranges from $15,974 to $24,857 per ton of VOC removed. The applicant calculated the annualized cost of the carbon adsorption with the use of a rotary concentrator ranges from $17,828 to $37,681 per ton of VOC removed. The cost of carbon adsorption (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The applicant provided an analysis of catalytic oxidation (with and without the rotary concentrator) on pages 11-12 of Appendix C of the application. The applicant calculated the annualized cost of the catalytic oxidation without the use of a rotary concentrator ranges from $16,150 to $34,164 per ton of VOC removed. The applicant calculated the annualized cost of the catalytic oxidation with the use of a rotary concentrator ranges from $16,266 to $36,203 per ton of VOC removed. The cost of catalytic oxidation (with and without the rotary concentrator) exceeds the benefit of the VOC reduction.

The Division agrees with the applicant that the regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation (with and without the rotary concentrator) costs exceed the benefit of the VOC reduction.

<u>Step 5 – Selection of BACT:</u>

The applicant has determined BACT as Good Work Practices/Low-VOC Materials and a BACT emission limits. This BACT selection is described in pages 12-13 of Appendix C of the application

Blue Bird Body Company will use good work practices to control emissions. These include keeping VOC-coatings and solvents in closed containers and storing wash rags that contain solvents and cleaners in air tight containers.

Blue Bird Body Company has reviewed cleaning solvents and will discontinue use of 100% VOC cleaning solvents. The proposed cleaning solvent has a VOC content of 55% which provides a reduction in VOC emissions from the Wipedown Stations.

The applicant will have a BACT emission limits for Wipedown Stations (Source Codes CS01-CS11).

<u>EPD Review – VOC Control</u>

Georgia Environmental Protect Division (GEPD) has reviewed the emissions and the BACT analysis prepared in the application for the Wipedown Stations (Source Codes CS01-CS11). GA EPD agrees that Good Work Practices/Low-VOC Materials and BACT emission limits are the best available technology for controlling VOC emissions from the Wipedown Stations. GAEPD agrees that regenerative/recuperative thermal oxidizer, carbon adsorption and catalytic oxidation are not economically cost effective and have undesirable energy and environmental impacts.

<u>Conclusion – VOC Control</u>

The BACT selection for the Wipedown Stations (Source Codes CS01-CS11) is summarized below in Table 4-16:

Table 4-16: BACT Summary for the Wipedown Stations

Wipedown Station	Pollutant	Control Technology	Proposed BACT Limit	Compliance Determination Method
Wipedown Station No. 1 (CS01)	VOC	BACT emission limit	20.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 2 (CS02)	VOC	BACT emission limit	19.40 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 3 (CS03)	VOC	BACT emission limit	21.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 4 (CS04)	VOC	BACT emission limit	21.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 5 (CS05)	VOC	BACT emission limit	21.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 6 (CS06)	VOC	BACT emission limit	12.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 7 (CS07)	VOC	BACT emission limit	21.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 8 (CS08)	VOC	BACT emission limit	10.81 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 9 (CS09)	VOC	BACT emission limit	10.81 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 10 (CS10)	VOC	BACT emission limit	10.81 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping
Wipedown Station No. 11 (CS11)	VOC	BACT emission limit	12.00 tons per every 12 months VOC content of solvent not to exceed 55% by weight	Recordkeeping

Table 4-17: BACT Summary for the Paint Booths

Emission Unit ID No.	Pollutant	Control Technology	VOC BACT Emission Limits (tons/12-month rolling total)	Compliance Determination Method
PB10	VOC	BACT emission limit	25.00	Recordkeeping
PB11	VOC	BACT emission limit	13.80	Recordkeeping
PB27	VOC	BACT emission limit	14.18	Recordkeeping
PB28	VOC	BACT emission limit	56.00	Recordkeeping
PB29	VOC	BACT emission limit	50.00	Recordkeeping
PB30	VOC	BACT emission limit	27.00	Recordkeeping
PB31	VOC	BACT emission limit	31.00	Recordkeeping

5.0 TESTING AND MONITORING REQUIREMENTS

Testing Requirements:

There are no applicable testing requirements being imposed due to no construction of additional equipment and no construction of control devices.

Monitoring Requirements:

There are no applicable monitor requirements being imposed due to no construction of additional equipment and no construction of control devices.

CAM Applicability:

Because there are no control devices used for VOC emissions control and the potential precontrolled PM emissions do not exceed the major source threshold for PM emissions, CAM is not applicable and is not being triggered by the proposed modification. Therefore, no CAM provisions are being incorporated into the facility's permit.

6.0 AMBIENT AIR QUALITY REVIEW

An air quality analysis is required to determine the ambient impacts associated with the construction and operation of the proposed modifications. The main purpose of the air quality analysis is to demonstrate that emissions emitted from the proposed modifications, in conjunction with other applicable emissions from existing sources (including secondary emissions from growth associated with the new project), will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment in a Class I or Class II area. NAAQS exist for NO_2, CO, $PM_{2.5,}$, PM_{10}, SO_2, Ozone (O_3), and lead. PSD increments exist for SO_2, NO_2, and PM_{10}.

The proposed project at the Blue Bird Body Company triggers PSD review for VOC. VOC does not have established PSD modeling significance levels (MSL) (an ambient concentration expressed in either $\mu g/m^3$ or ppm). Therefore, modeling is not required for VOC emissions. However, an ozone analysis is required since VOC emissions are greater than 100 tpy. An additional analysis was conducted to demonstrate compliance with the Georgia air toxics program.

Modeling Requirements

The air quality modeling analysis was conducted in accordance with Appendix W of Title 40 of the Code of Federal Regulations (CFR) §51, *Guideline on Air Quality Models*, and Georgia EPD's *Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions (Revised).*

The proposed project will cause net emission increases of VOC that are greater than the applicable PSD Significant Emission Rates. Therefore, air dispersion modeling analyses are required to demonstrate compliance with the NAAQS and PSD Increment. VOC does not have established PSD modeling significance levels (MSL) (an ambient concentration expressed in either $\mu g/m^3$ or ppm). Modeling is not required for VOC emissions; however, the project will likely have no impact on ozone attainment in the area based on data from the monitored levels of ozone in Bibb County and the level of emissions increases that will result from the proposed project. The southeast is generally NO_X limited with respect to ground level ozone formation.

Significance Analysis: Ambient Monitoring Requirements and Source Inventories
Because modeling is not required for VOC emissions, Significance Analysis: Ambient Monitoring Requirements and Source Inventories is not applicable.

NAAQS Analysis
Because modeling is not required for VOC emissions, NAAQS Analysis is not applicable.

PSD Increment Analysis
Because modeling is not required for VOC emissions, PSD Increment Analysis is not applicable.

Significant Impact Area
Because modeling is not required for VOC emissions, a review for Significant Impact Area is not applicable.

NAAQS and Increment Modeling
Because modeling is not required for VOC emissions, NAAQS and Increment Modeling is not applicable.

NAAQS Analysis
Because modeling is not required for VOC emissions, NAAQS Analysis is not applicable.

Class I Area Analysis

Federal Class I areas are regions of special national or regional value from a natural, scenic, recreational, or historic perspective. Class I areas are afforded the highest degree of protection among the types of areas classified under the PSD regulations. U.S. EPA has established policies and procedures that generally restrict consideration of impacts of a PSD source on Class I Increments to facilities that are located near a federal Class I area. Historically, a distance of 100 km has been used to define “near”, but more recently, a distance of 200 kilometers has been used for all facilities that do not combust coal.

The nearest Class I Areas to the facility, Cohutta I area and Wolf Island Class I area, are more than 275 kilometers away. The magnitude of the emissions from the proposed project do not warrant a review of impacts at this distance. Therefore, no Class I Increment consumption of Air Quality Related Values (AQRV) analyses were performed.

7.0 ADDITIONAL IMPACT ANALYSES

PSD requires an analysis of impairment to visibility, soils, and vegetation that will occur as a result of a modification to the facility and an analysis of the air quality impact projected for the area as a result of the general commercial, residential, and other growth associated with the proposed project.

Soils and Vegetation

The applicant submitted an analysis of the potential adverse impacts of increased VOC emissions on soils and vegetation (see Section 7.1 of Application No. 22073) in the areas surrounding the facility. The analysis concluded that any adverse impacts are expected to be insignificant. The Division agrees with the applicant's conclusion.

Growth

The purpose of a growth analysis is to predict how much new growth is likely to occur as a result of the project and the resulting air quality impacts from this growth. No adverse impacts on growth are anticipated from the project since any workforce growth and residential and commercial growth that would be associated with the proposed project (expected to be minimal) would not cause a quantifiable impact on the air quality of the area surrounding the facility.

Visibility

Visibility impairment is any perceptible change in visibility (visual range, contrast, atmospheric color, etc.) from that which would have existed under natural conditions. Poor visibility is caused when fine solid or liquid particles, usually in the form of volatile organics, nitrogen oxides, or sulfur oxides, absorb or scatter light. This light scattering or absorption actually reduces the amount of light received from viewed objects and scatters ambient light in the line of sight. This scattered ambient light appears as haze.

VOC emissions do not impact visibility. Therefore the project will not impact Class I and Class II visibility for purposes of PSD review of the project.

Georgia Toxic Air Pollutant Modeling Analysis

Georgia EPD regulates the emissions of toxic air pollutant (TAP) emissions through a program covered by the provisions of *Georgia Rules for Air Quality Control*, 391-3-1-.02(2)(a)3.(ii). A TAP is defined as any substance that may have an adverse effect on public health, excluding any specific substance that is covered by a State or Federal ambient air quality standard. Procedures governing the Georgia EPD's review of TAP emissions as part of air permit reviews are contained in the agency's "*Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions (Revised)*."

Selection of Toxic Air Pollutants for Modeling

For projects with quantifiable increases in TAP emissions, an air dispersion modeling analysis is generally performed to demonstrate that off-property impacts are less than the established Acceptable Ambient Concentration (AAC) values. The TAP evaluated are restricted to those that may increase due to the proposed project. Thus, the TAP analysis would generally be an assessment of off-property impacts due to facility-wide emissions of any TAP emitted by a facility. To conduct a facility-wide TAP impact evaluation for any pollutant that could conceivably be emitted by the facility is impractical. A literature review would suggest that at least one molecule of hundreds of organic and inorganic chemical compounds could be emitted from the various combustion units. This is understandable given the nature of the natural gas fed to the combustion sources, and the fact that there are complex chemical reactions and combustion of fuel taking place in some. The vast majority of compounds potentially emitted however are emitted in only trace amounts that are not reasonably quantifiable.

Twenty-eight potentially Toxic Air Pollutants (TAPs) were evaluated and can be located in Attachment D of Application No. 22073.

For each TAP identified for further analysis, both the short-term and long-term AAC were calculated following the procedures given in Georgia EPD's *Guideline*. Figure 8-3 of Georgia EPD's *Guideline* contains a flow chart of the process for determining long-term and short-term ambient thresholds. Blue Bird Body Company referenced the resources previously detailed to determine the long-term (i.e., annual average) and short-term AAC (i.e., 24-hour or 15-minute). The AACs were verified by the EPD.

Determination of Toxic Air Pollutant Impact

The Georgia EPD *Guideline* recommends a tiered approach to model TAP impacts, beginning with screening analyses using SCREEN3, followed by refined modeling, if necessary, with ISCST3 or ISCLT3. For the refined modeling completed, the infrastructure setup for the SIA analyses was relied upon with appropriate sources added for the TAP modeling. Note that per the Georgia EPD's *Guideline*, downwash was not considered in the TAP assessment.

Initial Screening Analysis Technique

Generally, an initial screening analysis is performed in which the total TAP emission rate is modeled from the stack with the lowest effective release height to obtain the maximum ground level concentration (MGLC). Note the MGLC could occur within the facility boundary for this evaluation method. The individual MGLC is obtained and compared to the smallest AAC. Due to the likelihood that this screening would result in the need for further analysis for most TAP, the analyses were initiated with the secondary screening technique.

Blue Bird modeled maximum ground-level concentrations (MGLCs) using the USEPA Industrial Source Complex (ISC3) dispersion model for 1-hour, 24-hour, and annual averaging periods. Note that the 15-min impact is based on the maximum 1-hour modeled impact multiplied by a factor of 1.32.

Table 7.1 below shows the modeled MGLCs for all TAPs evaluated with their respective AAC levels. Therefore, the applicant meets the applicable Georgia Air Toxics Guidelines.

Table 7-1: Modeled MGLCs and the Respective AACs

Pollutant	CAS	Averaging period	MGLC ($\mu g/m^3$)	AAC ($\mu g/m^3$)	Exceed AAC?	Averaging period	MGLC ($\mu g/m^3$)	AAC ($\mu g/m^3$)	Exceed AAC?
Refined solvent naphtha	8032-32-4	24-hour	9.6	833	No	15-min	38.3	1.8E5	No
Stoddard solvent	8052-41-3	24-hour	1.9	833	No	15-min	9.9	1.8E5	No
Solvent Naphtha Light Distillate	64742-89-8	24-hour	1847	8330	No	N/A	None	None	No
Acetone	67-64-1	24-hour	2772	5714	No	15-min	59246	178200	No
Toluene	108-88-3	Annual	0.16	5000	No	15-min	7.7	113000	No
2-Butanone	78-93-3	Annual	12	5000	No	15-min	613	88500	No
n-Heptane	142-82-5	24-hour	11.8	4762	No	15-min	47.1	200000	No

Pollutant	CAS	Averaging period	MGLC (μg/m^3)	AAC (μg/m^3)	Exceed AAC?	Averaging period	MGLC (μg/m^3)	AAC (μg/m^3)	Exceed AAC?
Ethyl Alcohol	64-17-5	24-hour	1.0	4524	No	N/A	None	None	No
tert-Butyl acetate	540-88-5	24-hour	130	2262	No	N/A	None	None	No
Propylene glycol monomethyl ether	107-98-2	Annual	58.4	2000	No	15-min	13182	54000	No
n-Butyl acetate	123-86-4	24-hour	141	1690	No	15-min	641	95000	No
2-Butoxyethanol	111-76-2	Annual	10.1	13000	No	N/A	None	None	No
Methyl (n-amyl) ketone	110-43-0	24-hour	60.1	1107	No	N/A	None	None	No
Ethyl benzene	100-41-4	Annual	6.7	1000	No	15-min	341	54300	No
n-Butyl alcohol	71-36-3	24-hour	14.2	714	No	15-min	51.4	15200	No
tert-Butyl alcohol	75-65-0	24-hour	0.63	714	No	N/A	None	None	No
Isobutyl alcohol	78-83-1	24-hour	3.11	714	No	N/A	None	None	No
Methyl Methacrylate	80-62-6	Annual	0.13	700	No	N/A	None	None	No
Cumene	98-82-8	Annual	0.05	400	No	N/A	None	None	No
1,2,4-Trimethylbenzene	95-63-6	24-hour	14.7	293	No	N/A	None	None	No
Xylenes	1330-20-7	Annual	38.4	100	No	15-min	1951	65500	No
Propyl Acetate Normal	109-60-4	24-hour	616	2000	No	15-min	13166	105000	No
Isopropanol	67-63-0	24-hour	924	2333	No	15-min	19749	98000	No
Pentyl Propanoate	624-54-4	24-hour	9.1	1405	No	15-min	46.3	88500	No
Trimethylbenzene	25551-137-7	24-hour	7.4	286	No	N/A	None	None	No
Solvent nalphtha (petroleum), light arom	64742-95-6	24-hour	27.6	600	No	N/A	None	None	No
Naphtha (petroleum), hydrotreated heavy	64742-48-9	24-hour	2.1	2432	No	N/A	None	None	No
Acetic acid	64-19-7	24-hour	1.3	60	No	15-min	4.5	3700	No

8.0 EXPLANATION OF DRAFT PERMIT CONDITIONS

The permit requirements for this proposed facility are included in draft Permit Amendment No. 4911-087-0053-V-05-1.

Section 1.0: Facility Description

Blue Bird Body Company is requesting to increase production on existing lines to produce more buses. There is no additional equipment proposed to be constructed with this application; however, the permit will require the removal of the PSD avoidance limit for facility-wide VOC emissions. In order to comply with the Best Available Control Technology (BACT), each paint booth and each wipedown station will have an emission limit.

Section 2.0: Requirements Pertaining to the Entire Facility

Condition 2.1.1 was deleted because it concerned the facility-wide VOC emission limit to avoid PSD.

Section 3.0: Requirements for Emission Units

Condition 3.1.1 which is the emission units table was modified to include 40 CFR 52.21(j) as an applicable rule, added the wipedown stations to the equipment list and updated the applicable condition numbers.

Condition 3.3.5 is a new condition which subjects the paint booths and the wipedown stations to a BACT emission limit and lists the individual limit.

Condition 3.3.6 is a new condition which limits the VOC content of the cleaning solution to 55% VOC by weight in order to comply with BACT.

Condition 3.3.7 is a new condition which limits guns used in the Black and Primer Paint Booth (PB28), Yellow Paint Booth (PB29) and White Paint Booth (PB31) to HVLP electrostatic guns in order to comply with BACT.

Condition 3.3.8 is a new condition which limits guns used in the Undercoat Booth (PB27) to airless spray guns in order to comply with BACT.

Section 4.0: Requirements for Testing

No conditions in Section 4.0 are being added, deleted or modified as part of this permit action.

Section 5.0: Requirements for Monitoring

No conditions in Section 5.0 are being added, deleted or modified as part of this permit action.

Section 6.0: Other Recordkeeping and Reporting Requirements

Condition 6.1.7 was modified to remove the reporting requirement for facility wide VOC emissions exceedances and to add the reporting requirement for VOC BACT emission limits exceedances.

Condition 6.2.3 was modified to require the facility to also track which paint booth that materials are used.

Condition 6.2.4 was modified to require the facility to calculate monthly VOC emissions for each paint booth and wipedown station.

Condition 6.2.5 was modified to require the facility to determine the 12-month rolling VOC emissions from each paint booth and wipedown station. The condition also requires notifications if any monthly VOC emissions exceed 80% of the stated limit or if any twelve month rolling total exceeds 80% of the VOC BACT limit for each paint booth and wipedown station.

Section 7.0: Other Specific Requirements

No conditions in Section 7.0 are being added, deleted or modified as part of this permit action

APPENDIX A

Draft Revised Title V Operating Permit Amendment
Blue Bird Body Company
Fort Valley (Peach County), Georgia

APPENDIX B

Blue Bird Body Company PSD Permit Application and Supporting Data

Contents Include:

1. PSD Permit Application No. 22073, dated August 6, 2013
2. Additional Information Package Dated March 24, 2014

APPENDIX C

EPD'S PSD Dispersion Modeling and Air Toxics Assessment Review