World Cat Greenville
Hearing Officer's Report and Recommendations

September 22, 2022

Public Comment Period:
July 21, 2022 through August 29, 2022
Public Hearing: August 25, 2022

Pertaining to Permit Application No. 7400317.20A and
Draft Air Quality Permit No. 10681R00 for:

World Cat Greenville
601 Staton Road
Greenville, NC 27834
Pitt County
Facility ID No. 7400317
Classification: Title V

Hearing Officer
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I. Background

On November 4, 2020, the North Carolina Department of Environmental Quality (DEQ), Division of Air Quality (DAQ), received an initial air quality permit application (App. No. 7400317.20A) from World Cat Greenville (WCG). The purpose of the application was for a new air quality permit (Permit No. 10681R00) to construct and operate a new fiberglass boat manufacturing facility. The facility is located at 601 Staton Road, Greenville, NC 27834, in Pitt County, which is in the DAQ's Washington Region (WaRO).

II. Air Quality Permit Application and Permit Review

The DAQ's mission is to work with the State's citizens to protect and improve outdoor (ambient) air quality in North Carolina for the health, benefit, and economic well-being of all. To accomplish this mission, the DAQ requires industrial facilities to apply for and receive air quality permits prior to construction and operation of the air pollution sources and air pollution control equipment to ensure compliance with all applicable federal and state regulations.

The proposed facility will manufacture fiberglass boats. The facility consists of the following sources:

Emission Source ID No(s).	Emission Source Description	Control Device	Control Device Description
ES-LAM01 **MACT VVVV**	Resin and gelcoat application area	CD-PF	Panel Filters installed on six exhaust stacks
IRST01* and IRST02*	Two resin storage tanks (6,000 gallons capacity each)	N/A	N/A

*Insignificant Activities per 15A NCAC 02Q.0503(8)

Resin and gelcoat application area (ID No. ES-LAM01) with panel filters (ID No. CD-PF)

This area will be used for the gelcoating and laminating (open molding) of the large parts, including decks, hulls, liners, etc., as well as small parts, including hatches, covers, and consoles. In addition, this area will be used for closed molding including mold preparation (waxing) and repair of molds.

Styrene based gelcoat is applied predominantly by spray to the hull and deck forms and molds in the lamination area and then allowed to cure. Styrene based resin is hard piped to the point of use from either of two 6,000-gallon storage tanks located on the western side of the building. The resin storage tanks will be equipped with J-neck conservation vents and estimated to have total breathing and working losses from both tanks at less than 100 pounds per year based on estimated annual resin usage of 93,700 gallons of resin per year, or 15.5 total turnovers per year (both tanks combined). (*See TANKS 4.09d model output in Attachment 2 of the application*). Therefore, the tanks will be Insignificant Activities per 15A North Carolina Administrative Code (NCAC) 02Q .0503(8).

Resin and fiberglass for structural support are hand applied over the gelcoat on the mold using buckets/brushes and rollers or non-atomized spray methods. When a sufficient thickness of resin/fiberglass has been applied to the mold, the resin is allowed to fully cure and harden. In addition to the hand/spray resin application to the open mold, the facility also utilizes vacuum infusion/resin transfer molding (RTM) of some components and some model lines. In these methods, cut to shape fiberglass mat is applied over the gelcoat without the application of resin. A plastic/silicone sheet is placed over the fiberglass and sealed at the edges of the mold. Catalyzed resin is forced into the open spaces in the fiberglass mat by application of vacuum at the discharge end or pressure at the inlet.

After curing, the hardened fiberglass hull and deck parts are removed from the mold and the excess material trimmed as necessary to remove the excess flashing. If necessary, imperfections in the surfaces are removed by grinding the surface and re-applying gelcoat and/or resin. The trimming, cutting, shaping, and grinding operations are typically performed by handheld air driven tools and by limited tabletop equipment. These activities are generally controlled by small portable vacuum collectors and normal good housekeeping procedures, including frequent cleaning of surfaces and sweeping of floors by providing control of all particulate matter (PM) generated that will be necessary to prevent contamination of the molds and the curing fiberglass surfaces in the adjoining work area. Minimal PM will exit the building from these activities due to the panel filters being installed on each of the six vertical stacks for the building. The panel filters will be 24" x 24" x 0.5" each with 0.44 ounce per square foot, 6 denier polyester with a PVAC binder for the filter material. These panel filters will have a Minimum Efficiency Reporting Value (MERV) of 4 or 5.

The manufacture of small parts is performed in a similar process to the large parts, with the same methods and materials as is used for hulls and decks but with correspondingly smaller molds. After removal of the components from the molds, the molds are cleaned, inspected, and prepared for return to lamination in the mold care step, using solvent-based materials. Scratches and other imperfections observed on the mold surface are repaired, if necessary, typically with resin or gelcoat tooling. In some situations, for example a damaged mold or a new product line, a new mold will have to be manufactured, using production or other resins and tooling. Mold care is typically conducted in or near the lamination area, but the activity may be located farther away as the situation demands.

Completed hulls and decks are relocated to the adjacent Assembly Area that has minimal emissions and then are prepared for the addition of small parts and components, motors, electrical and mechanical equipment, wiring installation, and final assembly. Two-part floatation foam may also be added as part of the assembly, depending on the boat model requirements. Miscellaneous hazardous air pollutant (HAP) containing bonding or other putties, fillers, waxes and solvents, and various adhesives and coatings are used in the assembly area. When completed, the finished boat is inspected and prepared for storage prior to delivery.

Fugitive sources, such as open product and waste containers, will be identified and minimized, and solvents in general will be subject to careful disbursement and general good housekeeping practices, including the use of solvent safety cans, etc. to minimize emissions. Acetone, the primary cleanup solvent, was classified as volatile organic compound (VOC) exempt by the EPA, but the usages and emissions may be included in the facility records for completeness.

III. Notice of Public Hearing/Public Meeting

At the discretion of the Director of the DAQ, a notice of the draft air quality permit was posted on the DAQ's website on May 20, 2022, and in the Daily Reflector on May 24, 2022, which began a 30-day comment period. While air quality rules do not require a hearing or comment period for the issuance of this permit, the Director decided to hold an initial comment period due to significant public interest. In response to the comments received, the Director also decided to open a second comment period and conduct a public hearing to receive additional comments. This also allowed the DAQ to provide additional outreach to the sensitive receptors and others identified in the Environmental Justice Report for WCG. The second comment period for this permit opened on July 21, 2022, and closed August 29, 2022, at 5:00 pm. Likewise, a notice of the draft air quality permit and permit review were posted on the DAQ's public engagement webpage, along with a press release detailing the hearing, and ways to comment. Copies of the permit application, air quality permit review, draft air quality permit, and DEQ's draft Environmental Justice Report were also made available at the DAQ's WaRO and the Raleigh Central Office-Permitting Section. These documents and other information were available for public review throughout the two comment periods.

Per the recommendation of the draft Environmental Justice Report, outreach letters were sent to sensitive receptors, local city and county officials that detailed the project and how to submit comments, as well as dates for the hearing. Emails were also sent to concerned citizens and local community groups detailing the project and the hearing date.

As indicated above, the first public comment period was from May 24, 2022 to June 23, 2022. During that period, ten written comments were submitted. Most of these comments requested an extension of the comment period and in person public hearing for submission of additional comments. In response, the Director of the DAQ decided to hold a public hearing.

The Hearing Officer for the Public Hearing was Mr. Ashby Armistead, Engineer II and Compliance Coordinator for the DAQ's Wilmington Regional Office (WiRO). During the Public Hearing, which occurred on August 25, 2022, citizens were allowed up to three minutes to speak and/or provide written comment. The final public comment period ended at 5:00 pm on August 29, 2022.

If issued, the permit contains a requirement that a Title V first time application be submitted within a year to complete the procedural TV process. At that time, another 30-day public comment period will be required, and a 45-day review by the United States Environmental Protection Agency (EPA) will also be conducted prior to the issuance of that permit.

IV. Overview of Public Comments Received

During the first 30-day comment period, ten comments were received. Each comment requested a public hearing. Two of the comments cited environmental justice concerns in the community as additional justification for a public hearing. On June 22, 2022, Mark Cuilla, Chief of DAQ's Permitting Section; Shawn Taylor, DAQ Public Information Officer; and Renee Kramer, Title VI and Environmental Justice Coordinator held a conference call with several citizens. During the call, commenters expressed concern regarding the company's compliance history at a separate, existing location, the toxic nature of styrene, cumulative impacts from all emissions in the area, and lack of oversight by the DAQ while relying on "self-monitoring" by World Cat. Similar comments were expressed during the second comment period and the hearing. They are addressed in this report.

Over the duration of the second public comment period, 27 written comments were received. Eighteen oral comments were made during the August 25, 2022, public hearing. Seven oral comments were left in the voicemail box. Out of a total 27 written comments, one was in favor while 26 were in opposition of permit issuance. One of the oral commenters during the hearing spoke in favor of the permit while the remaining 17 commenters were opposed. Many commenters provided duplicate comments in both written and oral formats.

All comments received during the public comment period, both oral and written, have been evaluated and copies of all written comments and any attachments to those written comments are available to the public upon request. All comments were given equal consideration, whether they were written, verbally recorded, or made orally at the public hearing. The comments received, both oral and written, expressed similar approval or concerns. Rather than addressing each comment on an individual basis, the comments were first separated based on whether they seemed to approve or oppose the issuance of the air quality permit. Once separated into these two very broad categories, the comments were further separated based on the expression of various similar points of approval or opposition to permit issuance. It is these various similar points that will be addressed by this Hearing Report.

Several environmental advocacy organizations spoke critically and/or in opposition to the project, the permit application, and issuance of an air quality permit. Many submitted multiple comments in written and oral formats, and many of their comments were similar in nature. These groups included:

- Blue Ridge Environmental Defense League
- CleanAIRE NC
- Down East Coal Ash Environmental and Social Justice Coalition
- North Carolina Conservation Network
- North of the River Association
- Pitt County Coalition Against Racism
- Sound Rivers
- Toxics Free NC
- Southern Environmental Law Center on behalf of:
    - CleanAIRE NC

- Down East Coal Ash Environmental and Social Justice Coalition
- Environmental Justice Community Action Network
- North Carolina Conservation Network
- North of the River Association
- Pitt County Coalition Against Racism
- RedTailed Hawk Collective
- Sierra Club – Cypress Group
- Toxic Free NC
- Women's International League for Peace and Freedom

All spoke in opposition of the proposed WCG facility and issuance of the air quality permit. The Public Hearing comments were not as detailed as some of the written comments received due to the time limit allotted to each speaker. However, the general points and claims that were made were very similar to those received in the written public comments.

Summaries of comments in this section are not verbatim, or exhaustive, but capture the major nuances of the comments submitted on each topic. A complete and accurate record of the comments is a matter of public record and is considered an essential part of the record, and supporting documents related to this Hearing Officer's Report and will be made available to the public upon request.

A. Comments in Support of the Draft Air Quality Permit and Hearing Officer's Response

General Comments in Support of the Draft Air Quality Permit:

Two commenters spoke in support of issuance of the draft air permit to WCG. One was received orally during the hearing and the other was submitted as a written comment. In summary, the commenters spoke in favor of issuance of the draft permit and cited the following reasons why:

- Improvements to the community
- WCG's voluntary use of vacuum infusion process which minimizes emissions
- WCG employs ex-military and second chance offenders
- Criteria and Hazardous Air Pollutant (HAP) actual emissions will be less than Title V permit levels (100 and 10 tons per year respectively for criteria pollutants and HAP's)
- If the permit is denied other permitted industries in the area should also be re-evaluated

Hearing Officer's Response

Many of these points are commendable and are positively aimed towards the company. However, none of these comments propose any changes to the draft permit or question the application or accuracy of its content. Regarding one commenter mentioning WCG's actual HAP emissions will be less than 10 tons per year, it is important to note that their actual styrene emissions are over 10 tons per year.

The DEQ appreciates the positive aspects that industry and business provide to the State. However, the decision at hand is whether the air quality permit should be issued to WCG, and if issued, will the content and conditions contained therein be based on a reasonable assurance that the facility can and will be operated in compliance with existing State and Federal air quality regulations at all times. Based on that, no recommendations are being made in response to any of the comments which were generally in support of the project and issuance of the draft air quality permit.

B. Comments in Opposition to the Draft Air Permit and Hearing Officer's Response:

General Comments in Opposition to the Draft Air Quality Permit:

Many of the comments opposed to issuing the permit contained very similar, if not identical language. Below are some paraphrased examples of general comments opposed to permit issuance and a response. These comments were largely submitted by individual commenters.

- You would not want it to be located near you
- The Bible says to protect the earth
- Operations will continue regardless of atmospheric inversions
- Air Quality rules need to be improved
- Sandpits should not be allowed
- Distrust of regulations
- Urging to look into WCG's environmental "hazard practices"
- All companies should reduce or eliminate hazardous emissions
- Producing a superior product does not equate to permission to pollute the environment

Hearing Officer's Response:

The DAQ is sensitive to all these issues especially those involving the protection of human health, environmental impacts, improvement of Air Quality rules, zoning, clean industries, and the protection of the surface and groundwaters of the State of North Carolina. However, as referenced earlier, the decision of whether to issue the air quality permit should be based on a reasonable assurance that the facility can and will be operated in compliance with existing State and Federal air quality regulations at all times. Based on that, no recommendations are being made in response to any of these comments which were in general opposition to the project and issuance of the draft air quality permit.

Compliance History / Operating Without a Permit:

Numerous commenters expressed a "lack of public trust" in WCG for their "demonstrated inability to report correctly" at a sister facility in Tarboro, NC. HC Composites, LLC is WCG's parent company. They have been producing World Cat boats in Tarboro under an air permit issued to HC Composites, LLC (Facility ID No. 3300170). The five-year compliance history at that location includes one Notice of Deficiency and seven Notices of Violation. Four of those Notices of Violation included recommendations for enforcement which resulted in assessment of civil penalties by the DAQ. In all cases, the violations were due to failure to submit reports on

time and maintain records required by air quality rules as specified in their air permit. In response to the Notices of Violation, all outstanding reports required by the air permit were submitted.

Commenters requested that DAQ shut down operations at WCG based on their continued operation without an air permit and the compliance history of the Tarboro facility. In addition to requesting WCG shutdown, one commenter called for the maximum fine of $25,000 per day for each day of continued operation without a permit. Another commenter expressed a belief that allowing WCG to operate without a permit for a year showed negligence on the part of the DAQ, Pitt County, and the City of Greenville. Many commenters called into question WCG's ability or willingness to maintain compliance as well as the DAQ's ability to ascertain WCG's compliance status with air quality regulations.

In July of 2021, a staff member in the WaRO discovered an online post by WCG indicating that the first boat hull had been produced by the facility. On July 29, 2021, DAQ WaRO staff went to WCG and were informed that only a small production closed mold project had been done. The DAQ staff verbally informed facility personnel that WCG could not start production until the permit was issued. The same WaRO staff revisited the facility on October 25, 2021, in order to reestablish contact between the company and DAQ's Central Office Permitting Section to obtain additional information requested for the application that was delaying processing of the permit. There was no indication, such as odor or vehicle activity, at that time to make the staff member believe WCG was operating. Therefore, he did not request access to the production portion of the building. WaRO staff returned to the facility on July 22, 2022 and discovered that WCG was in fact operating without the required air quality permit.

Hearing Officer's Response:

After the un-announced inspection on July 22, 2022, and discovering WCG had started operations without an air permit, the WaRO promptly issued a Notice of Violation / Notice of Recommended Enforcement (NOV/NRE) to WCG on July 28, 2022, for the following violations:

- North Carolina General Statute 143-215.108 by construction and operation of the facility without a permit
- 40 CFR 63.9(b)(4)(v) "National Emissions Standards for Hazardous Air Pollutants for Boat Manufacturing" (Subpart VVVV) for not submitting the 15-day notice of initial startup of the facility

As noted in the NOV/NRE (and the draft permit), Subpart VVVV requires specific recordkeeping and reporting requirements to demonstrate compliance. It was determined that operations at the facility began on July 1, 2021. The NOV/NRE required WCG to submit weekly records of material usage and emissions since operations began. The WaRO staff are currently evaluating that information as they prepare the recommendation for enforcement for consideration by the Director as he contemplates the potential assessment of a civil penalty. That analysis will also determine if any other violations of Federal or State air quality regulations contained in the draft air permit did occur. As of the date of this report, a review of the information submitted by WCG indicates that no emissions violations occurred while the facility operated without the required air quality permit. The NOV/NRE also stated *"Continued operation of the facility after July 25, 2022 may be considered a willful and knowing violation of the General Statute in addition to the state*

and Federal regulations." This factor will be given consideration in the Director's decision regarding any potential civil penalties.

The DAQ normally does not inspect a facility before they are issued an air permit due to resource limitations. When a company submits an air permit application, the DAQ provides regulatory guidance and answers any related questions. The WaRO staff did make WCG aware that they could not operate without an air quality permit. The DAQ expects that a company understands the air quality rules and will be operated in compliance with existing State and Federal air quality regulations at all times.

Establishment of Ambient Air Quality Monitoring Sites:

A few commenters requested placement of VOC and/or styrene monitors at four locations surrounding the facility or in the surrounding community. These requests were made in the context of the amount of styrene emissions coming from both WCG and/or the other sources of air emissions existing in the area, particularly styrene emissions from Grady-White Boats, Inc. (GWB). Some commenters pointed out a lack of ambient monitors in the vicinity of Greenville and requested that air quality monitors be sited in the vicinity to monitor VOCs and styrene, with no further discussion. Some pointed to the various industrial emissions in the area as justification for this general monitoring request.

Hearing Officer's Response:

The DAQ is committed to fulfilling its mission statement to the fullest of its abilities. The DAQ's Ambient Monitoring program is extremely resource intensive. Not only does it take up a significant portion of DAQ's budget, but it also requires extensive staffing resources to site, operate, troubleshoot, calibrate, quality assure, analyze, and report the data. Having extremely limited resources, the DAQ devotes itself to distributing those resources in a manner that best supports its mission statement and serves the citizens of the State of NC. In the case of the Ambient Monitoring Network, the number, types, and locations of the monitoring sites are determined by discussions between our Planning Section which includes modelers/meteorologists, the Ambient Monitoring Section, and DAQ management. Allocation of monitoring resources are reviewed annually by staff and Annual Network Review Plans are put out for public/EPA comment each year. A more extensive review is conducted every five years which is also put out for public/EPA comment. Ambient monitoring siting requirements and National Ambient Air Quality Standards (NAAQS) determinations are governed by 40 CFR Part 58 Appendices A, D, & E and 40 CFR Part 50 Appendices H, I, K, N, P, R, S, T, & U respectively. Rarely does a facility or conglomeration of facilities warrant source specific monitoring. The Hearing Officer has full confidence in DAQ's management and sections which allocate monitoring resources each year in NC. It is further believed that WCG as proposed does not warrant site specific monitoring for VOCs or other Criteria Pollutants. Commenters are urged to provide input regarding the location and type of monitors in any area, including Greenville, during the Annual Network Review comment period each year. The current comment period is open from September 19, 2022, through October 19, 2022. The link is: https://deq.nc.gov/news/events/public-comment-period-2022-2023-annual-monitoring-network-plan-north-carolina-air-quality.

Inadequate AQ Regulations & Requests for Additional Controls:

Some commenters expressed little faith in air quality rules and a belief that emissions controls are inadequate. Application of the highest level of emissions controls and/or regulatory scrutiny was called for in the comments. Several technologies used to control VOC emissions like styrene were suggested. These included; activated carbon, incineration, and biological treatment. One commenter questioned how the sanding and grinding area could contain particulate matter (PM) emissions when it is open on two ends. Additionally, the commenter questioned exemption of the grinding booth from air quality regulations and quoted the 2019 permit review for HC Composites, LLC (Tarboro), which stated that the process was exempt from air quality regulations since the bagfilter controlling its emissions was vented into the building.

Hearing Officer's Response:

Beginning with the exploitation of naval stores (tar, pitch, turpentine, and rosin) by early Europeans, North Carolina has a long history of boat building. According to comments submitted there are approximately sixteen other boat manufacturers currently operating in NC. All of these manufacturers utilize similar methods and emissions controls in their production of fiberglass boats. None of those facilities utilize the VOC control measures mentioned by commenters. The DAQ can only require controls or work practice standards when directed to do so by Federal or State regulations. A discussion of federal technology-based regulations is provided in the response to the next section.

One commenter questioned HC Composites, LLC's ability to control emissions from a booth with two open ends and its exemption from air quality regulations due to it venting indoors. Good housekeeping and control of particulate matter is imperative in the fiberglass boat industry. Grinding activities are typically located adjacent to the fiberglass layup area, so it is necessary to control PM in order to avoid contaminating the molds or the curing of fiberglass parts. Open-ended grinding booths are common in the fiberglass boat industry. They work by pulling a sufficient volume of air through the filter creating enough vacuum at the openings to prevent PM from escaping. It is the Hearing Officer's understanding that WCG's grinding booth utilizes a set of particulate filters to control PM before it exhausts inside. In addition, there are panel filters on each of the building's six exhaust stacks. It is expected that these measures will be adequate to prevent fugitive dust from migrating beyond the property line. WCG's ambient fugitive emissions and any emissions exiting the exhaust stacks are regulated by the DAQ. The DAQ does not have the authority to regulate indoor air. In all cases when a control device used for PM emissions is vented inside a building and workers are present, the source is considered exempt from permitting.

While some amount of fugitive dust is possible, it has not been the DAQ's experience that significant fugitive dust issues exist at boat manufacturers. In NC, fugitive dust is regulated under 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emissions Sources" (Specific Conditions and Limitations A.7 of the Draft Air Permit). 15A NCAC 02D .0540 requires a Fugitive Dust Plan only if a determination of substantive fugitive dust complaints is made by the Director based on a recommendation by staff at the local regional office according to the following:

(c) The owner or operator of a facility required to have a permit pursuant to 15A NCAC 02Q or a source subject to a requirement pursuant to 15A NCAC 02D shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or visible emissions in excess of that allowed pursuant to Paragraph (e) of this Rule.
(d) If fugitive dust emissions from a facility required to comply with this Rule cause or contribute to substantive complaints, the owner or operator of the facility shall:
(1) within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written report that includes the identification of the probable sources of the fugitive dust emissions causing complaints and what measures can be made to abate the fugitive emissions;
(2) within 60 days of the initial report submitted pursuant to Subparagraph (1) of this Paragraph, submit to the Director a fugitive dust control plan as described in Paragraph (f) of this Rule; and
(3) within 30 days after the Director approves the plan pursuant to Paragraph (g) of this Rule, be in compliance with the plan.

These determinations are typically driven by citizen complaints, but they can also be made based solely on a DAQ inspector's observations. Fugitive dust is regulated consistently throughout NC by the DAQ. In all cases, the same fugitive dust condition referencing 15A NCAC 02D .0540 is placed in applicable air permits and the requirement for a fugitive dust control plan is based on field observations by staff in accordance with the procedures above. The DAQ must follow the direction and the requirements of applicable rules as they are written. In this case, fugitive dust control plans are only required when justified by staff observations which result in substantive fugitive dust complaints or staff observations indicating fugitive dust is impacting areas beyond a facility's boundaries as determined by the Director. The DAQ does not expect fugitive emissions from the paved parking lot at WCG to be an issue either.

Community Health/Exposure:

Numerous commenters expressed concern regarding community exposure to emissions from the addition of WCG as well as other sources of air pollution in the area. In particular, many expressed concerns for the volume of styrene emissions proposed by WCG coupled with emissions from existing permitted air facilities (Grady-White Boats, Inc. in particular). Many discussed the exposure pathways and health impacts from both acute and chronic exposure to styrene with inhalation being the primary exposure route. Several people indicated that styrene was "*reasonably anticipated to be a human carcinogen.*" Styrene was cited by the majority of commenters as being the primary pollutant of concern. Others spoke of depression, hearing loss, irritant effects, dermatitis, liver, and reproductive impacts from styrene. Both young people and seniors in the area were cited as vulnerable populations.

Concerns regarding methyl methacrylate (MMA) emissions were also expressed. MMA may be present in the gelcoats and adhesives used in the boat manufacturing industry. MMA was cited as "*likely non-carcinogenic*" which "*can cause external irritation and respiratory and neurological symptoms in humans.*" Because of this and existing community health outcomes, more research was requested. General concerns were expressed for emissions of other chemicals from WCG, and existing industry. Several commenters expressed a belief that the area already had an elevated risk of cancer and cited existing industry in the area as the cause. In fact, commenters pointed to

EPA's EJScreen Report utilizing 2017 data which indicates that within a one-mile radius around WCG the cancer risk is in the 89th percentile compared to national risk. Commenters expressed particular concern for worker safety. Commenters cited the National Institute of Health's "Toxicity Summary" for styrene which stated: "*Epidemiologic studies found styrene workers had increased mortality or incidences of Lymphohematopoietic cancers.*" One commenter pointed out that Finland's Personal Exposure Level for styrene workers is much lower than for the United States. Another commenter indicated all workers should have access to a MSDS (SDS) sheets for styrene. Finally, commenters expressed concern regarding the proximity of WCG/other industries in the area to schools, a fitness/aquatic center, ECU athletic fields and the Pitt County Head Start/after school facility. In fact, a former Chief Planner for the City of Greenville weighed in on this point. His statement is incorporated into the Hearing Officer's response.

Hearing Officer's Response:

The EPA regulates sources of HAP (such as styrene and MMA) emissions in 40 CFR Part 63. Under that program, the EPA promulgates the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for various types of manufacturers. Since WCG will emit more than 10 tons of styrene per year, 40 CFR Part 63, Subpart VVVV for "Boat Manufacturing" applies. NESHAPs are technological based standards. The EPA conducts a national review of all manufacturers in a given source category, such as fiberglass boat manufacturing. During the review, the EPA identifies controls and/or work practices employed by the top 12% of manufacturers in the category that do the best job of reducing/controlling HAP emissions. Those controls and/or work practices are then required of the industry as a whole in a NESHAP regulation. This technological basis for the rules was cited as a reason for additional controls and concerns for human health impacts in the community. The Clean Air Act (CAA) requires a Health Risk Assessment within eight years of promulgation of a NESHAP for a given source category. Every eight years thereafter, the CAA requires EPA to revise the rule to account for new control technologies or improved work practices which reduce emissions. The EPA's risk assessment for the Boat Manufacturing NESHAP was completed in 2020. The EPA's fact sheet contains the following introduction:

> *"On February 25, 2020, the U.S. Environmental Protection Agency (EPA) finalized minor amendments to the 2001 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Boat Manufacturing and the 2003 NESHAP for Reinforced Plastic Composites Production. EPA has evaluated the risks remaining after fully implementing the NESHAP for Boat Manufacturing and Reinforced Plastic Composites Production and determined that risks from these source categories are acceptable. In addition, the agency identified no developments in practices, processes or control technologies that would further reduce emissions of air toxics. EPA is not making significant changes to the original NESHAP for this source category and has determined the standards provide an ample margin of safety to protect public health and the environment."*

In addition to this, NC has health based toxic rules, and styrene emissions are regulated under those rules in applicable cases. Even though WCG is not subject to those rules due to promulgated exemptions for sources subject to federal HAP standards (as further discussed below), the DAQ conducted a risk modeling analysis in accordance with Session Law 2012-91

House Bill 952, which demonstrated compliance for styrene's health-based standard. Modeling will be further discussed later in this report.

In most cases with new industries, the air quality permit is just one of many permits to be issued. If required, re-zoning requests are usually the first step in establishing a new business at a given location. All of the comments regarding proximity of WCG and existing industries to public venues and private residences are outside of the scope of this hearing report and outside the jurisdiction of the DAQ. However, the DAQ did conduct a modeling analysis of styrene emissions from both WCG and Grady-White Boats, Inc. The decision to conduct this additional modeling was made by the Director after the comment period ended. The DAQ has no authority over zoning. As an agency tasked with responding to air quality complaints, DAQ has a great interest in comments regarding zoning since most of the complaints the DAQ responds to are due to the proximity of the complainant to the offending issue. In this case a former city planner commented to "go on record" regarding this issue. His comment is below:

> *"I worked for the City of Greenville as Chief Planner for five years, during which time (in approximately 2015) a proposed private kindergarten, elementary and middle school named "Ignite" was approved for a rezoning which is diagonally across the street from World Cat's location within the former Eastern Carolina Vocational Center. I reviewed either a special use permit or a rezoning application and recommended denial, because it was poor planning to allow an incompatible land use such as a school within an industrial park. Despite the Planning and Zoning Commission unanimously recommending denial, the Greenville City Council approved the special use permit or rezoning.*
>
> *For reasons I do not know, the school never opened, but the approved rezoning remains and if someone wanted to, could move in and operate a school as special use permits and rezonings "run with the land" and not with the original applicant.*
>
> *I think this needs to go on record so that if another school tries to open in the building, Greenville City Council will recall their action and possibly learn from it.*
>
> *Tom Weitnauer, AICP American Institute of Certified Planner"*

Based on several commenters and the website headstartprograms.org, Pitt County Head Start is currently at the location mentioned by Mr. Weitnauer.

This Hearing Officer would advise individual commenters as well as the environmental groups who raised concerns regarding the proximity of WCG and other industries to local residences, schools, and recreation centers to express those concerns during local hearing and planning meetings where they will be more impactful. As noted earlier, the DAQ has no authority over local zoning.

Worker Safety:

Above and beyond health impacts in the community, several commenters expressed concern regarding workers exposure to styrene and other chemicals in use at the plant. Understandably, worker exposure levels are expected to be higher than exposure levels experienced by the general public.

Hearing Officer Response:

The Hearing Officer and DAQ staff are not qualified to provide recommendations on comments involving worker protection. The DAQ has no authority to regulate worker safety even though we consider the matter to be very important. The DAQ relies on the expertise of the North Carolina Department of Labor which operates under the purview of the United States Occupational Safety and Health Administration (OSHA) in matters concerning worker safety. In fact, many of the worker health concerns associated with styrene or other chemical exposures like MMA come from studies commissioned by or used by those agencies to set standards for workers' protection. Standards regarding worker safety are contained in Title 29 of the Code of Federal Regulations. One of the regulatory requirements is to require posting of Safety Data Sheet (SDS) documentation regarding chemicals used by industry for workers to review.

Exemption from NC toxic's regulations and additional reporting requirements:

Many commenters protested WCG's exemption from NC's toxic regulations in accordance with 15A NCAC 02Q .0702(a)(27)(B). Commenters questioned WCG's estimated operating hours of 24 hours per day and pointed to the HC Composite, LLC facility in Tarboro which operates 8 hours per day. In addition, the commenters surmised that WCG was reporting 24 hours of daily operations over 360 days per year in order to reduce the estimated hourly emissions rate and avoid styrene emissions from exceeding the NC toxic regulation's Toxic Air Pollutant Permitting Emission Rate (TPER). If a pollutant exceeds a TPER, the rules require the facility to conduct modeling analysis to demonstrate that the Acceptable Ambient Level (AAL) for the pollutant is not exceeded, thus demonstrating compliance with NC's toxic regulations. Commenters objected to exemption from the rule and requested WCG be required to track and report styrene emissions for comparison to its TPER. Commenters questioned why there is not an annual emission limit on styrene. Other commenters suggested styrene was reasonably anticipated to be carcinogenic. Known carcinogens which are regulated by NC's toxic regulations are usually assigned annual emissions limits.

Hearing Officer's Response:

WCG qualified for exemption from NC's toxic regulations according to 15A NCAC 02Q .0702(a)(27)(B). When a facility requests exemption under this provision, the DAQ is required to conduct a health-based risk assessment in accordance with Session Law 2012-91 House Bill 952. To satisfy that requirement, the DAQ conducted modeling of WCG's styrene emissions.

As noted earlier, if a pollutant exceeds a TPER, the rules require modeling to demonstrate that the AAL for the pollutant is not exceeded, thus demonstrating compliance with NC's health based toxic regulations. During the permit review process, WCG reported hourly emissions of styrene

just below the TPER of 11.16 pounds/hour. The review engineer was skeptical of the estimate since the emissions were spread out over 8,760 hours per year of operation. He requested WCG re-estimate the maximum hourly emission rate for styrene. Based on that request, WCG re-estimated the maximum hourly emissions and determined that the maximum hourly emissions rates for styrene occurred during the gelcoat operations and were close to the TPER. Based on this new information, it was determined that modeling was required in order to complete the required health-based risk assessment. That modeling demonstrated that WCG could emit up to 99.77 pounds per hour and still comply with the AAL at 95% of the standard. This represents a wide margin of safety considering the anticipated worst-case emissions estimate of 10.82 pounds per hour. In response to commenters concerns regarding cumulative impacts, especially with regards to Grady-White Boats, Inc.'s styrene emissions, the Hearing Officer recommended and the Director agreed to model combined actual styrene emissions from both WCG and Grady-White Boats, Inc. This is discussed further in the next section.

With regards to the comment questioning why there is no annual standard for styrene under NC's toxics regulations, such a limit can only be accomplished through the rulemaking process. Typically, suggested changes to the NC's toxic regulations are made by the Environmental Management Commission (EMC) based on advice from NC's Science Advisory Committee (SAB). Commenters suggesting the need for an annual standard should consider petitioning the EMC to initiate such a regulatory change.

Cumulative Impacts:

Many commenters requested a cumulative impact analysis outside the context of Environmental Justice concerns. Some commenters questioned DAQ's commitment to its mission while requesting cumulative impact analysis for all medias. Other commenters provided various analysis/justifications in support of those requests. Many referenced other facilities with similar characteristics to WCG. As mentioned in the section above, some comments were specifically focused on the cumulative impacts of styrene emissions from both WCG and Grady-White Boats, Inc. (GWB).

Hearing Officer's Response

While reviewing these comments and preparing this report, the Hearing Officer recommended to the Director that a modeling analysis of WCG and GWB's combined actual styrene emissions be conducted. Given the very specific nature of this request, to consider only styrene emissions from the two closely located boat manufacturing facilities with their actual emissions rates already known by the DAQ, the Director made a decision to proceed with the recommended modeling analysis. Such decisions can only be made on a case-by-case basis while considering the information that is available, and whether it would be an appropriate use of the DAQ's resources.

The modeling analysis was conducted by the DAQ's Air Quality Analysis Branch (AQAB). That analysis was completed on September 19, 2022, and it demonstrates compliance with the AAL of 10,600 $\mu g/m^3$ for styrene. The receptor grid included the Pitt County Head Start location mentioned by many commenters. Expected actual worst-case hourly styrene emissions data was applied to the worst-case stack for each facility. The combined modeling impact from WCG and GWB is 21.5% of the AAL for styrene. Based on this information, it is the Hearing Officer's

opinion that commenters' concerns regarding modeling and cumulative styrene air quality impacts have been addressed. Because of the margin of compliance demonstrated by the model, no further analysis is recommended regarding styrene emissions from the two facilities. It is also the opinion of the Hearing Officer that no other air quality pollutants warrant additional modeling analysis, as styrene is the primary HAP of concern at both facilities. The AQAB's combined styrene modeling results memo is attached to this report.

Environmental Justice / Title VI concerns:

Commenters remarked on the high levels of people of color, ethnic groups, and poverty in the area and questioned the appropriateness of locating a facility such as WCG in the area, especially considering existing industries and their actual/potential impacts on the local people and the environment. Poor health outcomes were mentioned by many commenters in general, and specific statistics were mentioned and reported. Outreach conducted in the community by the DEQ in response to the proposed draft permit was called insufficient. Some commenters questioned if the DEQ contacted the Pitt County Head Start facility and provided sufficient outreach to them in response to WCG's proposed draft air permit. Many commenters cited Environmental Justice (EJ)/Title VI concerns and cited several high EJ Index Rates (>80%) when calling for denial of the proposed draft air permit, cumulative impact analysis, and/or a full EJ analysis. Many commenters on the subject expressed a firm belief that EJ mandated a cumulative impact analysis by the DAQ for air impacts and/or by DEQ for all media. It was unclear in the comments what that would entail. In general, several commenters called into question the DEQ's commitment to EJ. Cumulative impact analysis was called for both inside and outside of EJ concerns.

Hearing Officer Response:

As the commenters point out, the DEQ's Draft Environmental Justice Report includes information on the elevated number of certain racial and ethnic groups that live within a one-mile radius of the facility. The report also includes information concerning the types of other permitted facilities located in the area around the proposed site, information on Pitt County's health rankings and health outcomes as well as sociodemographic data for the area. The DEQ conducted outreach in the community, including communications provided to the "Sensitive Receptors." In response to public input, the DAQ did conduct a modeling analysis for styrene air emissions from both WCG and Grady-White Boats, Inc. The DEQ remains committed to EJ and equity, and as such, compiled the aforementioned information within the Draft EJ Report in order to promote ease of access to this information for the public, the applicant, and DEQ staff. In response to the missed opportunity to provide outreach to the Pitt County Head Start program as a sensitive receptor, the Hearing Officer informed DEQ's EJ staff and received the following response:

> *"DEQ acknowledges that sensitive receptors may be missed through initial screening and therefore additional sensitive receptors may be identified throughout the entirety of the comment period. DEQ appreciates when notified by community members of missed sensitive receptors as early in the process as possible so additional outreach can be conducted to any sites originally missed. The final EJ Report will be updated to reflect the addition of this sensitive receptor."*

Per- and polyfluoroalkyl substances (PFAS) Concerns:

One commenter claimed that Teflon wax was used to coat the molds prior to the molding process to facilitate easy removal of the fiberglass hulls and parts. The commenter questioned the amount of Teflon wax used and its fate after usage. The commenter speculated as to the pathways of PFAS introduction to the environment. Does it volatilize, will it contaminate groundwater/surface water, will it adhere to particulate filters and be landfilled?

Hearing Officer's Response:

In response to this comment, information on the mold release products being used by WCG was requested. The four Safety Data Sheets (SDSs) supplied by WCG didn't show any PFAS related compounds in the mold care products they use.

Odor Concerns:

Commenters cited potential future odors from the facility as reasons for opposition. Additionally, requests were made for inclusion of an odor control plan as part of the permit requirements.

Hearing Officer's Response

The DAQ acknowledges that some amount of odors can be expected from the proposed facility. There are multiple fiberglass boat manufacturers in NC with air permits. While some odors are associated with these facilities, it has not been the DAQ's experience that significant odors extend beyond the property boundaries of those sites. Regardless, observations made at similar facilities cannot be assumed to be representative of conditions which may or may not exist if the WCG permit is issued and operations continue. However, having been in operation for over a year in tandem with emissions from Grady-White Boats, Inc., no odor complaints have been filed. In fact, a review of the records going back to 1993 indicates no odor (or any other) complaints regarding Grady-White Boats, Inc. (a nearby boat manufacturing facility) have been filed by the public. Odors are regulated under 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions" (Specific Conditions and Limitations A.9 of the Draft Air Permit). 15A NCAC 02D .1806 requires an Odor Management Plan only if a determination of objectionable odors is made by the Director based on a recommendation by staff at the local regional office according to the following:

i. *Determination of the existence of an objectionable odor. A source or facility is causing or contributing to an objectionable odor when:*
   a. *a member of the Division staff determines by field investigation that an objectionable odor is present by taking into account the nature, intensity, pervasiveness, duration, and source of the odor and other pertinent such as wind direction, meteorology, and operating parameters of the facility;*
   b. *the source or facility emits known odor-causing compounds such as ammonia, total volatile organics, hydrogen sulfide, or other sulfur compounds at levels that cause objectionable odors beyond the property line of that source or facility; or*
   c. *the Division receives from the State Health Director epidemiological studies associating health problems with odors from the source or facility.*

These determinations are typically driven by citizen complaints but can also be made based solely on a DAQ inspector's observations. In all cases involving potential odor impacts, the same odor condition referencing 15A NCAC 02D .1806 is placed in applicable air permits and in all cases, the requirement for an Odor Management Plan is based on field observations by staff in accordance with the procedures above. The DAQ must follow the direction and requirements of applicable rules as they are written. In this case, Odor Management Plans are only required when justified by staff observations which result in objectionable odors beyond a facility's boundaries as determined by the Director.

Criticism of the Public Hearing Process:

Several people spoke with Shawn Taylor, the DAQ's Public Information Officer (PIO), expressing criticism regarding the public hearing process. Below is a summary of those comments:

- Thursday night was open house for Pitt County Schools. Our hearing would have had higher attendance on another night.
- The DAQ should have scheduled a public hearing by default, rather than only doing so when asked. The DAQ's "floor" for public engagement (just a 30-day public comment period) is inadequate.
- There was little to no local awareness of this project and permitting action until a local newspaper article the day before the hearing.
- Many people who live near the facility don't get the newspaper, don't have internet access, and don't check the DEQ's website. There was no way for them to know about this hearing or draft permit.

Hearing Officer's Response:

Conducting a successful public hearing which allows for ample opportunity for public comment is a resource intensive and complex process. It requires the involvement of: Regional DAQ staff, Environmental Justice staff, the DAQ and DEQ PIOs, Central Office Permitting staff, the Hearing Officer, the Deputy Director, the Director, and others. In addition, a suitable venue must be found, and DAQ has to work with the dates available. Two public comment periods were held for this draft permit. Public notices of each were published in the Daily Reflector with the second one also announcing the hearing. In addition, in each case, the public notices were advertised on our website along with documentation related to permit issuance, videos were produced in both Spanish and English and advertised on our website, the EJ staff identified and conducted outreach to sensitive receptors, and information was provided to Pitt County and the City of Greenville. The Down East Coal Ash Environmental and Social Justice Network was consulted to identify additional opportunities for community outreach. The DAQ doesn't have the resources or staffing to publish additional media advertisement or conduct mass mailings to local citizens, and it doesn't have the resources to automatically conduct a public hearing for all draft permits. The DAQ has experienced significant declines in staffing and financial resources, yet the DAQ has devoted significantly more resources to holding more public hearings. Prior to 2018 DAQ typically held 0-2 hearings per year. Beginning in 2019, the DAQ changed our policies regarding when

to hold public hearings. This has resulted in significantly more hearings. Last year, DAQ held 17 public hearings on draft air permits. These efforts highlight our commitment to the public participation process and Environmental Justice.

Catastrophic Accidents/ Other Environmental impacts:

In addition to air quality concerns, commenters expressed concern regarding impacts to the soil, groundwater, and surface water. Commenters speculated regarding the consequences which could result in the event of natural disasters such as hurricanes, fires, floods, or other industrial accidents. Spontaneous combustion of styrene monomer as well as potential flooding of the resin/gelcoat tanks were included as concerns. Outside of catastrophic events, commenters also speculated regarding potential pathways chemicals used at the facility might contaminate soils, groundwater or surface waters.

Hearing Officer Response:

The DAQ is sensitive to all of these issues especially those involving the protection of human health, environmental impacts, and the protection of the surface and groundwaters of the State of North Carolina. The DAQ staff coordinate closely with colleagues in sister Divisions within DEQ to ensure fulfillment of the Department's important mission. However, as referenced earlier in this Hearing Officer's Report, the decision of whether the air quality permit should be issued to WCG and, if issued, the content and conditions contained therein must be based on a reasonable assurance that the facility can and will be operated in compliance with existing state and federal air quality regulations at all times.

One commenter cited concerns regarding spontaneous combustion of styrene monomer above 86°F and the effect of summer heat on the outdoor tanks. The two storage tanks are for resin (which contains styrene), not liquid styrene only. It should be noted that the local Fire Marshal has jurisdiction over any Fire Code related issues. Comments and questions made regarding the impact to medias regulated by other agencies due to catastrophes or other modes such as stormwater runoff are also under the jurisdiction of agencies other than the DAQ.

V. Conclusions and Recommendations

Many commenters are very passionate about the World Cat Greenville draft permit as evidenced by the thorough, thoughtful, and detailed comments which were submitted. The DAQ sincerely appreciates the time, effort, opinions, and interest in providing comments and attending the hearing for the WCG permit application and draft permit.

The goal in responding to those comments and preparing this report was to honor them by spending a significant amount of effort researching and responding to those comments.

After thoroughly considering all public comments addressing issuance of the proposed draft air quality permit (Permit No. 10681R00) to WCG for the construction and operation of a new fiberglass boat manufacturing facility, no permitting errors were identified. Additionally, no technical comments were received that indicated the DAQ was lacking in its evaluation of the application or construction of the current draft permit.

Therefore, it is the recommendation of the Hearing Officer to issue the draft air permit as written. It is expected that following the Conditions in the draft air permit will result in WCG complying with all applicable State and Federal Air Quality Regulations.

Additionally, it is recommended that DAQ staff remain sensitive to the health of the nearby communities and their concerns. This can be accomplished by thorough facility inspections and prompt responses to the citizens air quality concerns and complaints.

Ashby Armistead, Engineer II
Hearing Officer

9/22/22
Date

Appendix A

Draft Air Quality Permit and Permit Review

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL A. ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

Month XX, 2022

Mr. Scott Ellis
Director of Manufacturing/Engineering
HC Composites, LLC
601 Staton Road
Greenville, NC 27834

Subject: Air Permit No. 10681R00
World Cat Greenville
Greenville, Pitt County, North Carolina
Permit Class: Title V
Facility ID# 7400317

Dear Mr. Ellis:

In accordance with your completed application received March 15, 2022, we are forwarding herewith Permit No. 10681R00 to World Cat Greenville, Pitt County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Additionally, any emissions activities determined from your air permit application as meeting the exemption requirements contained in 15A NCAC 02Q .0503 have been listed for information purposes as an "ATTACHMENT" to the enclosed air permit. Please note the records retention requirements are contained in General Condition 2 of the General Conditions and Limitations.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. Such a request will stay the effectiveness of the entire permit. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this air permit shall be final and binding.

You may request modification of your air permit through informal means pursuant to G.S. 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that the permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under G.S. 150B-23.

Unless exempted by a condition of this permit or the regulations, construction of new air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

Pitt County has triggered increment tracking under PSD for NOx. However, this permit modification does not consume or expand increments for any triggered pollutants.

This permit shall be effective from XX XX, 2022 until XX XX, 2030, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Changes have been made to the permit stipulations. The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

Should you have any questions concerning this matter, please contact Mr. Jeff Twisdale at 919-707-8472 or at Jeff.Twisdale@ncdenr.gov.

Sincerely,

Mark J. Cuilla, EIT, CPM, Chief, Permitting Section
Division of Air Quality, NC DEQ

Enclosure

c: Washington Regional Office
Central Files
Connie Horne (cover letter only)

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF AIR QUALITY

AIR PERMIT NO. 10681R00

Issue Date: XX XX, 2022 | Effective Date: XX XX, 2022
Expiration Date: XX XX, 2030 | Replaces Permit: N/A

To construct and operate air emission source(s) and/or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere in accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina (NCGS) as amended, and other applicable Laws, Rules and Regulations,

World Cat Greenville
601 Staton Drive
Greenville, Pitt County, North Carolina
Permit Class: Title V
Facility ID# 7400317

(the Permittee) is hereby authorized to construct and operate the air emissions sources and/or air cleaning devices and appurtenances described below:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
ES-LAM01 **[MACT VVVV]**	Resin and gelcoat application area	CD-PF	Panel Filters installed on six exhaust stacks

in accordance with the completed application 7400317.20A received March 15, 2022, including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environmental Quality, Division of Air Quality (DAQ) and are incorporated as part of this permit.

This permit is subject to the following specified conditions and limitations including any TESTING, REPORTING, OR MONITORING REQUIREMENTS:

A. SPECIFIC CONDITIONS AND LIMITATIONS

1. Any air emission sources, or control devices authorized to construct and operate above must be operated and maintained in accordance with the provisions contained herein. The Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A North Carolina Administrative Code (NCAC), Subchapter 02D .0515, 02D .0521, 02D .0535, 02D .0540, 02D .0605, 02D .0611, 02D .1111 (40 CFR 63, Subpart VVVV), 02D .1806, 02Q .0207 and 02Q .0504.

2. PERMIT RENEWAL REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 02Q .0304(d) and (f). Pursuant to 15A NCAC 02Q .0203(i), no permit application fee is required for renewal of an existing air permit (without a modification request). The renewal request (with application Form A) should be submitted to the Regional Supervisor, DAQ.

3. ANNUAL EMISSION INVENTORY REQUIREMENTS - As required by 15A NCAC 02Q .0207 “Annual Emissions Reporting”, the Permittee shall report by June 30 of each year the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

4. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes," particulate matter emissions from the emission sources shall not exceed allowable emission rates. The allowable emission rates are, as defined in 15A NCAC 02D .0515, a function of the process weight rate and shall be determined by the following equation(s), where P is the process throughput rate in tons per hour (tons/hr) and E is the allowable emission rate in pounds per hour (lbs/hr).

$E = 4.10 * (P)^{0.67}$ for P <= 30 tons/hr, or

$E = 55 * (P)^{0.11} - 40$ for P >30 tons/hr

5. VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 02D .0521 "Control of Visible Emissions," visible emissions from the emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with a visible emissions standard in 15A NCAC 02D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants" shall meet that standard instead of the 02D .0521 visible emissions standard.

6. NOTIFICATION REQUIREMENT - As required by 15A NCAC 02D .0535, the Permittee of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

   a. Notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:
      i. the name and location of the facility,
      ii. the nature and cause of the malfunction or breakdown.
      iii. the time when the malfunction or breakdown is first observed,
      iv. the expected duration, and
      v. an estimated rate of emissions.

   b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

   This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

7. FUGITIVE DUST CONTROL REQUIREMENT - As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints are received or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).
"Fugitive dust emissions" means particulate matter that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

8. PANEL FILTER REQUIREMENTS including other dry filter particulate collection devices - As required by 15A NCAC 02D .0611, particulate matter emissions shall be controlled as described in the permitted equipment list.

   a. Inspection and Maintenance Requirements - To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirements shall include weekly inspections of the filters noting their condition.

   b. Recordkeeping Requirements - The results of inspection and maintenance for the panel filters **(ID No. CD-PF)** shall be maintained in a logbook (written or electronic format) on site and made available to an authorized representative upon request. The logbook shall record the following:

      i. the date and time of inspections;
      ii. the results of each inspection;
      iii. the results of maintenance performed on any filters; and
      iv. any variance from manufacturer's recommendations, if any, and corrections made.

   c. Reporting Requirements – The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section A.8.a and b above postmarked or delivered on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

      i. The Permittee shall submit the results of any maintenance performed on the panel filters within 30 days of a written request by the DAQ.

9. CONTROL AND PROHIBITION OF ODOROUS EMISSIONS - As required by 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions" the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

10. 15A NCAC 02D .1111 – The boat manufacturing operations shall comply with all requirements of 15A NCAC 02D .1111 "Maximum Achievable Control Technology" and 40 CFR Part 63 Subpart VVVV "National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing."

a. For each boat manufacturing emission source at this facility **(ID No. ES-LAM01)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR Part 63, Subpart VVVV "National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing," including Subpart A "General Provisions." [40 CFR 63.5683 and 63.5689]

Emission Limits for Open Molding Resin and Gel Coat Operations [40 CFR 63.5698]

b. The Permittee shall limit organic HAP emissions from any of the following open molding operations to the emission limit specified in Section A.9.c below. Operations listed in Section A.9.d are exempt from this limit.
   i Production resin.
   ii. Pigmented gel coat.
   iii. Clear gel coat.
   iv. Tooling resin.
   v. Tooling gel coat.

c. The Permittee shall limit organic HAP emissions from open molding operations to the limit specified by Equation 1 of this condition below, based on a 12-month rolling average.

$$HAP\ Limit = [46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})] \qquad \text{(Equation 1)}$$

Where:

$HAP\ Limit$	=	Total allowable organic HAP that can be emitted from the open molding operations, kilograms.
M_R	=	Mass of production resin used in the past 12 months, excluding any materials exempt under Section A.9.b above, in units of megagrams.
M_{PG}	=	Mass of pigmented gel coat used in the past 12 months, excluding any materials exempt under Section A.9.b above, in units of megagrams.
M_{CG}	=	Mass of clear gel coat used in the past 12 months, excluding any materials exempt under Section A.9.b above, in units of megagrams.
M_T	=	Mass of tooling resin used in the past 12 months, excluding any materials exempt under Section A.9.b iv, above, in units of megagrams.
M_{TG}	=	Mass of tooling gel coat used in the past 12 months, excluding any materials exempt under Section A.9.b above, in units of megagrams.

d. The materials specified in i through iii below are exempt from the open molding emission limit specified in Section A.9.c above.
   i. Production resins (including skin coat resins) that must meet specifications for use in military vessels or must be approved by the U.S. Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR Subchapter Q or the construction of small passenger vessels regulated by 46 CFR Subchapter T. Production resins for which this exemption is used must be applied with nonatomizing (non-spray) resin application equipment. A record must be kept of the resins which are being used for this exemption.
   ii. Pigmented, clear, and tooling gel coat used for part or mold repair and touch up. The total gel coat materials included in this exemption must not exceed 1 percent by weight of all gel coat used at the facility on a 12-month rolling-average basis. A record must be kept of the amount of gel coats which are being used for this exemption and copies of calculations showing that

the exempt amount does not exceed 1 percent of all gel coat used.

iii. Pure, 100 percent vinylester resin used for skin coats. This exemption does not apply to blends of vinylester and polyester resins used for skin coats. The total resin materials included in the exemption cannot exceed 5 percent by weight of all resin used at the facility on a 12-month rolling-average basis. A record must be kept of the amount of 100 percent vinylester skin coat resin used per month that is eligible for this exemption and copies of calculations showing that the exempt amount does not exceed 5 percent of all resin used.

Complying with the Open Molding Emission Limit [40 CFR 63.5701 and 63.5704]

e. The Permittee shall use one or more of the options listed in paragraphs i and ii below, to meet the emission limit in paragraphs c and d in this section for the resins and gel coats used in open molding operations at the facility.

i. Maximum achievable control technology (MACT) model point value averaging (emissions averaging) option. Demonstrate that emissions from the open molding resin and gel coat operations that are averaged meet the emission limit in paragraphs c and d above using the procedures described in 40 CFR 63.5710. Compliance with this option is based on a 12-month rolling average.

ii. Compliant materials option. Demonstrate compliance by using resins and gel coats that meet the organic HAP content requirements in Table 1 below. Compliance with this option is based on a 12-month rolling average.

Table 1: Alternative Organic HAP Content Requirements for Open Molding Resin and Gel Coat Operations [40 CFR Part 63 Subpart VVVV, Table 2]

For this operation -	And this application method -	You must not exceed this weighted-average organic HAP content (weight percent) requirement -
1. Production resin operations	Atomized (spray)	28 percent
2. Production resin operations	Nonatomized (nonspray)	35 percent
3. Pigmented gel coat operations	Any method	33 percent
4. Clear gel coat operations	Any method	48 percent
5. Tooling resin operations	Atomized (spray)	30 percent
6. Tooling resin operations	Nonatomized (nonspray)	39 percent
7. Tooling gel coat operations	Any method	40 percent

Demonstrating Compliance using Compliant Materials [40 CFR 63.5704(b) and 63.5713]

f. For each open molding operation complying using the compliant materials option, the Permittee must demonstrate compliance by performing the steps in the following paragraphs i through iv:

i. Use the methods specified in paragraphs g through j of this section to determine the organic HAP content of resins and gel coats.

ii. Complete the calculations described in paragraph j below to show that the weighted-average organic HAP content does not exceed the limit specified in Table 1 above.

iii. Keep records as specified in paragraphs (A) through (D) below for each resin and gel coat.

(A) Hazardous air pollutant content.

(B) Application method for production resin and tooling resin. This record is not required if all production resins and tooling resins are applied with nonatomized technology.

(C) Amount of material used per month. This record is not required for an operation if all materials used for that operation comply with the organic HAP content requirements.
(D) Calculations performed, if required, to demonstrate compliance based on weighted-average organic HAP content as described in paragraphs h through k of this section.

iv. Submit semiannual compliance reports to the Division as specified in paragraph aa. of this section.

g. Compliance using the organic HAP content requirements listed in Table 1 "Alternative Organic HAP Content Requirements for Open Molding Resin and Gel Coat Operations," is based on a 12-month rolling average that is calculated at the end of every month. If the Permittee is using filled material (production resin or tooling resin), the Permittee must comply according to the procedure described paragraph l of this section. [40 CFR 63.5713(a)]

h. At the end of the twelfth month after the Permittee's compliance date and at the end of every subsequent month, review the organic HAP contents of the resins and gel coats used in the past 12 months in each operation. If all resins and gel coats used in an operation have organic HAP contents no greater than the applicable organic HAP content limits in Table 1, then the Permittee is in compliance with the emission limit specified in Section A.9.c for that 12-month period for that operation. In addition, the Permittee does not need to complete the weighted- average organic HAP content calculation contained in paragraph j for that operation. [40 CFR 63.5713(b)]

i. At the end of every month, the Permittee must use Equation 2 of this condition to calculate the weighted-average organic HAP content for all resins and gel coats used in each operation in the past 12 months.

$$\textit{Weighted-Average HAP Content}\ (\%) = \frac{\sum_{i=1}^{n} M_i HAP_i}{\sum_{i=1}^{n} M_i} \qquad \text{(Equation 2)}$$

Where:

M_i = Mass of open molding resin or gel coat "i" used during the past 12 months in an operation, megagrams.

HAP_i = Organic HAP content, by weight percent, of open molding resin or gel coat i used in the past 12 months in an operation. Use the methods in Section A.9.w below to determine organic HAP content.

n = The number of different open molding resins or gel coats used during the past 12 months in an operation.

[40 CFR 63.5713(c)]

j. If the weighted-average organic HAP content does not exceed the applicable organic HAP content limit specified in Table 1, then the Permittee is in compliance with the emission limit specified in Section A.9.c. [40 CFR 63.5713(d)]

Demonstrating Compliance using Filled Resins [40 CFR 63.5710(d) and 63.5714]

k. i. If the Permittee is using a filled production resin or filled tooling resin, the Permittee must demonstrate compliance for the filled material on an as-applied basis using Equation 3 of this condition.

$$PV_F = PV_U \frac{100 - \%Filler}{100} \qquad \text{(Equation 3)}$$

Where:

PV_F = The as-applied MACT model point value for a filled production resin or tooling resin, kilograms organic HAP per megagram of filled material.

PV_u = The MACT model point value for the neat (unfilled) resin, before filler is added, as calculated using the formulas in Table 2 "MACT Model Point Value Formulas for Open Molding Operations" as contained in 40 CFR Part 63, Subpart VVVV (inserted below, for convenience).

% Filler = The weight-percent of filler in the as applied filled resin system.

ii. If the filled resin is used as a production resin and the value of PV_F calculated by Equation 3 of Section A.9.k.i, above, does not exceed 46 kilograms of organic HAP per megagram of filled resin applied, then the filled resin is in compliance.

iii. If the filled resin is used as a tooling resin and the value of PV_F calculated by Equation 3 of Section A.9.k.i, above, does not exceed 54 kilograms of organic HAP per megagram of filled resin applied, then the filled resin is in compliance.

Table 2: MACT Model Point Value Formulas for Open Molding Operations[1] [40 CFR Part 63 Subpart VVVV, Table 3]

For this operation -	And this application method -	Use this formula to calculate the MACT model plant value for each resin and gel coat -
1. Production resin, tooling resin	a. Atomized	$0.014 \times (\text{Resin HAP\%})^{2.425}$
	b. Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin HAP\%})^{2.425}$
	c. Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin HAP\%})^{2.425}$
	d. Nonatomized	$0.014 \times (\text{Resin HAP\%})^{2.275}$
	e. Nonatomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin HAP\%})^{2.275}$
	f. Nonatomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin HAP\%})^{2.275}$
2. Pigmented gel coat, clear gel coat, tooling gel coat	All methods	$0.445 \times (\text{Gel coat HAP\%})^{1.675}$

[1]Equations calculate MACT model point value in kilograms of organic HAP per megagrams of resin or gel coat applied. The equations for vacuum bagging with roll-out are applicable when a facility rolls out the applied resin and fabric prior to applying the vacuum bagging materials. The equations for vacuum bagging without roll-out are applicable when a facility applies the vacuum bagging materials immediately after resin application without rolling out the resin and fabric. HAP% = organic HAP content as supplied, expressed as a weight-percent value between 0 and 100 percent.

Standards for Resin and Gel Coat Mixing Operations [40 CFR 63.5731]

l. The Permittee shall cover at all times all resin and gel coat mixing containers with a capacity equal to or greater than 208 liters (55 gallons), including those used for on-site mixing of putties and polyputties, must have a cover with no visible gaps in place at all times.

m. The work practice standard in paragraph m above, does not apply when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

n. To demonstrate compliance with the work practice standard in paragraph m above, the Permittee must visually inspect all mixing containers subject to this standard at least once per month. The inspection should ensure that all containers have covers with no visible gaps between the cover and the container, or between the cover and equipment passing through the cover.

o. The Permittee must keep records of which mixing containers are subject to this standard and the results of the inspections, including a description of any repairs or corrective actions taken.

Standards for Resin and Gel Coat Application Equipment Cleaning Operations [40 CFR 63.5734 and 63.5737]

p. For routine flushing of resin and gel coat application equipment (e.g., spray guns, flowcoaters, brushes, rollers, and squeegees), the Permittee must use a cleaning solvent that contains no more than 5 percent organic HAP by weight. For removing cured resin or gel coat from application equipment, no organic HAP content limit applies.

q. The Permittee must store organic HAP-containing solvents used for removing cured resin or gel coat in containers with covers. The covers must have no visible gaps and must be in place at all times, except when equipment to be cleaned is placed in or removed from the container. On containers with a capacity greater than 7.6 liters (2 gallons), the distance from the top of the container to the solvent surface must be no less than 0.75 times the diameter of the container. Containers that store organic HAP-containing solvents used for removing cured resin or gel coat are exempt from the requirements of 40 CFR Part 63, Subpart T (National Emission Standards for Halogenated Solvent Cleaning). Cured resin or gel coat means resin or gel coat that has changed from a liquid to a solid.

r. Determine and record the organic HAP content of the cleaning solvents subject to the standards specified in paragraphs q and r above, using the methods specified in Section A.9.w below.

s. If the Permittee recycles cleaning solvents on site, the Permittee may use documentation from the solvent manufacturer or supplier or a measurement of the organic HAP content of the cleaning solvent as originally obtained from the solvent supplier for demonstrating compliance, subject to the conditions in paragraph w below demonstrating compliance with organic HAP content limits.

t. At least once per month, the Permittee must visually inspect any containers holding organic HAP-containing solvents used for removing cured resin and gel coat to ensure that the containers have covers with no visible gaps. Keep records of the monthly inspections and any repairs made to the covers.

Demonstrating Compliance with Carpet and Fabric Adhesive Operations [40 CFR 63.5740]

u. The Permittee must use carpet and fabric adhesives that contain no more than 5 percent organic HAP by weight.

v. To demonstrate compliance with the emission limit in paragraph v above, you must determine and record the organic HAP content of the carpet and fabric adhesives using the methods in paragraph w below.

Methods for Determining Organic Hazardous Air Pollutant Content [40 CFR 63.5758]

w. To determine the organic HAP content for each material used in the Permittee's open molding resin and gel coat operations, carpet and fabric adhesive operations, or aluminum recreational boat surface coating operations, the Permittee shall use one of the options in paragraph i through vi.

  i. Method 311 (appendix A to 40 CFR Part 63). The Permittee may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in (A) and (B) below, when determining organic HAP content by Method 311.

    (A) Include in the organic HAP total each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, the Permittee does not need to include it in the organic HAP total. Express the mass fraction of each organic HAP the Permittee measures as a value truncated to four places after the decimal point (e.g., 0.1234).

    (B) Calculate the total organic HAP content in the test material by adding up the individual organic HAP contents and truncating the result to three places after the decimal point.

ii. Method 24 (Appendix A to 40 CFR Part 63). The Permittee may use Method 24 to determine the mass fraction of non-aqueous volatile matter of aluminum coatings and use that value as a substitute for mass fraction of organic HAP.

iii. ASTM D1259-85 (Standard Test Method for Nonvolatile Content of Resins). The Permittee may use ASTM D1259-85 (available for purchase from ASTM) to measure the mass fraction of volatile matter of resins and gel coats for open molding operations and use that value as a substitute for mass fraction of organic HAP.

iv. Alternative method. The Permittee may use an alternative test method for determining mass fraction of organic HAP if the Permittee obtains prior approval by EPA Region IV. The Permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.

v. Information from the supplier or manufacturer of the material. The Permittee may rely on information other than that generated by the test methods specified in paragraphs i through iv, above, such as manufacturer's formulation data, according to (A) through (C), below.

(A) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, the Permittee does not have to include it in the organic HAP total.

(B) If the organic HAP content is provided by the material supplier or manufacturer as a range, then the Permittee must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content using the methods specified in Sections A.9.w.i through iv, above, exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, then the Permittee must use the measured organic HAP content to determine compliance.

(C) If the organic HAP content is provided as a single value, the Permittee may assume the value is a manufacturing target value and actual organic HAP content may vary from the target value. If a separate measurement of the total organic HAP content using the methods specified in paragraphs i through iv, above, is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then the Permittee may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, then the Permittee must use the measured organic HAP content to determine compliance.

vi. Solvent blends. Solvent blends may be listed as single components for some regulated materials in certifications provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP content of the materials. When detailed organic HAP content data for solvent blends are not available, the Permittee may use the values for organic HAP content that are listed in Table 5 "Default Organic HAP Contents of Solvents and Solvent Blends" or Table 6 "Default Organic HAP Contents of Petroleum Solvent Groups" as contained in 40 CFR Part 63, Subpart VVVV. The Permittee may use Table 6 as contained in 40 CFR Part 63, Subpart VVVV, only if the solvent blends in the materials the Permittee use do not match any of the solvent blends in Table 5 as contained in 40 CFR Part 63, Subpart VVVV, and the Permittee knows only whether the blend is either aliphatic or aromatic. However, if test results indicate higher values than those listed in Table 5 or 6 as contained in 40 CFR Part 63, Subpart VVVV, then the test results must be used for determining compliance.

Recordkeeping [15A NCAC 02Q .0508(f), 40 CFR 63.5764, 40 CFR 63.5767 and 40 CFR 63.5770]

x. The Permittee shall keep the following records:

i. a copy of each notification and report that the Permittee submitted to comply with 40 CFR Part 63, Subpart VVVV;

ii. all documentation supporting any notification or report that the Permittee submitted; and

iii. the total amounts of open molding production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used per month and the weighted-average organic HAP contents for each operation, expressed as weight-percent. For open molding production resin and tooling resin, the Permittee shall also record the amounts of each applied by atomized and nonatomized methods.

y. The Permittee shall keep each record:
   i. readily available and in a form so they can be easily inspected and reviewed.
   ii. for 5 years following the date that each record is generated.
   iii. on site for at least 2 years after the date that each record is generated. The Permittee can keep the records offsite for the remaining 3 years.
   iv. on paper or an electronic device.

Reporting [15A NCAC 02Q .0508(f), 40 CFR 63.5761 and 40 CFR 63.5764]

z. The Permittee shall submit a semiannual compliance report that covers the period from January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. Each compliance report must be postmarked no later than 60 days from the end of the semiannual reporting period. At a minimum, the compliance report shall contain:
   i. Company name and address;
   ii. A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the report;
   iii. The date of the report and the beginning and ending dates of the reporting period;
   iv. A description of any changes in the manufacturing process since the last compliance report;
   v. A statement or table showing, for each regulated operation, the applicable organic HAP content limit, application equipment requirement, or MACT model point value averaging provision with which the facility is complying. The statement or table shall also show the actual weighted-average organic HAP content or weighted-average MACT model point value (if applicable) for each operation during each of the rolling 12-month averaging periods that end during the reporting period;
   vi. If the facility was in compliance with the emission limits and work practice standards during the reporting period, the Permittee shall include a statement to that effect; and
   vii. If the Permittee deviated from an emission limit or work practice standard during the reporting period, they shall also include the following information in the semiannual compliance report:
      (A) A description of the operation involved in the deviation,
      (B) The quantity, organic HAP content, and application method (if relevant) of the materials involved in the deviation,
      (C) A description of any corrective action the Permittee took to minimize the deviation and actions he has taken to prevent it from happening again, and
      (D) A statement of whether or not the facility was in compliance for the 12-month averaging period that ended at the end of the reporting period.

aa. The Permittee must submit all of the notifications in Table 7 as contained in 40 CFR Part 63 Subpart VVVV, that apply to the Permittee by the dates in the table. The notifications are described more fully in 40 CFR Part 63, Subpart A "General Provisions," referenced in Table 8 as contained in 40 CFR Part 63 Subpart VVVV. If the Permittee changes any information submitted in any notification, the Permittee must submit the changes in writing to the Division within 15 calendar days after the change.

bb. The Permittee may switch between the compliance options (Emissions Averaging and Compliant Materials) in 40 CFR Part 63, Subpart VVVV per the requirements of paragraphs i. and ii below. In all cases, the Permittee shall submit notification to change options, in writing, to the Division of Air Quality, 15 days prior to changing compliance options. [40 CFR 63.5710 and 40 CFR 63.5713]

i. Changing from compliant materials to 12-month emissions averaging: The Permittee shall begin collecting resin and gel coat usage data on the date the compliance option is switched. The source shall demonstrate compliance using the emissions averaging option for at least 12 consecutive months.
ii. Changing from 12-month emissions averaging to compliant materials: The Permittee shall begin complying with the compliant materials option on the date the compliance option is switched. Until the full 12-month compliance period has ended the Permittee shall continue to collect resin and gel coat usage data and calculate the 12-month emissions average.

11. APPLICATION and REPORTING REQUIREMENT – As required by 15A NCAC 02Q .0504, the Permittee is required to submit a complete application for a Title V permit following the procedures of 15A NCAC 02Q .0500, within one year from the date of beginning of operation of any emissions sources. The Permittee shall notify the Regional Office in writing of the date of beginning operation of any of the sources listed in this permit, postmarked no later than 30 days after such date.

B. GENERAL CONDITIONS AND LIMITATIONS

1. In accordance with G.S. 143-215.108(c)(1), TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

Regional Supervisor
North Carolina Division of Air Quality
Washington Regional Office
943 Washington Square Mall
Washington, NC 27889

For identification purposes, each submittal should include the facility name as listed on the permit, the facility identification number, and the permit number.

2. RECORDS RETENTION REQUIREMENT - In accordance with 15A NCAC 02D .0605, any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.

3. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 02Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.

4. EQUIPMENT RELOCATION - In accordance with 15A NCAC 02Q .0301, a new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.

5. REPORTING REQUIREMENT - In accordance with 15A NCAC 02Q .0309, any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:

a. changes in the information submitted in the application regarding facility emissions;

b. changes that modify equipment or processes of existing permitted facilities; or

c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

6. In accordance with 15A NCAC 02Q .0309, this permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. In accordance with G.S. 143-215.108(c)(1), the facility shall be properly operated and maintained at all times in a manner that will effectuate an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.

7. CHANGES NOT REQUIRING PERMIT REVISIONS - Pursuant to 15A NCAC 02Q .0318, changes to the facility that are not exempt pursuant to 15A NCAC 02Q .0102 may be allowed without first modifying an applicable air permit if the change(s) meet(s) the requirements of 15A NCAC 02Q .0318(b)(1) through (b)(5) and the owner or operator notifies the Director in writing, using forms provided by the Division, seven calendar days before the change is made. Within 10 business days of receipt of the notice, the Division shall notify the owner or operator of its determination of whether the change(s) meet(s) the requirements of 15A NCAC 02Q .0318(b)(1) through (b)(5).

8. In accordance with G.S. 143-215.108(c)(1), this permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.

9. In accordance with G.S. 143-215.108(c)(1), this issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.

10. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.

11. In accordance with 15A NCAC 02D .0605, reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.

13. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

14. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.

15. PERMIT RETENTION REQUIREMENT - In accordance with 15A NCAC 02Q .0110, the Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.

16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 15A NCAC 02D .2100 "Risk Management Program," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan with the USEPA in accordance with 40 CFR Part 68.

17. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. **This condition is federally-enforceable only.**

18. GENERAL EMISSIONS TESTING AND REPORTING REQUIREMENTS - If emissions testing is required by this permit, or the DAQ, or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow all DAQ procedures including protocol approval, regional notification, report submittal, and test results approval. Additionally, in accordance with 15A NCAC 02D .0605, the Permittee shall follow the procedures for obtaining any required audit sample and reporting those results.

Permit issued this the XXth of XX, 2022.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

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Mark J. Cuilla, EIT, CPM, Chief, Permitting Section
Division of Air Quality, NC DEQ
By Authority of the Environmental Management Commission

ATTACHMENT to Permit No. 10681R00, XX XX, 2022

Insignificant / Exempt Activities

Source	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
IRST01 - resin storage tank (6,000 gallon capacity)	02Q .0503(8)	Yes	Yes
IRST02 - resin storage tank (6,000 gallon capacity)	02Q .0503(8)	Yes	Yes

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1. Because an activity is exempted from being required to have a permit or permit modification does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."

3. Sample permit conditions showing the regulatory requirements for exempt sources subject to NESHAP, NSPS, and NCAC rules may be found here: https://deq.nc.gov/aqpermitconditions

NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: XX/XX/2022

Region: Washington Regional Office
County: Pitt
NC Facility ID: 7400317
Inspector's Name: Kurt Tidd
Date of Last Inspection: N/A
Compliance Code: N/A

Facility Data

Applicant (Facility's Name): World Cat Greenville

Facility Address:
World Cat Greenville
601 Staton Road
Greenville, NC 27834

SIC: 3732 / Boat Building and Repairing
NAICS: 336612 / Boat Building

Facility Classification: Before: Permit/Registration Pending **After:** Title V
Fee Classification: Before: N/A **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0515, .0521, .0535, .0540, .0605, .0611, .1111, .1806, 02Q .0207 and .0504
NSPS: N/A
NESHAP: 40 CFR 63 Subpart VVVV
PSD: N/A
PSD Avoidance: N/A
NC Toxics: 15A NCAC 02Q .0702(a)(27) Exempt
112(r): N/A
Other: N/A

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Scott Ellis Director of Manufacturing/ Engineering (252) 641-8000 601 Staton Road Greenville, NC 27834	Scott Ellis Director of Manufacturing/ Engineering (252) 641-8000 601 Staton Road Greenville, NC 27834	Scott Ellis Director of Manufacturing/ Engineering (252) 641-8000 601 Staton Road Greenville, NC 27834

Application Data

Application Number: 7400317.20A
Date Received: 11/04/2020
Application Type: Greenfield Facility
Application Schedule: State

Existing Permit Data
Existing Permit Number: N/A
Existing Permit Issue Date: N/A
Existing Permit Expiration Date: N/A

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP

<No Inventory>

Review Engineer: Jeff Twisdale

Review Engineer's Signature: Jeff Twisdale **Date:** XX/XX/2022

Comments / Recommendations:
Issue 10681/R00
Permit Issue Date: XX/XX/2022
Permit Expiration Date: XX/XX/2030

I. Purpose of Application:

World Cat Greenville (WCG), under parent company, HC Composites LLC, submitted a permit application (7400317.20A) for a greenfield facility located in Greenville, North Carolina. The facility is a fiberglass boat manufacturing operation that will build a select range of styles and sizes in an existing building at this new location. The facility has requested to permit the fiberglass boat building operation under a construction and operation air permit for the following equipment:

- Resin and gelcoat application area (ID No. ES-LAM01) controlled by panel filters (ID No. CD-PF)
- Two resin storage tanks (6,000 gallons capacity each, ID Nos. IRST01 and IRST02)

The facility will be major for hazardous air pollutants (HAP) since styrene emissions are expected to be greater than 10 tons per year (tpy). As a result, the facility will be required to comply with the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Fiberglass Boat Manufacturing (40 CFR 63 Subpart VVVV). The facility will also have the potential to emit greater than 100 tpy of volatile organic compounds (VOCs). Therefore, the facility will be classified as Title V (TV). This permit is being issued pursuant to 15A NCAC 02Q .0300 procedures as allowed under 15A NCAC 02Q .0504.

Table 1. Facility Emissions Overview

Pollutant	Expected Actual Emissions (tons/yr)	Potential Emissions Before Controls (tons/yr)	Potential Emissions After Limitation (tons/yr)
VOC	84.0	122.2	84.0
Highest Individual HAP (styrene)	32.9	43.4	32.9
Total HAP	37.5	53.5	37.5

II. Facility Description

WCG will manufacture fiberglass outboard power catamarans (boats with twin hulls) in open molds as well as some parts in closed molds. The finished boats will range in length from 23 feet to 40 feet and are available in Center Console and Dual Console models. The WCG facility consists of a single "L" shaped building approximately 505 feet wide and 600 feet long containing two main activity areas. The north-south segment of the "L" contains the product assembly area. Minimal emissions are anticipated from this area. The gelcoat and resin application activities and the resin curing will be conducted in the lamination area in the approximately square building segment.

III. Application Chronology/History

November 4, 2020	The Raleigh Central Office (RCO) received a permit application that was deemed incomplete since the application fee, zoning and signature were not included. An acknowledgement letter was sent stating that the application was incomplete.
January 12, 202	Received the fee, zoning and signature info needed.
February 16, 2021	Requested information concerning HAP/TAP emission points; MACT VVVV compliance demonstration; PM control for cutting, grinding, and sanding operations; maximum capacity of the resin tanks, and any painting or gelcoat spray booths being utilized.
March 12, 2021	Received information from Tom John, consultant representing WCG, concerning HAP/TAP emission points being vertical stacks with no rain caps; MACT VVVV compliance demonstration by utilizing the MACT model point value averaging option and complaint materials; good housekeeping practices to limit PM from being released from the building; maximum capacity of the resin tanks to be 6,000 gallons, and currently no plans for painting or gelcoat spray booths.
March 18, 2021	Requested the short-term styrene emissions that need to be estimated to represent the potential higher short-term emissions rather than being back calculated from the annual estimates.
November 8, 2021	Received information from Tom John concerning styrene emission rates, updated gelcoat and resin usages, and updated applications forms.
November 11, 2021	Requested updated tracking frequency for the gelcoat and resin on a short-term basis to ensure compliance with the styrene TPER value, and for the source and stack parameters needed for dispersion modeling.
December 15, 2021	Received information from Tom John including a layout indicating the six fan locations evacuating the styrene emissions, and an updated spreadsheet showing the styrene emissions per hourly usage.
February 14, 2022	Matt Porter, AQAB meteorologist, sent additional info request for source, stack and site parameters in order to perform the dispersion modeling for styrene.

March 11, 2022	RCO requested the source, stack and site parameters for dispersion modeling as well as the updated facility contact info for a second time.
March 15, 2022	Received the source, stack and site parameters needed for dispersion modeling.
March 23, 2022	Matt Porter completed Toxics (styrene) modeling memo to ensure that there is no unacceptable risk to human health.
April 4, 2022	Requested details on PM emitted from the building, and if any filters were used to control those emissions. An email from Scott Ellis, Responsible Official for WCG, requested that the facility be exempt from State air toxics in accordance with 15A NCAC 02Q .0702(a)(27)(B) since the facility is subject to the Boat Building MACT Subpart VVVV.
April 19, 2022	Received details on panel filters installed on six exhaust stacks to control PM and the exemption request for Toxics from Scott Ellis pursuant to 15A NCAC 02Q .0702(a)(27).
May 5, 2022	Draft permit and review were submitted for comment to Booker Pullen, NSR supervisor for review.
May 6, 2022	Comments received on the draft permit and review from Mr. Booker Pullen, NSR supervisor.
May 12, 2022	Draft permit and review were submitted for comment to Scott Ellis of WCG, Yongcheng Chen and Kurt Tidd of the Washington Regional Office (WaRO), Samir Parekh of the Stationary Source Compliance Branch (SSCB)

IV. Regulatory Review

WCG will be subject to the following regulations:
15A NCAC 02D .0515 "Particulates from Miscellaneous Industrial Processes"
15A NCAC 02D .0521 "Control of Visible Emissions"
15A NCAC 02D .0605 "General Recordkeeping and Reporting Requirements"
15A NCAC 02D .0611 "Monitoring Emissions from Other Sources"
15A NCAC 02D .1111 "40 CFR 63 Subpart VVVV; NESHAP for Boat Manufacturing"
15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions"
15A NCAC 02D .0535 "Excess Emissions Reporting and Malfunction"
15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources"
15A NCAC 02Q .0207 "Annual Emissions Reporting"
15A NCAC 02Q .0504 "Option for Obtaining Construction and Operation Permit"

WCG shall follow all the required monitoring, recordkeeping and reporting associated with these regulations, and with the MACT for the specific affected sources as indicated below:

Emission Source ID No(s).	Emission Source Description	Control Device	Control Device Description
ES-LAM01 **MACT VVVV**	Resin and gelcoat application area	CD-PF	Panel Filters installed on each exhaust stack
IRST01* and IRST02*	Two resin storage tanks (6,000 gallons capacity each)	N/A	N/A

* Insignificant Activities per 15A NCAC 02Q .0503(8)

V. Specific Emission Sources and Control Devices

A. Resin and gelcoat application area (ID No. ES-LAM01) with panel filters (ID No. CD-PF)

This area will be used for the gelcoating and laminating (open molding) of the large parts including decks, hulls, liners, etc. as well as small parts including hatches, covers, consoles, etc. In addition, this area will be used for closed molding including mold preparation (waxing) and repair of molds.

Styrene based gelcoat is applied predominantly by spray methods to the hull and deck forms and molds in the lamination area and is allowed to cure during the manufacturing process. Styrene based resin is hard piped to the point of use from either of two 6,000-gallon resin storage tanks located on the western side of the building.

The resin storage tanks will be equipped with conservation vents on J-neck vents and estimated to have total breathing and working losses from both tanks estimated at less than 100 pounds per year based on estimated annual resin usage of 93,700 gallons of resin per year, or 15.5 total turnovers per year (both tanks combined). (*See TANKS 4.09d model output in Attachment 2 of the application*). Therefore, the tanks will be Insignificant Activities per 15A NCAC 02Q .0503(8).

Resin and fiberglass for structural support are hand applied over the gelcoat on the mold using buckets/brushes and rollers or non-atomized spray methods. When a sufficient thickness of resin/fiberglass has been applied to the mold, the resin is allowed to fully cure and harden. In addition to the hand/spray resin application to the open mold, the facility also utilizes vacuum infusion/resin transfer molding (RTM) of some components and some model lines. In these methods, cut to shape fiberglass mat is applied over the gelcoat without the application of resin. A plastic/silicone sheet is placed over the fiberglass and sealed at the edges of the mold. Catalyzed resin is forced into the open spaces in the fiberglass mat by application of vacuum at the discharge end or pressure at the inlet

After curing, the hardened fiberglass hull and deck parts are removed from the mold and the excess material trimmed as necessary to remove the excess flashing. If necessary, imperfections in the surfaces are removed by grinding the surface and re-applying gelcoat and/or resin. The trimming, cutting, shaping and grinding operations are typically performed by handheld air driven tools and by limited tabletop equipment. These activities are generally controlled by small portable vacuum collectors and normal good housekeeping type procedures, including frequent cleaning of surfaces and sweeping of floors by providing control of all particulate matter (PM) generated that will be necessary to prevent contamination of the molds and the curing fiberglass surfaces in the adjoining work area. Minimal PM will exit the building from these activities due to the panel filters being installed on each of the six vertical stacks for the building. The panel filters will be 24" x 24" x 0.5" each with 0.44 ounce per square foot, 6 denier polyester with a PVAC binder for the filter material. These panel filters will have a Minimum Efficiency Reporting Value (MERV) of 4 or 5.

The manufacture of small parts other than the large parts is performed in a similar process with the same methods and materials as is used for hulls and decks but with correspondingly smaller molds. After removal of the components from the molds, the molds are cleaned, inspected and prepared for return to lamination in the mold care step, using solvent-based materials. Scratches and other imperfections observed on the mold surface are repaired, if necessary, typically with resin or gelcoat tooling. In some situations, for example a damaged mold or a new product line, a new mold will have to be manufactured, using production or other resins and tooling. Mold care is typically conducted in or near the lamination area, but the activity may be located farther away as the situation demands.

Completed hulls and decks are relocated to the adjacent Assembly Area that has minimal emissions and then are prepared for the addition of small parts and components, motors, electrical and mechanical equipment, wiring installation, and final assembly. Two-part floatation foam may also be added as part of the assembly, depending on the boat model line requirements. Miscellaneous HAP-containing bonding or other putties, fillers, waxes and solvents, and various adhesives and coatings are used in the assembly area. When completed, the finished boat is inspected and prepared for storage prior to delivery.

Fugitive sources, such as open product and waste containers, will be identified and minimized, and solvents in general will be subject to careful disbursement and general good housekeeping practices, including the use of solvent safety cans, etc. to minimize emissions. Acetone, the primary cleanup solvent, is no longer considered a VOC, but the usages and emissions may be included in the facility records for completeness.

15A NCAC 02D .0515 - Particulates from Miscellaneous Industrial Processes
PM emissions will be controlled by a filter system consisting of panel filters installed on each of the six exhaust stacks. To ensure compliance, monthly visual inspections of the filters are required, and the results recorded. The records demonstrate monthly visual inspections are performed. Compliance is expected.

15A NCAC 02D .0521 - Control of Visible Emissions
The operation is limited to 20 percent opacity visible emissions. Visible emissions are controlled by a panel filter installed on each of the six stacks. To ensure compliance monthly inspections are required, and the results will be recorded. Compliance is expected.

15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions.
The facility is required to prevent objectionable odors beyond the facility's boundary. No objectionable odors are expected. Compliance is expected.

15A NCAC 02D .1111 – MACT - 40 CFR Part 63, Subpart VVVV
The facility will comply with the open molding emission limit by using the emissions averaging option. WCG shall assure that the emission limit established by 40 CFR 63.5698, equation 1, is not exceeded using the procedures set in 40 CFR 63.5704(a). Compliance using the emissions averaging option will demonstrate on a 12-month rolling-average basis and is determined at the end of every month (12 times per year). The facility will have one year to collect data since it is a 12-month rolling standard. For the fabric adhesive operations, the HAP content must be < 5% to comply with the MACT.

WCG submitted the initial notification requirement for the MACT on November 8, 2020, when they initially submitted their application that noted applicability of MACT Subpart VVVV.

The facility will conduct daily recordkeeping of materials used and application methods as appropriate. Raw materials usages and corresponding chemical species usages will be recorded and emissions calculated as monthly and rolling 12 month cumulative totals, providing reasonable assurance of compliance with permit emission limits and to demonstrate compliance with the HAP limits of the Subpart.

The styrene and methyl methacrylate (MMA) emission factors utilized for emission calculations are taken from the Unified Emission Factor (UEF) Table and reflect the appropriate styrene or MMA content of these materials and corresponding application methods. General VOC species will be assumed to have an emission factor of 1.0, *(Emission Rate in Pounds of Styrene Emitted per Ton of Resin or Gelcoat Processed)* except for reactive species (e.g., peroxides, isocyanates and phthalates) which are assumed to have very low emission factors. When styrene is used as a solvent for mold cleaning rather than as a polymerizing unit, the emission factor will be assumed to be 1.0 *(Emission Rate in Pounds of Styrene Emitted per Ton of Resin or Gelcoat Processed)*. Where styrene is polymerized, the UEF factors will be assumed to apply. MMA which may be present in gelcoat and in other materials such as adhesives, is assumed to have the same emission factor as presented in the UEF when the monomer is polymerized; otherwise, the factor will be assumed to be 1.0 *(Emission Rate in Pounds of MMA Emitted per Ton of Resin or Gelcoat Processed)*.

The styrene content of the resin and gelcoat used may vary depending on a particular type, purpose, blend or supplier, and the species and concentrations of all other raw materials are subject to change, outside the control of WCG. Despite these changes, the record keeping system will track each individual species (e.g., styrene) at its actual concentration in each material used in a production capacity as identified from its accompanying material Safety Data (SD) sheet, determine the weighted rolling average concentration for MACT compliance as necessary, assign an emission factor, and determine the emissions of an individual raw material or source as well as the total facility emission. The styrene and other species contents shown for resin, gelcoat and other materials are values based on current materials and vendors, obtained from the material SD sheets, which will be made available for DAQ to review upon request. The thresholds for identifying species in the SD sheets is 1.0 % (0.1 % for carcinogenic materials), and species present at lesser concentrations may not be identified in those documents.

Non-volatile HAP species may include metals and metal compounds which may be present in some of the materials used (e.g., pigments in some gelcoats). Although these species may potentially be emitted to the air as a result of very high temperatures (e.g., combustion process), the normal use of these materials in boat building, a non-volatile species does not volatize into the air. Since these materials are not sources of air pollution, they will not be included in the air emission calculations or considered in the HAP determination.

It should be noted that the maximum raw material usage rate is a surrogate measure of the HAP species emission rates that are the product of the usage rate, the species concentration and the emission factor for a particular species in a specific operation. If the species concentration varies up or down, or the application method changes from spray to hand, the usage rate may be adjusted accordingly to maintain compliance with a HAP emission limitation. This will allow the potential for higher cost resins and/or gelcoats with styrene contents below the MACT limits to be used at correspondingly higher levels than illustrated in the spreadsheet, or for variations in the resin/gelcoat ratio as models change, without violating the emission limits of the permit or the MACT allowable HAP limits. As a result, detailed recordkeeping was proposed for demonstrating compliance with HAP emissions limitations.

The facility proposed to comply with the requirements of MACT VVVV as applicable to their operations and will demonstrate compliance with the HAP emission limitation by the "point value" averaging method. For resins, pigmented and clear gel coats, and resin and gelcoat tooling operations, the quantity of material used in each 12-month rolling period will be determined, as well as the application method and HAP content for each material in each application. The appropriate calculations will be performed, and the facility-wide HAP calculated emissions will be compared to the HAP emissions allowed under the MACT. The facility will be considered in compliance with the HAP material content and emission limitations if the calculated HAP emissions are demonstrated to be less than or equal to the allowable HAP emissions of the Subpart. Operations involving resin infusion, a closed molding process, are exempt under MACT VVVV and will not be included in the MACT compliance demonstration. The materials applied to the surface of a closed molding mold (e.g., gelcoat, skin coat) which do not meet the definition of closed molding will be included in the MACT calculation. The material usages and emissions associated with the infusion process will be included in the facility-wide monthly and 12 month rolling usages and emissions spreadsheet to demonstrate compliance with the limitations in the permit.

The facility will be required to submit reports for each 6-month period ending on July 30 and December 31. The report shall evaluate compliance with the open molding emission limit for each 12-month averaging period ending on each six months that the report covers. The report shall be submitted within 60 days after the end of the reporting period.

Monitoring/Recordkeeping/Reporting:
The facility's monitoring/recordkeeping/reporting requirements will have to be met as noted above. WaRO will review the records at the facility for the past 12 months once completed to ensure compliance with the MACT's HAP limits and the MACT Model Point value as well as compliant coatings. Compliance is expected.

VI. NSPS/ PSD/NAA/Increment/ MACT/ CAM/ Facility-wide Toxic Air Pollutants

NSPS - This facility is not currently subject to any NSPS regulations.

PSD/NAA/Increment - This facility is a Prevention of Significant Deterioration (PSD) minor source since the potential VOC emissions (122 tpy) will be less than the major source threshold of 250 tpy. Pitt County is in an attainment area, and the non-attainment area (NAA) regulations do not apply. Pitt County has been triggered for PSD increment tracking for NOx. A review of the application indicates that there are no NOx emissions. Therefore, no increment is consumed.

MACT - This facility is subject to 40 CFR 63, Subpart VVVV (Boat Manufacturing MACT). WCG shall follow the MACT Subpart VVVV requirements and associated monitoring, recordkeeping and reporting including the periodic reporting of emissions (e.g., rolling averages of HAP emissions, etc.) as detailed above.

112(r) - This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. The facility is not required to maintain a written Risk Management Plan (RMP).

CAM - 40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at major facilities that have pre-controlled emissions above the major source threshold and use a control device to meet an applicable standard. This facility does not utilize a control device to meet compliance with an emission limit or a standard for a federally regulated pollutant, nor does the facility have uncontrolled potential emissions greater than 100 tons per year. Therefore, CAM is not applicable to this facility.

Facility-wide Toxic Air Pollutants - This greenfield facility did not trigger toxics modeling since the six toxic air pollutants (TAPs) emitted were estimated to be below their respective Toxic Air Pollutant Permitting Emissions Rates (TPERs) as detailed below.

15A NCAC 02Q .0711 - Toxic Air Pollutants Emissions Limitation Requirement
The facility completed an NC air toxics review in their application for six TAPs, and their emissions did not exceed the TPERs in 15A NCAC 02Q .0711. Normally, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Pollutant	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
ethylene glycol monoethyl ether (110-80-5)		5.1	2.00	
n-hexane (110-54-3)		46.3		
methyl ethyl ketone (78-93-3)		155.8		93.19
Styrene (100-42-5)				11.16
Toluene (108-88-3)		197.96		58.97
Xylene (mixed isomers) (1330-20-7)		113.7		68.44

However, this regulation does not apply since the Responsible Official (Scott Ellis) requested that WCG be exempted from a permit to emit toxic air pollutants pursuant to 15A NCAC 02Q .0702(a)(27)(B) since the facility is subject to the Boat Building MACT Subpart VVVV. In accordance with 15A NCAC 02Q .0702(a)(27), this facility is exempt from North Carolina (NC) Air Toxics (State-only requirement); however, the NC Division of Air Quality (DAQ) is required by NC Session Law 2012-91, House Bill 952, to perform a health risk assessment.

The facility completed an NC air toxics review in their application for six TAPs, and their emissions did not exceed the TPERs in 15A NCAC 02Q .0711; however, NC DAQ was unsure if the styrene emissions presented an unacceptable health risk since the styrene hourly emissions, initially estimated just below the TPER limit of 11.16 pounds per hour (lb/hr), were calculated by dividing the annual styrene emission rate by 8,760 hours per year of operation. NC DAQ raised a question about the methodology for determining the hourly emission rate, and WCG prepared a revision to address that concern. WCG identified the expected activities for each hour of operation at the maximum capacity and determined that the styrene emissions from the gelcoat operations, conducted over an 8-hour period each day, had the potential to exceed the TPER on a 1-hour basis, although the daily and annual average values did not exceed the TPER.

WCG requested self-imposed limitations on gelcoat and resin annual usage below the levels previously requested. These reduced levels will result in reduced styrene emissions from these activities, with styrene emissions being calculated at 7.62 lb/hour based on 360 days/year, 24 hours/day of operation (*see below Table 2 of the revised TAP emissions spreadsheet submitted December 15, 2021*).

Table 2	TOXIC AIR POLLUTANTS COMPARED to 15A NCAC 02Q.0711(b)											
	styrene		methylethyl ketone		xylene		toluene		hexane		glycol ethers	
	projected	limit	projected	limit	projected	limit	projected	limit	projected	limit	projected	limit
lbs/yr	65800		396.82		225.16		16.37		2352.75		6.00	
lb/day	182.78		1.09	155.8	0.62	113.7	0.04	197.96	6.45	46.3	0.02	5.1
lb/hr*	7.62	11.16	0.05	93.19	0.03	68.44	0.002	58.97	0.27		0.001	2
	*at 360 days/yr, 8640 hrs/yr											

WCG then calculated the hourly emissions associated with application of resin, gelcoat, putty, and adhesives, and when those activities would be conducted over the course of each 24-hour day (see below *Table 3 of the revised TAP emissions spreadsheet submitted December 15, 2021*).

Table 3	% of total							
	styrene	styrene emissions					hrs/day	
activity	emissions	lbs/yr	lbs/day*	lbs/hr**		activity	operation	lbs/hr
resin	41.58%	27359	76.00	3.17		resin	10	7.60
gelcoat	47.36%	31161	86.56	3.61		gelcoat	8	10.82
putty	4.62%	3039	8.44	0.35		putty	8	1.06
adhesives	6.45%	4241	11.78	0.49		adhesives	8	1.47
total		65800.00	182.78	7.62				
* at	360	days/yr operation						
** average at	24	hrs/day operation						

The results, shown in the data and graph, (*see attached Table 4 of the revised TAP emissions spreadsheet submitted December 15, 2021*), show that the styrene emissions do not exceed the TPER limit at any 1-hour period during the 24-hour operating day.

The dispersion modeling analysis approved by Matt Porter, Air Quality Analysis Branch (AQAB) meteorologist, on March 23, 2022, was conducted to support determination of unacceptable risks in terms of ambient impacts from styrene emissions released from resin, gelcoat, putty, and adhesive boat molding operations.

Table 1 and Table A2 of the approved dispersion modeling memo provides a conservative estimate of the facility-wide total styrene hourly emissions released through the worst-case stack that would result in modeled impacts scaled to 95% of the styrene AAL for the worst-case stack (EFSP1). In other words, the worst-case stack (EFSP1) modeled at 99.77 lb/hr styrene would result in maximum modeled impacts at 95% of the AAL. The modeling confirms that the max styrene emission rate of 10.82 lb/hr (gelcoat, as presented by WCG) results in a worst-case 1-hour impact of 10.3% (1,092 µg/m^3) of the styrene AAL (10,600 µg/m^3). Note the emissions were modeled assuming 8,760 hours/year operation for each year of the 5-year meteorological database.

Table 1.
Maximum Modeled Toxics Impacts from Worst-Case Stack
World Cat Greenville, NC

Pollutant	Averaging Period	AAL (µg/m^3)	Maximum Modeled Impacts % of AAL
Styrene	1-hour	10,600	95 %

Table A2. Unit Emissions Impact Summary (*Worst-Case Stack in **Bold***)

Model ID	Unit Emissions (g/s)	Unit Impact (ug/m3)	Styrene AAL (ug/m3)	95% AAL (ug/m3)	95% Scaled Emissions (g/s)	95% Scaled Emissions (lb/hr) (1)	Worst-Case Stack?
EFL1	1.0	451.09	10,600	10,070	22.32	177.18	No
EFL2	1.0	623.77	10,600	10,070	16.14	128.13	No
EFL3	1.0	538.98	10,600	10,070	18.68	148.28	No
EFL4	1.0	524.53	10,600	10,070	19.20	152.37	No
EFSP1	**1.0**	**801.08**	**10,600**	**10,070**	**12.57**	**99.77**	**Yes**
EFSP2	1.0	539.79	10,600	10,070	18.66	148.06	No

(1) 95% Scaled Emissions (lb/hr) = [10,600 (ug/m3) AAL x (95%)] / [Unit Impact (ug/m3 per 1 g/s)] x [3600 (sec/hr)] / [453.59 (g/lb)]

Therefore, the NC DAQ believes that the TAP emissions from the facility will not present an unacceptable health risk.

VII. Public Notice / EPA and Affected State(s) Review

This permit application is being processed pursuant to the 15A NCAC 02Q .0300 provisions. As such, a public notice/hearing process is not required. However, since this facility is classified as Title V, and this is the first time obtaining a construction and operating permit, a review under the Secretary's Environmental Justice provisions is triggered. Therefore, a 30-day public comment period will be part of the permitting process. EPA and the Affected State review is not required at this time. The permit requires the submittal of a procedural 1st time Title V permit application within 12 months of startup. That application will be subject to the formal public participation process pursuant to 15A NCAC 02Q .0500 procedures.

VIII. RCO Conclusions, Comments, and Recommendations:

A professional engineer's seal was not required for this permit modification.

A consistency determination was required for this permit modification. Ms. Chantae Gooby, Chief Planner with the City of Greenville, confirmed this proposed operation is consistent with local zoning ordinances on January 7, 2021.

Recommend issuance of Permit No. 10681R00 once any comments have been resolved.

Table 4 of the revised TAP emissions spreadsheet submitted December 15, 2021

Table 4			**AM**										**PM**											
	12:01:00 -1.00	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**	**9-10**	**10-11**	**11-12**	**12-1**	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**	**9-10**	**10-11**	**11-12**
resin									**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**						
gelcoat	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**																
putty										**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**							
adhesives										**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**							
	styrene lbs per hour emitted per activity																							
	AM												**PM**											
	12:01:00 -1.00	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**	**9-10**	**10-11**	**11-12**	**12-1**	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**	**9-10**	**10-11**	**11-12**
resin	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.60**	**7.60**	**7.60**	**7.60**	**7.60**	**7.60**	**7.60**	**7.60**	**7.60**	**7.60**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
gelcoat	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
putty										**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**	**1.06**
adhesives										**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**	**1.47**
total/hr	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**7.60**	**10.13**	**10.13**	**10.13**	**10.13**	**10.13**	**10.13**	**10.13**	**10.13**	**10.13**	**2.53**	**2.53**	**2.53**	**2.53**	**2.53**	**2.53**
lbs/hr per exhaust	**1.80**	**1.80**	**1.80**	**1.80**	**1.80**	**1.80**	**1.80**	**1.80**	**1.27**	**1.69**	**1.69**	**1.69**	**1.69**	**1.69**	**1.69**	**1.69**	**1.69**	**1.69**	**0.42**	**0.42**	**0.42**	**0.42**	**0.42**	**0.42**
AM												**PM**												
0-1	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**	**9-10**	**10-11**	**11-12**	**12-1**	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**	**9-10**	**10-11**	**11-12**	
11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	11.16	
10.82	10.82	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**10.82**	**7.60**	**10.13**	**10.13**	**10.13**	**10.13**	**10.13**	10.13	10.13	10.13	10.13	2.53	2.53	2.53	2.53	2.53	

Appendix B

WCG Environmental Justice Report

North Carolina Department of Environmental Quality
September 22, 2022

World Cat Greenville

Environmental Justice Report

Contents

1 Introduction

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This evaluation examines the demographic and environmental conditions in Pitt County, in census tracts 8 and 9, and the one-mile radius around the property boundary of the proposed World Cat Greenville. Finally, the demographics of the entire state of North Carolina are also considered as they compare to both the county and the local census tract and radius settings.

The primary goal of this EJ Report is to encourage comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period. Public comments will be considered throughout the remainder of the comment period to inform the Final EJ Report.

2 Environmental Justice Evaluation

The Department of Environmental Quality (DEQ or Department) has assessed the permit application and the demographics of the communities in the area surrounding the proposed project. Accordingly, this EJ Report includes:

- Permit application submitted by World Cat Greenville
- Facility emissions overview
- Study of area demographics [determined by utilizing the US EPA Environmental Justice tool (EJSCREEN) https://ejscreen.epa.gov/mapper/ and current, available census data. https://data.census.gov/cedsci/]
- Comparison of local area demographics to the county and statewide census data
- County health assessment
- Sensitive receptors surrounding the area
- Local industrial sites (using the NCDEQ Community Mapping System: https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4cccb3cc212af8a0b8c8).

Demographics for Pitt County and the state are compared to the local (census tracts and project radius) level data to identify any disparities surrounding the project area using standard environmental justice guidelines from the EPA and National Environmental Policy Act (NEPA) documentation. Certain areas will be flagged as potentially underserved communities using criteria set out in more detail in Section 5, Regional and Local Settings.

3 Proposed Project

World Cat Greenville (WCG) submitted a permit application for a greenfield boat manufacturing facility located in Greenville, North Carolina. The facility will be classified as a major facility for both hazardous air pollutants (HAP's) and volatile organic compounds (VOCs). Therefore, the facility will be classified as Title V.

Potential emissions as presented in the application are included in the table below.

Table 1. Facility Emissions Overview

Pollutant	Potential Emissions (tons/yr)
VOC	122.2
Highest Individual HAP (styrene)	43.4
Total HAP	53.5

While reviewing the public comments received throughout the comment period, the Hearing Officer recommended to the Air Quality Division Director that a modeling analysis of World Cat Greenville and Grady White Boat's combined actual styrene emissions be conducted. Expected actual worst-case hourly styrene emissions data was applied to the worst-case stack for each facility. The combined modeling impact from WCG and GWB is 21.5% of the AAL for styrene. A memo of this report can be found in Appendix A.

4 Geographic Area

As proposed, World Cat Greenville would be located at 601 Staton Road, Greenville 27834 (Figure 1). The highest off-site ambient air impacts will occur at the plant fence line. A one-mile radius was used to evaluate the local demographics and socioeconomics to appropriately include the surrounding community and help inform the DAQ's public outreach efforts. The one-mile buffer around the proposed facility is located within Pitt County.

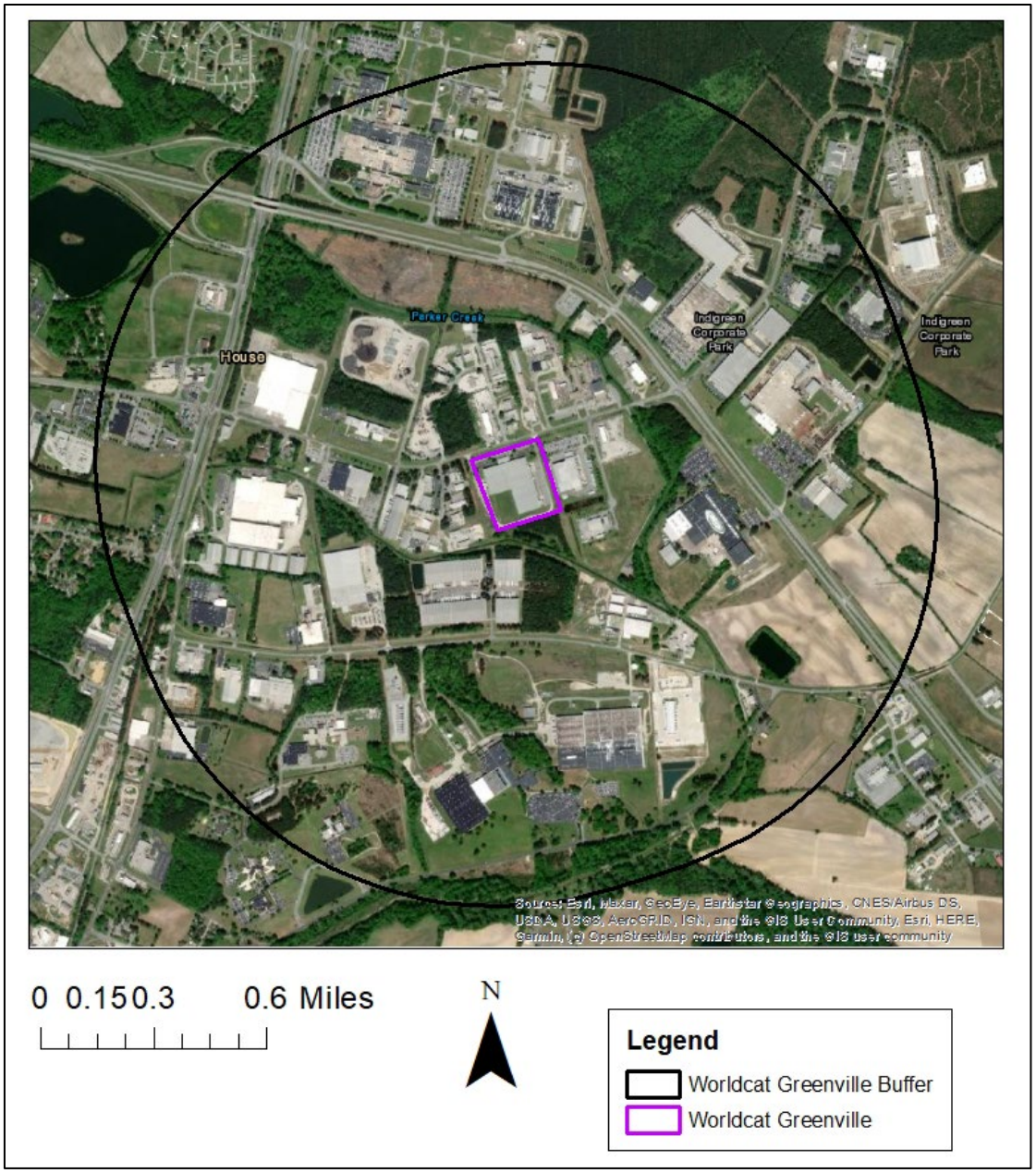

Figure 1. World Cat Greenville location with the one-mile radius.

Pitt County is designated as a Tier 2 county by the NC Department of Commerce 2021 rankings. According to the Department of Commerce, Tier 1 counties encompass the 40 most distressed counties based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax per capita. Tier 2 counties encompass the next 40 counties based on this ranking system. The proposed World Cat Greenville facility and the one-mile radius is located within census tracts 8 and 9 in Pitt County (Figure 2). Census tracts are small, relatively permanent statistical subdivisions of a county with a unique numeric code (US Census Bureau). The census tracts do not encompass land within a state-designated tribal statistical area.

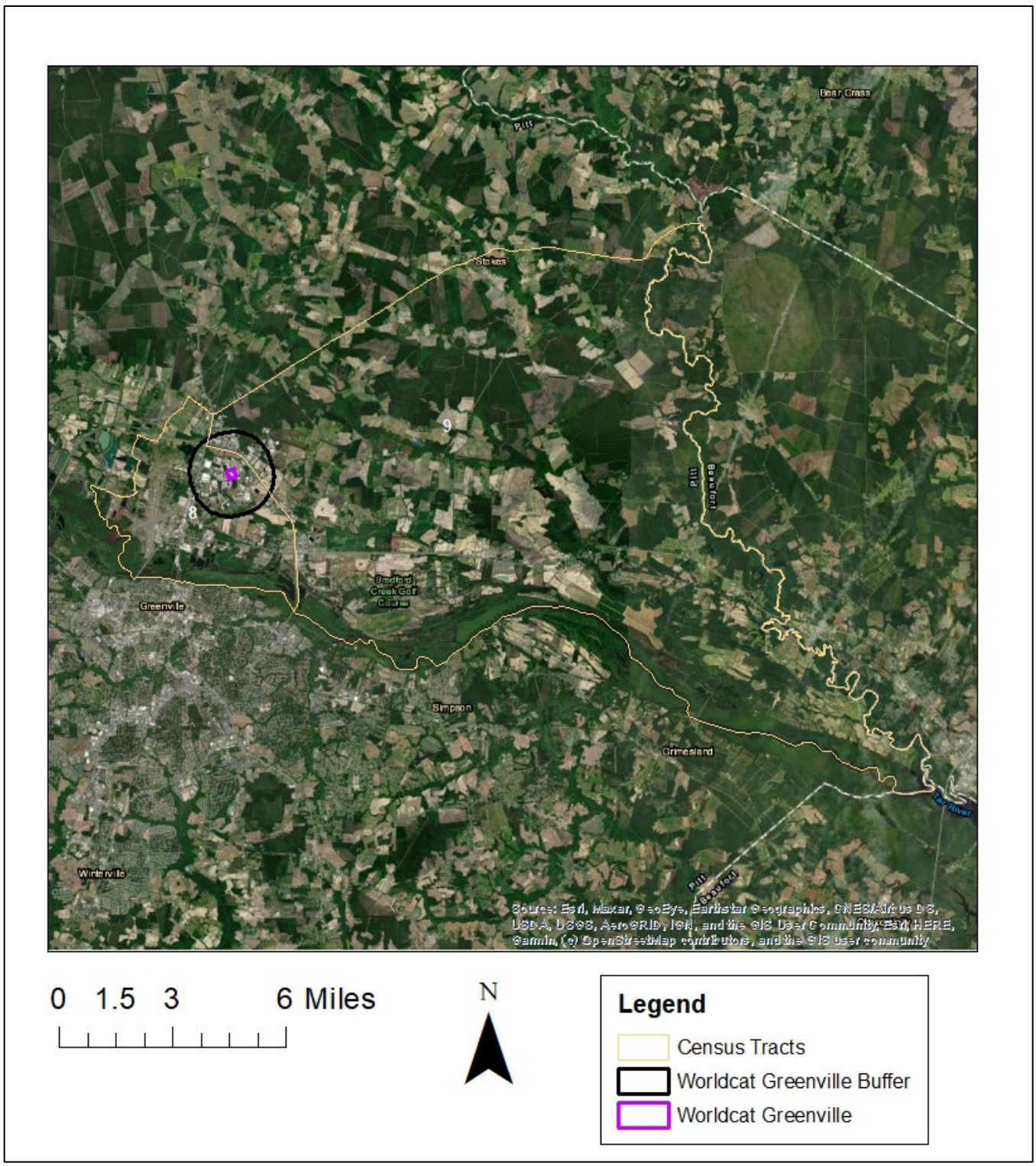

Figure 2. Census Tracts surrounding the facility location.

5 Regional and Local Settings

The following sections on race and ethnicity, age and sex, disability, poverty, household income, and Limited English Proficiency (LEP) populations are based on U.S. Census Bureau data, first at a state and county level (regional setting), and then at a census tract- and project- radius level (local setting). The surrounding census tracts included are those that overlap into the one-mile radius. Demographics of the county will be compared to the local level data to identify any disparities surrounding the project area. Using standard environmental justice guidelines from the EPA and NEPA documentation, the following conditions will be flagged as potential communities of concern:

1. 10% or more in comparison to the county or state average
2. 50% or more minority
3. 5% or more in comparison to the county or state average for poverty

For example, if a census tract has 35% of the population classified as low income but the county consists of 30% low income, the census tract would exceed the county average by 16.7% and thus be flagged as a potential area of concern. For this report, census data from 2010 and census data estimates from 2011-2015 and 2019 were used. 2010 Census Bureau data is real data gathered every ten years, whereas the estimates from the more recent years are modeled based on the real data. For the data gathered from the 2019 and 2011-2015 estimates, the margin of error (MOE) has been included. This value is a measure of the possible variation of the estimate around the population value (U.S. Census Bureau). The Census Bureau standard for the MOE is at the 90% confidence level and may be any number between 0 and the MOE value in either direction (indicated by +/-).

5.1 Race and Ethnicity

Regional Setting

According to the 2010 US Census Data Table 9: Hispanic or Latino, and Not Hispanic or Latino by Race, North Carolina's population totaled 9,535,483 individuals (Table 2). The three most common racial groups across the state were White (65.3%), Black or African American (21.2%), and Hispanic or Latino (of any race) at 8.4%.

Pitt County had a total population of 168,148 individuals (Table 2). The three most common racial or ethnic groups in Pitt County were White (57.1%), Black or African American (33.8%), and Hispanic or Latino (of any race) (5.5%). Black or African American was greater than 10% different when compared to the state.

Table 2. Regional Setting - Race and Ethnicity

Race and Ethnicity	North Carolina		Pitt County	
	Number	**Percent**	**Number**	**Percent**
Total Population	9,535,483	100.0	168,148	100
White	6,223,995	65.3	96,038	57.1
Black or African American	2,019,854	21.2	56,813	**33.8**
American Indian or Alaska Native	108,829	1.1	474	0.3
Asian	206,579	2.2	2,561	1.5
Native Hawaiian and Other Pacific Islander	5,259	0.1	71	0.0
Some other Race	15,088	0.2	290	0.2
Two or More Races	155,759	1.6	2,699	1.6
HISPANIC OR LATINO (of any race)	800,120	8.4	9,202	5.5

Source: US Census Bureau, 2010 Census
All **bolded and orange** highlighted cells indicate a difference that is greater than 10% different when compared to the State.

Local Setting

According to the 2010 US Census Data Table 9: Hispanic or Latino, and Not Hispanic or Latino by race or ethnicity, the largest population within Census Tract 8 was Black or African American at 67.5%. Black or African American and Hispanic or Latino (of any race) were greater than 10% different when compared with both the county and the state (Table 3).

The largest population within Census Tract 9 was White at 53.9%. Black or African American was greater than 10% different compared to state, and Hispanic or Latino (of any race) was greater than 10% different compared to both the county and the state.

Within the one-mile project radius, the largest population was Black or African American at 65%. Black or African American and Hispanic or Latino (of any race) were greater than 10% different when compared to the county and the state.

Table 3. Local Setting - Race and Ethnicity

	Project Area - 1 Mile		Census Tract 8		Census Tract 9	
Race and Ethnicity	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Total Population	795	100	3,575	100	8,052	100
White	158	20	577	16.1	4,340	53.9
Black or African American	514	**65**	2,413	**67.5**	2,734	**34.0**
American Indian or Alaska Native	2	0	8	0.2	17	0.2
Asian	2	0	9	0.3	65	0.8
Native Hawaiian and Other Pacific Islander	0	0	0	0.0	0	0.0
Some other Race	1	0	5	0.1	16	0.2
Two or More Races	13	2	70	2.0	101	1.3
HISPANIC OR LATINO (of any race)	104	**13**	493	**13.8**	779	**9.7**

Source: US Census Bureau, 2010 Census
All **bolded and orange** highlighted cells indicate a difference that is greater than 10% different when compared to the State.

5.2 Age and Sex

Regional Setting

According to the 2010 US Census Data Table P 12: Sex by Age, and Table P13: Median Age, North Carolina had a total population of 9,535,483 individuals (Table 4). The median age for females (38.7) was slightly higher than the median age for males (36).

Pitt County had a total population of 168,148 individuals. The median age for females (30.1) was slightly lower than the median age for males (31.8) and were both lower than the median age for the state.

Table 4. Regional Setting - Age Groups and Sex

	North Carolina						Pitt County					
Age	**Number**			**Percent**			**Number**			**Percent**		
	Both sexes	**Male**	**Female**	**Both sexes**	**Male**	**Female**	**Both Sexes**	**Male**	**Female**	**Both Sexes**	**Male**	**Female**
Total Population	9,535,483	4,645,492	4,889,991	100%	49%	51%	168,148	79,360	88,788	100	47	53%
Median Age	37.4	36	38.7				31.0	30.1	31.8			
Source: US Census Bureau, 2010 Census												

Local Setting

According to the 2010 US Census Data Table P 12: Sex by Age, and Table P13: Median Age, Census Tract 8 had a slightly older median age than both Pitt County and Census Tract 9. Both census tracts had a younger median age than the state (Table 5).

Table 5. Local Setting - Age Groups and Sex

Age	Census Tract 8						Census Tract 9					
	Number			**Percent**			**Number**			**Percent**		
	Both sexes	**Male**	**Female**	**Both sexes**	**Male**	**Female**	**Both sexes**	**Male**	**Female**	**Both sexes**	**Male**	**Female**
Total Population	3,575	1,903	1,672	100%	53%	47%	8,052	3,882	4,170	100%	48%	52%
Median Age	34	32.2	36.3				28	27.7	28.2			
Source: US Census Bureau, 2010 Census												

Project Radius

EJSCREEN identified a population of 795 individuals within the one-mile radius surrounding the proposed facility. There was a higher percentage of males than females in this area. EJSCREEN data does not provide the median age (Table 6).

Table 6. Project Radius - Age Groups and Sex

Age	Project Area - 1 Mile					
	Number			Percent		
	Both sexes	Male	Female	Both sexes	Male	Female
Total Population	795	457	338	100%	57%	43%
Median Age						
Source: US Census Bureau, 2010 Census. Obtained through EJSCREEN 2019						

5.3 Disability

Regional Setting

According to the 2019 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, the state of North Carolina had an estimated total population of 10,060,249 noninstitutionalized citizens. Of those individuals, an estimated 13.4% (MOE +/- 0.1%) had a disability. American Indian and Alaskan Native had the highest estimated disability rate of 18.2% (MOE +/- 0.8%). Black or African American and White (not Hispanic or Latino) were the next highest population estimates with disabilities in North Carolina, at 14.6% (MOE +/-0.2%) and 14.5% (MOE +/- 0.1%), respectively (Table 7).

Pitt County had an estimated total population of 177,203 noninstitutionalized citizens. Of those, an estimated 13.6% (MOE +/- 0.7%) had a disability. The largest population of disabled civilians was American Indian and Alaska Native (25.0%, MOE 17.3%), followed by Black or African American (15.0%, MOE +/- 1.1%). American Indian and Alaska Native, Two or more races, and Hispanic or Latino (of any race) were all greater than 10% different when compared to the state.

Table 7. Regional Setting - Disability

Subject	North Carolina						Pitt County					
	Total		With a Disability		Percent with a Disability		Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Total civilian noninstitutionalized population	10,060,249	2,163	1,352,783	8,378	13.4%	0.1	177,203	265	24,088	1,221	13.6%	0.7
RACE AND HISPANIC OR LATINO ORIGIN												
White (not Hispanic or Latino)	6,357,724	2,614	919,485	7,082	14.5%	0.1	96,571	359	13,350	964	13.8%	1.0
Black or African American	2,144,532	5,119	312,780	4,850	14.6%	0.2	61,252	875	9,169	664	15.0%	1.1
American Indian and Alaska Native	120,813	1,815	22,048	842	18.2%	0.8	591	189	148	128	**25.0%**	17.3
Asian	290,103	1,968	15,414	800	5.3%	0.3	3116	335	100	88	3.2%	2.9
Native Hawaiian and Other Pacific Islander	6,694	677	638	183	9.5%	2.7	102	103	0	29	0.0%	28.3
Some other Race	313,224	7,444	16,846	1,231	5.4%	0.4	5947	927	291	197	4.9%	3.2
Two or more races	265,791	6,168	29,353	1,430	11.0%	0.4	4641	811	562	218	**12.1%**	4.3
Hispanic or Latino	942,342	855	59,694	2,120	6.3%	0.2	11150	22	942	270	**8.4%**	2.4

Source: US Census Bureau, ACS 2019 5-year Estimates
All **bolded** and orange highlighted cells indicate a difference that is greater than 10% when compared to the State

Local Setting

According to the 2019 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, Census Tract 8 had an estimated total population of 2,972 noninstitutionalized citizens (Table 8). Of those individuals, an estimated 13.5% (MOE +/- 5.2%) had a disability. The subject with the largest population of disabled civilians was White (25.5%, MOE +/- 13.3%), followed by Black or African American at 12.6% (MOE +/- 5.4%). Census Tract 9 had a total population of 8,100 noninstitutionalized citizens. Of those individuals, an estimated 13.3% (MOE +/- 3.8) had a disability. The subject with the largest population of disabled civilians was White (17.2%, MOE +/- 5.2%), followed by two or more races at 18.1% (MOE +/- 44.6%). In both census tracts, White had a greater than 10% difference when compared to both the County and the state.

Table 8. Local Setting - Disability

Subject	Census Tract 8						Census Tract 9					
	Total		With a Disability		Percent with a Disability		Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Total civilian noninstitutionalized population	2,972	271	400	156	13.5	5.2	8,100	884	1,074	274	13.3	3.8
RACE AND HISPANIC OR LATINO ORIGIN												
White (not Hispanic or Latino)	495	259	126	97	**25.5**	13.3	3,567	423	612	176	**17.2**	5.2
Black or African American	2,183	365	274	120	12.6	5.4	3,135	631	431	218	13.7	7.6
American Indian and Alaska Native	0	12	0	12	-	-	21	33	0	17	0.0	67.2
Asian	0	12	0	12	-	-	0	17	0	17	-	-
Native Hawaiian and Other Pacific Islander	0	12	0	12	-	-	0	17	0	17	-	-
Some other Race	115	181	0	12	0	25.8	529	299	1	3	0.2	0.5
Two or more races	73	63	0	12	0	35.8	83	126	15	26	**18.1**	44.6
Hispanic or Latino	221	220	0	12	0	14.6	1294	478	16	29	1.2	2.3

Source: US Census Bureau, ACS 2019 5-year Estimates
All **bolded** and orange highlighted cells indicate a difference that is greater than 10% when compared to the State
All **bolded** and blue highlighted cells indicate a difference that is greater than 10% when compared to both the County and the State

5.4 Poverty

Regional Setting

According to the Census Table S1701, Poverty Status in the Past 12 Months, 2019 American Community Survey 5-Year Estimates, from the US Census Bureau, North Carolina had an estimated population of 9,984,891, with 14.7% (MOE +/- 0.2%) below the poverty level (Table 9). Across all subjects, Some Other Race had the highest percent living below the poverty level at 27.2% (MOE +/- 1.2%). The next three subjects with the highest poverty level were Hispanic or Latino at 26.4% (MOE +/- 0.6%), American Indian and Alaska Native at 24.9% (MOE +/- 1.3%), and Black or African American at 22.5% (MOE +/- 0.4%). Households below 200 percent of the federal poverty level[1] are calculated by multiplying the percentage point by the poverty level for the number of individuals in that household. For example, to calculate 200% of the poverty level for a household of four in 2021,[2] that would be $53,000 (2.0 x $26,500).

Pitt County had an estimated population of 171,321 with 22.9% (MOE +/-1.3%) living below the poverty level. Across all subjects, American Indian and Alaska Native had the highest percent living below the poverty level at 35.7% (MOE +/- 23.5%). The total population for whom poverty status is determined, White, Black or African American and American Indian or Alaska Native all had estimates greater than 5% different when compared to the state values.

[1] https://www.thebalance.com/federal-poverty-level-definition-guidelines-chart-3305843

[2] The poverty level for a household of four in 2021 is an annual income of $26,500. To calculate the poverty level for larger families, add $4,540 for each additional person in the household. For smaller families, subtract $4,540 per person.

Table 9. Regional Setting – Poverty

Subject	North Carolina						Pitt County					
	Total		**Below poverty level**		**Percent below poverty level**		**Total**		**Below poverty level**		**Percent below poverty level**	
	Estimate	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**
Population for whom poverty status is determined	9,984,891	1,988	1,467,591	17,844	14.7%	0.2	171,321	467	39,314	2,196	**22.9%**	1.30
RACE AND HISPANIC OR LATINO ORIGIN												
White	6,320,337	2,990	644,440	10,085	10.2%	0.2	92,783	520	15,313	1,147	**16.5%**	1.20
Black or African American	2,116,769	5,452	475,973	8,126	22.5%	0.4	59,848	906	19,388	1,638	**32.4%**	2.6
American Indian and Alaska Native	120,328	1,846	29,981	1,608	24.9%	1.3	518	177	185	156	**35.7%**	23.5
Asian	285,786	2,021	30,707	2,034	10.7%	0.7	2,998	331	350	175	11.7%	5.70
Native Hawaiian and Other Pacific Islander	6,630	675	1,360	332	20.5%	4.6	76	98	-	29	0.0%	34.90
Some other Race	311,206	7,397	84,699	4,639	27.2%	1.2	5,887	922	1,829	603	31.1%	9.40
Two or more races	262,580	6,121	54,627	2,414	20.8%	0.8	4,401	799	1,006	417	22.9%	8.10
Hispanic or Latino	940,295	1,251	248,474	6,013	26.4%	0.6	10,933	112	2,917	609	26.7%	5.60
All individuals below:												
200 percent of poverty level	3,420,476	24,183					71,345	2,405				

Source: American Community Survey 5-year Estimates, 2019
All **bolded and orange** cells indicate a difference that is greater than 5% when compared to the State

Local Setting

According to the Census Table S1701, Poverty Status in the Past 12 Months, 2019 American Community Survey 5-Year Estimates, from the US Census Bureau, Census Tract 8 had an estimated population of 2,951 with 38.2% (MOE +/-11.7%) living below the poverty level (Table 10). The total population for whom poverty status is determined as well as three racial groups had poverty levels higher than 5% different when compared to both the county and state.

Census Tract 9 had an estimated population of 8,086 individuals, with 29.1% (MOE +/- 8.1%) living below the poverty level. The total population for whom poverty status is determined as well as three racial groups had poverty levels higher than 5% different when compared to both the county and state.

Table 10. Local Setting- Poverty

Subject	Census Tract 8						Census Tract 9					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	2,951	266	1,128	360	**38.2%**	11.7	8,086	884	2,354	784	**29.1%**	8.1
RACE AND HISPANIC OR LATINO ORIGIN												
White	495	259	156	174	**31.5%**	29.3	3,567	423	512	261	14.4%	6.8
Black or African American	2,162	359	802	303	**37.1%**	13.6	3,135	631	1,555	636	**49.6%**	16.1
American Indian and Alaska Native	0	12	0	12	-	-	7	11	7	11	**100.0%**	100.0
Asian	-	12	-	12	-	-	-	17	-	17	-	-
Native Hawaiian and Other Pacific Islander	-	12	-	12	-	-	-	17	-	17	0.0%	-
Some other Race	115	181	115	181	**100.0%**	25.8	529	299	196	175	**37.1%**	43.0
Two or more races	73	63	-	12	0.0%	35.8	83	126	-	17	0.0%	32.9
Hispanic or Latino	221	220	170	200	**76.9%**	29.3	1,294	478	280	203	21.6%	16.9
All individuals below:												
200 percent of poverty level	1,820	317					4,217	922				

Source: American Community Survey 5-year Estimates, 2019
All **bolded and blue** cells indicate a difference that is greater than 5% when compared to the county and the State.

5.5 Household Income

Regional Setting

The following table (Table 11) was compiled using data from the Census Table S1901, Income in the Past 12 Months (in 2019 Inflation-Adjusted Dollars) 2019 American Community Survey 5-Year Estimates for North Carolina. The North Carolina household income range with the highest percent was for $50,000 to $74,999, at 18.0%. The state median household income was $54,602 and the mean income was $76,940.

The household income range for Pitt County with the highest percent was $50,000 to $74,999 at 17.7% (MOE +/- 1.2%). The median income was $47,437 and the mean income was $67,261, both lower than that of the state. The two lowest income ranges were both greater than 10% different when compared to the state.

Table 11. Regional Setting - Household Income

Subject	North Carolina		Pitt County	
	Households		**Households**	
	Estimate	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**
Total	3,965,482	10,327	69,799	808
Less than $10,000	6.4%	0.1	**10.1%**	1.0
$10,000 to $14,999	5.0%	0.1	**6.2%**	0.8
$15,000 to $24,999	10.3%	0.1	11.5%	0.9
$25,000 to $34,999	10.3%	0.1	9.9%	0.9
$35,000 to $49,999	13.9%	0.1	13.8%	1.2
$50,000 to $74,999	18.0%	0.1	17.7%	1.2
$75,000 to $99,999	12.4%	0.1	10.6%	0.8
$100,000 to $149,999	13.1%	0.1	12.3%	1.0
$150,000 to $199,999	5.1%	0.1	4.5%	0.6
$200,000 or more	5.4%	0.1	3.5%	0.5
Median income (dollars)	54,602	231	47,437	1,940
Mean income (dollars)	76,940	352	67,261	2,354
Per Capita Income	30,783	154	27,155	890

Source: US Census, 2019 ACS 5-Year Estimates.
All **orange and bolded** highlighted cells indicate a difference that is greater than 10% when compared to the state

Local Setting

The household income range for Census Tract 8 with the highest percent was $35,000 to $49,999 at 23.4% (MOE +/- 10%). The median income was $38,139 and the mean income was

$42,917 (Table 12). All income ranges less than $24,999 had percentages that were more than 10% greater than either the state or county.

The household income range for Census Tract 9 with the highest percent was $50,000 to $74,999 at 24.1% (MOE +/- 7.4%). The median income was $50,422 and the mean income was $62,765.

The household income range for the one-mile radius with the highest percent was $25,000-$50,000 at 34%. EJSCREEN data provides different income ranges that cannot be compared in the same manner. (Table 13).

Table 12. Local Setting - Household Income

Subject	Census Tract 8		Census Tract 9	
	Households		**Households**	
	Estimate	**Margin of Error +/-**	**Estimate**	**Margin of Error +/-**
Total	1,126	121	2,739	234
Less than $10,000	**13.4%**	8.8	6.2%	4.3
$10,000 to $14,999	**14.0%**	9.3	1.9%	2.3
$15,000 to $24,999	**12.0%**	6.8	**13.8%**	5.4
$25,000 to $34,999	5.2%	3.6	12.1%	5.5
$35,000 to $49,999	**23.4%**	10	14.9%	5.1
$50,000 to $74,999	14.9%	7.7	**24.1%**	7.4
$75,000 to $99,999	8.4%	5.8	9.1%	4.5
$100,000 to $149,999	8.7%	6.8	13.9%	6.3
$150,000 to $199,999	-	3.1	2.8%	3
$200,000 or more	-	3.1	1.0%	1.3
Median income (dollars)	38,139	5,898	50,422	4,615
Mean income (dollars)	42,917	8,143	62,765	8,306
Per Capita Income	16,409	3,616	22,225	3,326

Source: US Census, 2019 ACS 5-Year Estimates.
All **orange and bolded** highlighted cells indicate a difference that is greater than 10% when compared to the state
All **blue and bolded** highlighted cells indicate a difference that is greater than 10% when compared to the state and the county

Table 13. Project Radius - Household Income

Subject	1 mile		
	Number	**Percent**	**MOE**
Number of Households	126	100%	182
Per Capita Income (dollars)	16,544		
Household Income			
<$15,000	33	26%	108
$15,000-$25,000	14	11%	112
$25,000-$50,000	42	34%	158
$50,000-$75,000	19	15%	132
$75,000+	17	14%	91
Source: EJSCREEN 2019			

Per Capita Income

Per Capita Income data was obtained through the Census Table B19301, Per Capita Income in the Past 12 Months (In 2018 Inflation-Adjusted Dollars), 2019 American Community Survey 5-Year Estimates. The North Carolina per capita income estimate was $30,783. The estimate for Pitt County was $27,155. The estimate for Census Tract 8 was $16,409, and the estimate for Census Tract 9 was $22,225.

The EJSCREEN analysis also provided the Per Capita Income estimate for the one-mile radius surrounding facility site, which was $16,544. All Per Capita Income estimates were lower than that of the state.

6 Limited English Proficiency (LEP)

Per the Safe Harbor Guidelines, should an LEP Group be identified during the permit application process, written translations of vital documents for each eligible LEP language group that constitutes 5% or includes 1,000 members (whichever is less) of the population of persons eligible to be served or likely to be affected or encountered. If there are fewer than 50 persons in a language group that reaches the 5% trigger, then DEQ will not translate vital written materials, but instead will provide written notice in the primary language of the LEP language group of the right to receive competent oral interpretation of those written materials, free of cost. The safe harbor provisions apply to the translation of written documents only. Safe harbor guidelines are based on EPA guidance for LEP persons and implemented by DEQ when deemed appropriate. Only languages where an estimated population of greater than 0 who speak English less than “very well” are included in this analysis. The population over 5 years and over who speak English less than “very well” in Census Tract 8 was greater than 5% (8.3%).

Table 14. Limited English Proficiency

LANGUAGE SPOKEN AT HOME	Census Tract 8		Census Tract 9	
	Estimate	Margin of Error	Estimate	Margin of Error
Total (population 5 years and over):	**3,423**	**459**	**7,689**	**559**
Speak only English	2,947	427	6,977	553
Spanish or Spanish Creole:	476	305	672	227
Speak English "very well"	193	139	513	149
Speak English less than "very well"	**283**	197	159	140
Source: US Census, ACS 5-Year estimates 2011-2015				

7 Educational Attainment

Regional Setting

The following data was obtained through the US Census Bureau Table S1501, American Community Survey 2019 5-year Estimates. Pitt County had very similar percentages of individuals across all education attainment levels as compared to the state.

Table 15. Regional Setting- Educational Attainment (above 25 years old)

Subject	North Carolina				Pitt County			
	Number		Percent		Number		Percent	
	Estimate	MOE +/-	Estimate	MOE +/-	Estimate	MOE +/-	Estimate	MOE +/-
Total Above 25	6,983,859	1,636			108,447	147		
Less than 9th grade	314,545	4,322	4.5%	0.1	3,456	479	3.2%	0.4
9th to 12th grade, no diploma	538,851	6,801	7.7%	0.1	8,196	676	7.6%	0.6
High school graduate (includes equivalency)	1,791,532	12,844	25.7%	0.2	25,786	1,153	23.8%	1.1
Bachelor's degree or higher	2,182,853	16,331	31.3%	0.2	35,418	1,182	32.7%	1.1
Source: US Census, ACS 5-Year estimates 2019								

Local Setting

The following data was obtained through the US Census Bureau Table S1501, American Community Survey 20195-year Estimates. The project radius and Census Tract 8 had the highest percentage of individuals with less than a 9th grade education. Both census tracts and the one-mile radius also had higher percentages of individuals with a 9th to 12th grade education, but no diploma. Additionally, the percentage of individuals with a Bachelor's degree or higher are significantly lower for the local setting than for the regional setting.

Table 16. Local Setting- Educational Attainment (above 25 years old)

Subject	Census Tract 8				Census Tract 9			
	Number		**Percent**		**Number**		**Percent**	
	Estimate	**MOE +/-**	**Estimate**	**MOE +/-**	**Estimate**	**MOE +/-**	**Estimate**	**MOE +/-**
Total Above 25	2,064	276			4,535	340		
Less than 9th grade	157	97	7.6%	4.4	160	160	3.5%	3.4
9th to 12th grade, no diploma	241	131	11.7%	6	803	215	17.7%	4.6
High school graduate (includes equivalency)	556	194	26.9%	8.7	1,350	257	29.8%	5.4
Bachelor's degree or higher	265	124	12.8%	5.7	604	203	13.3%	4.7
Source: US Census ACS 2019 5-year estimates								

Table 17. Project Radius - Educational Attainment (above 25 years old)

Subject	Project Radius			
	Number		**Percent**	
	Estimate	**MOE +/-**	**Estimate**	**MOE +/-**
Total Above 25	456	288		
Less than 9th grade	44	68	10.0%	
9th to 12th grade, no diploma	59	127	13%	
High school graduate (includes equivalency)	130	159	28%	
Bachelor's degree or higher	38	134	8%	
Source: EJSCREEN 2019				

8 County Health

The University of Wisconsin Population Health Institute, in collaboration with the Robert Wood Johnson Foundation, calculated County Health Rankings for all the States in the United States (www.countyhealthrankings.org). This ranking is based on health outcomes (such as lifespan and self-reported health status) and health factors (such as environmental, social and economic conditions). According to this 2021 report, out of all 100 counties in North Carolina (with 1 indicating the healthiest), Pitt County ranks 34th in health factors and 39th in health outcomes.

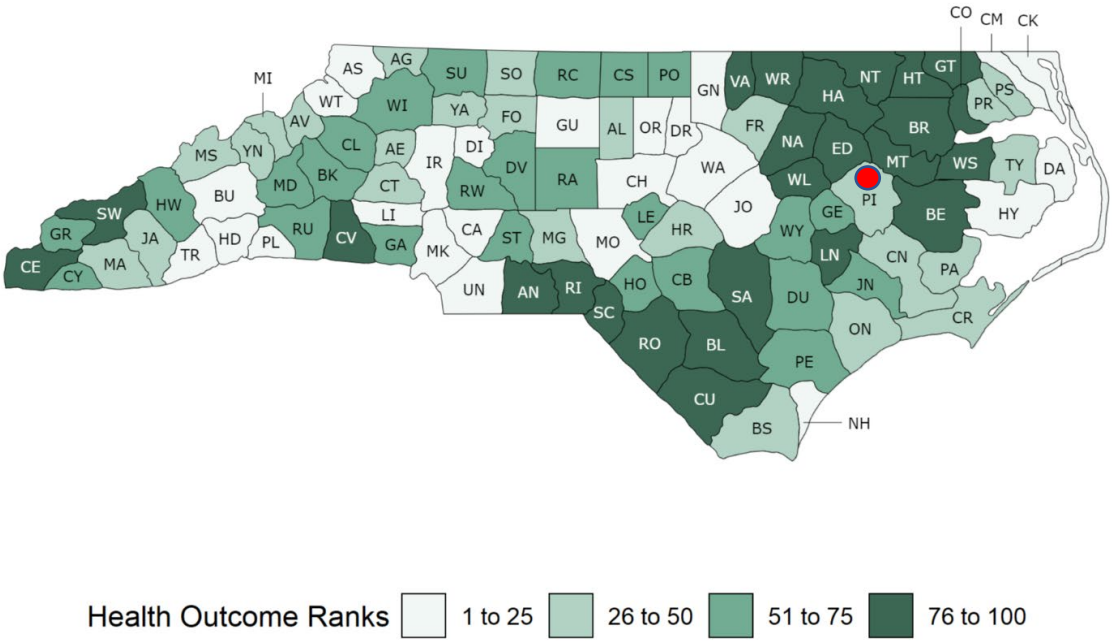

Figure 3. County Health Rankings for Health Factors in North Carolina provided by University of Wisconsin Public Health Institute.

According to the NC DEQ Community Mapping System Environmental Justice Tool, the health outcome causes of death in Pitt County overall are similar though slightly higher than the state averages. However, the hospitalizations due to asthma in Pitt County is 217 (per 100,000 individuals), as compared to the state at 90 (per 100,000 individuals). Finally, the number of primary care physicians in Pitt County (14.734 per 10,000 residents) is considerably higher than the state average (4.812 per 10,000 residents).

Table 18. Health Outcomes

Cause of Death	Pitt County	North Carolina
Cancer	171.1	169.1
Heart Disease	169.2	163.7
Stroke	48.9	43.1
Cardiovascular Disease	233.6	221.9
Diabetes	27.3	22.8
Source: NCDEQ 2020 EJ Tool. Death rates are per 100,000 individuals		

9 Local Sensitive Receptors

The U.S. Environmental Protection Agency suggests that sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors. For instance, children and the elderly may have a higher risk of developing asthma from elevated levels of certain air pollutants than a healthy individual aged between 18 and 64.

Within the one-mile radius surrounding the proposed facility location, the following sensitive receptors were identified (Figure 4):

- Kingdom Hall of Jehovah's Witnesses
- Greenfield Terrace Park
- Pitt County Arboretum
- Pitt's County Headstart

Additional sensitive receptors may be identified during the remainder of the permit application process.

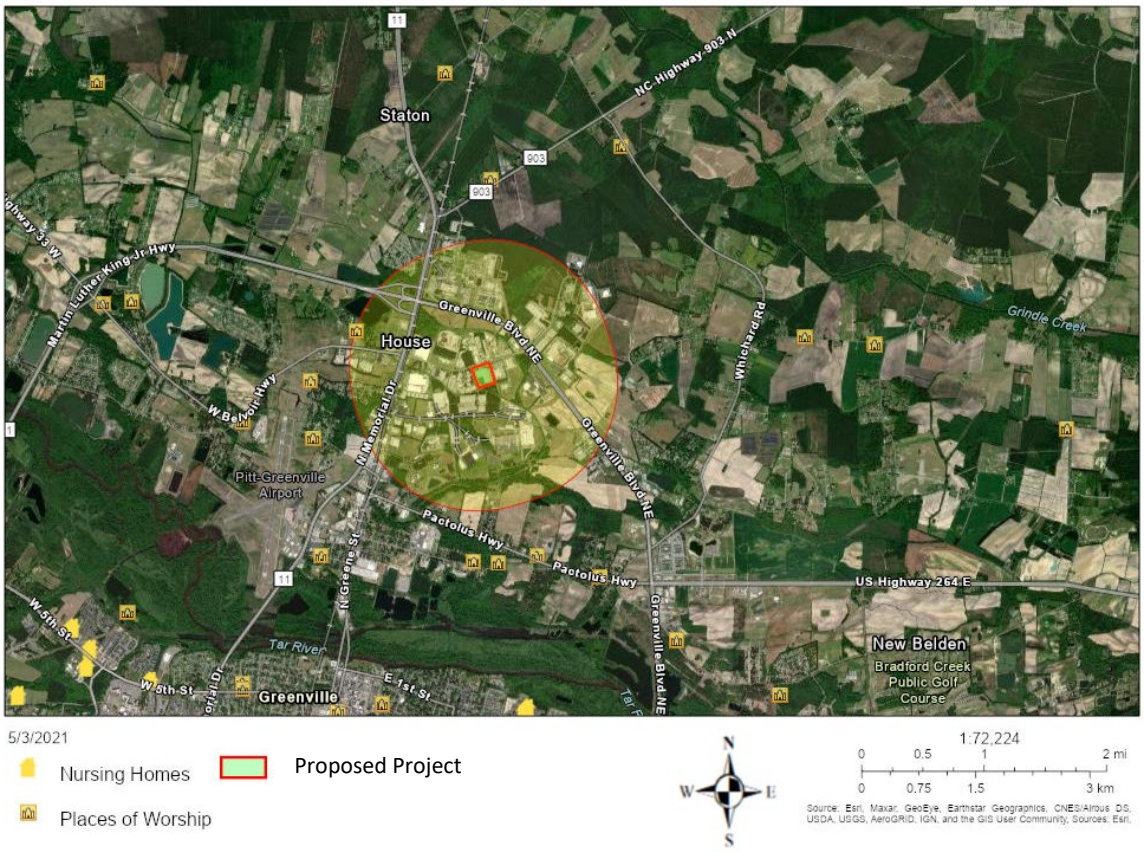

Figure 4. Sensitive receptors surrounding the proposed facility location.

10 Local Industrial Sites

Within the one-mile radius of the proposed facility, there are 72 permits or incidents (as of April 22, 2021) (Figure 5).

- 11 Air Quality Permitted sites
- 1 NPDES Wastewater Treatment Facility
- 3 inactive hazardous sites
- 1 Brownfields Program site
- 7 hazardous waste sites
- 26 Underground Storage Tank (UST) Incidents
- 11 Above ground storage tank incidents
- 4 UST active facilities
- 9 land use restrictions or notices

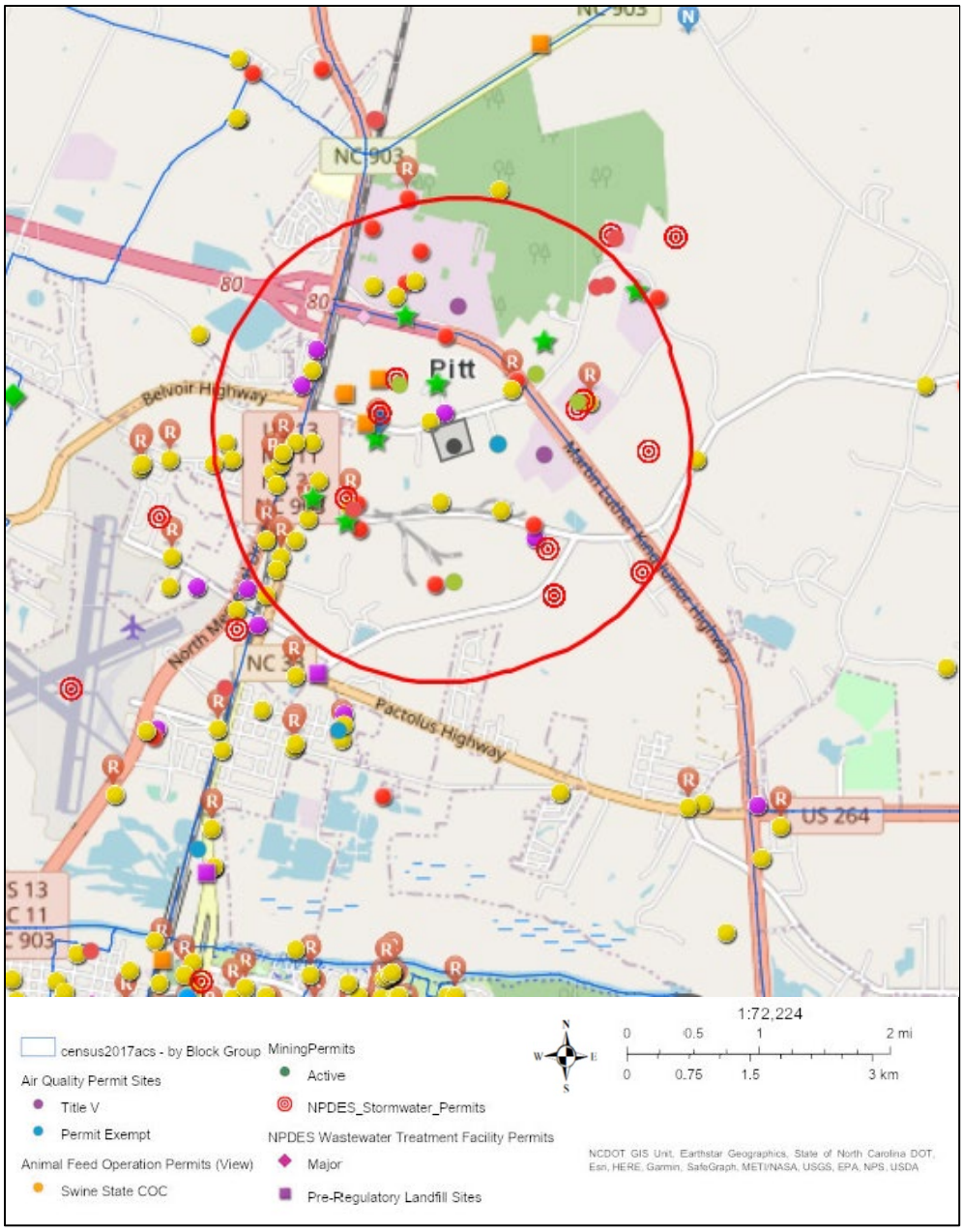

Figure 5. Permitted facilities and incidents with the one-mile radius surrounding the proposed project.

11 Conclusion

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This EJ report examined the demographic and environmental conditions in North Carolina, Pitt County, census tracts 8 and 9, and the one-mile radius around the proposed World Cat Greenville facility. Potential emissions rates outlined in the permit application and county level health data are included, as well as data from the NCDEQ Community Mapping System. It is important to keep in mind that based on the available data, the following limitations of this report: census data is from 2010 and may be outdated; the more recent census data through 2019 are estimates; EJSCREEN does not provide all of the data categories that were used in this analysis so the census tract and county data cannot be compared to the radius used surrounding the facility boundary for all criteria; census tracts can still be large areas and do not allow for exact locations of each population; and the Department cannot determine which populations are in that small amount of overlap around the facility.

The Department assessed the available demographic and socioeconomic data of the community surrounding the World Cat Greenville Facility regarding its permit application. Pitt County, the project area data from the radius used, and the census tracts generally exceed the state estimates for race and ethnicity. The area also showed higher percentages of individuals earning the lowest income ranges and elevated poverty rates (as compared to the state and County). One LEP group was identified (Spanish or Spanish Creole).

Pitt County ranks 34th in health factors and 39th in health outcomes and performed worse than the state average for most death rates that are included in the DEQ EJ Tool. There were 72 permits or incidents recorded within one mile of the proposed facility.

Based on this EJ Report, the following outreach was conducted:

- A one-page fact sheet was created with simplified project information and ways to engage.
- The comment period was extended, and a public hearing was conducted at the request of community members.
- Translation services were provided for the one-page fact sheet and through the La Grande radio station (running adds over the course of 2-weeks) in accordance with the Department LEP-Language Access Plan.
- Social media reminders went out in both English and Spanish.
- The list of sensitive receptors was consulted (one-page fact sheet sent out) while considering additional outreach options that may best fit this community's needs.
- Project information was provided to officials with the Town of Greenville and Pitt County.
- Known community leaders were consulted for additional outreach options.

Appendix C

DAQ Memorandums Regarding Styrene Toxics Modeling

DIVISION OF AIR QUALITY
March 23, 2022

MEMORANDUM

TO: Jeff Twisdale, Environmental Engineer, RCO
Yongcheng Chen, Permit Coordinator, WARO

FROM: Matthew Porter, Meteorologist, AQAB MKP

THROUGH: Tom Anderson, AQAB Supervisor, AQAB

SUBJECT: Dispersion Modeling Air Toxics Analysis for World Cat Greenville
Facility ID: 7400317
Application ID: 7400317A – GREEN – 300
Greenville, NC Pitt County

As requested by the permit engineer, I have completed the dispersion modeling analysis for the boat manufacturing plant owned and operated by HC Composites LLC and located in Greenville, Pitt County, NC. The dispersion modeling analysis was conducted to support determination of unacceptable risks in terms of ambient impacts from styrene emissions released from resin, gelcoat, putty, and adhesive boat molding operations. The modeling analysis shows compliance with the Acceptable Ambient Levels (AALs) outlined in 15A NCAC 02D.1104 on a source-by-source basis.

Modeled source release parameters for six point sources is provided in the attached Table A1. Each point source was modeled with a unit emission rate of 1 g/s to identify the stack with the worst-case hourly ambient impact. As shown in the attached Table A2, EFSP1 was the worst-case stack. Table A2 also provides a conservative estimate of the facility-wide total styrene hourly emissions released through the worst-case stack that would result in modeled impacts scaled to 95% of the styrene AAL. In other words, the worst-case stack EFSP1 modeled at 99.77 lb/hr styrene would result in maximum modeled impacts at 95% of the AAL. Note the emissions were modeled assuming 8,760 hours/year operation for each year of the 5-year meteorological database.

AERMOD (version 21112) using five years (2014-2018) of Rocky Mount-Wilson Airport meteorological data (surface) and Morehead City vertical profile data (upper air) were used to evaluate impacts in both simple and complex terrain. AERMET (version 18081) was used to process the airport surface and upper air data to generate vertical meteorological and atmospheric turbulence profiles for hourly AERMOD dispersion modeling calculations. The AERMET processing was conducted by NC DAQ and downloaded by the applicant from the NC DAQ website. Direction-specific building downwash parameters, calculated using EPA's BPIP-PRIME program (04274), were used as input to AERMOD to determine building downwash effects on plume rise and effects on entrainment and dispersion of stack emissions into the cavity and turbulent wake zones downwind of existing buildings. The building downwash analysis included one building and six point sources. Receptors were modeled around the facility's property line at 25-meter intervals. Discrete receptors were modeled with 100-meter spacing out to approximately 3 km from the facility. In all, a total of 3,766 receptors were modeled. Building, source, and receptor elevations and receptor dividing streamline heights were

calculated from 1-arc-second resolution USGS NED terrain data using the AERMOD terrain pre-processor AERMAP (version 18081). All model buildings, sources, and receptors were geo-located within the modeling domain based on the horizontal North American Datum of 1983 (NAD83) and Zone 18 of the Universal Transverse Mercator (UTM) coordinate system.

Maximum modeled styrene emissions impacts are shown in Table 1 below as a percentage of the applicable AAL.

Table 1.
Maximum Modeled Toxics Impacts from Worst-Case Stack
World Cat Greenville, NC

Pollutant	Averaging Period	AAL ($\mu g/m^3$)	Maximum Modeled Impacts % of AAL
Styrene	1-hour	10,600	95 %

This compliance demonstration assumes the emissions scenarios, sources modeled, source parameters, and pollutant emission rates used in the dispersion modeling analysis are correct.

cc: Tom Anderson
Matthew Porter

Table A1. Modeled Release Parameters for Point Sources

Model ID	**Description**	**X-utm (m)**	**Y-utm (m)**	**Elev. (m)**	**Release Ht. (m)**	**Exit Temp. (K)**	**Exit Vel. (m/s)**	**Stack Diam. (m)**	**CAPped or HORizontal?**
EFL1	Fan Stack	286810.0	3947722.0	7.50	9.76	293.15	23.01	0.91	No
EFL2	Fan Stack	286815.0	3947702.0	7.67	9.76	293.15	23.01	0.91	No
EFL3	Fan Stack	286851.0	3947733.0	8.43	12.04	293.15	23.01	0.91	No
EFL4	Fan Stack	286853.0	3947716.0	8.52	12.04	293.15	23.01	0.91	No
EFSP1	Fan Stack	286853.0	3947724.0	8.47	12.04	293.15	14.54	0.81	No
EFSP2	Fan Stack	286855.0	3947715.0	8.55	12.04	293.15	23.01	0.91	No

Table A2. Unit Emissions Impact Summary (Worst-Case Stack in **Bold**)

Model ID	Unit Emissions (g/s)	Unit Impact (ug/m3)	Styrene AAL (ug/m3)	95% AAL (ug/m3)	95% Scaled Emissions (g/s)	95% Scaled Emissions (lb/hr) [(1)]	Worst-Case Stack?
EFL1	1.0	451.09	10,600	10,070	22.32	177.18	No
EFL2	1.0	623.77	10,600	10,070	16.14	128.13	No
EFL3	1.0	538.98	10,600	10,070	18.68	148.28	No
EFL4	1.0	524.53	10,600	10,070	19.20	152.37	No
EFSP1	**1.0**	**801.08**	**10,600**	**10,070**	**12.57**	**99.77**	**Yes**
EFSP2	1.0	539.79	10,600	10,070	18.66	148.06	No

(1) 95% Scaled Emissions (lb/hr) = [10,600 (ug/m3) AAL x (95%)] / [Unit Impact (ug/m3 per 1 g/s)] x [3600 (sec/hr)] / [453.59 (g/lb)]

DIVISION OF AIR QUALITY
September 19, 2022

MEMORANDUM

TO: Ashby Armistead, Environmental Engineer, WIRO

FROM: Mark Yoder, Meteorologist, AQAB

THROUGH: Tom Anderson, AQAB Supervisor, AQAB

SUBJECT: Dispersion Modeling Air Toxics Analysis for World Cat Greenville and Grady-White Boats, Inc.

World Cat Facility ID: 7400317
Grady White Facility ID: 7400104
Greenville, NC Pitt County

As requested, I have completed dispersion modeling for the HC Composites LLC World Cat Greenville (World Cat) and Grady-White Boats, Inc. (Grady-White), facilities located in Greenville, Pitt County, NC. The modeling analysis was conducted to determine combined ambient impacts of styrene emissions released from boat manufacturing operations at both facilities. The modeling analysis shows compliance with the styrene Acceptable Ambient Levels (AALs) outlined in 15A NCAC 02D.1104.

Modeled source release parameters and emissions rates for two worst-case point sources are provided in the attached Table A1. Point sources at both facilities were evaluated to identify stack parameters with the worst-case hourly ambient impact. Actual emissions rates, obtained from World Cat's application and Grady-White's emissions inventory data, were used for the facilities, and assigned to the worst-case stacks. Note the emissions were modeled assuming 8,760 hours/year operation for each year of the 5-year meteorological database.

AERMOD (version 22112) using five years (2014-2018) of Rocky Mount-Wilson Airport surface meteorological data and vertical profile data (upper air) from the Newport, NC, National Weather Service were used to evaluate impacts in both simple and complex terrain. Direction-specific building downwash parameters, calculated using EPA's BPIP-PRIME program (04274), were used as input to AERMOD to determine building downwash effects on plume rise and effects on entrainment and dispersion of stack emissions into the cavity and turbulent wake zones downwind of existing buildings. The building downwash analysis included one building and six point sources. Receptors were modeled around the facility's property line at 25-meter intervals. Discrete receptors were modeled with 50-meter, 100-meter, and 250-meter spacing out to approximately 5 km from the facility. Receptors were also located at the Pitt County Head Start and Greenville Aquatics and Fitness Center proprieties. Styrene concentrations at both locations were well below the styrene AAL. In all, a total of 4,940 receptors were modeled. Building, source, and receptor elevations and receptor dividing streamline heights were calculated from 1-arc-second resolution USGS NED terrain data using the AERMOD terrain pre-processor AERMAP (version 18081). All model buildings, sources, and receptors were geo-located within the modeling domain based on the horizontal North American Datum of 1983 (NAD83) and Zone 18 of the Universal Transverse Mercator (UTM) coordinate system.

Maximum modeled styrene emissions impacts are shown in Table 1 below as a percentage of the applicable AAL.

Table 1.
Maximum Modeled Toxics Impacts from Worst-Case Stacks
World Cat Greenville and Grady-White, NC

Pollutant	Averaging Period	AAL ($\mu g/m^3$)	Maximum Modeled Impacts % of AAL
Styrene	1-hour	10,600	21.5 %

This compliance demonstration assumes the emissions scenarios, sources modeled, source parameters, and pollutant emission rates used in the dispersion modeling analysis are correct.

cc: Tom Anderson
Mark Yoder

Table A1. Worst-case Modeled Release Parameters and Emissions Rates

Model ID	Description	X-utm (m)	Y-utm (m)	Elev. (m)	Release Ht. (m)	Exit Temp. (K)	Exit Vel. (m/s)	Stack Diam. (m)	CAPped or HORizontal?	Styrene (lb/hr)
GW	Worst-case stack	287457.2	3947599.09	7.62	13.7	298.	15.2	0.76	No	44.2
WC	Worst-case Stack	286855.0	3947715.0	8.55	12.04	293.15	23.01	0.91	No	10.82