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Clarence Rowe.
418 Pennsylvania Ave
Rockledge, Fl
32955

4a. Article Number
Z 031 391 885

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 3-23-0

5. Received By: *(Print Name)* Clarence Rowe

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X Clarence Rowe

PS Form **3811,** December 1994 102595-98-B-0229 Domestic Return Receipt

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3. Article Addressed to:
Clarence Rowe
418 Pennsylvania Ave
Rockledge, FL 32955

4a. Article Number
Z 031 391 921

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☒ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 1-24-0

5. Received By: *(Print Name)*

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*
X Clarence Rowe

PS Form **3811,** December 1994 102595-98-B-0229 Domestic Return Receipt

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Public Comment Summary

Public Comments Received Via E-Mail

"I have lived approximately one quarter of a mile south of the existing plant in Villa de Palmas for over 22 years. Residents of Villa de Palmas have complained many, many times about the noxious fumes and airborne fallout emanating from the Sea Ray plant, but nothing has ever been done to correct the situation. I was not surprised to learn that Sea Ray has been classified as a major polluter. What does surprise me is the fact that the operation of their new facility will more than double the pollution that will be released from their two facilities. What effect does this pollution have on our health and our children's health? I feel that the residents and workers around Sea Ray are human guinea pigs.

In light of this, Sea Ray has said that since the installation of control systems to reduce the amount of pollution is not cost effective, it should not be required! The absurdity of this comment absolutely defies all reasonable logic. But Sea Ray's logic doesn't stop there, they want the new facility to be considered a separate and independent facility and not linked to the existing facility 1.2 miles west of the proposed plant. The pollution that Sea Ray generates knows no boundaries!

I do not understand why the DEP proposes that Sea Ray begin with a small scale pilot project that captures 53% of the volatile organic compounds and hazardous chemicals, including styrene. What about the 47% that will be dumped into our atmosphere and on hundreds of nearby residents? The DEP must deny Sea Ray's permit for the sake of the health and welfare of the people who live and work in the area of Sea Ray. "

Thomas M. Page, 249 Via Havarre, Merritt Island, FL 32953 (11/18/99)

"Thank you for the opportunity to comment on Sea Ray's request to expand their production facilities on Merritt Island. I contacted Randy O'Brien and expressed my concerns about Sea Ray's expansion plans and request for tax exemptions. My point was that any tax breaks should be based on their meeting EPA air quality standards, and failure to do so should result in stiff penalties and /or loss of any tax exemptions until suitable styrene vapor capture equipment is installed.

We live in Sunset Groves, approximately one mile north of the plant and have been subjected to the toxic fumes during the evening on numerous occasions while taking our evening stroll through our development. We believe that the plant has released excessive amounts of fumes during the night shifts on several occasions. My wife and I have cut our walks short due to the fumes being strong enough to cause nausea. We are apprehensive that the pollution problem will get even worse if state of the art solvent capture systems are not installed in the new production facilities. We also recommend that the need for upgrading the toxic fume control practices of the existing plant be investigated by the EPA."

Vjt84@aol.com (11/18/99)

"As a Merritt Island homeowner and nearby resident, I am deeply opposed to any increase in styrene emissions whether it be from a new or existing operation. In the context of business competition, stringent controls on styrene releases may indeed not be cost effective as Sea Ray officials argue. However, as boats and yachts are pleasure/luxury items, in the context of ' normal daily living, I profer that Sea Ray products and all pleasure craft are not "cost effective" thereby exposing the Sea Ray position as null, void, and nonsensical. I do not own a boat and do not believe it legal for a Corporation to degrade the quality of life in the area I have chosen to live in and plan to remain for "cost effective" manufacture of luxury items. Pay the price to install and operate clean-up equipment, add the costs to the end product, and I'm all for expanding the plant. Otherwise, I strongly oppose the expansion and scoff at the company's hollow rationalization of "cost effective" manufacturing.

Jim Haithcoat, 3415 Spartina Ave., Merritt Island, FL 32953 (11/18/99)

"I live in Villa De Palmas, a subdivision of 300 homes that is a quarter mile south of the first Sea Ray Boat plant. We can smell the chemicals from Sea Ray Boats and we can see it on our cars when they are left in the driveway. We have tried unsuccessfully to have the Dept. of Environmental Protection do something about it for the last twenty years. There is a subdivision of duplexes just east of Sea Ray that has a large percentage of leukemia in their children. They tried to do something about Sea Ray and they were unsuccessful.

When a company goes in business, it is to make money. Sea Ray must be making money or they would not be building another plant. I realize it would cut into the amount of profit they make if they have to contain their volatile organic compounds, hazardous chemicals, and styrene. I would like the Dept. of Environmental Protection to protect me, and everyone else that lives, works, or goes to school near these plants. I DO NOT want them to get a permit unless they can capture 100 percent of anything hazardous that they have. I have an e-mail from a county commissioner who used to live in this development saying that he knew Sea Ray released vapors early in the morning or on weekends when the EPA wasn't around.

Sea Ray Boats is on the south side of the barge canal and I have been told that one of our local attorneys owns land on the north side and is trying to sell it to another boat building company. If we don't take a stand now, and make the regulations strict, when this next company comes in it will be twice as bad. Now is the time to make the rules that everyone will have to follow and protect all of us."

Patricia Saemmer, 2555 Castile Court, Merritt Island, FL 32953, patinfla@brevard.net (11/18/99)

"NO, NO, NO to Sea Ray, give a foot and they will take a leg....Cape Canaveral, Cocoa Beach, Merritt Island, Cocoa, Titusville are not dependent upon Sea Ray economically, but we are dependent upon clean air and water.....Thank you and I must rely on your ability to make the right decision, for the present and the years to come ....."

Mary Downing, Cocoa Beach, FL (11/18/99)

"Don't give up the fight !!! I can smell the styrene in the air from a mile away. If I lived across 528 next to that place especially when they start the Lamination going I'd have to wear a gas mask. By the way, did you know that your nice new houses are built on an old DUMP ??? They threw everything away back then. I wouldn't drink the water or let my children play in those yards...."

Birdman, chillywilly41@webtv.net (11/18/99)

"My family has resided in Villa de Palmas for 33 years. Over the many years that Sea Ray has been here we have been subjected to noxious odors. Unfortunately we have never been apprised of the chemical components. Now we hear what some of them are, but not all of them, and the possibility of doubling the danger by adding another plant.

This hardly makes sense to anyone, especially if you live near both facilities. We have somewhat of a natural barrier with vegetation and trees along one side of Villa de Palmas now. However we are fighting the building of 264 townhouses by Pulte Developers. This will necessitate taking down our natural barrier and place 264 more families directly in the path of chemical emissions. These structures will not allow us nature's coverage to help diminish the harm to all of us.

Please stop the pollution. People are the most important consideration - not dollars.

If Sea Ray wants to build another plant, please insist they stop the pollution from their present plant, and guarantee there will be no pollution from the new facility. If it is not cost effective to control pollution, don't build a plant that generates it."

Mr. & Mrs. C. W. Wash, 109 Via Delarcina, Merritt Island, FL 32953 (11/18/99)

"Please register my opposition to the new Sea Ray facility, unless the emission control systems are installed. As a resident of Merritt Island, I have many times driven by the existing Sea Ray plant traveling on SR528, and very strongly smelled the chemical fumes inside my car with the A/C on. Also, my residence of the past 16 years is located 1 mile south of the new facility. During the winter months, the prevailing winds are generally from north to south, so I am concerned for the air quality of my neighborhood.

I can't really believe that there is any debate about this. When a company builds a new facility in an existing populated area, there is no question in my mind that they would be required to take the necessary steps and use the most advanced technology to minimize the negative impact. It's not like they are building anything that is going to better mankind; they are building boats for God's sake! ...However, being alive and breathing, I realize that rational thought has very little affect on outcomes,

especially ones concerning the potential for 400 new employees and big property taxes. Anyway, please require the emission controls."

Jonathan S. Wyse, 2360 Queen Ann St., Merritt Island, FL 32952 (11/19/99)

"I am a resident of Merritt Island, FL (approximately 1/4 mile south of Sea Ray's plant). For the last thirteen years I have endured the fiberglass odors emanating from the Sea Ray facility. I assumed it was a natural byproduct of their manufacturing process, but other than the acrid smell, I had no idea it contained toxins which are detrimental to our health and the environment!! There have been cases of abnormally high leukemia rates in a housing area immediately West of the plant (see DER files from the late 1980s) people with difficulty breathing, irritated eyes and even paint peeling off of new cars. There is an elementary school located less than a mile from the plant, and teachers and kids state that they frequently smell the odors. It is beyond belief that anyone would allow the area residents to be "Human Guinea Pigs" for a major polluter. This is placing profit before human safety!! Modern scrubbers capable of eliminating virtually all the toxins, would cost only a fraction of the cost of one new 50' boat. We don't want to become another "Love Canal"."

Lew A. Bowman, 241 Via Havarre, Merritt Island, FL 32953 (11/19/99)

"Regarding the current controversy over Sea Ray's reluctance to provide environmental protection for VOC/Styrene emissions, Sea Ray would be well advised to conform to current FDEP and EPA Regulations.

In addition, if the general public (potential customers) perceive Sea Ray as uncaring regarding the health of the public and their employees, this in the long run, would not be a very "cost effective" position to stand on."

Leonard Martin, 5305 Lovett Dr., Merritt Island, FL 32953, email: mlmartin@scci.net (11/19/99)

"I am very alarmed after reading the Nov 17th and 18th articles in Florida Today concerning the new Sea Ray plant, and their reluctance to install state of the art environmental protection equipment. The new plant is located directly across SR 528 from the 3 year old subdivision we live in (Island Crossings). There are approximately 150 new homes in this area. The Florida Today articles left me with the sinking feeling that the DEP is looking out for industry instead of the environment and the public. Is there anything we can do to prevent the permit from being issued?"

Bill Quarles, quarles@digital.net (11/20/99)

"Living within 1 1/2 miles of the proposed Sea Ray Plant I am very concerned that the local air quality will be severely degraded if any additional air pollutants are allowed to be released to the local atmosphere. As most people living in the vicinity of Sea Ray's plants can attest, the plants are not and have not been in compliance for air emissions to the environment. One need only step outside in the Sunset Groves development to be exposed to the toxic vapors being released during the Sea Ray's existing plant operations.

Being an environmental engineer I am sensitive to the economic concerns of Sea Ray regarding plant construction and environmental compliance. To their credit Sea Ray is a huge employer and their factories are pleasant to look at from the public view. However, It should be noted that there are also two major electrical power plants and a third planned within a ten mile radius of the proposed new Sea Ray plant. The electrical power plants spew their air pollutants continuously into the local air...We all need electrical power. Not much choice there , but what a cost. We all do not need a sixty five foot Sea Ray yacht so there is a choice here.

If environmental compliance adds to the cost of a new boat plant then so be it, let the cost be borne by the boat manufacturer of the end product user, not the air quality of the neighboring community. In this day and age it is more important than ever for our state regulators to insure that industry proceeds into the new millennium utilizing the most effective technology available, at whatever cost, for the good of us all. I personally, and at the request of my neighbors in the Sunset Groves Community want to go on record that we feel Sea Ray boats should be held to the strictest compliance standards for all air emissions from the proposed new plant."

E. L. Coyle, 3350 Biscayne Dr., Merritt Island, FL 32953 (11/22/99)

"The residents of Riverwalk and Island Crossing housing developments on Merritt Island are opposed to the Sea Ray expansion. We do not want our heath and our children's health to be endangered by the neurotoxin Styrene that this plant will release into the air. Our home owners' associations have met and all present agree that this harmful and damaging carcinogen should NOT be released into our area. Not only are our homes at risk of becoming contaminated with these deadly toxins, but the public elementary school our children attend will also be at risk. There is also the question of what this air pollution can do to the wildlife in the nature preserve that is nearby. Many endangered animals live in the area. I'm sure the impact from this pollution can do nothing to help their endangered environment.

Sea Ray's intent to build the plant in this area is totally unacceptable. Hazardous chemicals have no business being in a residential family neighborhood. Sea Ray is considered a major polluter under federal air quality guidelines. We don't WANT a major polluter in our neighborhood. We chose to live in this area for its positive qualities and living conditions. Please help us to keep our quality of life SAFE and CLEAN. We urge you to deny a permit for Sea Ray."

Alexander and Re Monteith, 1234 Potomac Drive, Merritt Island, FL 32952 (11/26/99)

"Please, please, do not issue a permit for Sea Ray to pollute the air more than it already is. There are absolutely too many health risks now, not to mention the fact that many local residents already have respiratory problems from existing pollution problems. If they cannot clean up their emissions, then please do not let them continue to do business. I don't care how many people they employ. If they are not in business, another will take their place."

Linda and Ruby Frye, 1700 S. Merrimac Drive, Merritt Island, FL 32952 (11/26/99)

"I am a resident of the development located 200 meters south of Sea Ray's new plant on Merritt Island. I am extremely concerned about the threat this new facility will pose to my health and the health of my neighbors and their children. The unrestrained release of Styrene into the atmosphere should be stopped before it begins. The refusal of Sea Ray to install scrubbers or other methods of dealing with the toxic release of Styrene into the atmosphere less than 1/8th of a mile from a major residential area is reprehensible. Please take my concerns into account and insure Sea Ray is required to provide adequate impact studies and install recommended environmental fixes prior to commencing operations. "

Paul Whidby, 1201 Potomac Drive, Merritt Island, FL 32952-7222 (11/26/99)

"I am writing to urge the Department of Environmental Protection to deny Sea Ray Boats issuance of a permit allowing discharge of airborne pollutants from the proposed new plant in Merritt Island, FL. In addition to myriad health concerns from the byproducts of fiberglass boat production, my family is concerned about the strong odor that accompanies such an operation. The smell of fiberglass has become an almost permanent fixture in the vicinity of Sea Ray's existing plant near the intersection of State Roads 3 and 528. Indeed, we find the odor quite potent inside our automobile when passing the plant on S.R. 528. If the odor can penetrate a closed automobile (with the ventilation system set to "recirculate") in the few seconds we are near the existing plant, we can only dreadfully imagine the potency of the odor inside our home, less than ¼ mile south of the proposed plant.

More than one article in *Florida Today* newspaper indicated that the DEP wants Sea Ray to start out capturing 53% of the VOC they emit, and study the feasibility and cost-effectiveness of the collection system. The cost of such a system was quoted as $450k. That is less than the cost of four homes in the housing development closest and most-effected by the pollution. We don't care how much it costs Sea Ray to contain their pollution. If it is not feasible to capture significantly all of their waste, Sea Ray should locate their plant farther from established communities. ...We do not want the odor of fiberglass boat production a part of our everyday lives. We do not want our infant son breathing toxic substances."

Daniel J. Dvorak, 1577 Stafford Avenue, Merritt Island, FL 32952 (11/26/99)

"Please consider placing strict EPA constraints on Sea Ray Boats of Merritt Island's new expansion. If the new plant doesn't have stringent pollution controls (scrubbers in their smoke stacks), it will not only affect the health of the people in River Walk and Island Crossing Housing Development which is a mile south of the new facility, but there is a wild life sanctuary (Ulamay) which will be affected."

Louis & Rose , RiverWalk and Island Crossings, 1190 Potomac Dr., Merritt Island, Fl 32952 (11/27/99)

"I like express my concern about plant. Before plant start operation I like to place stringent pollution controls or permission denied. My family is living just opposite side Bee Line in where plant is situated."

Erkki Nisula, 1200 Potomac Dr., Merritt Island, FL 32952 (11/27/99)

"...the air permit should be denied because:

1. Health: Styrene, a VOC, known neurotoxin, and a suspected carcinogen will be emitted at 125 tons per year. The proposed plant will be built in the middle of existing residential communities. Homes are literally across the street. Within one mile are an estimated 1000 homes, an elementary school, a community athletic park, and a nature preserve.

2. Quality of Life: The EPA describes styrene as having a "penetrating odor." The noxious odor from the existing plant can be detected up to 3 miles away. The most optimistic studies conducted for the new facility show many more residents of Merritt Island will face the same noxious odor.

3. Tourism: Tourism is a major contributor to the surrounding communities. In addition to the penetrating odor, the new facility will be characterized by eleven 55-foot emission stacks on the main route from Orlando to Cocoa Beach and the cruise ships of Port Canaveral.

4. Malicious Compliance: Based on correspondence between Sea Ray and the DEP, Sea Ray appears to be reluctant to implement the BACT. Failure to implement will only worsen the health situation.

Please stop Sea Ray from expanding its operation until it proves that the safety and quality of life for Florida residents is just as important as profit for Sea Ray. Sea Ray needs to stop polluting the environment at its existing plant before it can become a welcomed contributor to the community of which it is already a member. This represents the feeling of 300 homes Called Villa De Palmas. I am president of this homeowners association and keep receiving calls Asking Doesn't anyone care?"

Herman Skambraks, President, VDP Homeowners Association (11/29/99)

"I live in the Island Crossings subdivision and my home is probably within a 1/4 to 1/2 mile radius of the Sea Ray boat fabrication facility expansion, and I am greatly distressed by its proposed function.

When building began at the site, I had no idea it was going to be a manufacturing facility. Even if I had, I certainly would not have believed that a site that pumps out tons of hazardous and noxious chemicals would be allowed so close to residential areas. I have two sons, 10 months and 3 years, whose safety is a great concern of mine, as is the health of my wife and myself. When my wife found out about what was going on (from the president of our homeowners association), she was in tears. Besides the direct health issues with the presence of styrene, my wife suffers from migraine headaches that are aggravated by strong light and smells. Styrene has a very strong and noxious smell. I have personally experienced it on multiple occasions while driving to and from work past the existing Sea Ray facility. The smell alone is enough to cause someone physical discomfort. If this site is permitted to continue, we will probably have to sell our home and move to a safe, non-toxic location. This will cost me at least $10,000 in realtor's fees and moving expenses, which I can't afford right now. This figure does not even consider the potential (I'd say almost guaranteed) loss in value caused by the facilities hazardous operations.

HOW CAN THE STATE OF FLORIDA WEIGH THE EXPENSE TO SEA RAY AGAINST THE HEALTH OF MY FAMILY. I don't see how the two can even be compared. If Sea Ray is doing well enough that they are expanding their operations, then I am very happy for them. If Sea Ray makes a mess, it should have to clean it up, regardless of the expense. If they can't afford it then they shouldn't be allowed to do it. This is just common sense."

Charles Curley, Kennedy Space Center, Florida (11/29/99)

"In this day and age with all the pollutants in the air, why would DEP approve putting more out there? My family and myself would like to express our displeasure and disappointment in DEP, as a regulating agency for allowing this to happen. Also, when has a company ever come back and said they would like to spend more money to avoid polluting the air? Very rarely, if ever I am sure."

Marianne Huston, 340 Madison Avenue, Cape Canaveral, FL 32920 (11/29/99)

"I recently moved to the Riverwalk community, only to learn of the possible pollution problem. I definitely feel that not enough environmental studies and/or research have been done to clear Sea Ray for their factory expansion. I understand the potential money to be made is a driving factor in pushing this expansion through. Allowing this plant to be built without the strictest of pollution protection controls WILL affect everyone's health. There are many children that live in this neighborhood, how can we do this to them, let alone the entire area. The Space Coast is responsible for a great deal of revenue in FL in terms of tourism. Tourists will not want to be near a health hazard such as what is being proposed by Sea Ray. This needs to be re-thought and more research needs to be done in order to make this a "win-win" for all parties involved."

Kimberly Mears, 1205 Potomac Drive, Merritt Island, FL 32952 (11/29/99)

"We are strongly against the building of a new plant as proposed 1.2 miles east of the current Sea Ray Plant in Merritt Island. We currently live just South of the Merritt Island Plant, and often smell the Resins emitted into the air by Sea Ray Boats. We also often can hear the late night dumps to the air of this resin pollutant. We have a son who is approaching 2 years and a daughter due in April next year. It particularly upsets me to hear that Sea Ray is refusing to install the cleaning equipment to minimize the pollution, given that styrene is a potential carcinogen to human beings and also can be associated with genetic mutations and neurological damage. If Sea Ray wants to put those kind of chemicals into the air then they should seek a different neighborhood, preferably with no residents. We have a very nice environment here in Merritt Island; we would all hate to see it deteriorate. We should never let any company put their profit margins above the health of the local people. As a citizen of Merritt Island, on behalf of my family, I request that this permit be denied. And as a minimum, Sea Ray should be required to install the pollution controls. They should also be required to install the pollution controls on the existing plant in any case."

Dean C. Orr, Villa De Palmas Development, Merritt Island, FL (11/29/99)

"I have lived in Merritt Island at three different locations since 1990. ...If there is a north wind blowing it was, and still is, possible to smell the heavy odor of fiberglass components, i.e. styrene, resins, etc., from any of the locations where I resided. I feel that the new Sea Ray plant would intensify the problem of pollutants in the air in the vicinity in which I live.

The plant that Sea Ray is contemplating building will manufacture boats costing over $1 Million each. Almost all of these boats will be delivered outside of Brevard County. The state estimate of $450,000 to recapture 90% of the pollutants is a veritable bargain to save the local environment. Paid for with a couple of boats.

Other than us humans breathing in the pollutants there are two other federally protected species that need to be considered. The manatees and dolphins that inhabit the waters all around the Sea Ray plant in the barge canal, Sykes Creek, and even in the dock space of the plant. What harm is being done to them? Do we need to contact "Save the Manatee Club?"

Brevard County even wanted to grant Sea Ray a tax incentive to build another plant. Bring in all those high paying jobs. Ludicrous. At the first sign of an economy downturn Sea Ray lays off hundreds of workers. Check out 1990 and 1991 employment figures. Sea Ray turned the tax break down...wonder why?

As an avid boater, fisherman, environmentalist, homeowner and taxpayer, I feel that Sea Ray should pay the dues to protect me and the environment."

John Roth, 1995 Sykes Creek Drive, Merritt Island, FL 32953, jroth@yourlink.net (11/29/99)

"Sea Ray is considered a major polluter under federal air quality guidelines. As we MUST consider our health and our children's future, we ask that you deny the permit for the expansion until Sea Ray agrees to ensure that more stringent environmental standards can be met at the startup of the new facility."

Elena Ridgway, 1222 Potomac Drive, Merritt Island, FL 32952 (11/30/99)

"My goal is to ensure that the any new facility does not negatively impact the health, welfare, and quality of life for the existing residents across the street from the new facility. My wife and two children live directly across the street from the new facility. From what I've learned, I have no confidence that the environment we would be living in will be safe for my family. I've seen some contour plots showing "average" styrene levels computed for the new plant. I am now more

concerned than ever: even at average levels (which, as an engineer, I question the validity of) we would experience detectable levels. On a day when the winds are out of the North (half the year?), the levels will clearly be considerably higher. High enough to pose a health risk (see below). If the plant comes into existence, we will certainly be smelling Sea Ray's work. It seems to me that calling about an objectionable odor has no impact whatsoever. This is indicated by the fact that the existing Sea Ray plant still, after all these years of people complaining, emits the terrible smell which permeates the neighborhood. I smell it every day on my way to work.

From section 11(b) (see below): "No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor".

Please do not let this new facility pollute our neighborhood. Protect us: DENY this permit. If you CANNOT deny this permit, at least force the new facility to reduce emissions to undetectable levels (less than 8 ppb). I do not understand how the DEP could do differently. In my mind this means monitoring levels in our neighborhood with the power to shut Sea Ray down if the levels exceed 8 ppb. If the DEP does not deny the permit and does not force Sea Ray to keep emissions undetectable in our neighborhood, I think the DEP has failed in protection of the "comfortable use and enjoyment of life or property" [Sec. 11(b)]."

Tim Widrick, Merritt Island, FL widrick@mpinet.net (11/30/99)

"This permit should be DENIED based on the DEP's own standards. Per Section 11(b) entitled "General Pollutant Emission Limiting Standards": "No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor". Per the EPA fact sheets, styrene has a "noxious penetrating odor" which is discernible at 8 ppb. Per the Sea Ray dispersion modeling (performed by Golder Associates), the yearly average levels of styrene at the property boundaries will be 9 ppb. However, because of wind direction, we can expect a peak daily average at least 10 times that high. Clearly, this will create the noxious odor for rejection based on Sec. 11(b). This permit should be DENIED because the plant, as opened, will present a daily health risk to the local community. The EPA threshold for long term exposure in ambient air is 230 ppb. Without the emissions control program in place, we can expect daily levels (based on wind direction) over 500 ppb. This is clearly a health risk.

The permit should be DENIED because the impact on the local community was not considered by Sea Ray. If DEP refuses to deny permit, then all controls must be maintained independent of cost. The EPA threshold for long term exposure in ambient air is 230 ppb. Without the emissions control program in place, we can expect daily levels (based on wind direction) over 500 ppb. This is clearly a health risk. This noxious odor will remain in spite of this.

If DEP refuses to deny permit, a monitoring system must be in place. Much anecdotal evidence exists to suggest that the Sea Ray analysis will not succeed in practice. A monitoring system with stop-work measures must be in place to ensure public health and welfare. Please consider these serious comments in your decision. I consider the issue of the Sea Ray Air Construction Permit a failure in protection of the "comfortable use and enjoyment of life or property" [Sec. 11(b)]."

Tim & Dee Widrick, Merritt Island (11/30/99)

"... I was very disturbed when I discovered that the new Sea Ray boat plant on Merritt Island is going to add 125 tons of styrene to the environment and Merritt Island communities. I am expecting my first child and I have experienced the noxious odors from the present facility which is of enough concern to me. Allowing Sea Ray to release more styrene with methods that are most cost effective for the company, although not as safe, would seem to send the message that the DEP is not truly interested in protecting the environment and citizens. Since the building of the new facility is already substantially underway, I feel that it is useless to argue for not allowing the expansion. My only remaining hope is that the permit would require Sea Ray to use the safest methods and controls possible, regardless of cost to the company. "

Carolyn A. Mizell, Merritt Island, FL (11/30/99)

"...Our goal is to ensure that any proposed new facility does not negatively impact the health, welfare, and quality of life for the existing residents who reside across the street at Island Crossings and River Walk (over 300 homes). This permit should be DENIED based on the DEP's own standards. Per Section 11(b) entitled "General Pollutant Emission Limiting Standards": "No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor." Per the EPA fact sheets, styrene has a "noxious penetrating odor" which is discernible at 8 ppb. Per the Sea Ray

dispersion modeling (performed by Golder Associates), which is based on the DEP recommended MACT and BACT, the yearly average levels of styrene at the property boundaries will be 9 ppb. Depending on wind direction, we can expect a peak daily average at least 10 times that high. Clearly, this will create the noxious odor for rejection based on Sec. 11(b).

This permit should be DENIED because the plant, as opened without emission controls, will present a daily health risk to the local community. The EPA threshold for long term exposure in ambient air is 230 ppb. Without the emissions control program in place, our community can expect daily levels (based on wind direction) over 500 ppb. This is clearly a health risk. This permit should be DENIED because the impact on the local community was not considered by Sea Ray.

If in light of all of these facts the DEP still refuses to deny permit, and accepts the noxious odor:

1. Full emissions control (at least 85% capture) must be implemented immediately and maintained independent of cost. The EPA threshold for long term exposure in ambient air is 230 ppb. Without the emissions control program in place, we can expect daily levels (based on wind direction) over 500 ppb. This is clearly a health risk.

2. A monitoring system must be implemented immediately and maintained independent of cost. Much anecdotal evidence exists to suggest that the Sea Ray analysis will not succeed in practice. A monitoring system with stop-work measures must be in place to ensure public health and welfare.

Please consider these serious comments in your decision. We consider the issue of the Sea Ray Air Construction Permit a failure in protection of the "comfortable use and enjoyment of life or property" [Sec. 11(b)]."

Isam & Rachel Yunis, Merritt Island, FL, yunis@aol.com (11/30/99)

"Please do not approve the plans for Sea Ray's plant expansion. The current plant puts out levels of toxins in the air that are intolerable now. I have been a resident of Merritt Island for 15 years and have lived and presently work within a mile of the plant. When I lived in Villa de Palmes the fumes would get so bad around 4:00 am that I would have to close my windows. It caused me to have difficulty breathing. I experienced congestion following some of these occasions. It got so bad, one night I drove to the plant to determine if they were venting more in early morning hours or whether it was the inversion layer. There was an obvious plume not normally seen during the day. I believe that the plant was avoiding detection of this activity.

I believe if this development is allowed the most stringent controls on discharge should be applied immediately, not allowed over an extended period of time ruining our health and air quality. The estimated cost is low, comparable to ONE of the expensive vessels they will sell. They can not claim financial hardship or they would not be expanding and buying up other manufacturing plants in the area (Whaler). The cost of a couple compromised residents health care would also be a similar expenditure. The citizens of Merritt Island do not want this expansion and resulting pollution."

Sharon Tyson, 169 Platt Ave., Merritt Island, FL 32952 (11/30/99)

"I know that the official time for Sea Ray comments has passed, but I am compelled to write you on the people aspect, not the numbers of ppb nor the fact sheets of styrene...I'd like to take five minutes of your time and tell you how I got involved and what I'm hearing from the community. Some of it is hearsay and some of it is fact and I will clearly mark each type.

Fact: On Sunday October 10, 1999 I read in the Florida Today paper that Sea Ray boats was applying for a tax break. It also contained the information that Sea Ray is biggest styrene polluter in Brevard County. Having worked in the research field for many years, I became concerned and started researching styrene. My husband and I talked with several neighbors and it was clear that we were all concerned for the safety of our families and the value of our homes.

Fact: On Nov. 17, 1999 my picture was published in the Florida Today and I was quoted saying that I was concerned with the situation and that I was researching the facts. It also stated that I have a degree (MS) in genetics and wrote for the American Medical Association. (I also have a MA in BioMedical Ethics).

Fact: Our home was flooded with phone calls from people wanting to know more about the subject. Many calls came from the Villa de Palma housing division which is located across the street from existing Sea Ray plant. They wanted to support us since they smell the existing plant on a daily basis and are tired of Sea Ray telling the press that they do not effect the surrounding community.

Hearsay: I received two calls from two separate people telling me that there was an incident of leukemia in 1988. According to this "rumor" several children were diagnosed with cancer and the EPA came out to investigate. The only "smoking gun"

was Sea Ray. The incident was silenced and nothing came of it. This "rumor" was started by a former employee of Commissioner Randi O'Brien.

Fact: I searched the EPA's web sites and the CDC's web site for further information. I found none. I made some phone calls and found nothing. Finally, I talked with a gentleman at the health department and he confirmed that three children were diagnosed with ES tumor in 1988 in the 32952 zip code area. I am not an epidemiologist so I don't claim to know if that means anything. I do know that the health department has enlisted the help of two Tallahassee epidemiologists to examine the numbers. I intend to contact them and find out what all of this means.

Hearsay/Fact: Some community members forwarded emails which came from Commissioner O'Brien's office in which he states that "It's a known fact that Sea Ray occasionally cheats and releases pollution in the off hours when no one is watching." We are trying to track down the original email to see if there is any validity to this.

What does this all mean? I don't know. All I do know is that my husband and I decided to build our home here because we felt it was the ideal location. We moved into our new home in February. I have two small boys (2ys and 1yr). I am very concerned about my family. I don't want to be the advocate. I would much rather take my sons to the park and run and play. I don't however want to smell styrene. I don't want to wake up each morning and wonder if I'm literally killing my children by living here.

What I would like from you is for you to seriously take a moment to consider the people who live, and play, and sleep...here each day. There are rules and regulations, but there are also some things which should be held higher than the regulations and that is the human aspect of life. If you must grant the air permit to Sea Ray, at least do so aware of the fact that many people will be affected. Many children could potentially be harmed. Hundreds of home dwellers will wake up each morning and there will be something "just not quite right" in their lives.

Sea Ray does not deserve the right to pollute our air. Sea Ray is interested in profit. The cost the people will have to pay for their profit is astronomical."

Rachael Yunis yunis1965@aol.com (12/1/99)

"...The plant is being built on the eastern end of the island and with the prevailing winds coming from the southeast, many residents will be in the direct path of the poisonous clouds of Styrene, including my home. If you cannot guarantee that the plant could collect 100 percent of these hazardous chemicals, then please do not approve this plant.

As for Sea Ray's claim that the controls are too expensive, have them talk to others that must comply with DEP regulations. For example, take the area local hospital, Wuesthoff Hospital in Rockledge would love to use it's incinerators to dispose of it's waste, but because this might be an environmental hazard, the hospital (at a great cost) must no longer uses it's incinerators. Futhermore, expense is no excuse for being allowed to pollute. I beg you please, do not endanger the health of me and my family. Do not allow Sea Ray to emit any Styrene into the air. Please send me any literature on this subject that will convince me that this plant should be built."

Sheila Soileau, 3320 Horse Trail Court, Merritt Island, FL 32953 (12/1/99)

"...As a homeowner on North Merritt Island and as a member of the North Merritt Island Special Advisory Board, I see the expansion of Sea Ray Boats, without the environmental protection in place at the start of operation, a very bad move for the homeowners of Merritt Island, the tourists, who come through here, and the workers at the plant itself. I understand that business must expand and that there are items such as costs that must be weighed into the equations, but I also see that the environment must be protected for the residents. I have a six-year old child who attends school on Merritt Island. She will be breathing this carcinogenic material whenever she is outside. I have a family who will be breathing it every time we travel from North Merritt Island down to the Mall or grocery store or other places. I ask you to do some real heart searching as to how far this business should be let go before installing the necessary protection devices to capture this material. It should be there at start up."

Ronald Penn, 1750 Dee Drive, Merritt Island, Florida 32953-6523 (12/07/99)

"Sea Ray is considered a major polluter under federal air quality guidelines. As we must consider our children's health, we ask that you deny the permit for the expansion until Sea Ray agrees to ensure that more stringent environmental standards can be met at the start up of the new facility."

Elena Ridgway, 1222 Potomac Drive, Merritt Island, Florida 32952 (11/30/99)

Public Comments Received by Letter

Sierra Club believes the issuing of an air construction permit for a Title V emitter of regulated air pollutants is an event worthy of public scrutiny and dialogue. The public should have the opportunity to understand the potential health and environmental impacts of the proposed project.

At this meeting, Sierra Club requests that DEP make a presentation on the styrene emission control technologies that are available to the fiberglass reinforced plastic/composite boat building industry and discuss the control technologies that will be mandated for this project. This discussion should include the rationale for the selection of these control technologies, especially where impacts to health and environment were traded to mitigate cost impacts to the applicant. Sierra Club also requests that DEP discuss proposed post-construction monitoring and enforcement activities to assure proper installation, operation, and maintenance of styrene emission control devices and techniques.

Douglas H. Sphar, Air Quality Issues Chair, Sierra Club, P.O. Box 061887, Palm Bay, Florida 32906

SEA RAY List :

Clarence Rowe

Doug Sphar

Rachel Yunis - Yuni51965@aol.com

SEA RAY BOATS LEGAL DEPARTMENT
TELECOPY MEMORANDUM

Attorney Work Product - Privileged and Confidential
This communication should not be copied to any other party.

DATE: October 6, 1999 FILE NO.: _____

TO: Mr. Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
850 922 6979

FROM: Doug Kitts, Group Senior Vice President/General Counsel

RE: Proposed Cape Canaveral Plant
DEP File Nos. 0090182-001-AC, 0090093-003-AC
Brevard County, Florida

TELEPHONE: Sea Ray Operator (423) 522-4181
Sea Ray FAX (423) 971-6434

PAGES (Including Cover Sheet): 2

October 5, 1999

VIA FACSIMILE
850 922 6979

Mr. Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Proposed Cape Canaveral Plant
DEP File Nos. 0090182-001-AC, 0090093-003-AC
Brevard County, Florida

Dear Mr. Fancy:

This letter is a follow-up to your previous conversations with Gary Stoecker on October 5, and Kevin Thompson, Pete Cantelou and Ken Kosky on last Friday regarding the proposed Title V Permit for the Cape Canaveral facility. Sea Ray appreciates your time and effort in discussing the proposed Permit and attempting to resolve the outstanding issues. It is currently our understanding that you are planning to issue the intent to permit with the attached conditions on Wednesday, October 6, 1999. The proposed conditions for the permit are also to include a brief description of a proposed pilot program in which Sea Ray is to capture and measure various emissions for purposes of a two to three year study.

After numerous discussions with DEP representatives including yourself, Sea Ray understands and acknowledges that it is the position of DEP that DEP is going to require Sea Ray to conduct the proposed pilot program. Sea Ray has been willing to listen to such a proposal for a pilot program but the complete parameters and measurements for feasibility have not been provided for Sea Ray to make any final determination. Therefore, Sea Ray is not waiving any of its rights to object to any portion of the proposed pilot program as well as to the pilot program in general depending upon the proposed terms and conditions of the program. Therefore, there has not been an agreement as to the implementation of a pilot program other than Sea Ray's willingness to review the proposed terms and conditions of the program which are yet to be resolved.

Once we have received the intent to permit with the proposed conditions, we will look forward to further discussing any questions and issues that will be raised in the permit and its conditions.

Thank you once again for your efforts in this matter.

Sincerely,

SEA RAY BOATS

H. Douglas Kitts

H. Douglas Kitts
Group Senior Vice President/General Counsel

cc: Gary Stoecker
Kevin Thompson
Pete Cantelou, 407/259-4165
Angela Morrison, 850/224-8551
Ken Kosky, 352/336-6603

Florida Department of
Memorandum Environmental Protection

TO: Clair Fancy

FROM: Al Linero 10/5

DATE: October 5, 1999

SUBJECT: Sea Ray Boats Merritt Island Facility
Cape Canaveral Plant
DEP File No. 0090093-003-AC (PSD-FL-274)

Attached is the public notice package for construction of the Sea Ray Boats Cape Canaveral Plant. It includes a PSD Review, draft BACT and draft MACT determination.

October 6 will correspond to the following events:

- Day 7 per receipt of $2,500 supplementary fee
- Day 34 per receipt of the PSD and BACT document from Golder
- Day 80 (excluding Sea Ray's extensions) per receipt of the MACT proposal
- Day 85 by Sea Ray's count (including extensions) per non-PSD/MACT application

Sea Ray submitted the supplementary fee for a PSD determination on September 30. If Sea Ray does not challenge PSD applicability, then I consider October 6 to be Day 7. This provides ample time to accommodate any possible level of public participation and agency comment. They may request an extension of time to petition the PSD determination or even just a typical extension to sort out details. In that case, there will probably be enough time to accommodate the 30-day comment period under any presumed clock scenario.

Per our analysis, installation of add-on control equipment is feasible now. The pilot plant together with the case-by-case MACT requirements will provide for sufficient reductions during Phase I. For phased construction projects, the determination of BACT shall be reviewed and modified in accordance with 40 CFR 51.166(j)(4) [Rule 62-212.400(h)(6)(b)]. Therefore we can incorporate the developments from the pilot study and any other information available to us into an updated BACT determination prior to initiation of Phase II.

Use of low styrene materials will reduce VOC emissions from roughly 350 to less than 250 TPY (basis Phase II). Sea Ray's MACT proposal (including non-atomizing application) will further reduce emissions to 211 TPY. Finally, implementation of our case-by-case MACT/BACT determination will further reduce emissions to less than 100 TPY. This compares with the 426 TPY emissions potential of the existing facility.

I recommend your approval of the attached Intent to Issue.

AAL/al

Attachments

HOPPING GREEN SAMS & SMITH
PROFESSIONAL ASSOCIATION
ATTORNEYS AND COUNSELORS
123 SOUTH CALHOUN STREET
POST OFFICE BOX 6526
TALLAHASSEE, FLORIDA 32314
(850) 222-7500
FAX (850) 224-8551
FAX (850) 425-3415

WRITER'S DIRECT DIAL NO.:
(850) 425-2358

JAMES S. ALVES
BRIAN H. BIBEAU
RICHARD S. BRIGHTMAN
KEVIN B. COVINGTON
PETER C. CUNNINGHAM
RALPH A. DEMEO
RANDOLPH M. GIDDINGS
WILLIAM H. GREEN
WADE L. HOPPING
GARY K. HUNTER, JR.
JONATHAN T. JOHNSON
ROBERT A. MANNING
FRANK E. MATTHEWS
RICHARD D. MELSON
ANGELA R. MORRISON
GABRIEL E. NIETO
ERIC T. OLSEN

MARY V. PERKO
MICHAEL P. PETROVICH
DAVID L. POWELL
WILLIAM D. PRESTON
CAROLYN S. RAEPPLE
DOUGLAS S. ROBERTS
GARY P. SAMS
TIMOTHY G. SCHOENWALDER
ROBERT P. SMITH
DAN R. STENGLE
CHERYL G. STUART
W. STEVE SYKES
T. KENT WETHERELL, II

OF COUNSEL
ELIZABETH C. BOWMAN

September 30, 1999

Via Fax

Kirby Green
Deputy Secretary
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida

RE: Sea Ray Boats, Inc.
Proposed Cape Canaveral Plant
DEP File Nos. 0090182-001-AC, 0090093-003-AC
Brevard County, Florida

Dear Kirby:

Thank you for your continued interest in the air construction permitting activities associated with Sea Ray Boats' proposed Cape Canaveral Plant referenced above. We have made significant progress over the last couple of months, but there are some very important concerns that have yet to be resolved. We would appreciate any assistance you can provide in this regard.

As we discussed, the Department's Bureau of Air Regulation currently plans to formally issue its Notice of Intent and proposed permit on Monday, October 4th. Because Sea Ray representatives have not had an opportunity to meet with Clair Fancy and his staff this week to resolve some outstanding issues, Sea Ray submitted an additional waiver yesterday to extend the time for formal action by the Department until October 11th and provide additional opportunities for discussions. A conference call with Clair Fancy and his staff has been scheduled for tomorrow afternoon at 3:00 p.m. (See waiver and letter attached.)

Lee File

The most significant issue that has yet to be resolved is whether a provision could be added to the permit to effectively replace the case-by-case Maximum Achievable Control Technology (MACT) determination (developed by the Department under the requirements of Section 112(g) of the federal Clean Air Act) with the final NESHAP (National Emissions Standards for Hazardous Air Pollutants) for the Boat Manufacturing Industry that is expected to be promulgated in approximately one year. The federal rules, adopted and incorporated by reference by the Department, require the Department to revise Sea Ray's permit at its next renewal to reflect a newly promulgated standard. The rules also give the Department the discretion to maintain any limit that is more stringent than the final NESHAP (see 40 CFR 63.56(b), (c) attached). This issue is important to Sea Ray because draft determination documents we have received from the Department indicate that the case-by-case MACT may be more stringent in several aspects than what we expect in the final NESHAP based on information from the U.S. Environmental Protection Agency (EPA). While it may be necessary on a case-by-case basis to include such requirements because of the uncertainty of the final NESHAP (although we are continuing to discuss this with the Department), it will be important to eventually replace the case-by-case determination with the final NESHAP. Otherwise, Sea Ray will be placed in a competitive disadvantage and location of the facility in Florida is a serious concern.

Sea Ray therefore respectfully requests that the Department include the following (or similar) language in its air construction permit:

> **Requirements and conditions established in this permit under the case-by-case MACT determination (developed pursuant to Section 112(g) of the federal Clean Air Act, 40 CFR 63.40-63.56, and Rule 62-204.800(10)(d)2., Florida Administrative Code) shall be replaced in their entirety with requirements established under the final National Emissions Standards for Hazardous Air Pollutants (NESHAP) for the Boat Manufacturing Industry under 40 CFR Part 63 once it has been promulgated by the U.S. Environmental Protection Agency. Within 90 days of effective date of the final NESHAP for the Boat Manufacturing Industry, this permit and the corresponding provisions of the Title V permit shall be revised to incorporate the newly promulgated standards and establish compliance deadlines.**

While some Department representatives have expressed concerns over such language, we know of no legal impediments and, as stated in Sea Ray's August 26, 1999 letter to the Department, there is precedent under the Florida Power Plant Siting Act for pre-authorizing compliance with less stringent requirements that might be promulgated after issuance of a permit (or certification).

Another concern raised in Sea Ray's August 26 letter was whether the federal Shipbuilding NESHAP would apply to the proposed Cape Canaveral Plant, where large boats will be manufactured. Because the Department's initial position was that the Shipbuilding NESHAP would apply, on September 2nd Sea Ray requested a formal NESHAP applicability determination by EPA. We have not heard from the Department as to whether the determination has yet been made, but we hope to receive a favorable response shortly. If you learn anything regarding the status of this determination, we would appreciate an update.

Please let me know if you have any questions or would like any additional information related to these issues. Again, we appreciate your assistance in this matter and look forward to hearing from you soon on a possible resolution of these issues.

Sincerely,

Angela R. Morrison
Attorney for Sea Ray Boats, Inc.

Attachments

cc: Howard Rhodes, DEP DARM
Pat Comer, DEP OGC
Clair Fancy, DEP BAR
Al Linero, DEP BAR
John Reynolds, DEP BAR
Cindy Phillips, DEP BAR

SWD
File

130342.1

in ensuring that MACT emissions limitations are achieved.

(5) When the Administrator or the permitting authority has issued guidance or collected information establishing a MACT floor finding for the source category or subcategory, the equivalent emission limitation for an emission unit must be at least as stringent as that MACT floor finding unless, based on additional information, the permitting authority determines that the additional information adequately supports an amendment to the MACT floor. In that case, the equivalent emission limitation must be at least as stringent as the amended MACT floor.

(6) The permitting authority will select a specific design, equipment, work practice, or operational standard, or combination thereof, when it is not feasible to prescribe or enforce an equivalent emission limitation due to the nature of the process or pollutant. It is not feasible to prescribe or enforce a limitation when the Administrator determines that a hazardous air pollutant (HAP) or HAPs cannot be emitted through a conveyance designed and constructed to capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

(7) Nothing in this subpart will prevent a State or local permitting authority from establishing an emission limitation more stringent than required by Federal regulations.

(c) *Reporting to National Data Base.* The owner or operator shall submit additional copies of its application for a permit, permit modification, administrative amendment, or Notice of MACT Approval, whichever is applicable, to the EPA by the section 112(j) deadline for existing emission units, or by the date of the application for a permit or Notice of MACT Approval for new emission units.

§ 63.56 Requirements for case-by-case determination of equivalent emission limitations after promulgation of a subsequent MACT standard.

(a) If the Administrator promulgates an emission standard that is applicable to one or more emission units within a major source before the date a permit application under this paragraph is approved, the permit shall contain the promulgated standard rather than the emission limitation determined under § 63.52, and the owner or operator shall comply with the promulgated standard by the compliance date in the promulgated standard.

(b) If the Administrator promulgates an emission standard under section 112 (d) or (h) of the Act that is applicable to a source after the date a permit is issued pursuant to § 63.52 or § 63.54, the permitting authority shall revise the permit upon its next renewal to reflect the promulgated standard. The permitting authority will establish a compliance date in the revised permit that assures that the owner or operator shall comply with the promulgated standard within a reasonable time, but not longer than 8 years after such standard is promulgated or 8 years after the date by which the owner or operator was first required to comply with the emission limitation established by permit, whichever is earlier.

(c) Notwithstanding the requirements of paragraph (a) or (b) of this section, if the Administrator promulgates an emission standard that is applicable to a source after the date a permit application is approved under § 63.52 or § 63.54, the permitting authority is not required to change the emission limitation in the permit to reflect the promulgated standard if the level of control required by the emission limitation in the permit is at least as stringent as that required by the promulgated standard.

September 29, 1999

RECEIVED

SEP 30 1999

BUREAU OF AIR REGULATION

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Proposed Cape Canaveral Plant
DEP File Nos. 0090182-001-AC, 0090093-003-AC
Brevard County, Florida

Dear Mr. Fancy:

Sea Ray Boats, Inc., appreciates the efforts of the Department in reviewing the Prevention of Significant Deterioration (PSD) analysis that was submitted on September 3. We also appreciate the time you and Mr. Linero spent touring our Sykes Creek facility last week and hope you found the information gathered during your visit to be useful. As we recently discussed, Sea Ray would very much appreciate an opportunity to further disucss with you and your staff the Department's response to the analysis and to resolve some outstanding issues regarding the pending permit application prior to any formal action being taken.

Since you and your staff have been unavailable for most of the week but expect to be back in the office on Friday (October 1), we would like to have a conference call with you along with Al Linero, Cindy Phillips and John Reynolds, on Friday afternoon if possible. While you have expressed to us your desire to take formal action on October 4, we again request an opportunity to further discuss the pending issues in an effort to reach an amicable resolution. The current waiver is being extended until October 11 (see separate letter attached), which we understand will allow the Department to continue reviewing the pending application for several more days.

Sea Ray appreciates the continued cooperation and assistance we have received from the Department. Please call me at your earliest convenience to let us know whether you and your staff would be available for a conference call on Friday afternoon. Thank you again.

Sincerely,

Kevin Thompson
Director of Environmental Management

Enclosure

Sea Ray Boats, Inc., World Headquarters, 2600 Sea Ray Blvd., Knoxville, TN 37914
423-522-4181 / Fax: 1-423-971-6423

cc: Howard Rhodes, DEP DARM
Al Linero, DEP BAR
Cindy Phillips, DEP BAR
John Reynolds, DEP BAR

September 29, 1999

VIA OVERNIGHT COURIER

RECEIVED
SEP 30 1999
BUREAU OF AIR REGULATION

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
DEP File Nos. 0090182-001-AC, 0090093-003-AC
Brevard County, Florida

Dear Mr. Fancy:

Please find enclosed a check in the amount of $2,500.00 as requested by the Department of Environmental Protection for continued processing of the application filed by Sea Ray Boats, Inc., on May 5, 1999, for the above-referenced project. Submittal of this fee is intended to ensure continued expedited review of the pending application and is not intended to delay or prolong in any way the Department's review. Further, submittal of this fee does not reflect Sea Ray's acquiescence of Prevention of Significant Deterioration (PSD) program applicability to this project, and Sea Ray specifically reserves the right to challenge PSD applicability when the Intent and Proposed Permit are issued.

We understand that the Department will continue to expedite its review of the pending application, and we remain hopeful that an Intent and Proposed Permit will be issued within the next two weeks as we have previously discussed.

On behalf of Sea Ray, I would like to again thank you and your staff for your cooperation in the review and processing of our pending application. If you have any questions or need any additional information from Sea Ray to complete the Department's review of the application, please let me know as soon as possible.

Sincerely,

SEA RAY BOATS

Kevin Thompson
Director, Environmental Management

Enclosure

cc: Howard Rhodes, DEP DARM
Al Linero, DEP BAR

SWD

Sea Ray Boats, Inc., World Headquarters, 2600 Sea Ray Blvd., Knoxville, TN 37914
423-522-4181 / Fax: 1-423-971-6423

DATE | VENDOR NAME | INC.

INVOICE #	INVOICE DATE	DESCRIPTION	DISCOUNT AMOUNT	NET AMOUNT
T			0.00	2,500.00

PLEASE DETACH AND RETAIN THIS STATEMENT AS YOUR RECORD OF PAYMENT. *Thank You*

0.00	2,500.00

ORIGINAL CHECK HAS AN ARTIFICIAL WATERMARK ON REVERSE SIDE - HOLD AT AN ANGLE TO VIEW.

Sea Ray

Sea Ray Boats
2600 Sea Ray Boulevard
Knoxville, TN 37914
(423) 522-4181 Fax (423) 971-6445

Nations Bank Customer Connection
Nations Bank, N.A.
Atlanta, Dekalb County, Georgia

64-1278
611

No: 154961
VOID AFTER 90 DAYS FROM ISSUE DATE.

CHECK DATE	CHECK NUMBER	CHECK AMOUNT
28-SEP-99	154961	******2,500.00

PAY Two Thousand Five Hundred and 00 Cents**********

TO THE ORDER OF

Sea Ray Boats

BY _____ AUTHORIZED SIGNATURE

BY _____ AUTHORIZED SIGNATURE

⑈154961⑈ ⑆061112788⑆ 329 995 9868⑈

September 29, 1999

VIA FACSIMILE
850 922 6979

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
(DEP File # 0090182-001-AC)
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Linero:

Please accept this letter as Sea Ray's request for additional time for the Department of Environmental Protection to review the air permit application for the above proposed facility dated May 4, 1999. Sea Ray requests an additional extension to review the permit application which will be through October 11, 1999.

Sea Ray remains committed to assist in the review of this application and if any additional information is required, please do not hesitate to contact either Kevin Thompson or our consultant, Pete Cantelou. We will immediately respond so that this process for approval can be completed within the above time period. Sea Ray does understand that DEP has committed to expedite this review and approval process in light of our current schedule for the project. Thank you for your assistance in this matter.

Sincerely,

SEA RAY BOATS

Dennis Wilson
Vice President/General Manager

HDK:la

cc: Angela Morrison, 850/224-8551
Pete Cantelou, 407/259-4165

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

September 24, 1999

9937586

Florida Department of Environmental Protection
New Source Review Section; Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: A.A. Linero, P.E., Administrator

RE: DEP File Nos. 0090182-001-AC, 0090093-003-AC
Sea Ray – Cape Canaveral Plant

Dear Al:

Please find attached a Professional Engineer's Statement pertaining to the Prevention of Significant Deterioration (PSD) Analysis submitted to the Department for the Sea Ray Boats, Inc. proposed Cape Canaveral Plant. The PSD Analysis specifically pertains to the requirements of the Department's PSD regulations in Rule 62-212.400 including the Best Available Control Technology (BACT) evaluation. The application form related to this project was previously submitted with a Professional Engineer's Statement from Cantelou, Herrera & Powell. This application form and subsequent information submitted to the Department pertains to the project's scope and proposed emissions from the facility.

Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.
Principal

KFK/jkk
Enclosures

cc: G. E. (Pete) Cantelou, Jr., P.E., Cantelou, Herrera & Powell, Inc.
Kevin Thompson, Sea Ray Boast, Inc.

\\GATORBAIT\DP\Projects\99\9937\9937586Y\F1\WP\#\02ltr.dot

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [✓], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

9/24/99
Date

(seal)

* Attach any exception to certification statement.
See attached cover letter. JEG

CHP

Cantelou, Herrera & Powell, Inc.
Architecture, Engineering, Surveying, Planning
AA 0002614 • EB 0007086 • LB 0006609

FED-EX TRANSMITTAL

Date: September 21,1999

Please Deliver To:

Name: Al Linero

Firm/Company: Florida Dept. of Environmental Protection

From:

Sender's Name: Pete Cantelou

Regarding: Sea Ray Boats, Inc./Sykes Creek Lamination Area

Number of Pages Including Cover: 13

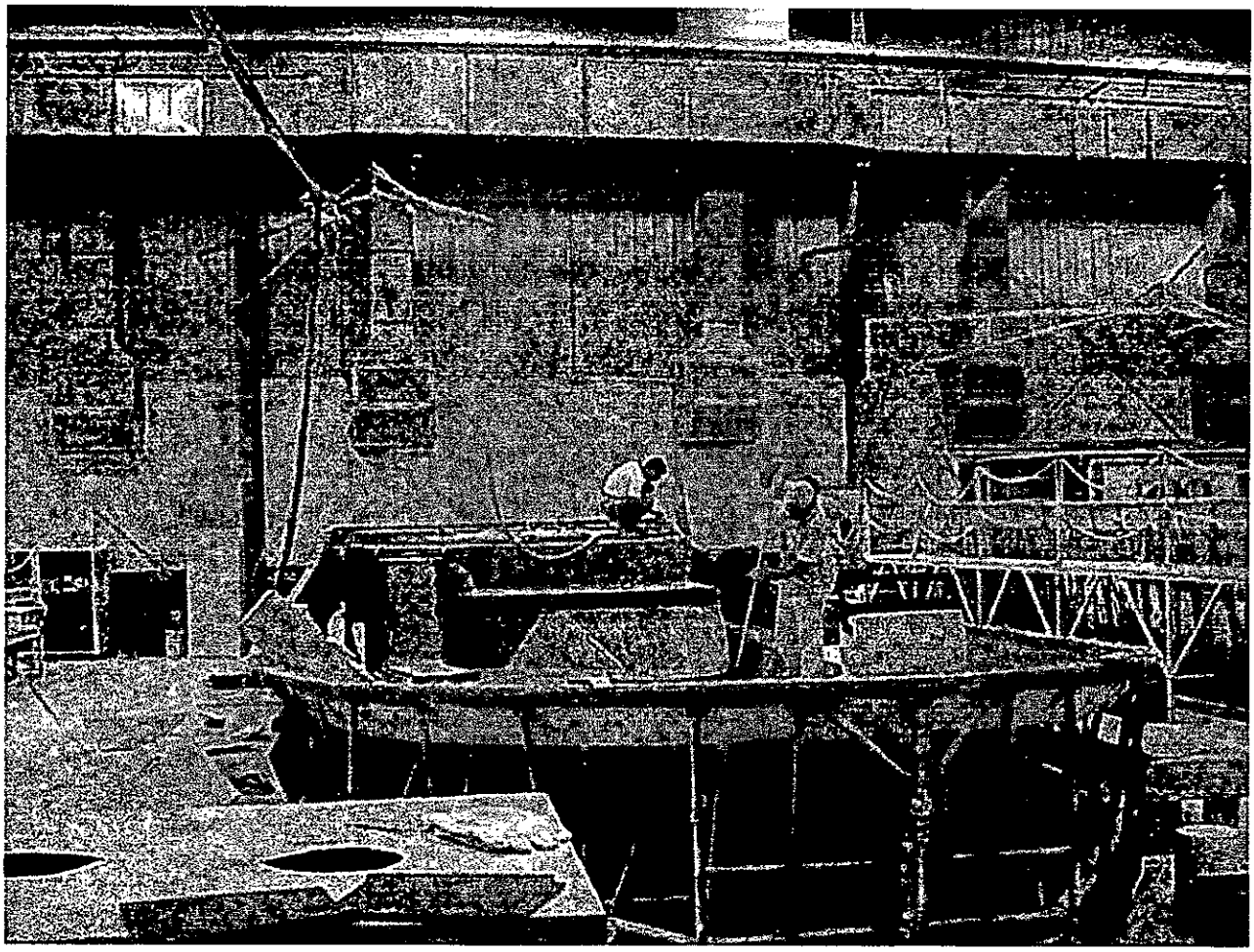
Comments: Here are the photographs that Clair requested.

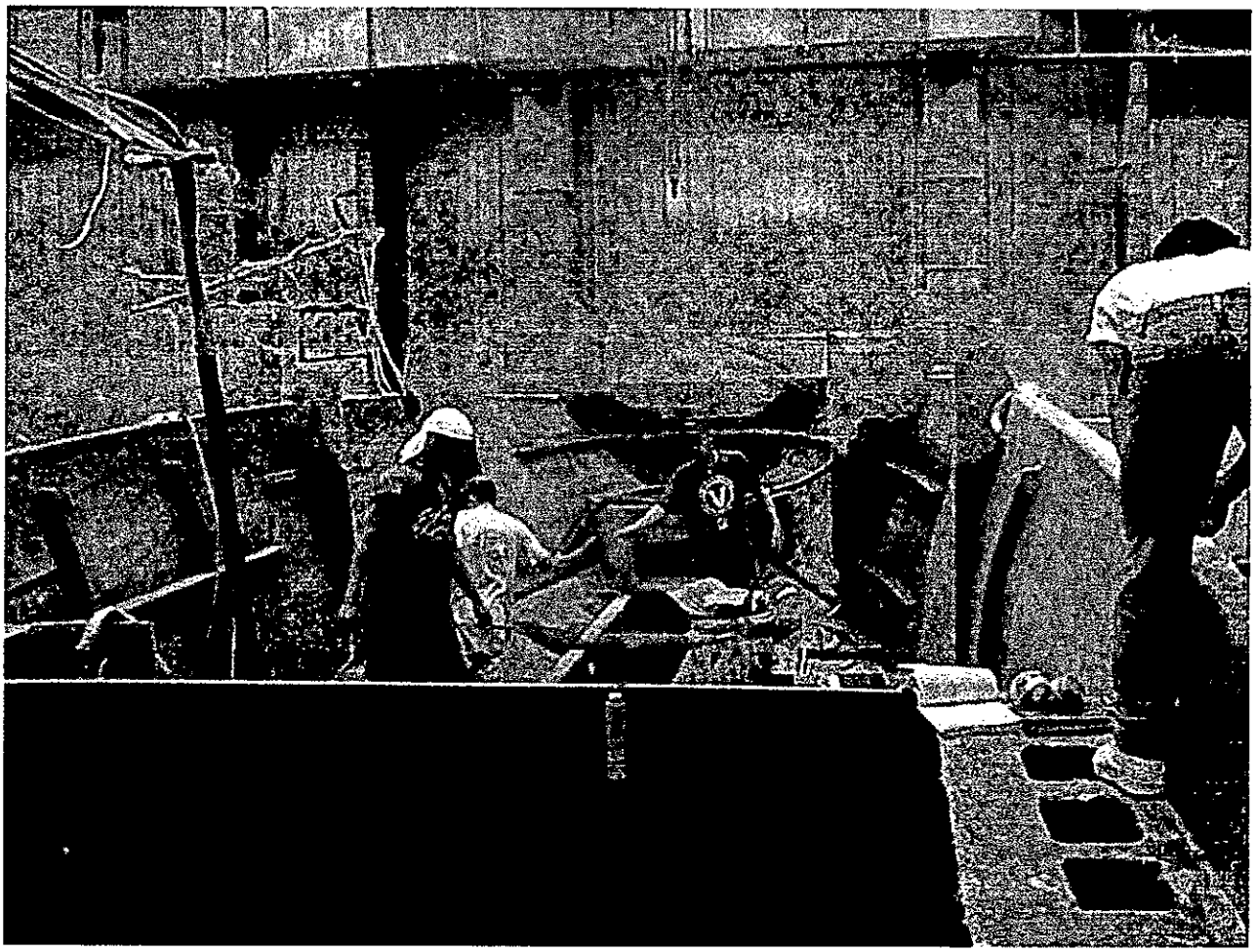
Please call me if they require interpretation.

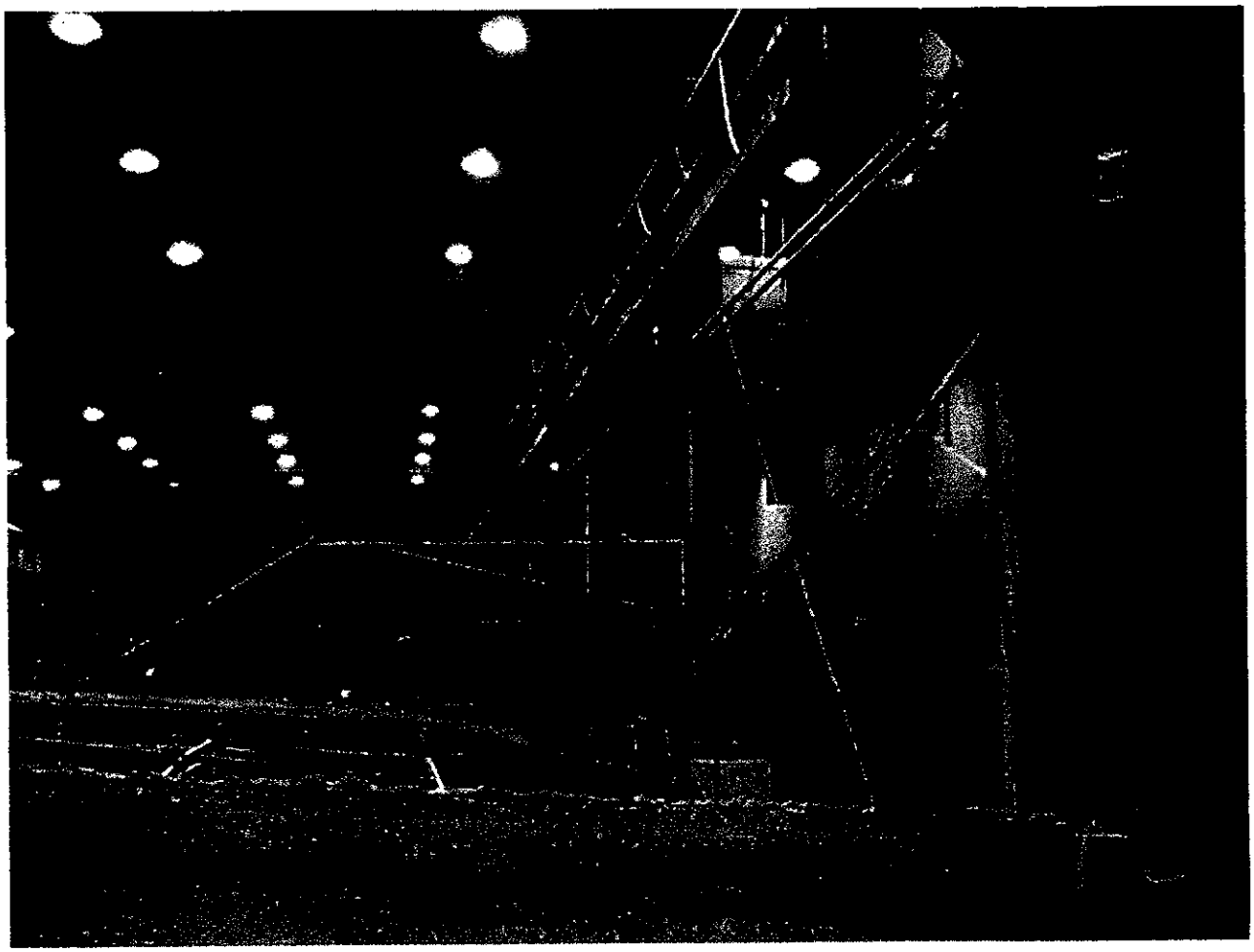
Thanks.

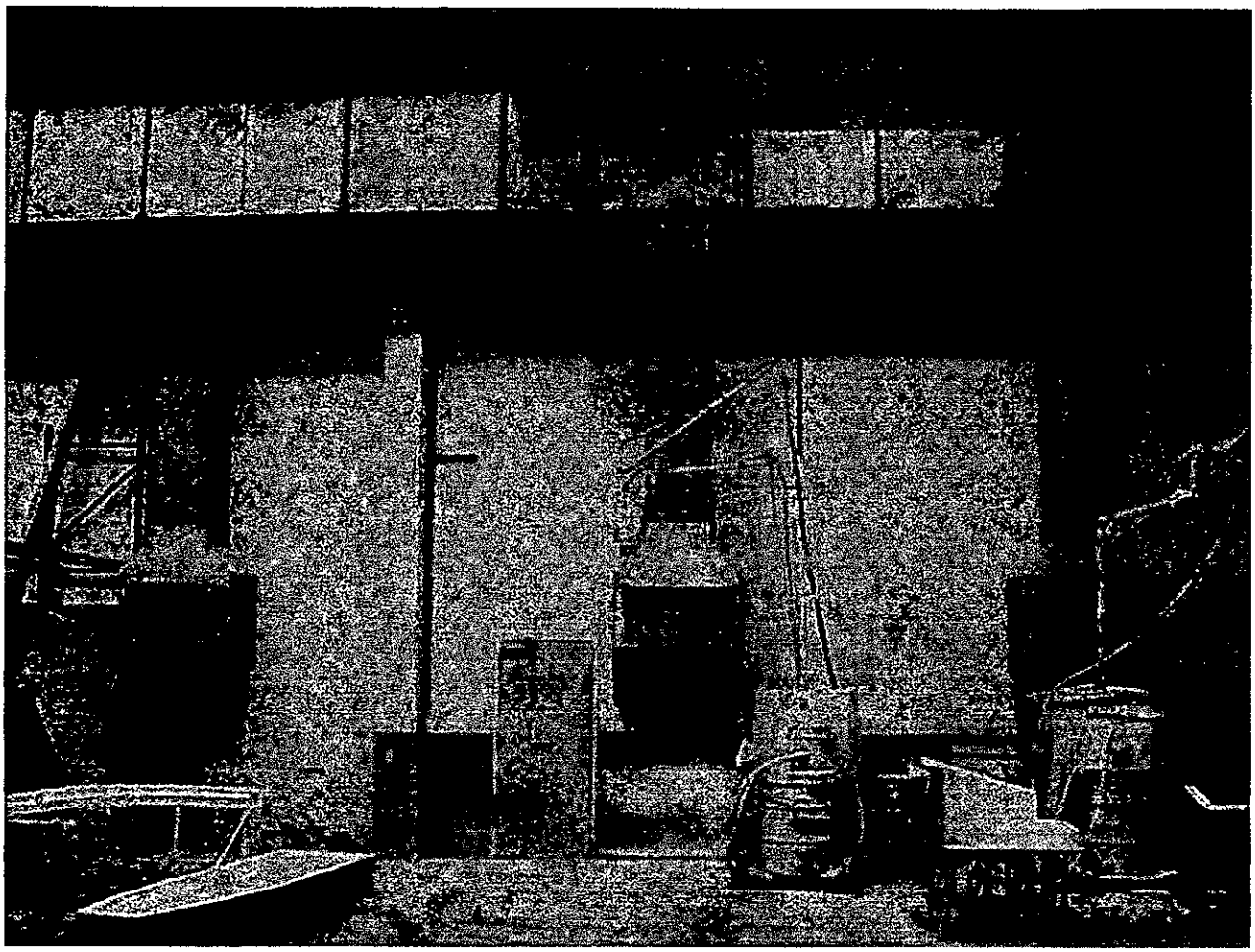
If there are any problems, please call sender at (407) 259-1525 or Fax (407 259-4165

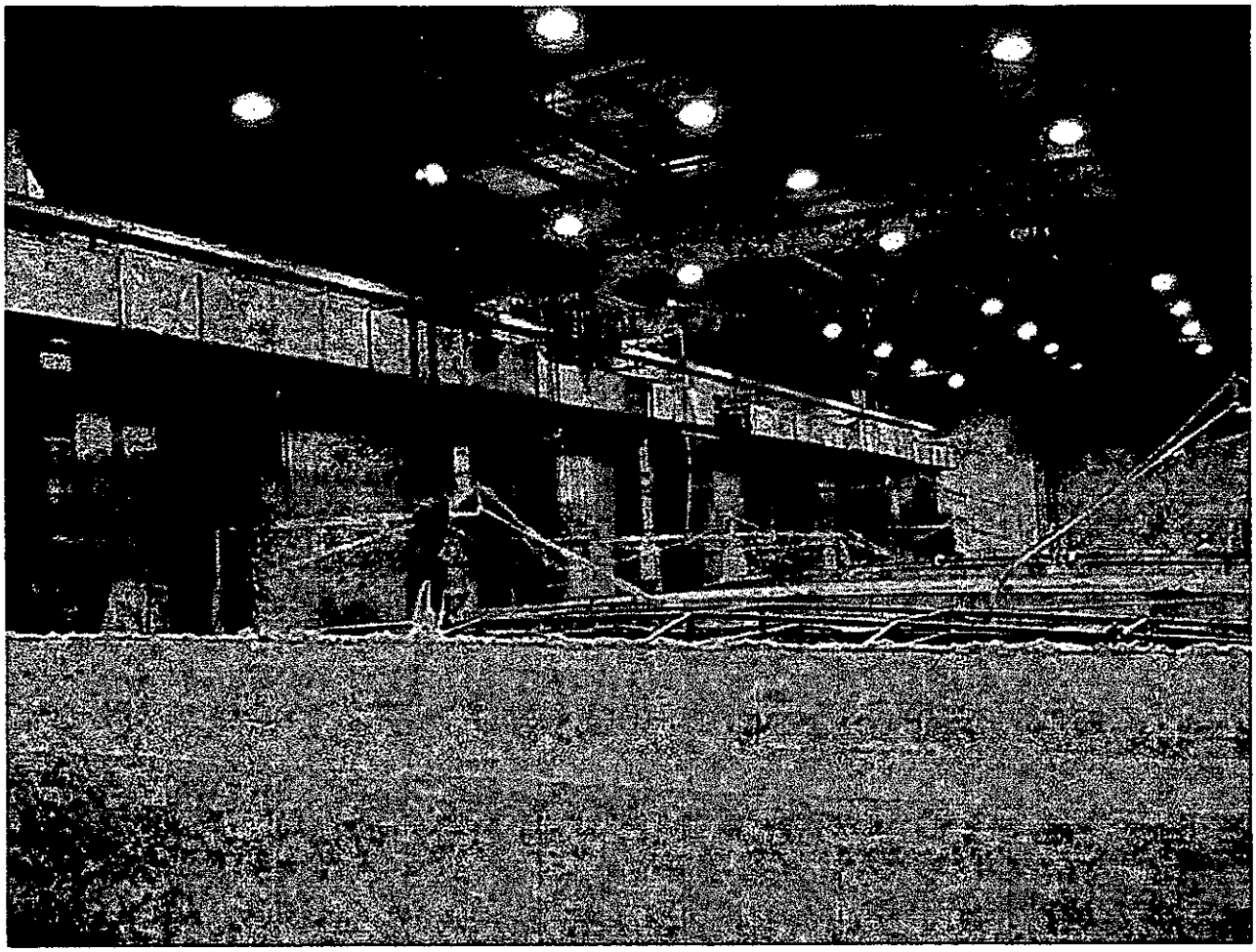
1400 Sarno Road • Melbourne, FL 32935
(407)259-1525 • (407)259-4165 Fax

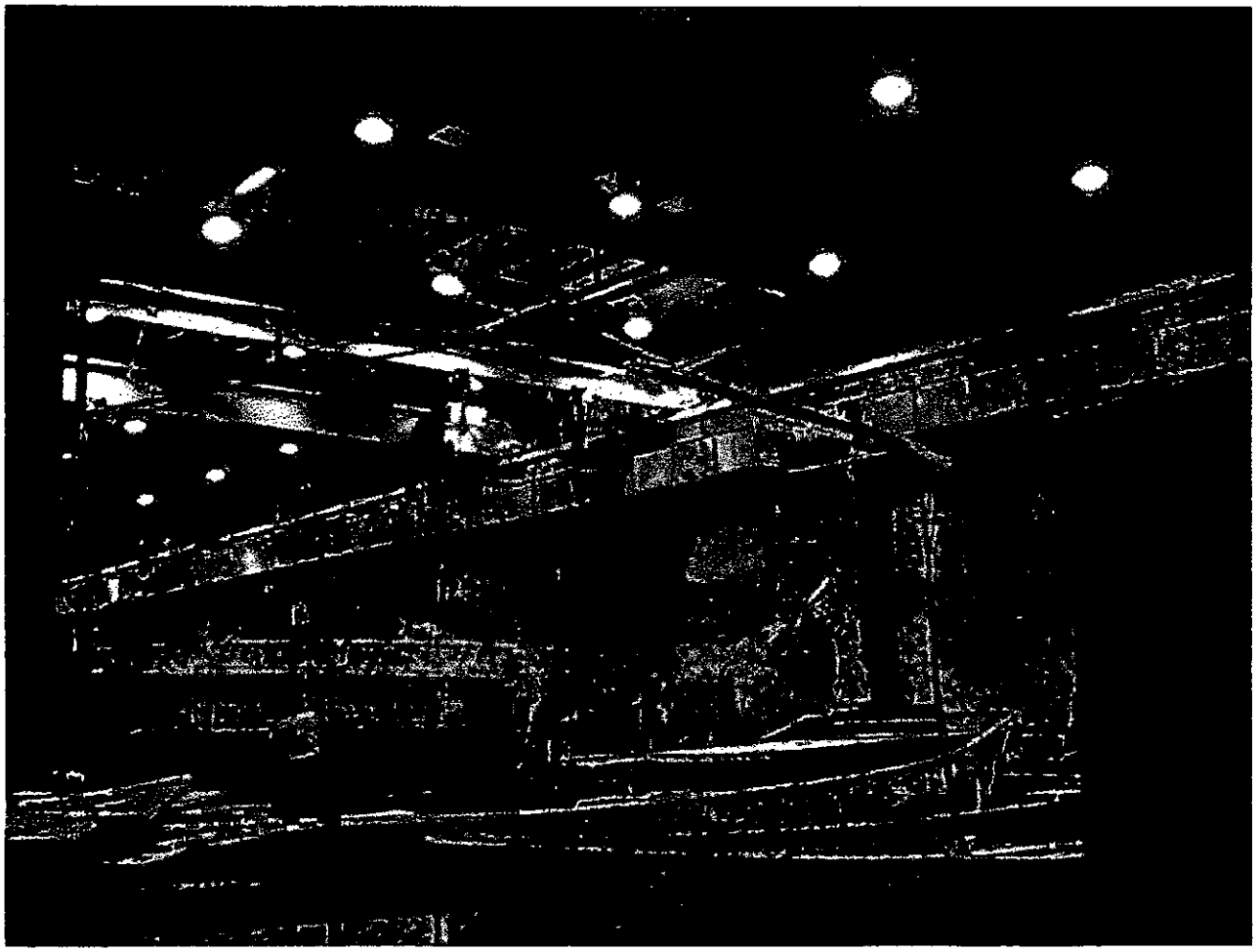


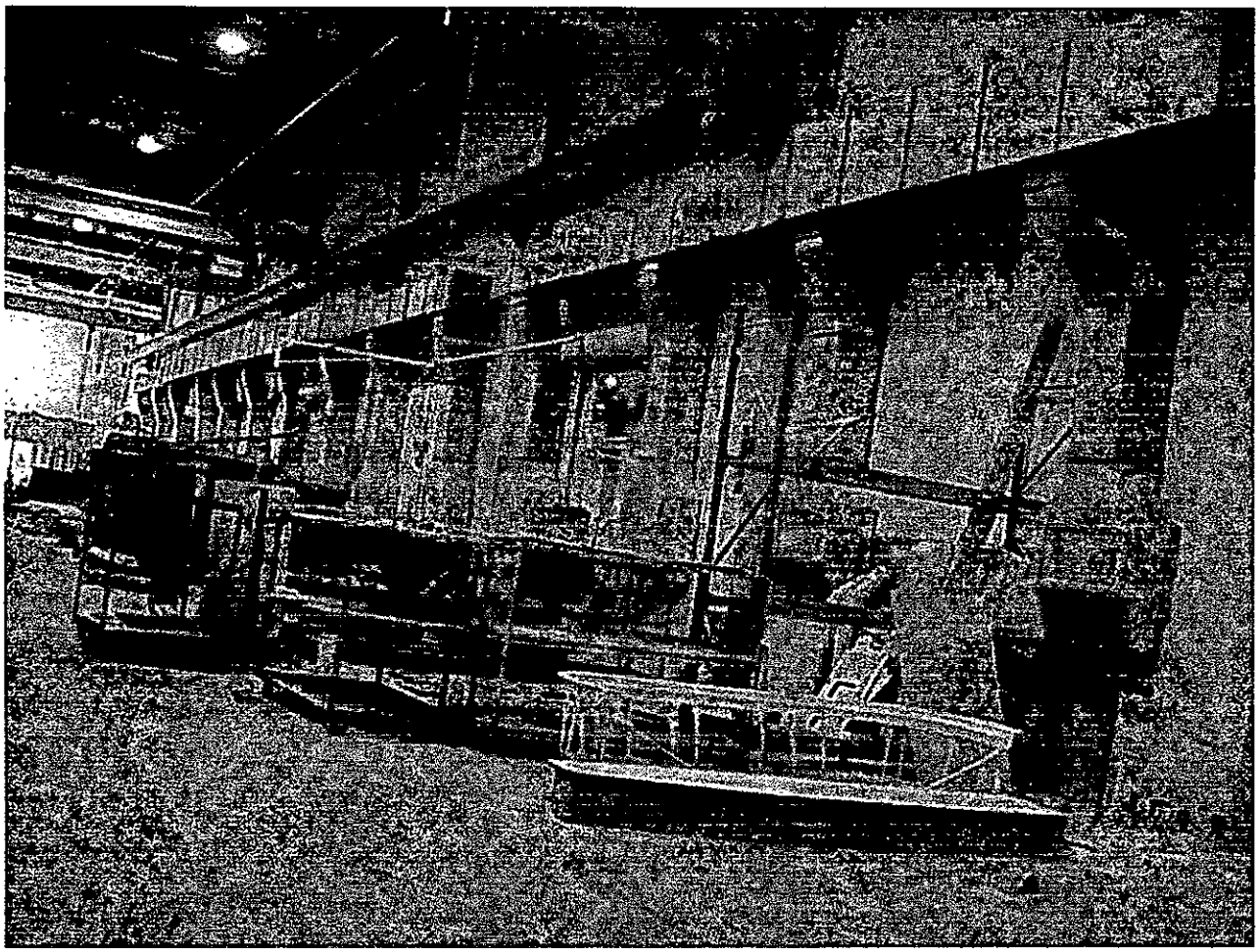


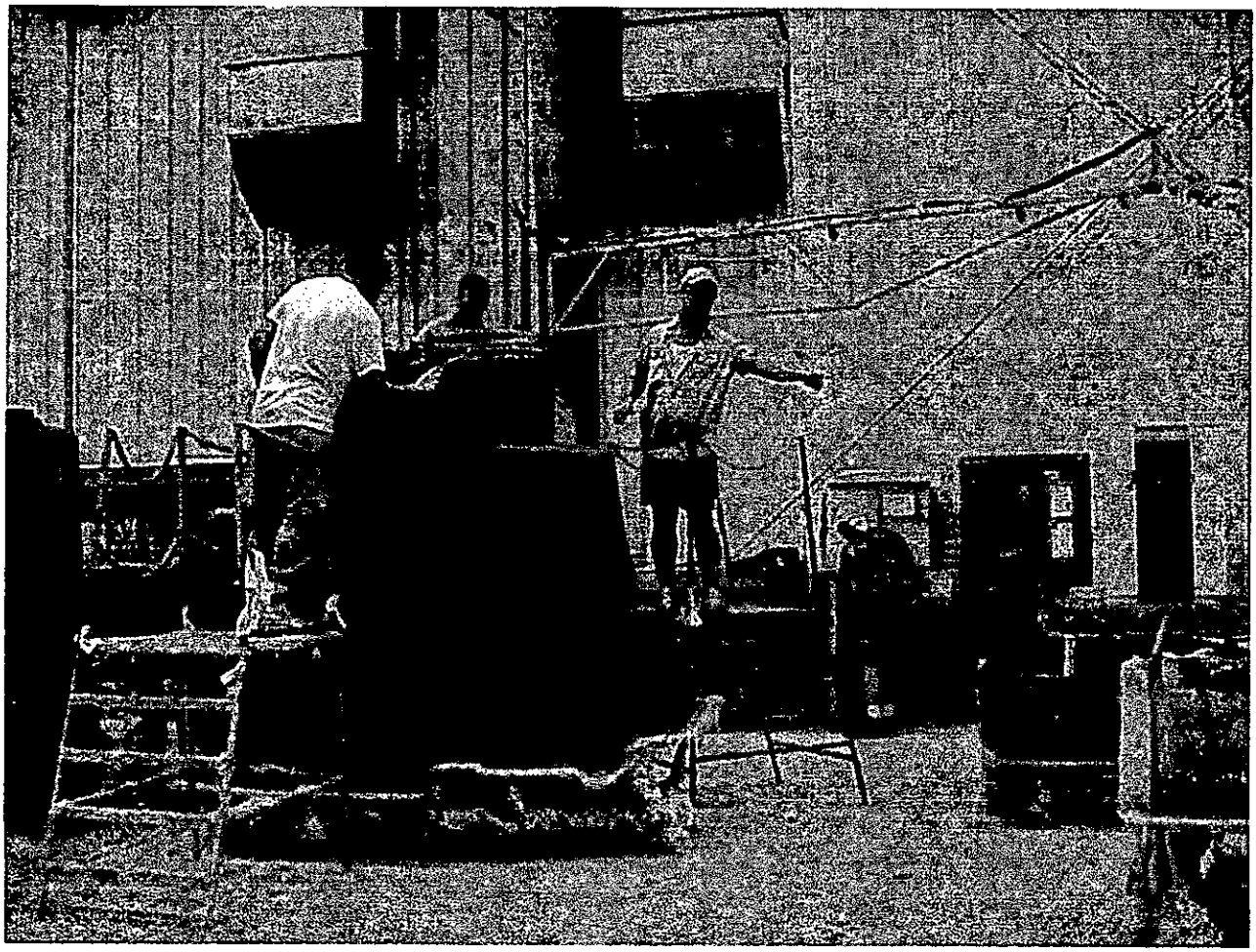


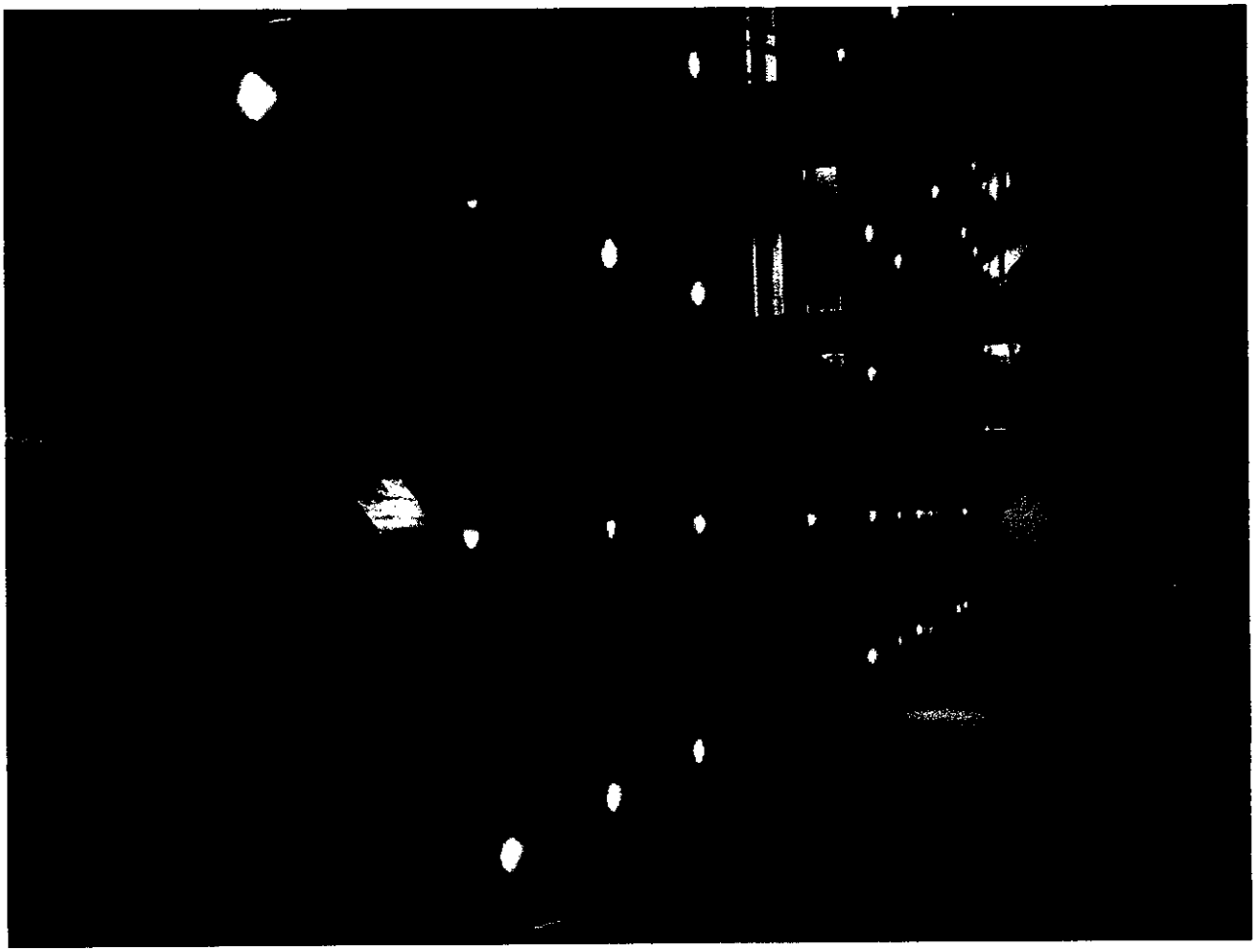


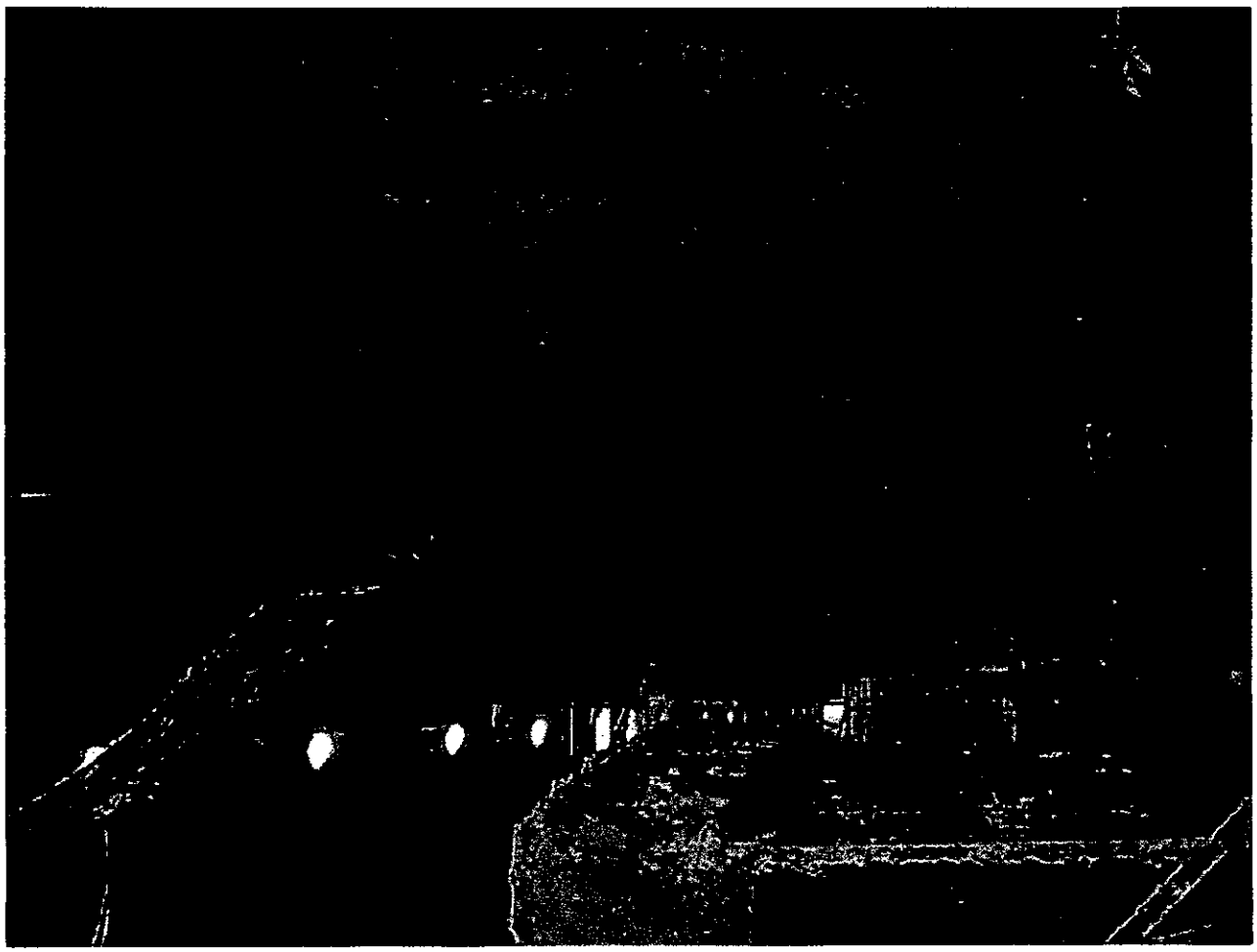












Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

August 15, 2000

9937586A/11

Florida Department of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl 32399-2400

Attention: Mr. C. H. Fancy, P.E., Chief

RE: SEA RAY, INC., CAPE CANAVERAL PLANT
DEP PERMIT NO. 0090093-003-AC, PSD-FL-274
SPECIFIC CONDITION III. 17.

Dear Clair:

Attached please find the results of the special feasibility tests conducted at Sea Ray's existing Merritt Island manufacturing plant. The feasibility tests were conducted on August 31 and September 1, 2000 to quantify the styrene destruction efficiency of the enzyme bioaerosol odor destruction technology as specified by Specific Condition III.17. EPA Method 25, as identified in my letter of August 4, 2000 was used to determine VOC concentrations before and after application of the enzyme bioaersol to determine the styrene destruction efficiency of this odor destruction technology. The enzyme bioaerosol used during the feasibility tests was Piian 5000EE, which is manufactured by Piian Systems. Personnel for Piian Systems installed and operated the enzyme bioaerosol spray system. The EPA Method 25 sampling train at the stack outlet (after the bioaerosol injection) was equipped to allow a 6-minute contact time between the manufacturing area exhaust gas and bioaerosol enzyme. The stack outlet was also sampled for formaldehyde to determine the potential for partial oxidation of the styrene as a result of the application of the enzyme bioaerosol.

The results of the feasibility tests indicated that styrene destruction did not occur with the use of enzyme bioaerosol odor destruction technology. The results of formaldehyde sampling did not suggest partial oxidation of styrene.

Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.
Principal

KFK/jkw

w/enclosures

cc: L. T. Kozlov, P.E., FDEP Central District
Dan Goddard, Sea Ray Boats, Inc.
Pete Cantelou, Cantelou, Herrera and Powell, Inc.

PREVENTION OF SIGNIFICANT DETERIORATION ANALYSIS FOR SEA RAY BOATS, INC. CAPE CANAVERAL PLANT BREVARD COUNTY, FLORIDA

Prepared For:
Sea Ray Boats, Inc.
1200 Sea Ray Drive
Merritt Island, Florida 32953

Prepared By:
Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

Cantelou, Herrera & Powell
1400 Sarno Road
Melbourne, Florida 32935

September 1999

9937586Y/F1/WP

DISTRIBUTION:
4 Copies - FDEP
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APPLICATION FOR PERMIT

TABLE OF CONTENTS

1.0 INTRODUCTION

Sea Ray Boats, Inc. (Sea Ray) proposes to construct and operate a fiberglass boat manufacturing facility in an unincorporated area of Brevard County, Florida (Figure 1-1). The site will be located on a 37.8 acre tract approximately 1.2 miles to the east of the existing Sea Ray Sykes Creek Facility in Merritt Island, Florida. The Project consists of facilities for the fabrication of large fiberglass boats up to 75 foot in length. The primary emissions will consists of volatile organic compounds (VOCs) from the fiberglass construction activities (primarily styrene) and from miscellaneous solvents. The emissions from the plant will be in excess of 100 tons/year.

The proposed project will be a new air pollution source that will result in increases in air emissions in Brevard County. The permitting of a new source of air emissions in Florida generally requires an air construction permit and may be required to undergo prevention of significant deterioration (PSD) review and approval. The new plant has been determined by the Environmental Protection Agency and the Florida Department of Environmental Protection to be considered to be part of the existing facility operated by Sea Ray 1.2 miles to the west. These facilities, the Merritt Island Plant, the Product Development and Engineering Plant, and the Sykes Creek Plant, are defined as an existing major source under the FDEP regulations [Rule 62-212.400 (2)(d)F.A.C. Under the FDEP rules in 62-212.400, a modification of an existing major source above the PSD criteria will require certain analyses and reviews. The proposed emissions of VOCs will trigger PSD review based of FDEP's determination.

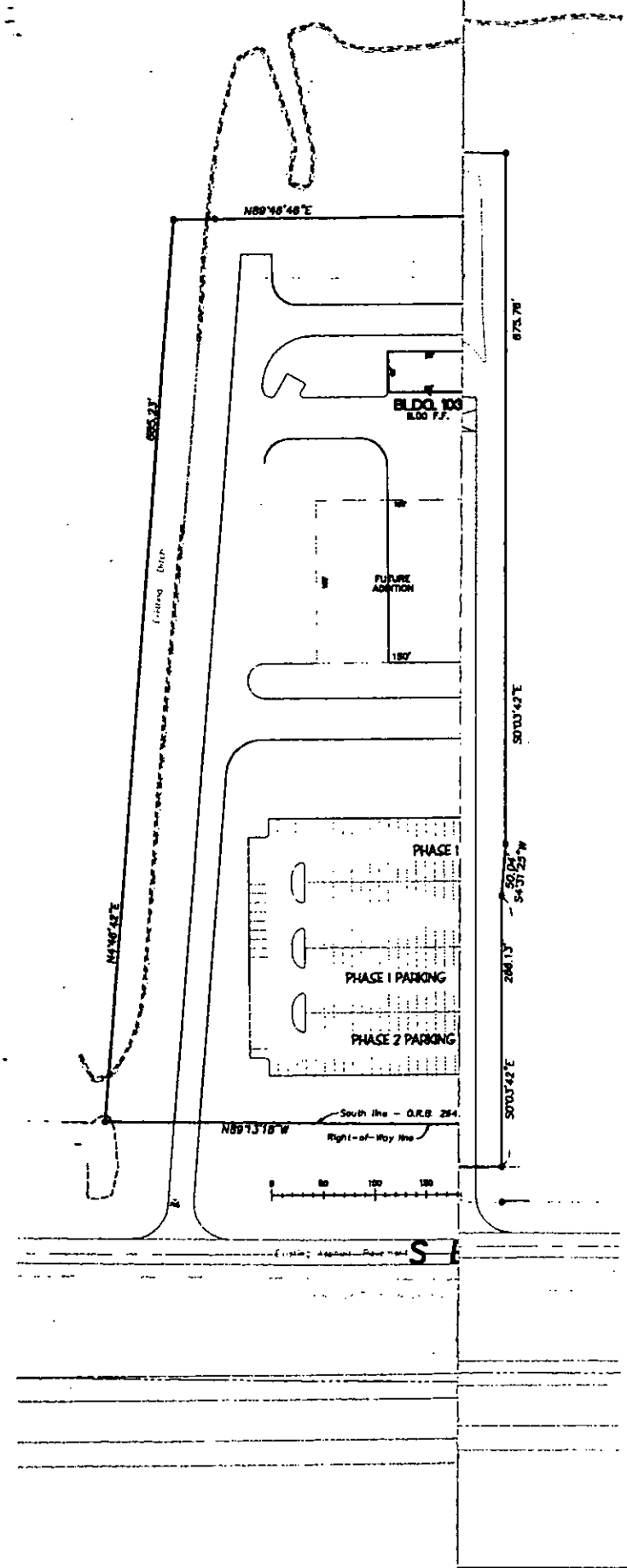
The U.S. Environmental Protection Agency (EPA) has implemented regulations requiring a PSD review for new or modified sources that increase air emissions above certain threshold amounts. Because the threshold amounts will be exceeded by the proposed project, the project is subject to PSD review. PSD regulations are promulgated under 40 Code of Federal Regulations (CFR) Part 52.21 and implemented through approval of the Florida Department of Environmental Protection (DEP) program. Florida's PSD regulations are codified in Rules 62-212.400, F.A.C. These regulations incorporate the EPA PSD regulations.

To assist in performing the necessary licensing activities, Sea Ray has contracted Golder Associates Inc. (Golder) to perform the necessary assessments for determining the project's compliance with state and federal new source review (NSR) regulations, including PSD and nonattainment review requirements. The critical aspects of these assessments may include the air quality impact analyses performed using an air dispersion model and the best available control technology (BACT) analyses performed to evaluate the selected emission control technology. Based on the emissions from the proposed project, a PSD review is required for VOCs.

Brevard County has been designated as an attainment or unclassifiable area for all criteria pollutants [i.e., attainment: ozone (O_3), PM_{10}, SO_2, CO, and NO_2; unclassifiable: lead] and is classified as a PSD Class II area for PM_{10}, SO_2, and NO_2; therefore, the PSD review will follow regulations pertaining to such designations.

The air permit application is divided into seven major sections.

- Section 2.0 presents a description of the facility, including air emissions.
- Section 3.0 provides a review of the PSD and nonattainment requirements applicable to the proposed project.
- Section 4.0 includes the control technology review BACT.
- Section 5.0 discusses the ambient air monitoring analysis (pre-construction monitoring) required by PSD regulations.
- Section 6.0 presents a summary of the PSD air quality analyses.
- Section 7.0 provides the additional impact analyses for soils, vegetation, and visibility.



NORTH
1" = 160'

SEA RAY BOATS, INC.
LAMINATION BUILDING
FOR
CAPE CANAVERAL PLANT

S12, T24, R36E & S7, T24, R37E
MERRITT ISLAND, FLORIDA

Figure 1-1

Site Location and Boundary Map

2.0 PROJECT DESCRIPTION

2.1 SITE DESCRIPTION

The project site, shown in Figure 1-1, consists of 37.8 acres that is currently zoned for the proposed activity. The site is along the Port Canaveral Barge Canal with some industrial, commercial, and residential development within a 3-km radius of the site. The plant elevation will be approximately 8 feet above sea level. The terrain surrounding the site is flat.

2.2 DESCRIPTION OF MANUFACTURING AND LAYOUT OF PLANT

Sea Ray Boats utilizes a commonly used manufacturing technique to fabricate large boats called "contact open molding". Figure 2-1 presents a flow diagram of the process. The contact molding method consists of applying an initial layer of gel coat, allowing it to cure, and then applying successive layers of resin or resin impregnated with fiberglass reinforcement to an open mold. This is called the lamination process. Each layer of laminate is manually constructed to its required thickness and allowed to cure. When the final cure is completed the part is removed from the mold and the mold is cleaned, waxed, and reused. The resulting fiberglass part is trimmed and moved to the assembly area where the boat is completely assembled. Air emissions associated with the manufacture of these products result from the use of gel coat, polyester resin, paints, glues, cleaning solvents, floatation foam, and other VOC containing materials. Manufacturing techniques and many other factors influence the quantity of air emissions resulting from the application of the materials.

Sea Ray Boats initially plans to begin operations in this facility by manufacturing a 58 foot model, a 63 foot model and a 65 foot model (currently in product development stage). Production of other models at lengths up to 75 feet will also be produced depending upon design development and the market. Market conditions ultimately dictate the products with potential concomitant changes in production.

The primary source of VOC emissions is the lamination/assembly building. In particular, styrene emissions are concentrated in the lamination area where the gel coat, fiberglass and resin applications occur. The lamination area within the lamination/assembly building is an

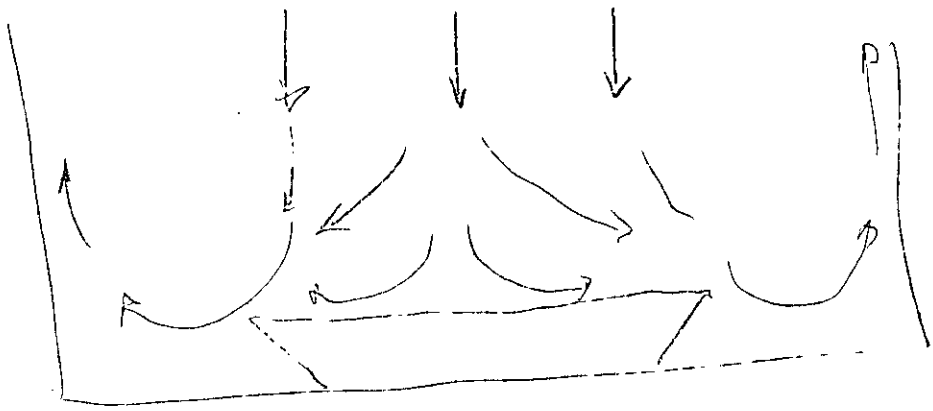
enclosed room 300 feet long, 80 feet in width with ceiling heights an average of 50 feet. The volume of the room is approximately 1,200,000 cubic feet. No other location within this facility has such a concentration of VOCs. The open area allows the flexibility to manufacture various sizes of product, some of which may reach up to 75 feet in length.

The approximate dimensions of the largest boat and mold to be manufactured at the Cape Canaveral Plant are:

- Boat size – 75 ft in length, 18 ft wide and 14 ft high;
- Mold size – 80 ft in length, 20 ft beam and 14 ft high;
- Hull weight – 10 tons; and
- Mold weight – 12.5 tons.

Resin will be applied with flow coaters or other non-atomizing application methods. The flow coaters will mix the proper proportion of accelerated resin and catalyst to form the plastic compound. During resin application, a brush or other device is used to manually even out the applied resin. After a thin coat of resin is applied to the gel coat or previous layer of lamination, chopped fiberglass, woven roving, cloth or mat is manually placed over the wet resin. Mat rollers (or squeegees) are used to force, by-hand, the wet resin through the reinforcing materials (i.e., chopped fiberglass, etc.). This removes any trapped air, which will weaken the product. The resin is allowed to slightly harden and subsequent layers of resin and reinforcing materials are applied until the required thickness of laminate is achieved. The lamination process is highly manual during the construction of large boats, due to the product size and quality requirements. Application of gel coat requires about two employees over a time period of about 4 hours and the application of laminate (including bracing) takes about five employees over a time period of about 50 working hours.

The lamination area is designed to be completely open with no obstruction from ceiling or walls, to accept a large system of bridge cranes. This crane system is the only feasible method of moving the hull molds (about 10 tons for the largest hull and 12.5 tons for the largest mold) and other boat parts and materials within the building.



A crane system will be utilized to place the large hull and deck molds in an available location within this room. The capacity of each crane is 30 tons. Construction of the boat will be accomplished in that space. Within the industry, this is called station building. The larger boat molds cannot be moved during the lamination process. Movement of these large parts (hull and top) during lamination and bracing will induce torsional stresses to the mold and may cause the part being produced to pre-release. Any premature release of large parts affects its structural integrity and may require the destruction of the product.

A ventilation system will be installed in the lamination area to reduce exposure of the workers to the styrene vapors. The plant's ventilation system will be designed to allow the crane system to operate unimpeded. Make up air units will be installed over the center of the open space and will direct fresh air from the ceiling into the building and across the parts under construction. The ventilation system is a "push-pull" type. Collectors are mounted along the outside walls that collect vapors emitted from the fabrication areas and carry them through ducts to large exhaust fans mounted on the roof. The exhaust capacity for the lamination area will be 290,000 cfm. Although the ventilation system will be designed to operate with doors closed, in practice this is not the usual case. During hot weather the doors remain open for employee comfort and the movement of materials and personnel. This activity significantly reduces the ability of the exhaust ventilation system to capture emissions from the process.

2.3 OCCUPATIONAL AND VENTILATION REQUIREMENTS

The Occupational Safety and Health Administration (OSHA) has promulgated regulations regarding the permissible exposure limit (PEL) for styrene and requirements for ventilation systems. The current worker exposure 8 hour time-weighted-average (TWA) for styrene is 100 parts per million (ppm). The OSHA TWA short-term exposure limit (STEL) is 200 ppm for 15 minutes during a work-day and 600 ppm for 5 minutes in any 3 hours. The recommendations by the American Conference of Governmental Industrial Hygienist (ACGIH) are 20 ppm 8-hour TWA and 40 STEL (ACGIH, 1998).

The industry has voluntary agreed to a 20 ppm TWA as an exposure limit. Above the exposure limits, either air supplied respirators or specific cartridge respirators can be used.

OSHA also has regulations for paint booths depending upon the operating conditions. The requirements range from 100 to 200 ft/min velocity across the booth. For spray booths, the ACGIH recommend a flow rate of from 50 to 100 ft^3 /min per cross section of booth, depending upon sizes (the same as a velocity of 50 to 100 ft/min across the spray booth).

The practice in industry has been to use high rates of ventilation to limit worker exposure due to the close proximity that workers are from the source of VOC (i.e., boat hull) and where necessary use half mask respirators to limit exposure. At the existing Sea Ray plant in Merritt Island, the "push-pull" ventilation system is used. This is proposed for the ventilation method for the Cape Canaveral Plant. The resulting exhaust air will be a high volume and low concentration.

2.4 PROPOSED SOURCE EMISSIONS AND CHARACTERISTICS

Table 2-1 presents emissions calculations for each major process of boat building to be conducted in the proposed facility. The emissions for each area is summarized below:

- Mold Maintenance – 1.11 tons VOC/year,
- Lamination Area – 174.28 tons VOC/year,
- Assembly – 33.71 tons VOC/year,
- Final Finish – 3.38 tons VOC/year, and
- Wood Shop – 5.16 tons VOC/year.

VOC emissions from the lamination area will produce 80 percent of the total VOC. More importantly, these emissions occur over relatively short-time frames compared to the other processes. While the process is highly dependent upon boat size, the construction of a 65 foot boat will take approximately 120 working days. In contrast, the application of gel coat and resins to construct a hull takes about 6 working days. Thus, the emission rate (VOCs per unit time) for the lamination process is about 70 times higher than emissions of the other processes combined. Emissions of PM/PM_{10} from wood working and sanding/grinding operations will be less than 1 ton/year. There will only be minor emissions of NO_x, CO, and SO_2 resulting from testing boat engines.

Table 2-1a. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
10	120	100073	Orange Tooling					54.00	lbs	Methyl Methacrylate	80-62-6	x	x			5.0%	2.70	54%	1.46	0.00
10	120	100073	Orange Tooling					54.00	lbs	Styrene	100-42-5	x	x			40.8%	22.01	54%	11.89	0.01
10	120	101154	Bilge Grey Gc					184,765.00	lbs	Styrene	100-42-5	x	x			34.4%	63,562.86	16.5%	10,487.87	5.24
10	190	101410	Polygard 33-441					2,438.00	lbs	Hexachloroethane	67-72-1	x	x			4.1%	100.69	11%	11.08	0.01
10	190	101410	Polygard 33-441					2,438.00	lbs	Styrene	100-42-5	x	x			37.2%	906.69	11%	99.74	0.05
10	120	101436	Black Tooling					162.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.4%	7.12	54%	3.84	0.00
10	120	101436	Black Tooling					162.00	lbs	Styrene	100-42-5	x	x			42.5%	68.79	54%	37.15	0.02
15	60	101485	Paint, Latex Black (Delta Labs)	1,246.00	gal	10.1	#/gl	12,584.60	lbs	Ethylene Glycol	107-21-1	x	x			2.9%	364.95	100%	364.95	0.18
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Hexane	110-54-3	x	x			18.0%	1.24	100%	1.24	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Methyl Ethyl Ketone	78-93-3	x	x			8.0%	0.55	100%	0.55	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Other:VOC		x				33.0%	2.28	100%	2.28	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Toluene	108-88-3	x	x			15.0%	1.04	100%	1.04	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Methyl Ethyl Ketone	78-93-3	x	x			3.0%	4.00	100%	4.00	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Other:VOC		x				65.5%	87.25	100%	87.25	0.04
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Toluene	108-88-3	x	x			3.0%	4.00	100%	4.00	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Xylene	1330-20-7	x	x			4.0%	5.33	100%	5.33	0.00
15	10	102491	Additive, Retardant Butyl Cellulose	20.40	gal	7.48	#/gl	152.59	lbs	2-Butoxyethanol	111-76-2	x	x			100.0%	152.59	100%	152.59	0.08
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Methyl Alcohol	67-56-1	x	x			3.9%	44.01	100%	44.01	0.02
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15.0%	171.47	100%	171.47	0.09
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Other:VOC		x				42.7%	488.10	100%	488.10	0.24
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Toluene	108-88-3	x	x			15.0%	171.47	100%	171.47	0.09
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Xylene	1330-20-7	x	x			3.9%	44.01	100%	44.01	0.02
10	110	102574	Flexbond Putty	984.00	gal	9.17	#/gl	9,023.28	lbs	Styrene	100-42-5	x	x			34.5%	3,113.03	11.0%	342.43	0.17
25	120	102665	Silicon, Lubricant (Wd-40)	5.00	gal	6.68	#/gl	33.40	lbs	Other:VOC		x				71.0%	23.71	100%	23.71	0.01
25	110	156984	Sealant, Silicone	7,897.00	ea	10.3	oz	5,083.69	lbs	Other:VOC		x				3.7%	188.10	100%	188.10	0.09
25	110	156992	Sealant, Silicone	238.00	ea	10.3	oz	153.21	lbs	Other:VOC		x				3.7%	5.67	100%	5.67	0.00
25	110	157008	Sealant, Silicone	15,437.00	ea	10.3	oz	9,937.57	lbs	Other:VOC		x				3.7%	367.69	100%	367.69	0.18
195	35	164939	Compound, Edge Wax Fin-Kare	13.00	ea (gal)	6.65	#/gl	86.45	lbs	Other:VOC		x				44.7%	38.64	100%	38.64	0.02
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Hexane	110-54-3	x	x			37.5%	17.34	100%	17.34	0.01
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Other:VOC		x				27.5%	12.72	100%	12.72	0.01
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Formaldehyde	50-00-0	x	x			0.5%	0.24	100%	0.24	0.00
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Other:VOC		x				33.0%	15.88	100%	15.88	0.01
195	35	179358	Compound, Mold Release TR Hi-Tem	310.00	can	14	oz	271.25	lbs	Other:VOC		x				70.0%	189.88	100%	189.88	0.09
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Butane	106-97-8	x		x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Isobutane	75-28-5	x		x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Other:VOC		x				8.1%	206.61	100%	206.61	0.10
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Propane	74-98-6	x		x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Toluene	108-88-3	x	x			25.0%	634.56	100%	634.56	0.32
15	80	181255	Paint, Spray Pt (Black)	4,430.00	can	11	oz	3,045.63	lbs	Xylene	1330-20-7	x	x			12.5%	380.70	100%	380.70	0.19
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Methyl Ethyl Ketone	78-93-3	x	x			4.0%	21.64	100%	21.64	0.01
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Other:VOC		x				69.0%	373.25	100%	373.25	0.19
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Xylene	1330-20-7	x	x			3.0%	16.23	100%	16.23	0.01
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Acetone	67-64-1				x	14.5%	1,861.56	100%	1,861.56	0.93
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Other:VOC		x				39.3%	5,045.46	100%	5,045.46	2.52
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Pentane	109-66-0	x		x		24.2%	3,106.87	100%	3,106.87	1.55
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Methyl Alcohol	67-56-1	x	x			2.0%	0.19	100%	0.19	0.00

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Table 2-1a. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Other:VOC		x				11.3%	1.06	100%	1.06	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Acetone	67-64-1				x	70.00%	0.53	100%	0.53	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Isobutane	75-28-5	x		x		22.50%	0.17	100%	0.17	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Isopropyl Alcohol	67-63-0	x				10.00%	0.08	100%	0.08	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Other:VOC		x				2.96%	0.02	100%	0.02	0.00
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15.0%	60.82	40%	24.33	0.01
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Other:VOC		x				66.5%	269.65	40%	107.86	0.05
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Hexane	110-54-3	x	x			15.0%	600.30	100%	600.30	0.30
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Other:VOC		x				80.0%	3201.60	100%	3,201.60	1.60
175	15	191742	Cleaner, Glass	125.00	btl	20	oz	156.25	lbs	2-Butoxyethanol	111-76-2	x	x			5.7%	8.95	100%	8.95	0.00
175	15	191742	Cleaner, Glass Spartan	125.00	btl	20	oz	156.25	lbs	Isobutane	75-28-5	x		x		5.7%	8.95	100%	8.95	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Acetone	67-64-1				x	49.0%	88.20	100%	88.20	0.04
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Methyl Alcohol	67-56-1	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Other:VOC		x				17.0%	30.60	100%	30.60	0.02
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Propane	74-98-6	x		x		15.0%	27.00	100%	27.00	0.01
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Toluene	108-88-3	x	x			3.0%	5.40	100%	5.40	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Xylene	1330-20-7	x	x			1.0%	1.80	100%	1.80	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Acetone	67-64-1				x	45.0%	2.70	100%	2.70	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			11.0%	0.66	100%	0.66	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Other:VOC		x				31.0%	1.86	100%	1.86	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Propane	74-98-6	x		x		3.0%	0.18	100%	0.18	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Toluene	108-88-3	x	x			10.0%	0.60	100%	0.60	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Acetone	67-64-1				x	36.0%	13.23	100%	13.23	0.01
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Butane	106-97-8	x		x		8.0%	2.94	100%	2.94	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Other:VOC		x				1.0%	0.37	100%	0.37	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propane	74-98-6	x		x		16.0%	5.88	100%	5.88	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propylene Glycol Methyl Ether Acetate	108-65-6	x	x			12.5%	4.59	100%	4.59	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Xylene	1330-20-7	x	x			12.0%	4.41	100%	4.41	0.00
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Other:VOC		x				50.8%	391.00	100%	391.00	0.20
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Xylene	1330-20-7	x	x			1.0%	7.70	100%	7.70	0.00
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Butane	106-97-8	x		x		11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Isobutane	75-28-5	x		x		11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Other:VOC		x				8.1%	10.30	100%	10.30	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Propane	74-98-6	x		x		11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Toluene	108-88-3	x	x			25.0%	31.63	100%	31.63	0.02
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Xylene	1330-20-7	x	x			12.5%	15.81	100%	15.81	0.01
195	35	192864	Super Polyglaze	86.00	cn (2 qt)	7.92	#/gl	340.56	lbs	Other:VOC		x				65.0%	221.36	100%	221.36	0.11
195	35	192872	Imperial Hand Glaze	16.00	cn (qt)	7.92	#/gl	31.68	lbs	Other:VOC		x				14.3%	4.53	100%	4.53	0.00
175	15	192898	Bilge Cleaner	2.00	ea	16	oz	2.00	lbs	Other:VOC		x				1.0%	0.02	100%	0.02	0.00
175	15	192922	Cleaner, Vinyl Formula Lr	5.00	can	14	oz	4.38	lbs	Other:VOC		x				95.0%	4.16	100%	4.16	0.00
195	35	194274	Cpd Polishing Lackryt	72.00	gal	11.68	#/gl	840.96	lbs	Other:VOC		x				2.4%	20.18	100%	20.18	0.01
195	35	194282	Compound, Polishing Dixtler	20.00	gal	10.81	#/gl	216.20	lbs	Other:VOC		x				33.3%	72.06	100%	72.06	0.04
25	30	194308	Dykem Co	11.00	gal	7.18	#/gl	78.98	lbs	Other:VOC		x				89.4%	70.61	100%	70.61	0.04
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Methyl Alcohol	67-56-1	x	x			50.0%	2294.75	100%	2,294.75	1.15

[redacted] 9957356Y/F [redacted] Table2-1

Table 2-1a. Proposed Emissions Calculations

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Other:VOC		x				47.5%	2180.01	100%	2,180.01	1.09
25	110	209106	Sealant, Silicone	43.00	ea	3	8.72	8.79	lbs	Other:VOC		x				5.2%	0.46	100%	0.46	0.00
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Acetone	67-64-1				x	17.3%	2,833.02	100%	2,833.02	1.42
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Hexane	110-54-3	x	x			34.6%	5,656.24	100%	5,656.24	2.83
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Other:VOC		x				15.2%	2,478.28	100%	2,478.28	1.24
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Propane	74-98-6	x		x		15.2%	2,478.28	100%	2,478.28	1.24
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Other:VOC		x				80.0%	1,213.60	100%	1,213.60	0.61
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Propane	74-98-6	x		x		20.0%	303.40	100%	303.40	0.15
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Other:VOC		x				32.5%	4.55	100%	4.55	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Perchloroethylene	127-18-4	x	x			22.5%	3.15	100%	3.15	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Trichloroethylene	79-01-6	x	x			42.5%	5.95	100%	5.95	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Other:VOC		x				8.6%	0.02	100%	0.02	0.00
25	110	257600	Sealant, Pipe (PVC) w/Teflon	10.00	ea (50 ml)	9.51	#/gl	0.25	lbs	Ethyl Benzene	100-41-4	x	x			4.5%	10.69	100%	10.69	0.01
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Xylene	1330-20-7	x	x			4.5%	10.69	100%	10.69	0.01
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Other:VOC		x				100.0%	1035.23	100%	1,035.23	0.52
25	30	270009	Chemical, Mineral Spirits	161.00	gal	6.43	#/gl	1,035.23	lbs	Acetone	67-64-1				x	13.7%	1.11	100%	1.11	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Methyl Ethyl Ketone	78-93-3	x	x			9.1%	0.74	100%	0.74	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Other:VOC		x				63.5%	5.16	100%	5.16	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Xylene	1330-20-7	x	x			13.7%	1.11	100%	1.11	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Other:VOC		x				4.0%	1.84	100%	1.84	0.00
25	110	277731	Sealant, Silicone White	92.00	ea	8	oz	46.00	lbs	Dimethyl Phthalate	131-11-3	x	x			43.0%	6,373.46	na	neg	0.00
10	140	308205	Clear Mekp-9H					14,822.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			2.0%	296.44	48%	142.29	0.07
10	140	308205	Clear Mekp-9H					14,822.00	lbs	Dimethyl Phthalate	131-11-3	x	x			50.0%	19,651.00	na	neg	0.00
10	140	308213	Red Mekp9-H					39,302.00	lbs	Xylene	1330-20-7	x	x			17.5%	6,877.85	100%	6,877.85	3.44
10	140	308213	Red Mekp9-H					39,302.00	lbs	Acetone	67-64-1				x	26.5%	7,078.90	100%	7,078.90	3.54
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Hexane	110-54-3	x	x			19.2%	5,128.87	100%	5,128.87	2.56
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Methyl Alcohol	67-56-1	x	x			2.5%	667.82	100%	667.82	0.33
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Other:VOC		x				19.2%	5,128.87	100%	5,128.87	2.56
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Toluene	108-88-3	x	x			13.0%	3,472.67	100%	3,472.67	1.74
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Other:VOC		x				5.2%	11.59	100%	11.59	0.01
25	110	352443	Sealant, Silicone	1,093.00	ea	3	8.7	222.87	lbs	Ethylbenzene	100-41-4	x	x			0.1%	0.61	100%	0.61	0.00
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Other:VOC		x				22.8%	139.37	100%	139.37	0.07
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Xylene	1330-20-7	x	x			0.1%	0.61	100%	0.61	0.00
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Acetone	67-64-1				x	85.0%	761.60	100%	761.60	0.38
10	120	437145	Webbing Solution	128.00	gal	7	#/gl	896.00	lbs	Acetone	67-64-1				x	5.0%	137.09	100%	137.09	0.07
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10.0%	274.18	100%	274.18	0.14
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			25.0%	685.44	100%	685.44	0.34
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Other:VOC		x				25.0%	685.44	100%	685.44	0.34
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Toluene	108-88-3	x	x			35.0%	959.62	100%	959.62	0.48
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	2-Butoxyethanol	111-76-2	x	x			6.0%	2.57	100%	2.57	0.00
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	Propane	74-98-6	x		x		5.0%	2.14	100%	2.14	0.00
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	Methyl Methacrylate	80-62-6	x	x			3.0%	1,111.65	48%	533.59	0.27
10	120	556944	Antique White Gel					37,055.00	lbs	Styrene	100-42-5	x	x			35.0%	12,969.25	48%	6,225.24	3.11
10	120	556944	Antique White Gel					37,055.00	lbs	Styrene	100-42-5	x	x			15.0%	3,188.78	11.0%	350.77	0.18
10	110	581975	Polyester Putty	1,602.00	gal	13.27	#/gl	21,258.54	lbs	Other:VOC		x				20.0%	441.04	100%	441.04	0.22
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Xylene	1330-20-7	x	x			5.0%	110.26	100%	110.26	0.06
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs											

Table 2-1a. Proposed Emissions Calculations

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Other:VOC		x				17.0%	5.54	100%	5.54	0.00
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Xylene	1330-20-7	x	x			5.0%	1.63	100%	1.63	0.00
15	120	592899	Bottom Paint Thinner	48.00	gal	7.3	#/gl	350.40	lbs	Xylene	1330-20-7	x	x			100.0%	350.40	100%	350.40	0.18
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			13.0%	11.70	100%	11.70	0.01
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Other:VOC		x				69.0%	62.10	100%	62.10	0.03
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Methylene Chloride	75-09-2		x			10.7%	24.78	100%	24.78	0.01
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Other:VOC		x				48.3%	63.52	100%	63.52	0.03
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Xylene	1330-20-7	x	x			38.0%	49.93	100%	49.93	0.02
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Xylene	1330-20-7	x	x			7.7%	17.81	100%	17.81	0.01
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/1	19.00	gal	8.1	#/gl	153.90	lbs	Other:VOC		x				35.5%	54.63	100%	54.63	0.03
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/1	19.00	gal	8.1	#/gl	153.90	lbs	Phenol	108-95-2	x	x			12.5%	19.24	100%	19.24	0.01
10	190	619981	Alpha Altek 80602F					3,552,635.00	lbs	Styrene	100-42-5	x	x			35.0%	1,243,422.25	11%	136,776.45	68.39
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Other:VOC		x				8.4%	9.65	100%	9.65	0.00
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Xylene	1330-20-7	x	x			1.6%	1.84	100%	1.84	0.00
175	15	662437	Cleaner, Super Blue Resin	2,112.00	gal	8.8	#/gl	18,585.60	lbs	Dipropylene glycol methyl ether	34950-94-8	x	x			7.0%	1,300.99	100%	1,300.99	0.65
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			9.0%	4,800.00	100%	4,800.00	2.40
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Other:VOC		x				90.9%	48,479.95	100%	48,479.95	24.24
10	190	666057	Hydropell A35					210,060.00	lbs	Styrene	100-42-5	x	x			35.0%	73,521.00	11%	8,087.31	4.04
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Other:VOC		x				43.5%	31.95	100%	31.95	0.02
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Propylene Glycol Monomethyl Ether	108-65-6	x	x			7.2%	5.29	100%	5.29	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Toluene	108-88-3	x	x			3.7%	2.72	100%	2.72	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Xylene	3330-20-7	x	x			1.4%	1.03	100%	1.03	0.00
15	10	667451	Additive, Activator Imron	12.00	qt	8.01	#/gl	24.03	lbs	Other:VOC		x				67.8%	16.29	100%	16.29	0.01
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	19,334.96	48%	9,280.78	4.64
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Styrene	100-42-5	x	x			28.5%	137,848.60	48%	66,167.33	33.08
10	120	680751	Bilge Grey Gel Coat					55,290.00	lbs	Styrene	100-42-5	x	x			30.0%	16,587.00	48.0%	7,961.76	3.98
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Methyl Methacrylate	80-62-6	x	x			47.9%	80.47	100%	80.47	0.04
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Styrene	100-42-5	x	x			48.0%	80.64	100%	80.64	0.04
195	35	715581	Cpd Polishing Lackryl 5 gal	101.00	pl (5 gl)	11.68	#/gl	5,898.40	lbs	Other:VOC		x				2.4%	141.56	100%	141.56	0.07
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Acetone	67-64-1				x	27.0%	10.13	100%	10.13	0.01
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Butane	106-97-8	x		x		6.0%	2.25	100%	2.25	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Other:VOC		x				15.9%	5.96	100%	5.96	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Propane	74-98-6	x		x		14.0%	5.25	100%	5.25	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Toluene	108-88-3	x	x			10.0%	3.75	100%	3.75	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Xylene	1330-20-7	x	x			3.0%	1.13	100%	1.13	0.00
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Methyl Methacrylate	80-62-6	x	x			9.4%	1,768.42	48%	848.84	0.42
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Styrene	100-42-5	x	x			33.7%	6,320.87	48%	3,034.02	1.52
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Methyl Methacrylate	80-62-6	x	x			5.0%	64.80	54%	34.99	0.02
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Styrene	100-42-5	x	x			42.7%	553.52	54%	298.90	0.15
10	110	723080	Hvy Wt Bonding Putty					74,204.00	lbs	Styrene	100-42-5	x	x			15.0%	11,130.60	11.0%	1,224.37	0.61
25	160	761346	Poly vinyl Alcohol	74.00	gal	7.63	#/gl	564.62	lbs	Other:VOC		x				44.2%	249.56	100%	249.56	0.12
10	110	761643	Hvy Wt Bond Putty Low					90,540.00	lbs	Styrene	100-42-5	x	x			15.0%	13,581.00	11.0%	1,493.91	0.75
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			3.0%	39.42	100%	39.42	0.02

Table 2-1a. Proposed Emissions Calculations

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Other:VOC		x				97.0%	1,274.66	100%	1,274.66	0.64
25	100	790477	Isopropyl Acetate					24,480.00	lbs	Other:VOC		x				100.0%	24,480.00	100%	24,480.00	12.24
195	65	810820	Lubricant, Protecto-Flex	1,282.00	ea	15	oz	1,201.88	lbs	Other:VOC		x				50.0%	600.94	100%	600.94	0.30
25	110	813220	Sealant, Silicone Lt Gray Starbrite RT	5.00	o (10.3 fl o	8.68	#/gl	3.49	lbs	Other:VOC		x				5.0%	0.17	100%	0.17	0.00
15	20	825745	Paint, Acrylic Black Fast Drying	144.00	gal	8.345	#/gl	1,201.68	lbs	Other:VOC		x				6.1%	73.30	100%	73.30	0.04
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			7.5%	237.60	100%	237.60	0.12
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Dipropylene Glycol Monobutyl Ether	29911-28-2	x	x			3.0%	95.04	100%	95.04	0.05
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Other:VOC		x				78.2%	2,477.38	100%	2,477.38	1.24
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Acetone	67-64-1				x	27.5%	1.83	100%	1.83	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other:VOC		x				7.5%	0.50	100%	0.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other:VOC		x				17.5%	1.17	100%	1.17	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Propylene Glycol Monomethyl Ether Acetate	108-65-6	x	x			7.5%	0.50	100%	0.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Toluene	108-88-3	x	x			22.5%	1.50	100%	1.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Xylene	1330-20-7	x	x			17.5%	1.17	100%	1.17	0.00
10	30	863142	Adhesive, Glue Instabond	527.00	ea	1.75	oz	57.64	lbs	Other:VOC		x				86.0%	49.57	100%	49.57	0.02
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Hydroquinone	123-31-6	x	x			0.1%	0.02	100%	0.02	0.00
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Other:VOC		x				99.8%	20.90	100%	20.90	0.01
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40		2-Butoxyethanol	111-76-2	x	x			2.9%	406.08	100%	406.08	0.20
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40	lbs	Ethylene Glycol	107.21-1	x	x			2.9%	406.08	100%	406.08	0.20
15	70	868885	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			50.0%	928.20	100%	928.20	0.46
15	70	868893	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs	Other:VOC		x				30.0%	556.92	100%	556.92	0.28
15	120	868901	Thinner, Btm Paint Brushing Dewaxer	64.00	gal	7.1	#/gl	454.40	lbs	Other VOC		x				100.0%	454.40	100%	454.40	0.23
10	120	893420	Gelcoat, Black Backcoat					1,380.00	lbs	Styrene	100-42-5	x	x			32.0%	441.60	48%	211.97	0.11
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	76.80	48%	36.86	0.02
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Styrene	100-42-5	x	x			24.0%	460.80	48%	221.18	0.11
10	120	894790	Gelcoat, Bone Backcoat					2,580.00	lbs	Styrene	100-42-5	x	x			32.0%	825.60	48%	396.29	0.20
10	110	896886	Gunk, Hvy Wt Bonding Putty Lg					56,654.00	lbs	Styrene	100-42-5	x	x			12.0%	6,798.48	11.0%	747.83	0.37
175	15	900381	Cleaner, Dishsoap	8.00	gal	8.6	#/gl	68.80	lbs	Other:VOC		x				1.4%	0.96	100%	0.96	0.00
25	110	911859	Sealant, Silicone Clear (Corian)	170.00	ea	1.5	oz	15.94	lbs	Other:VOC		x				5.0%	0.80	100%	0.80	0.00
25	110	918706	Sealant, Joint Compound Bone/Bisqu	302.00	ea	1.5	oz	28.31	lbs	Other:VOC		x				40.0%	11.33	100%	11.33	0.01
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Methyl Alcohol	67-56-1	x	x			47.5%	1.43	100%	1.43	0.00
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Toluene	108-88-3	x	x			52.5%	1.58	100%	1.58	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Methyl Ethyl Ketone	78-93-3	x	x			40.0%	2.18	100%	2.18	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Other:VOC						8.7%	0.47	100%	0.47	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Toluene	108-88-3	x	x			10.0%	0.55	100%	0.55	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	Acetone	67-64-1				x	15.0%	0.86	100%	0.86	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	MDI	101-68-8	x	x			3.9%	0.22	na	negl	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	Methyl Ethyl Ketone	78-93-3	x	x			45.0%	2.58	100%	2.58	0.00
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	MDI	101-68-8	x	x			1.0%	1.82	na	negl	0.00
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	Toluene	108-88-3	x	x			5.0%	9.08	100%	9.08	0.00
10	120	946327	Gelcoat, Black					648.00	lbs	Methyl Methacrylate	80-62-6	x	x			3.0%	19.44	51%	9.91	0.00
10	120	946327	Gelcoat, Black					648.00	lbs	Styrene	100-42-5	x	x			37.7%	244.42	51%	124.65	0.06
15	60	983130	Paint, Latex Cream Touch-Up Btl w/B	36.00	ea	0.6	oz	1.35	lbs	Other:VOC		x				27.6%	0.37	100%	0.37	0.00

Table 2-1a. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	60	983130	Paint, Latex Cream Touch-Up Btl w/B	36.00	ea	0.6	oz	1.35	lbs	Xylene	1330-20-7	x	x			30.0%	0.41	100%	0.41	0.00
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	631.20	48%	302.98	0.15
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs	Styrene	100-42-5	x	x			24.0%	3,787.20	48%	1,817.86	0.91
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	36.00	48%	17.28	0.01
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs	Styrene	100-42-5	x	x			24.0%	216.00	48%	103.68	0.05
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	12.00	48%	5.76	0.00
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs	Styrene	100-42-5	x	x			24.0%	72.00	48%	34.56	0.02
10	120	1003250	Gelcoat, Tan Backcoat					300.00	lbs	Styrene	100-42-5	x	x			32.0%	96.00	48%	46.08	0.02
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs	Acetone	67-64-1				x	77.5%	1.11	100%	1.11	0.00
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs	Isobutane	75-28-5	x		x		22.5%	0.32	100%	0.32	0.00
25	110	1019231	Sealant, Pipe (PST)	26.00	ea (10 ml)	9.18	#/gl	0.63	lbs	Other:VOC		x				13.3%	0.08	100%	0.08	0.00
25	110	1081694	Sealant, Silicone Cream Starbrite RT	133.00	b (10.3 fl o	8.68	#/gl	92.90	lbs	Other:VOC		x				5.0%	4.64	100%	4.64	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Acetone	67-64-1				x	32.0%	9.89	100%	9.89	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Ethylbenzene	100-41-4	x	x			4.0%	1.24	100%	1.24	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Other:VOC		x				27.2%	8.42	100%	8.42	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Xylene	1330-20-7	x	x			21.0%	6.49	100%	6.49	0.00
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Other:VOC		x				77.9%	21.06	100%	21.06	0.01
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Toluene	108-88-3	x	x			3.0%	0.81	100%	0.81	0.00
25	110	1096072	Sealant, Silicone Zephyr RTV	484.00	b (10.3 fl o	8.68	#/gl	338.06	lbs	Other:VOC		x				5.0%	16.90	100%	16.90	0.01
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Methyl Alcohol	67-56-1	x	x			16.04%	939.92	100%	939.92	0.47
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			1.00%	58.60	100%	58.60	0.03
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Other:VOC		x				82.96%	4,861.32	100%	4,861.32	2.43
195	35	1105485	Wax, Gruber Care X-Wax Soft	26.00	bx (2.5 gal)	7.93	#/gl	515.45	lbs	Other:VOC		x				15.0%	77.32	100%	77.32	0.04
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Acetone	67-64-1				x	24.0%	291.23	100%	291.23	0.15
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10.0%	121.34	100%	121.34	0.06
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			10.0%	121.34	100%	121.34	0.06
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Other:VOC		x				22.0%	266.96	100%	266.96	0.13
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Toluene	108-88-3	x	x			4.0%	48.54	100%	48.54	0.02
25	100	1151588	Safety Clean Solvent	330.00	gal	6.65	#/gl	2,194.50	lbs	Other:VOC		x				100.0%	2,194.50	100%	2,194.50	1.10
10	30	1209303	Adhesive, Spray Whisper	714.00	gal	9.89	#/gl	7,061.46	lbs	Other:VOC		x				70.0%	4,943.02	100%	4,943.02	2.47
10	190	1226638	Resin, Hydropell A-35					23,220.00	lbs	Styrene	100-42-5	x	x			35.0%	8,127.00	11%	893.97	0.45
10	110	1235316	Gunk, Lt Wt Bonding Putty LV					51,840.00	lbs	Styrene	100-42-6	x	x			16.0%	8,294.40	11.0%	912.38	0.46
10	110	1235324	Gunk, Lt Wt Bonding Putty LG					48,000.00	lbs	Styrene	100-42-7	x	x			16.0%	7,680.00	11.0%	844.80	0.42
			TOTAL																435,274.10	217.64
			Subtotals																	
			Total VOC Compounds (VOC)																422,181.12	211.09
			Total Hazardous Air Pollutants (HAPs)																297,433.50	148.72
			Total Acetone																13,092.98	6.55
			Total Regulated and Toxic Substances (RFS)																6,875.76	3.44

Table 2-1b. Proposed Emissions Calculations

9937586Y/FTI/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Methyl Methacrylate	80-62-6	x	x			47.9%	80.47	100%	80.47	0.04
10	60	699553	Gel Patch, Slow Patchaid					168.00	lbs	Styrene	100-42-5	x	x			48.0%	80.64	100%	80.64	0.04
10	110	102574	Flexbond Putty	984.00	gal	9.17	#/gl	9,023.28	lbs	Styrene	100-42-5	x	x			34.5%	3,113.03	11.0%	342.43	0.17
10	110	581975	Polyester Putty	1,602.00	gal	13.27	#/gl	21,258.54	lbs	Styrene	100-42-5	x	x			15.0%	3,188.78	11.0%	350.77	0.18
10	110	723080	Hvy Wt Bonding Putty					74,204.00	lbs	Styrene	100-42-5	x	x			15.0%	11,130.60	11.0%	1,224.37	0.61
10	110	761643	Hvy Wt Bond Putty Low					90,540.00	lbs	Styrene	100-42-5	x	x			15.0%	13,581.00	11.0%	1,493.91	0.75
10	110	896886	Gunk, Hvy Wt Bonding Putty Lg					56,654.00	lbs	Styrene	100-42-5	x	x			12.0%	6,798.48	11.0%	747.83	0.37
10	110	1235316	Gunk, Lt Wt Bonding Putty LV					51,840.00	lbs	Styrene	100-42-6	x	x			16.0%	8,294.40	11.0%	912.38	0.46
10	110	1235324	Gunk, Lt Wt Bonding Putty LG					48,000.00	lbs	Styrene	100-42-7	x	x			16.0%	7,680.00	11.0%	844.80	0.42
10	120	100073	Orange Tooling					54.00	lbs	Methyl Methacrylate	80-62-6	x	x			5.0%	2.70	54%	1.46	0.00
10	120	100073	Orange Tooling					54.00	lbs	Styrene	100-42-5	x	x			40.8%	22.01	54%	11.89	0.01
10	120	101154	Bilge Grey Gc					184,765.00	lbs	Styrene	100-42-5	x	x			34.4%	63,562.86	16.5%	10,487.87	5.24
10	120	101436	Black Tooling					162.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.4%	7.12	54%	3.84	0.00
10	120	101436	Black Tooling					162.00	lbs	Styrene	100-42-5	x	x			42.5%	68.79	54%	37.15	0.02
10	120	437145	Webbing Solution	128.00	gal	7	#/gl	896.00	lbs	Acetone	67-64-1				x	85.0%	761.60	100%	761.60	0.38
10	120	556944	Antique White Gel					37,055.00	lbs	Methyl Methacrylate	80-62-6	x	x			3.0%	1,111.65	48%	533.59	0.27
10	120	556944	Antique White Gel					37,055.00	lbs	Styrene	100-42-5	x	x			35.0%	12,969.25	48%	6,225.24	3.11
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	19,334.96	48%	9,280.78	4.64
10	120	677732	Arctic White Gel Coat					483,374.00	lbs	Styrene	100-42-5	x	x			28.5%	137,848.60	48%	66,167.33	33.08
10	120	680751	Bilge Grey Gel Coat					55,290.00	lbs	Styrene	100-42-5	x	x			30.0%	16,587.00	48.0%	7,961.76	3.98
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Methyl Methacrylate	80-62-6	x	x			9.4%	1,768.42	48%	848.84	0.42
10	120	721126	Gelcoat, Zephyr Armorcote					18,773.00	lbs	Styrene	100-42-5	x	x			33.7%	6,320.87	48%	3,034.02	1.52
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Methyl Methacrylate	80-62-6	x	x			5.0%	64.80	54%	34.99	0.02
10	120	721548	Airless Tooling Gel Coat					1,296.00	lbs	Styrene	100-42-5	x	x			42.7%	553.52	54%	298.90	0.15
10	120	893420	Gelcoat, Black Backcoat					1,380.00	lbs	Styrene	100-42-5	x	x			32.0%	441.60	48%	211.97	0.11
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	76.80	48%	36.86	0.02
10	120	894782	Gelcoat, Sandstone					1,920.00	lbs	Styrene	100-42-5	x	x			24.0%	460.80	48%	221.18	0.11
10	120	894790	Gelcoat, Bone Backcoat					2,580.00	lbs	Styrene	100-42-5	x	x			32.0%	825.60	48%	396.29	0.20
10	120	946327	Gelcoat, Black					648.00	lbs	Methyl Methacrylate	80-62-6	x	x			3.0%	19.44	51%	9.91	0.00
10	120	946327	Gelcoat, Black					648.00	lbs	Styrene	100-42-5	x	x			37.7%	244.42	51%	124.65	0.06
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	631.20	48%	302.98	0.15
10	120	987792	Gelcoat, Aurora (Granicoat)					15,780.00	lbs	Styrene	100-42-5	x	x			24.0%	3,787.20	48%	1,817.86	0.91
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	36.00	48%	17.28	0.01
10	120	992677	Gelcoat, Burnt Amber (Granicoat)					900.00	lbs	Styrene	100-42-5	x	x			24.0%	216.00	48%	103.68	0.05
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs	Methyl Methacrylate	80-62-6	x	x			4.0%	12.00	48%	5.76	0.00
10	120	992685	Gelcoat, Oceanic (Granicoat)					300.00	lbs	Styrene	100-42-5	x	x			24.0%	72.00	48%	34.56	0.02
10	*120*	*1003250*	*Gelcoat, Tan Backcoat*					300.00	lbs	Styrene	100-42-5	x	x			32.0%	96.00	48%	46.08	0.02
10	140	308205	Clear Mekp-9H					14,822.00	lbs	Dimethyl Phthalate	131-11-3	x	x			43.0%	6,373.46	na	neg	0.00
10	140	308205	Clear Mekp-9H					14,822.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			2.0%	296.44	48%	142.29	0.07
10	140	308213	Red Mekp9-H					39,302.00	lbs	Dimethyl Phthalate	131-11-3	x	x			50.0%	19,651.00	na	neg	0.00
10	140	308213	Red Mekp9-H					39,302.00	lbs	Xylene	1330-20-7	x	x			17.5%	6,877.85	100%	6,877.85	3.44
10	190	101410	Polygard 33-441					2,438.00	lbs	Hexachloroethane	67-72-1	x	x			4.1%	100.69	11%	11.08	0.01
10	190	101410	Polygard 33-441					2,438.00	lbs	Styrene	100-42-5	x	x			37.2%	906.69	11%	99.74	0.05
10	190	619981	Alpha Altek 80602F					3,552,635.00	lbs	Styrene	100-42-5	x	x			35.0%	1,243,422.25	11%	136,776.45	68.39
10	190	666057	Hydropell A35					210,060.00	lbs	Styrene	100-42-5	x	x			35.0%	73,521.00	11%	8,087.31	4.04
10	190	1226638	Resin, Hydropell A-35					23,220.00	lbs	Styrene	100-42-5	x	x			35.0%	8,127.00	11%	893.97	0.45

Table 2-1b. Proposed Emissions Calculations

9937586Y/PTI/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			9.0%	4,800.00	100%	4,800.00	2.40
25	100	662445	Solvent, Super Flush S-280	6,006.00	gal	8.88	#/gl	53,333.28	lbs	Other:VOC		x				90.9%	48,479.95	100%	48,479.95	24.24
25	100	790477	Isopropyl Acetate					24,480.00	lbs	Other:VOC		x				100.0%	24,480.00	100%	24,480.00	12.24
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Dipropylene Glycol Methyl Ether	34590-94-8	x	x			7.5%	237.60	100%	237.60	0.12
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Dipropylene Glycol Monobutyl Ether	29911-28-2	x	x			3.0%	95.04	100%	95.04	0.05
25	100	846824	Thermaclean, Wipe-Brite					3,168.00	lbs	Other:VOC		x				78.2%	2,477.38	100%	2,477.38	1.24
			TOTAL																348,554.57	174.28

Table 2-1c. Proposed Emissions Calculations

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Hexane	110-54-3	x	x			37.5%	17.34	100%	17.34	0.01
10	30	166488	Contact Disc Cement	148.00	ea	5	oz	46.25	lbs	Other:VOC		x				27.5%	12.72	100%	12.72	0.01
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Acetone	67-64-1				x	14.5%	1,861.56	100%	1,861.56	0.93
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Other:VOC		x				39.3%	5,045.46	100%	5,045.46	2.52
10	30	191510	3M Fast Foam Adhesive	11,908.00	ea	17.25	oz	12,838.31	lbs	Pentane	109-66-0	x		x		24.2%	3,106.87	100%	3,106.87	1.55
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Methyl Alcohol	67-56-1	x	x			2.0%	0.19	100%	0.19	0.00
10	30	191569	Adhesive, Threadlocker	89.00	ea	1.69	oz	9.40	lbs	Other:VOC		x				11.3%	1.06	100%	1.06	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Acetone	67-64-1				x	70.00%	0.53	100%	0.53	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Isobutane	75-28-5	x		x		22.50%	0.17	100%	0.17	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Isopropyl Alcohol	67-63-0	x				10.00%	0.08	100%	0.08	0.00
10	30	191585	Adhesive, Threadlocker Primer Only	2.00	can	6	oz	0.75	lbs	Other:VOC		x				2.96%	0.02	100%	0.02	0.00
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15.0%	60.82	40%	24.33	0.01
10	30	191718	Adhesive, Pvc Cement	203.00	qt	7.99	#/gl	405.49	lbs	Other:VOC		x				66.5%	269.65	40%	107.86	0.05
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Acetone	67-64-1				x	17.3%	2,833.02	100%	2,833.02	1.42
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Hexane	110-54-3	x	x			34.6%	5,656.24	100%	5,656.24	2.83
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Other:VOC		x				15.2%	2,478.28	100%	2,478.28	1.24
10	30	209783	Adhesive, Contact Spray Stuck-Up	20,120.00	ea	13	oz	16,347.50	lbs	Propane	74-98-6	x		x		15.2%	2,478.28	100%	2,478.28	1.24
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Acetone	67-64-1				x	26.5%	7,078.90	100%	7,078.90	3.54
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Hexane	110-54-3	x	x			19.2%	5,128.87	100%	5,128.87	2.56
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Methyl Alcohol	67-56-1	x	x			2.5%	667.82	100%	667.82	0.33
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Other:VOC		x				19.2%	5,128.87	100%	5,128.87	2.56
10	30	321190	Lokweld Contact Adh	3,894.00	gal	6.86	#/gl	26,712.84	lbs	Toluene	108-88-3	x	x			13.0%	3,472.67	100%	3,472.67	1.74
10	30	863142	Adhesive, Glue Instabond	527.00	ea	1.75	oz	57.64	lbs	Other:VOC		x				86.0%	49.57	100%	49.57	0.02
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Hydroquinone	123-31-6	x	x			0.1%	0.02	100%	0.02	0.00
10	30	863159	Adhesive, Primer 48	335.00	ea	1	oz	20.94	lbs	Other:VOC		x				99.8%	20.90	100%	20.90	0.01
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	MDI	101-68-8	x	x			1.0%	1.82	na	negl	0.00
10	30	946012	Adhesive, Beatseal #58702	223.00	10.5 fl oz	9.93	#/gl	181.65	lbs	Toluene	108-88-3	x	x			5.0%	9.08	100%	9.08	0.00
10	30	1209303	Adhesive, Spray Whisper	714.00	gal	9.89	#/gl	7,061.46	lbs	Other:VOC		x				70.0%	4,943.02	100%	4,943.02	2.47
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Acetone	67-64-1				x	24.0%	291.23	100%	291.23	0.15
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10.0%	121.34	100%	121.34	0.06
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			10.0%	121.34	100%	121.34	0.06
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Other:VOC		x				22.0%	266.96	100%	266.96	0.13
10	35	1129691	Coating, Strippable Wht	158.00	gal	7.68	#/gl	1,213.44	lbs	Toluene	108-88-3	x	x			4.0%	48.54	100%	48.54	0.02
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Other:VOC		x				43.5%	31.95	100%	31.95	0.02
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Monomethyl Ether	108-65-6	x	x			7.2%	5.29	100%	5.29	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Toluene	108-88-3	x	x			3.7%	2.72	100%	2.72	0.00
15	90	667337	Paint, Imron Sea Ray White	8.00	gal	9.18	#/gl	73.44	lbs	Xylene	3330-20-7	x	x			1.4%	1.03	100%	1.03	0.00
25	110	156984	Sealant, Silicone	7,897.00	ea	10.3	oz	5,083.69	lbs	Other:VOC		x				3.7%	188.10	100%	188.10	0.09
25	110	156992	Sealant, Silicone	238.00	ea	10.3	oz	153.21	lbs	Other:VOC		x				3.7%	5.67	100%	5.67	0.00
25	110	157008	Sealant, Silicone	15,437.00	ea	10.3	oz	9,937.57	lbs	Other:VOC		x				3.7%	367.69	100%	367.69	0.18
25	110	209106	Sealant, Silicone	43.00	ea	3	8.72	8.79	lbs	Other:VOC		x				5.2%	0.46	100%	0.46	0.00
25	110	257600	Sealant, Pipe (PVC) w/Teflon	10.00	ea (50 ml)	9.51	#/gl	0.25	lbs	Other:VOC		x				8.6%	0.02	100%	0.02	0.00
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Ethyl Benzene	100-41-4	x	x			4.5%	10.69	100%	10.69	0.01
25	110	257907	Sealant, Urethane White Sikaflex	362.00	ea	10.5	oz	237.56	lbs	Xylene	1330-20-7	x	x			4.5%	10.69	100%	10.69	0.01
25	110	277731	Sealant, Silicone White	92.00	ea	8	oz	46.00	lbs	Other:VOC		x				4.0%	1.84	100%	1.84	0.00
25	110	352443	Sealant, Silicone	1,093.00	ea	3	8.7	222.87	lbs	Other:VOC		x				5.2%	11.59	100%	11.59	0.01

Table 2-1c. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
25	110	813220	Sealant, Silicone Lt Gray Starbrite RT	5.00	b (10.3 fl o	8.68	#/gl	3.49	lbs	Other:VOC		x				5.0%	0.17	100%	0.17	0.00
25	110	911859	Sealant, Silicone Clear (Corian)	170.00	ea	1.5	oz	15.94	lbs	Other:VOC		x				5.0%	0.80	100%	0.80	0.00
25	110	918706	Sealant, Joint Compound Bone/Bisqu	302.00	ea	1.5	oz	28.31	lbs	Other:VOC		x				40.0%	11.33	100%	11.33	0.01
25	110	1019231	Sealant, Pipe (PST)	26.00	ea (10 ml)	9.18	#/gl	0.63	lbs	Other:VOC		x				13.3%	0.08	100%	0.08	0.00
25	110	1081694	Sealant, Silicone Cream Starbrite RT	133.00	b (10.3 fl o	8.68	#/gl	92.90	lbs	Other:VOC		x				5.0%	4.64	100%	4.64	0.00
25	110	1096072	Sealant, Silicone Zephyr RTV	484.00	b (10.3 fl o	8.68	#/gl	338.06	lbs	Other:VOC		x				5.0%	16.90	100%	16.90	0.01
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Methyl Alcohol	67-56-1	x	x			50.0%	2294.75	100%	2,294.75	1.15
25	30	194415	Denatured Alcohol	685.00	gal	6.7	#/gl	4,589.50	lbs	Other:VOC		x				47.5%	2180.01	100%	2,180.01	1.09
25	30	270009	Chemical, Mineral Spirits	161.00	gal	6.43	#/gl	1,035.23	lbs	Other:VOC		x				100.0%	1035.23	100%	1,035.23	0.52
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Methyl Alcohol	67-56-1	x	x			16.04%	939.92	100%	939.92	0.47
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			1.00%	58.60	100%	58.60	0.03
25	30	1104843	Alcohol, Denatured	872.00	gal	6.72	#/gl	5,859.84	lbs	Other:VOC		x				82.96%	4,861.32	100%	4,861.32	2.43
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Acetone	67-64-1				x	13.7%	1.11	100%	1.11	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Methyl Ethyl Ketone	78-93-3	x	x			9.1%	0.74	100%	0.74	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Other:VOC		x				63.5%	5.16	100%	5.16	0.00
195	60	277681	Seam Fill Antique White	130.00	ea	1	oz	8.13	lbs	Xylene	1330-20-7	x	x			13.7%	1.11	100%	1.11	0.00
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Hexane	110-54-3	x	x			15.0%	600.30	100%	600.30	0.30
195	65	191734	Silicone Spray Lubricant	2,668.00	can	24	oz	4,002.00	lbs	Other:VOC		x				80.0%	3201.60	100%	3,201.60	1.60
195	65	810820	Lubricant, Protecto-Flex	1,282.00	ea	15	oz	1,201.88	lbs	Other:VOC		x				50.0%	600.94	100%	600.94	0.30
			TOTAL																67,425.57	33.71

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Table 2-1d. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1d

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	10	102491	Additive, Retardant Butyl Cellulose	20.40	gal	7.48	#/gl	152.59	lbs	2-Butoxyethanol	111-76-2	x	x			100.0%	152.59	100%	152.59	0.08
15	10	667451	Additive, Activator Imron	12.00	qt	8.01	#/gl	24.03	lbs	Other:VOC		x				67.8%	16.29	100%	16.29	0.01
15	20	825745	Paint, Acrylic Black Fast Drying	144.00	gal	8.345	#/gl	1,201.68	lbs	Other:VOC		x				6.1%	73.30	100%	73.30	0.04
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Other:VOC		x				20.0%	441.04	100%	441.04	0.22
15	30	592790	Bottomkote Black	149.00	gal	14.8	#/gl	2,205.20	lbs	Xylene	1330-20-7	x	x			5.0%	110.26	100%	110.26	0.06
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Other:VOC		x				17.0%	5.54	100%	5.54	0.00
15	30	592816	Paint, Bottom Red	2.00	gal	16.3	#/gl	32.60	lbs	Xylene	1330-20-7	x	x			5.0%	1.63	100%	1.63	0.00
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Methylene Chloride	75-09-2		x			10.7%	24.78	100%	24.78	0.01
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Other:VOC		x				48.3%	63.52	100%	63.52	0.03
15	30	612077	Epoxy Btm Coat w/Hardener 2001	18.00	gal	7.3	#/gl	131.40	lbs	Xylene	1330-20-7	x	x			38.0%	49.93	100%	49.93	0.02
15	30	612077	Epoxy Btm Coat w/Hardener 2000	18.00	gal	12.9	#/gl	232.20	lbs	Xylene	1330-20-7	x	x			7.7%	17.81	100%	17.81	0.01
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/1	19.00	gal	8.1	#/gl	153.90	lbs	Other:VOC		x				35.5%	54.63	100%	54.63	0.03
15	30	612085	Epoxy, Btm Coat w/Hardener 1000/1	19.00	gal	8.1	#/gl	153.90	lbs	Phenol	108-95-2	x	x			12.5%	19.24	100%	19.24	0.01
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40		2-Butoxyethanol	111-76-2	x	x			2.9%	406.08	100%	406.08	0.20
15	30	868885	Paint, Bottom Black (Aqua-Clean)	716.00	gal	19.9	#/gl	14,248.40	lbs	Ethylene Glycol	107.21-1	x	x			2.9%	406.08	100%	406.08	0.20
15	120	592899	Bottom Paint Thinner	48.00	gal	7.3	#/gl	350.40	lbs	Xylene	1330-20-7	x	x			100.0%	350.40	100%	350.40	0.18
15	120	868901	Thinner, Btm Paint Brushing Dewaxer	64.00	gal	7.1	#/gl	454.40	lbs	Other VOC		x				100.0%	454.40	100%	454.40	0.23
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			13.0%	11.70	100%	11.70	0.01
25	100	604025	Solvent, Vinyl-Lux Primer Wash	12.00	gal	7.5	#/gl	90.00	lbs	Other:VOC		x				69.0%	62.10	100%	62.10	0.03
25	160	761346	Poly vinyl Alcohol	74.00	gal	7.63	#/gl	564.62	lbs	Other:VOC		x				44.2%	249.56	100%	249.56	0.12
175	15	191742	Cleaner, Glass	125.00	btl	20	oz	156.25	lbs	2-Butoxyethanol	111-76-2	x	x			5.7%	8.95	100%	8.95	0.00
175	15	191742	Cleaner, Glass Spartan	125.00	btl	20	oz	156.25	lbs	Isobutane	75-28-5	x		x		5.7%	8.95	100%	8.95	0.00
175	15	192898	Bilge Cleaner	2.00	ea	16	oz	2.00	lbs	Other:VOC		x				1.0%	0.02	100%	0.02	0.00
175	15	192922	Cleaner, Vinyl Formula Lr	5.00	can	14	oz	4.38	lbs	Other:VOC		x				95.0%	4.16	100%	4.16	0.00
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Other:VOC		x				80.0%	1,213.60	100%	1,213.60	0.61
175	15	225417	Cleaner, Industrial Citrus Base	1,312.00	can	18.5	oz	1,517.00	lbs	Propane	74-98-6	x		x		20.0%	303.40	100%	303.40	0.15
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Other:VOC		x				32.5%	4.55	100%	4.55	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Perchloroethylene	127-18-4	x	x			22.5%	3.15	100%	3.15	0.00
175	15	230557	Cleaner, Spot Remover	14.00	can	16	oz	14.00	lbs	Trichloroethylene	79-01-6	x	x			42.5%	5.95	100%	5.95	0.00
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	2-Butoxyethanol	111-76-2	x	x			6.0%	2.57	100%	2.57	0.00
175	15	440727	Cleaner, All Purpose	36.00	can	19	oz	42.75	lbs	Propane	74-98-6	x		x		5.0%	2.14	100%	2.14	0.00
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Other:VOC		x				8.4%	9.65	100%	9.65	0.00
175	15	645952	Cleaner, TFX	14.00	gal	8.21	#/gl	114.94	lbs	Xylene	1330-20-7	x	x			1.6%	1.84	100%	1.84	0.00
175	15	662437	Cleaner, Super Blue Resin	2,112.00	gal	8.8	#/gl	18,585.60	lbs	Dipropylene glycol methyl ether	34950-94-8	x	x			7.0%	1,300.99	100%	1,300.99	0.65
175	15	900381	Cleaner, Dishsoap	8.00	gal	8.6	#/gl	68.80	lbs	Other:VOC		x				1.4%	0.96	100%	0.96	0.00
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs	Acetone	67-64-1				x	77.5%	1.11	100%	1.11	0.00
175	15	1004217	Cleaner, PVC Klean-N-Prime	26.00	ea	0.88	oz	1.43	lbs	Isobutane	75-28-5	x		x		22.5%	0.32	100%	0.32	0.00
195	35	164939	Compound, Edge Wax Fin-Kare	13.00	ea (gal)	6.65	#/gl	86.45	lbs	Other:VOC		x				44.7%	38.64	100%	38.64	0.02
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Formaldehyde	50-00-0	x	x			0.5%	0.24	100%	0.24	0.00
195	35	179341	Compound Sealer Glaze	11.00	gal	8.75	#/gl	48.13	lbs	Other:VOC		x				33.0%	15.88	100%	15.88	0.01
195	35	179358	Compound, Mold Release TR Hi-Tem	310.00	can	14	oz	271.25	lbs	Other:VOC		x				70.0%	189.88	100%	189.88	0.09
195	35	192864	Super Polyglaze	86.00	cn (2 qt)	7.92	#/gl	340.56	lbs	Other:VOC		x				65.0%	221.36	100%	221.36	0.11
195	35	192872	Imperial Hand Glaze	16.00	cn (qt)	7.92	#/gl	31.68	lbs	Other:VOC		x				14.3%	4.53	100%	4.53	0.00
195	35	194274	Cpd Polishing Lackryl	72.00	gal	11.68	#/gl	840.96	lbs	Other:VOC		x				2.4%	20.18	100%	20.18	0.01
195	35	194282	Compound, Polishing Dixtler	20.00	gal	10.81	#/gl	216.20	lbs	Other:VOC		x				33.3%	72.06	100%	72.06	0.04

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Table 2-1d. Proposed Emissions Calculations

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Ethylbenzene	100-41-4	x	x			0.1%	0.61	100%	0.61	0.00
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Other:VOC		x				22.8%	139.37	100%	139.37	0.07
195	35	353482	Compound, Polishing Finesse It II	293.00	qt	8.345	#/gl	611.27	lbs	Xylene	1330-20-7	x	x			0.1%	0.61	100%	0.61	0.00
195	35	715581	Cpd Polishing Lackryl 5 gal	101.00	pl (5 gl)	11.68	#/gl	5,898.40	lbs	Other:VOC		x				2.4%	141.56	100%	141.56	0.07
195	35	1105485	Wax, Gruber Care X-Wax Soft	26.00	bx (2.5 gal)	7.93	#/gl	515.45	lbs	Other:VOC		x				15.0%	77.32	100%	77.32	0.04
			TOTAL																6,765.45	3.38

Table 2-1e. Proposed Emissions Calculations

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Methyl Ethyl Ketone	78-93-3	x	x			3.0%	4.00	100%	4.00	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Other:VOC		x				65.5%	87.25	100%	87.25	0.04
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Toluene	108-88-3	x	x			3.0%	4.00	100%	4.00	0.00
15	50	102475	Moist Resist Lacquer	18.00	gal	7.4	#/gl	133.20	lbs	Xylene	1330-20-7	x	x			4.0%	5.33	100%	5.33	0.00
15	50	191429	Paint, Lacquer HI-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Methyl Ethyl Ketone	78-93-3	x	x			4.0%	21.64	100%	21.64	0.01
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Other:VOC		x				69.0%	373.25	100%	373.25	0.19
15	50	191429	Paint, Lacquer Hi-Gloss For Vitracore	74.00	gal	7.31	#/gl	540.94	lbs	Xylene	1330-20-7	x	x			3.0%	16.23	100%	16.23	0.01
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Acetone	67-64-1				x	49.0%	88.20	100%	88.20	0.04
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Methyl Alcohol	67-56-1	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			1.0%	1.80	100%	1.80	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Other:VOC		x				17.0%	30.60	100%	30.60	0.02
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Propane	74-98-6	x		x		15.0%	27.00	100%	27.00	0.01
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Toluene	108-88-3	x	x			3.0%	5.40	100%	5.40	0.00
15	50	191858	Fast Dry Lacquer	240.00	can	12	oz	180.00	lbs	Xylene	1330-20-7	x	x			1.0%	1.80	100%	1.80	0.00
15	60	101485	Paint, Latex Black (Delta Labs)	1,246.00	gal	10.1	#/gl	12,584.60	lbs	Ethylene Glycol	107-21-1	x	x			2.9%	364.95	100%	364.95	0.18
15	60	983130	Paint, Latex Cream Touch-Up Btl w/B	36.00	ea	0.6	oz	1.35	lbs	Other:VOC		x				27.6%	0.37	100%	0.37	0.00
15	60	983130	Paint, Latex Cream Touch-Up Btl w/B	36.00	ea	0.6	oz	1.35	lbs	Xylene	1330-20-7	x	x			30.0%	0.41	100%	0.41	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Hexane	110-54-3	x	x			18.0%	1.24	100%	1.24	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Methyl Ethyl Ketone	78-93-3	x	x			8.0%	0.55	100%	0.55	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Other:VOC		x				33.0%	2.28	100%	2.28	0.00
15	70	101923	Paint, Plasti-Dip (Red)	1.00	gal	6.91	#/gl	6.91	lbs	Toluene	108-88-3	x	x			15.0%	1.04	100%	1.04	0.00
15	70	868885	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			50.0%	928.20	100%	928.20	0.46
15	70	868893	Paint, Primer Sandless	238.00	gal	7.8	#/gl	1,856.40	lbs	Other:VOC		x				30.0%	556.92	100%	556.92	0.28
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Butane	106-97-8	x		x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Isobutane	75-28-5	x		x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Other:VOC		x				8.1%	206.61	100%	206.61	0.10
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Propane	74-98-6	x		x		11.7%	295.96	100%	295.96	0.15
15	80	181255	Paint, Spray Pt (Black)	3,692.00	can	11	oz	2,538.25	lbs	Toluene	108-88-3	x	x			25.0%	634.56	100%	634.56	0.32
15	80	181255	Paint, Spray Pt (Black)	4,430.00	can	11	oz	3,045.63	lbs	Xylene	1330-20-7	x	x			12.5%	380.70	100%	380.70	0.19
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Acetone	67-64-1				x	45.0%	2.70	100%	2.70	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Methyl Ethyl Ketone	78-93-3	x	x			11.0%	0.66	100%	0.66	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Other:VOC		x				31.0%	1.86	100%	1.86	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Propane	74-98-6	x		x		3.0%	0.18	100%	0.18	0.00
15	80	191866	Paint, Spray Black Hi-Temp	8.00	can	12	oz	6.00	lbs	Toluene	108-88-3	x	x			10.0%	0.60	100%	0.60	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Acetone	67-64-1				x	36.0%	13.23	100%	13.23	0.01
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Butane	106-97-8	x		x		8.0%	2.94	100%	2.94	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Other:VOC		x				1.0%	0.37	100%	0.37	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propane	74-98-6	x		x		16.0%	5.88	100%	5.88	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Propylene Glycol Methyl Ether Acetate	108-65-6	x	x			12.5%	4.59	100%	4.59	0.00
15	80	191882	Paint, Spray Red	49.00	can	12	oz	36.75	lbs	Xylene	1330-20-7	x	x			12.0%	4.41	100%	4.41	0.00
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Other:VOC		x				50.8%	391.00	100%	391.00	0.20
15	80	191924	Spray Paint Hard Hat	821.00	can	15	oz	769.69	lbs	Xylene	1330-20-7	x	x			1.0%	7.70	100%	7.70	0.00
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Butane	106-97-8	x		x		11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Isobutane	75-28-5	x		x		11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Other:VOC		x				8.1%	10.30	100%	10.30	0.01

Table 2-1e. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1

CC	SC	MRP #	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Propane	74-98-6	x		x		11.7%	14.75	100%	14.75	0.01
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Toluene	108-88-3	x	x			25.0%	31.63	100%	31.63	0.02
15	80	191932	Paint, Spray Pt (White)	184.00	can	11	oz	126.50	lbs	Xylene	1330-20-7	x	x			12.5%	15.81	100%	15.81	0.01
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Acetone	67-64-1				x	27.0%	10.13	100%	10.13	0.01
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Butane	106-97-8	x		x		6.0%	2.25	100%	2.25	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Other:VOC		x				15.9%	5.96	100%	5.96	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Propane	74-98-6	x		x		14.0%	5.25	100%	5.25	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Toluene	108-88-3	x	x			10.0%	3.75	100%	3.75	0.00
15	80	716936	Paint, Spray White High Glass "Hard	40.00	can	15	oz	37.50	lbs	Xylene	1330-20-7	x	x			3.0%	1.13	100%	1.13	0.00
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Methyl Alcohol	67-56-1	x	x			47.5%	1.43	100%	1.43	0.00
15	80	945980	Primer, Beataseal #43518	55.00	30 cc btl	6.9	#/gl	3.01	lbs	Toluene	108-88-3	x	x			52.5%	1.58	100%	1.58	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Methyl Ethyl Ketone	78-93-3	x	x			40.0%	2.18	100%	2.18	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Other:VOC						8.7%	0.47	100%	0.47	0.00
15	80	945998	Primer, Beataseal #43520	84.00	30 cc btl	8.2	#/gl	5.46	lbs	Toluene	108-88-3	x	x			10.0%	0.55	100%	0.55	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	Acetone	67-64-1				x	15.0%	0.86	100%	0.86	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	MDI	101-68-8	x	x			3.9%	0.22	na	negl	0.00
15	80	946004	Primer, Beataseal #43532	85.00	30 cc btl	8.5	#/gl	5.73	lbs	Methyl Ethyl Ketone	78-93-3	x	x			45.0%	2.58	100%	2.58	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Acetone	67-64-1				x	32.0%	9.89	100%	9.89	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Ethylbenzene	100-41-4	x	x			4.0%	1.24	100%	1.24	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Other:VOC		x				27.2%	8.42	100%	8.42	0.00
15	80	1084912	Paint, Spray Royal Blue "Great Day"	43.00	ea	11.5	oz	30.91	lbs	Xylene	1330-20-7	x	x			21.0%	6.49	100%	6.49	0.00
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Methyl Alcohol	67-56-1	x	x			3.9%	44.01	100%	44.01	0.02
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Methyl Ethyl Ketone	78-93-3	x	x			15.0%	171.47	100%	171.47	0.09
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Other:VOC		x				42.7%	488.10	100%	488.10	0.24
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Toluene	108-88-3	x	x			15.0%	171.47	100%	171.47	0.09
15	100	102525	Sanding Sealer	161.00	gal	7.1	#/gl	1,143.10	lbs	Xylene	1330-20-7	x	x			3.9%	44.01	100%	44.01	0.02
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Other:VOC		x				77.9%	21.06	100%	21.06	0.01
15	110	1084920	Stain, Maple Wiping	4.00	gal	6.76	#/gl	27.04	lbs	Toluene	108-88-3	x	x			3.0%	0.81	100%	0.81	0.00
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Acetone	67-64-1				x	5.0%	137.09	100%	137.09	0.07
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Methyl Ethyl Ketone	78-93-3	x	x			10.0%	274.18	100%	274.18	0.14
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			25.0%	685.44	100%	685.44	0.34
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Other:VOC		x				25.0%	685.44	100%	685.44	0.34
15	120	440230	T-70 Lacquer Thinner	408.00	gal	6.72	#/gl	2,741.76	lbs	Toluene	108-88-3	x	x			35.0%	959.62	100%	959.62	0.48
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Methyl Isobutyl Ketone	108-10-1	x	x			3.0%	39.42	100%	39.42	0.02
15	120	789719	Thinner, Dykem Blue	191.00	gal	6.88	#/gl	1,314.08	lbs	Other:VOC		x				97.0%	1,274.66	100%	1,274.66	0.64
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Acetone	67-64-1				x	27.5%	1.83	100%	1.83	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other:VOC		x				7.5%	0.50	100%	0.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Other:VOC		x				17.5%	1.17	100%	1.17	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Propylene Glycol Monomethyl Ether Acetate	108-65-6	x	x			7.5%	0.50	100%	0.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Toluene	108-88-3	x	x			22.5%	1.50	100%	1.50	0.00
15	120	848242	Thinner, Lacquer PPG-DLT/16	1.00	gal	6.67	#/gl	6.67	lbs	Xylene	1330-20-7	x	x			17.5%	1.17	100%	1.17	0.00
25	30	194308	Dykem Co	11.00	gal	7.18	#/gl	78.98	lbs	Other:VOC		x				89.4%	70.61	100%	70.61	0.04
			TOTAL																10,310.30	5.16

Table 2-1f. Proposed Emissions Calculations

9937586Y/F1/WP/table2-1

CC	SC	MRP #	Basic Processes	DESCRIPTION	USAGE	UOM	WT/GAL	UOM	USAGE	UOM	Chemical	CAS #	VOC	HAP	RFS	Ace	% Chem	Chemical (lbs)	Emis Fctr	Emissions #/Yr	Emissions Tons/Yr
25	100	1151588	Maintenance	Safety Clean Solvent	330.00	gal	6.65	#/gl	2,194.50	lbs	Other:VOC		x				100.0%	2,194.50	100%	2,194.50	1.10
25	120	102665		Silicon, Lubricant (Wd-40)	5.00	gal	6.68	#/gl	33.40	lbs	Other:VOC		x				71.0%	23.71	100%	23.71	0.01
				TOTAL																2,218.21	1.11

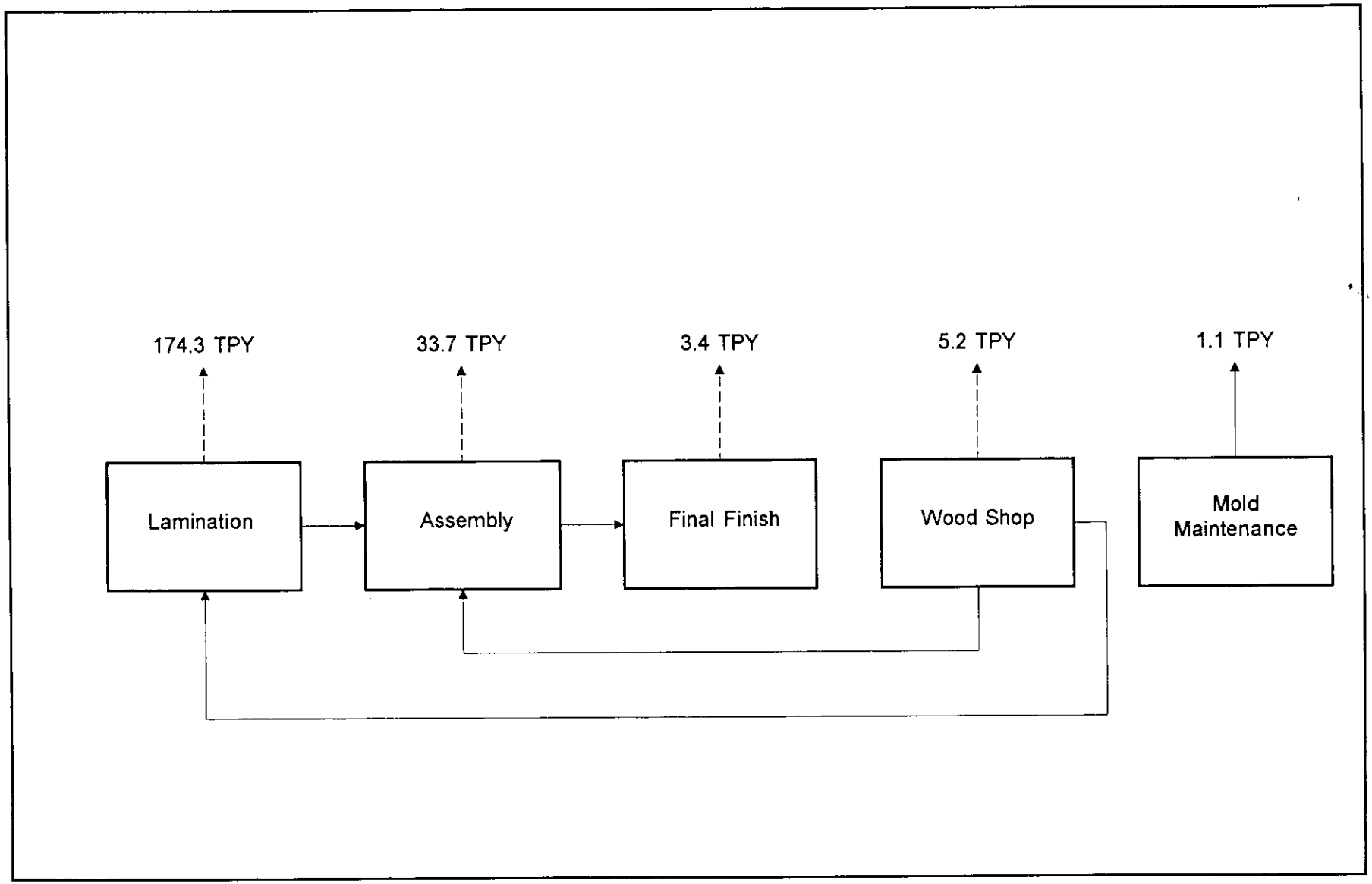


Figure 2-1
VOC Emissions Flow Diagram
Process Flow Diagram
Sea Ray Boats, Inc.
Cape Canaveral, FL

Process Flow Legend
Solid/Liquid ——→
Gas - - - →
Steam ..... →

Filename: Emisflow
Date: 09/02/99

Golder Associates

3.0 AIR QUALITY REVIEW REQUIREMENTS AND APPLICABILITY

The following discussion pertains to the federal and state air regulatory requirements and their applicability to the proposed Sea Ray Cape Canaveral Plat. These regulations must be satisfied before the proposed project can begin operation.

3.1 NATIONAL AND STATE AAQS

The existing applicable national and Florida AAQS are presented in Table 3-1. Primary national AAQS were promulgated to protect the public health, and secondary national AAQS were promulgated to protect the public welfare from any known or anticipated adverse effects associated with the presence of pollutants in the ambient air. Areas of the country in violation of AAQS are designated as nonattainment areas, and new sources to be located in or near these areas may be subject to more stringent air permitting requirements.

3.2 PSD REQUIREMENTS

3.2.1 GENERAL REQUIREMENTS

Under federal and State of Florida PSD review requirements, all major new or modified sources of air pollutants regulated under the Clean Air Act (CAA) must be reviewed and a pre-construction permit issued. EPA has approved Florida's State Implementation Plan (SIP), which contains PSD regulations; therefore, PSD approval authority has been granted to DEP.

A "major facility" is defined as any one of 28 named source categories that have the potential to emit 100 tons per year (TPY) or more or any other stationary facility that has the potential to emit 250 TPY or more of any pollutant regulated under CAA. "Potential to emit" means the capability, at maximum design capacity, to emit a pollutant after the application of control equipment.

A "major modification" is defined under PSD regulations as a change at an existing major facility that increases emissions by greater than significant amounts. PSD significant emission rates are shown in Table 3-2.

EPA has promulgated as regulations certain increases above an air quality baseline concentration level of SO_2, PM_{10}, and NO_2 concentrations that would constitute significant deterioration. The EPA class designations and allowable PSD increments are presented in Table 3-1. The State of Florida has adopted the EPA class designations and allowable PSD increments for SO_2, PM_{10}, and NO_2 increments.

PSD review is used to determine whether significant air quality deterioration will result from the new or modified facility. Federal PSD requirements are contained in 40 CFR 52.21, Prevention of Significant Deterioration of Air Quality. The State of Florida has adopted PSD regulations in Rule 62-212.400 F.A.C. Major facilities and major modifications are required to undergo the following analysis related to PSD for each pollutant emitted in significant amounts:

1. Control technology review,
2. Source impact analysis,
3. Air quality analysis (monitoring),
4. Source information, and
5. Additional impact analyses.

In addition to these analyses, a new facility also must be reviewed with respect to GEP stack height regulations if air quality analyses are required. Discussions concerning each of these requirements are presented in the following sections.

3.2.2 CONTROL TECHNOLOGY REVIEW

The control technology review requirements of the federal and state PSD regulations require that all applicable federal and state emission-limiting standards be met, and that BACT be applied to control emissions from the source (Rule 62-212.400, F.A.C.). The BACT requirements are applicable to all regulated pollutants for which the increase in emissions from the facility or modification exceeds the significant emission rate (see Table 3-2).

BACT is defined in 52.21 (b)(12) and Rule 62-210.200(42), F.A.C., as:

> An emissions limitation (including a visible emission standard) based on the maximum degree of reduction of each pollutant subject to regulation under the

> Act which would be emitted by any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular part of a source or facility would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reductions achievable by implementation of such design, equipment, work practice, or operation and shall provide for compliance by means which achieve equivalent results.

BACT was promulgated within the framework of the PSD requirements in the 1977 amendments of the CAA [Public Law 95-95; Part C, Section 165(a)(4)]. The primary purpose of BACT is to optimize consumption of PSD air quality increments and thereby enlarge the potential for future economic growth without significantly degrading air quality (EPA, 1978; 1980). Guidelines for the evaluation of BACT can be found in EPA's Guidelines for Determining Best Available Control Technology (BACT) (EPA, 1978) and in the PSD Workshop Manual (EPA, 1980). These guidelines were promulgated by EPA to provide a consistent approach to BACT and to ensure that the impacts of alternative emission control systems are measured by the same set of parameters. In addition, through implementation of these guidelines, BACT in one area may not be identical to BACT in another area. According to EPA (1980), "BACT analyses for the same types of emissions unit and the same pollutants in different locations or situations may determine that different control strategies should be applied to the different sites, depending on site-specific factors. Therefore, BACT analyses must be conducted on a case-by-case basis."

The BACT requirements are intended to ensure that the control systems incorporated in the design of a proposed facility reflect the latest in control technologies used in a particular industry and take into consideration existing and future air quality in the vicinity of the proposed facility. BACT must, as a minimum, demonstrate compliance with new source performance standards (NSPS) for a source (if applicable). An evaluation of the air pollution control techniques and systems, including a cost-benefit analysis of alternative control technologies capable of achieving a higher degree of emission reduction than the proposed control technology, is required. The cost-benefit analysis requires the documentation of the materials, energy, and economic penalties associated with the proposed and alternative control systems, as well as the environmental benefits derived from these systems. A decision on BACT is to be based on sound judgment, balancing environmental benefits with energy, economic, and other impacts (EPA, 1978).

Historically, a "bottom-up" approach consistent with the BACT Guidelines and PSD Workshop Manual has been used. With this approach, an initial control level, which is usually NSPS, is evaluated against successively more stringent controls until a BACT level is selected. However, EPA developed a concern that the bottom-up approach was not providing the level of BACT decisions originally intended. As a result, in December 1987, the EPA Assistant Administrator for Air and Radiation mandated changes in the implementation of the PSD program, including the adoption of a new "top-down" approach to BACT decision making.

The top-down BACT approach essentially starts with the most stringent (or top) technology and emissions limit that have been applied elsewhere to the same or a similar source category. The applicant must next provide a basis for rejecting this technology in favor of the next most stringent technology or propose to use it. Rejection of control alternatives may be based on technical or economic infeasibility. Such decisions are made on the basis of physical differences (e.g., product size or type), location differences (e.g., availability of water), or significant differences that may exist in the environmental, economic, or energy impacts. The differences between the proposed facility and the facility on which the control technique was applied previously must be justified. EPA has issued a draft guidance document on the top-down

approach entitled Top-Down Best Available Control Technology Guidance Document (EPA, 1990).

3.2.3 SOURCE IMPACT ANALYSIS

A source impact analysis must be performed for a proposed major source subject to PSD review for each pollutant for which the increase in emissions exceeds the significant emission rate (Table 3-2). The PSD regulations specifically provide for the use of atmospheric dispersion models in performing impact analyses, estimating baseline and future air quality levels, and determining compliance with AAQS and allowable PSD increments. Designated EPA models normally must be used in performing the impact analysis. Specific applications for other than EPA-approved models require EPA's consultation and prior approval. Guidance for the use and application of dispersion models is presented in the EPA publication Guideline on Air Quality Models (Revised). The source impact analysis for criteria pollutants to address compliance with AAQS and PSD Class II increments may be limited to the new or modified source if the net increase in impacts as a result of the new or modified source is above significance levels, as presented in Table 3-1.

3.2.4 AIR QUALITY MONITORING REQUIREMENTS

In accordance with requirements of 40 CFR 52.21(m) and Rule 62-212.400(5)(f), F.A.C. any application for a PSD permit must contain an analysis of continuous ambient air quality data in the area affected by the proposed major stationary facility or major modification. For a new major facility, the affected pollutants are those that the facility potentially would emit in significant amounts. For a major modification, the pollutants are those for which the net emissions increase exceed the significant emission rate (see Table 3-2).

Ambient air monitoring for a period of up to 1 year generally is appropriate to satisfy the PSD monitoring requirements. A minimum of 4 months of data is required. Existing data from the vicinity of the proposed source may be used if the data meet certain quality assurance requirements; otherwise, additional data may need to be gathered. Guidance in designing a PSD monitoring network is provided in EPA's Ambient Monitoring Guidelines for Prevention of Significant Deterioration (EPA, 1987a).

The regulations include an exemption that excludes or limits the pollutants for which an air quality analysis must be conducted. This exemption states that Florida DEP may exempt a proposed major stationary facility or major modification from the monitoring requirements with respect to a particular pollutant if the emissions increase of the pollutant from the facility or modification would cause, in any area, air quality impacts less than the de minimis levels presented in Table 3-2 (Rule 62-212.400-3, F.A.C.).

3.2.5 SOURCE INFORMATION/GOOD ENGINEERING PRACTICE STACK HEIGHT

Source information must be provided to adequately describe the proposed project. The general type of information required for this project is presented in Section 2.0.

The 1977 CAA Amendments require that the degree of emission limitation required for control of any pollutant not be affected by a stack height that exceeds GEP or any other dispersion technique. On July 8, 1985, EPA promulgated final stack height regulations (EPA, 1985a). Identical regulations have been adopted by Florida DEP (Rule 62-210.550, F.A.C.). GEP stack height is defined as the highest of:

1. 65 meters (m); or
2. A height established by applying the formula:

   $Hg = H + 1.5L$

   where: Hg = GEP stack height,

   H = Height of the structure or nearby structure, and

   L = Lesser dimension (height or projected width) of nearby structure(s); or
3. A height demonstrated by a fluid model or field study.

"Nearby" is defined as a distance up to five times the lesser of the height or width dimensions of a structure or terrain feature, but not greater than 0.8 km. Although GEP stack height regulations require that the stack height used in modeling for determining compliance with AAQS and PSD increments not exceed the GEP stack height, the actual stack height may be greater.

The stack height regulations also allow increased GEP stack height beyond that resulting from the above formula in cases where plume impaction occurs. Plume impaction is defined as concentrations measured or predicted to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain that exceeds the height calculated by the GEP stack height formula.

3.2.6 ADDITIONAL IMPACT ANALYSIS

In addition to air quality impact analyses, federal and State of Florida PSD regulations require analyses of the impairment to visibility and the impacts on soils and vegetation that would occur as a result of the proposed source [40 CFR 52.21(o); Rule 62-212.400(5)(e), F.A.C.]. These analyses are to be conducted primarily for PSD Class I areas. Impacts as a result of general commercial, residential, industrial, and other growth associated with the source also must be addressed. These analyses are required for each pollutant emitted in significant amounts (Table 3-2).

3.3 NONATTAINMENT RULES

Based on the current nonattainment provisions (Rule 62-212.500, F.A.C.), all major new facilities and modifications to existing major facilities located in a nonattainment area must undergo nonattainment review. A new major facility is required to undergo this review if the proposed pieces of equipment have the potential to emit 100 TPY or more of the nonattainment pollutant. A major modification at a major facility is required to undergo review if it results in a significant net emission increase of 40 TPY or more of the nonattainment pollutant or if the modification is major (i.e., 100 TPY or more).

For major facilities or major modifications that locate in an attainment or unclassifiable area, the nonattainment review procedures apply if the source or modification is located within the area of influence of a nonattainment area. The area of influence is defined as an area that is outside the boundary of a nonattainment area but within the locus of all points that are 50 km outside the boundary of the nonattainment area. Based on Rule 62-212.500 (2)(f)2a F.A.C., all VOC sources that are located within an area of influence are exempt from the provisions of NSR for

nonattainment areas. Sources that emit other nonattainment pollutants and are located within the area of influence are subject to nonattainment review unless the maximum allowable emissions from the proposed source do not have a significant impact within the nonattainment area.

3.4 EMISSION STANDARDS

3.4.1 NEW SOURCE PERFORMANCE STANDARDS

The NSPS are a set of national emission standards that apply to specific categories of new sources. As stated in the CAA Amendments of 1977, these standards "shall reflect the degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction the Administrator determines has been adequately demonstrated."

3.4.2 FLORIDA RULES

The Florida DEP regulations for new stationary sources are covered in the F.A.C. The Florida DEP has adopted the EPA NSPS by reference in Rule 62-204.800. DEP has authority for implementing NSPS requirements in Florida.

3.4.3 FLORIDA AIR PERMITTING REQUIREMENTS

The Florida DEP regulations require any new source to obtain an air permit prior to construction. Major new sources must meet the appropriate PSD and nonattainment requirements as discussed previously. Required permits and approvals for air pollution sources include NSR for nonattainment areas, PSD, NSPS, National Emission Standards for Hazardous Air Pollutants (NESHAP), Permit to Construct, and Permit to Operate. The requirements for construction permits and approvals are contained in Rules 62-4.030, 62-4.050, 62-4.052, 62-4.210, and 62-210.300(1), F.A.C. Specific emission standards are set forth in Chapter 62-296, F.A.C.

3.4.4 LOCAL AIR REGULATIONS

Brevard County has implemented air regulations that restrict the visible emissions (smoke), SO_2 emissions, and ambient air concentrations of SO_2 and PM (Brevard County Ordinance No. 97-49). For visible emissions (Brevard County Codes Section 62-2254), emissions of any

contaminant from existing sources should not be discharged to the atmosphere for a period or periods of 3 minutes or more in any one hour with a shade designated as no. 2 on the Ringelmann chart or comparable opacity reading, excluding water vapor. In addition, SO_2 emissions (Section 62-2258) shall not exceed 2,000 and 500 ppmvd from existing and any source, respectively.

Ambient particulate matter concentrations shall not exceed 200 mg/m^3 during any 24-hour period (Section 62-2255). SO_2 concentrations shall not exceed 0.40 ppm (1,046 $\mu g/m^3$), 0.18 ppm (470 $\mu g/m^3$), and 0.05 ppm (130 $\mu g/m^3$) for the 1-hour, 24-hour, and annual averaging periods, respectively, in specified land use zoning (Section 62-2258).

3.5 SOURCE APPLICABILITY

3.5.1 AREA CLASSIFICATION

The project site is located in Brevard County, which has been designated by EPA and DEP as an attainment area for all criteria pollutants. Brevard County and surrounding counties are designated as PSD Class II areas for SO_2, PM(TSP), and NO_2. The nearest Class I areas to the site are the Everglades National Park and Chassahowitzka National Wilderness Area. The Chassahowitzka PSD Class I area is 193 kilometers (120 miles) and the Everglades PSD Class I area is more than 200 km (125 miles) from the site.

3.5.2 PSD REVIEW

3.5.2.1 Pollutant Applicability

The FDEP and EPA determined that the proposed site for the project was adjacent within the definition of major source. The existing facility has the potential to emit more than 250 tons/year of an air pollutant and any emissions above the PSD significant emission rates would trigger PSD review. The proposed project is considered to be a modification of a major facility because the emissions of VOCs, a regulated pollutant, are estimated to exceed the significant emission rate of 40 tons/year. PSD review is required for any pollutant for which the emissions are considered the PSD significant emission rates. As shown in Table 3-3, potential emissions from the proposed project will exceed the PSD significant emission rates for VOCs. Because the

proposed project will trigger PSD review for only VOCs, an air quality impact analysis is not required. There are no AAQS specifically for VOCs and no PSD increments.

As part of the PSD review, a PSD Class I increment analysis is required if the proposed project's impacts are greater than the proposed EPA Class I significant impact levels. The nearest Class I area is about 193 km from the site.

3.5.2.2 Emission Standards

There are currently no specific emission limitations for the proposed project. The EPA is developing emissions standards for VOC emissions from boat manufacturing under Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAPs). Several draft regulations have circulated but have not yet been proposed. The draft regulations include both process controls (application and styrene content) and add-on controls as options. Because the proposed project will emit a hazardous air pollutant above the major threshold, a determination of case-by-case Maximum Achievable Control Technology (MACT) will be made for the project. This review is currently being conducted by FDEP.

3.5.2.3 Ambient Monitoring

Based on the estimated pollutant emissions from the proposed plant (see Table 3-4), a pre-construction ambient monitoring analysis is required for O_3 (based on VOC emissions). If the net increase in impact of other pollutants is less than the applicable de minimis monitoring concentration (100 TPY in the case of VOC), then an exemption from the pre-construction ambient monitoring requirement shall be granted [40 CFR 52.21(i)(8); 62-212.400(3)(e)1, F.A.C.]. In addition, if an acceptable ambient monitoring method for the pollutant has not been established by EPA, monitoring is not required.

If pre-construction monitoring data are required to be submitted, data collected at or near the project site can be submitted, based on existing air quality data or the collection of onsite data.

As shown in Table 3-4, the proposed plant's emissions for VOCs are above the de minimis monitoring concentration levels for all pollutants except VOC. Therefore, pre-construction monitoring is required to be submitted for O_3.

3.5.2.4 GEP Stack Height Impact Analysis

The GEP stack height regulations are applicable to emissions of pollutants where impacts are required to be determined using air quality modeling (e.g., where AAQS or PSD Increments must be evaluated). Since the PSD pollutant for this project is VOC the GEP stack height regulations are not applicable.

3.5.3 NONATTAINMENT REVIEW

The project site is located in Brevard County, which is classified as an attainment area for all criteria pollutants. Therefore, nonattainment requirements are not applicable.

3.5.4 LOCAL AIR REGULATIONS

The proposed project will comply will all air emission and air quality regulations established by Brevard County.

Table 3-1. National and State AAQS, Allowable PSD Increments, and Significant Impact Levels

Pollutant	Averaging Time	AAQS ($\mu g/m^3$)			PSD Increments ($\mu g/m^3$)		Significant Impact Levels ($\mu g/m^3$) [b]
		Primary Standard	Secondary Standard	Florida	Class I	Class II	
Particulate Matter[c] (PM_{10})	Annual Arithmetic Mean	50	50	50	4	17	1
	24-Hour Maximum	150	150	150	8	30	5
Sulfur Dioxide	Annual Arithmetic Mean	80	NA	60	2	20	1
	24-Hour Maximum	365	NA	260	5	91	5
	3-Hour Maximum	NA	1,300	1,300	25	512	25
Carbon Monoxide	8-Hour Maximum	10,000	10,000	10,000	NA	NA	500
	1-Hour Maximum	40,000	40,000	40,000	NA	NA	2,000
Nitrogen Dioxide	Annual Arithmetic Mean	100	100	100	2.5	25	1
Ozone[c]	8-Hour Maximum[d]	157	157	157	NA	NA	NA
Lead	Calendar Quarter Arithmetic Mean	1.5	1.5	1.5	NA	NA	NA

Note: Particulate matter (PM_{10}) = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.
NA = Not applicable, i.e., no standard exists.

[a] Short-term maximum concentrations are not to be exceeded more than once per year.

[b] Maximum concentrations are not to be exceeded.

[c] On July 18, 1997, EPA promulgated revised AAQS for particulate matter and ozone. For particulate matter, PM2.5 standards were introduced with a 24-hour standard of 65 g/m^3 (3-year average of 98th percentile) and an annual standard of 15 g/m^3 (3-year average at community monitors). A federal court has stayed these EPA standards and EPA is appealing. Implementation of these standards are many years away.

[d] 0.08 ppm; achieved when 3-year average of 99th percentile is 0.08 ppm or less. A federal court has stayed these EPA standards and EPA is appealing. FDEP still has the 0.12 ppm 1-hour standard and has not yet adopted the 8-hour standards.

Sources: Federal Register, Vol. 43, No. 118, June 19, 1978.
40 CFR 50; 40 CFR 52.21.
Chapter 62-204, F.A.C.

Table 3-2. PSD Significant Emission Rates and De Minimis Monitoring Concentrations

Pollutant	Regulated Under	Significant Emission Rate (TPY)	De Minimis Monitoring Concentration[a] (μg/m3)
Sulfur Dioxide	NAAQS, NSPS	40	13, 24-hour
Particulate Matter [PM(TSP)]	NSPS	25	10, 24-hour
Particulate Matter (PM_{10})	NAAQS	15	10, 24-hour
Nitrogen Dioxide	NAAQS, NSPS	40	14, annual
Carbon Monoxide	NAAQS, NSPS	100	575, 8-hour
Volatile Organic Compounds (Ozone)	NAAQS, NSPS	40	100 TPY[b]
Lead	NAAQS	0.6	0.1, 3-month
Sulfuric Acid Mist	NSPS	7	NM
Total Fluorides	NSPS	3	0.25, 24-hour
Total Reduced Sulfur	NSPS	10	10, 1-hour
Reduced Sulfur Compounds	NSPS	10	10, 1-hour
Hydrogen Sulfide	NSPS	10	0.2, 1-hour
Mercury	NESHAP	0.1	0.25, 24-hour
MWC Organics	NSPS	$3.5x10^{-6}$	NM
MWC Metals	NSPS	15	NM
MWC Acid Gases	NSPS	40	NM
MSW Landfill Gases	NSPS	50	NM

Note: Ambient monitoring requirements for any pollutant may be exempted if the impact of the increase in emissions is below de minimis monitoring concentrations.

NAAQS = National Ambient Air Quality Standards.
NM = No ambient measurement method established; therefore, no de minimis concentration has been established.
NSPS = New Source Performance Standards.
NESHAP = National Emission Standards for Hazardous Air Pollutants.
g/m^3 = micrograms per cubic meter.
MWC = Municipal waste combustor
MSW = Municipal solid waste

[a] Short-term concentrations are not to be exceeded.
[b] No de minimis concentration; an increase in VOC emissions of 100 TPY or more will require monitoring analysis for ozone.
[c] Any emission rate of these pollutants.

Sources: 40 CFR 52.21.
Rule 62-212.400

Table 3-3. Maximum Emissions Due to the Proposed Sea Ray Cape Canaveral Plant Compared to the PSD Significant Emission Rates

Pollutant	Pollutant Emissions (TPY)		PSD Review
	Potential Emissions from Proposed Facility	Significant Emission Rate	
Sulfur Dioxide	NEG	40	No
Particulate Matter [PM(TSP)]	<1	25	No
Particulate Matter (PM_{10})	<1	15	No
Nitrogen Dioxide	NEG	40	No
Carbon Monoxide	NEG	100	No
Volatile Organic Compounds	218	40	Yes
Lead	NEG	0.6	No
Sulfuric Acid Mist	NEG	7	No
Total Fluorides	NEG	3	No
Total Reduced Sulfur	NEG	10	No
Reduced Sulfur Compounds	NEG	10	No
Hydrogen Sulfide	NEG	10	No
Mercury	NEG	0.1	No
MWC Organics (as 2,3,7,8-TCDD)	NEG	$3.5x10^{-6}$	No
MWC Metals (as Be, Cd)	NEG	15	No
MWC Acid Gases (as HCl)	NEG	40	No

Note: NEG = Negligible.

Table 3-4. Predicted Net Increase in Impacts Due To the Sea Ray Cape Canaveral Plant Compared to PSD De Minimis Monitoring Concentrations

Pollutant	Emissions (tons/year)	
	Predicted Increase in Emissions	De Minimis Monitoring Level
Volatile Organic Compounds	218	100

Note: NA = not applicable.
NM = no ambient measurement method.
TPY = tons per year.

4.0 CONTROL TECHNOLOGY REVIEW

4.1 APPLICABILITY

The PSD regulations require new major modified stationary sources to undergo a control technology review for each pollutant that may potentially be emitted above significant amounts. The control technology review requirements of the PSD regulations are applicable to emissions of VOC.

This section presents the proposed NESHAPS and the proposed BACT for VOC. The approach to the BACT analysis is based on the regulatory definitions of BACT, as well as EPA's current policy guidelines requiring a top-down approach. A BACT determination requires an analysis of the economic, environmental, and energy impacts of the proposed and alternative control technologies [see 40 CFR 52.21(b)(12); and Rule 62-210.200(42), and Rule 62-214.400, F.A.C.]. The analysis must, by definition, be specific to the project (i.e., case-by-case).

4.2 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

The US Environmental Protection Agency is currently developing emissions standards for boat manufacturing as one of the source categories that emits hazardous air pollutants (HAPs). These NESHAPs are referred to as Maximum Achievable Control Technology (MACT) standards. While draft regulations have been circulated, proposed regulations have yet to be promulgated under 40 CFR Part 63. EPA's draft regulations include emission and work practice standards for various operations. The emission standards include provisions that would allow the use of low styrene content resins and gel coats or add-on pollution control equipment.

The proposed Cape Canaveral Plant will be a major source of HAPs as defined in Rule 62-210.200(178) (i.e., emissions greater than 10 tons/year of styrene). Since the MACT standards for boat manufacturing have not yet been promulgated, the FDEP will establish MACT under 112(g) of the 1990 Amendments to the Clean Air Act and implementing EPA regulations codified in 40 CFR 63. The MACT standards established by FDEP is a limitation that reflects the maximum degree of emissions reduction that FDEP determines is achievable after taking into consideration the costs, non-air quality health and environmental impacts and

energy requirements considering the best controlled similar source and EPA's draft proposed regulation. Sea Ray, according to 40 CFR 63.43(d)1., has proposed MACT standards to FDEP. This review is currently be performed by FDEP separate from the PSD/BACT review for the facility.

4.3 BEST AVAILABLE CONTROL TECHNOLOGY

4.3.1 LAER/BACT CLEARINGHOUSE AND EPA ASSESSMENTS FOR BOAT MANUFACTURERS

Table 4-1 presents a listing form the EPA LAER/BACT Clearinghouse regarding determinations for boat manufacturers. The predominate control is the use of lower VOC containing resins and gel coats. Where possible, such pollution prevention controls are preferred since they can be both cost effective and eliminate other environmental and energy impacts of add-on controls. EPA (1996) evaluated controls for styrene emissions that included combustion technologies, adsorption technologies, condensation technologies, novel technologies and emerging technologies. While some of these technologies have been employed and are promising in the control of styrene emissions, their applications have not been widespread throughout the boat manufacturing industry. Yet, from this information, a list of potentially available controls that could effect a VOC emission reduction at the proposed Cape Canaveral Plant was developed. These potentially available control are listed below and evaluated in the subsequent section.

- Low Styrene Resins/Gel Coats
- Solvent Replacements
- Vapor Suppressed Resins/Gel Coats
- Material Substitution
- Application Methods
- Thermal Oxidation
- Activated Carbon
- Condensation/Recovery
- Chemical Scrubbers
- Biofiltration

4.3.2 TECHNOLOGY FEASIBILITY ASSESSMENT

4.3.2.1 Pollution Prevention Methods

Low Styrene Resins/Gel Coats - Using materials that reduce the amount of emissions in the process without additional controls are referred to as pollution prevention techniques. The use of low styrene resins and gel coats has been the primary means of reducing VOC emissions in the industry. For the development of the NESHAPS, the EPA published an "Assessment of Styrene Emission Controls for FRP/C and Boat Building Industries – Final Report" (1996) and an Addendum (note: FRP/C is fiberglass-reinforced plastics/composites). These reports evaluated the industry and numerous types of potential control technology. The influence of styrene content was evaluated. The EPA study found that the styrene content of conventional resins used in the fiberglass boat manufacturing industry typically ranges from 40 to 50 percent with an average of 43 percent. The report concluded: "by reducing the total monomer content in the resins, emissions can be reduced. For example, by reducing the resin styrene monomer content from 43 percent to 35 percent would reduce styrene emissions from resin application and curing by approximately 19 percent based on the emission factors presented in AP-42." Using the Interim Styrene Emission Factors for Boat Manufacturing supplied by the FDEP, a reduction of styrene monomer from 42 to 35 percent reduces emission by approximately 33 percent.

A number of concerns that were identified by the industry in implementing the use of low styrene resins were considered. These included the viscosity of low styrene resins which are more viscous than conventional resins, particularly at lower temperatures. The high viscosity makes the low styrene resins harder to work with and application of a smooth, even layer of resin in the lamination process is dependent on the skill of the operator. Spray-up operations, in which the resin and fiberglass layers are applied to the mold with spray and chopper guns, respectively, are particularly affected by resin viscosity. Application of uneven layers results in varying curing. If a second layer is applied before the first layer is evenly cured then air entrapment or bubbles can occur which reduces the strength of the laminate structure. Fiberglass boats typically have 4-6 layers of laminate consisting of layers of chopped glass and roving depending on the boat size and performance specifications. Producing boats with weaker laminate structures could result in serious product liability issues, particularly for high

performance speed boats. Consequently, the boat manufacturing industry has been cautious to substitute low styrene resins in their production (EPA, 1996).

Sea Ray is an industry leader in the use of low styrene resins. These low styrene materials (maximum of 35 percent styrene) are used for skin coat resins and bulk resins. For other applications, low styrene resins are used were possible. Sea Ray is continuing to test and incorporate newly developed low styrene materials that meet the product specifications.

Solvent Replacements - Sea Ray, in accordance with the policies of the State of Florida's Department of Environmental Protection, prepared and has been conscientiously implementing, as a matter of company policy, a waste reduction plan for each manufacturing unit located on the Merritt Island complex and is planned for the Cape Canaveral Plant as well. Implementation of this plan has served to reduce air emissions generated through evaporation of cleaning solvents.

Acetone has been replaced with Superior S-280, Super Blue, Resaway Gun Flush, and water based emulsifiers for use in employee and equipment clean-up operations. Low vapor pressure solvents are used to clean parts and resin handling equipment in the lamination process. Various water based emulsifiers are used to clean hand tools, rollers, and other equipment employed in the areas where resin is applied.

Vapor Suppressed Resins/Gel Coats - Vapor suppressed resins contain additives which reduce VOC emissions during resin curing. The most common additive is paraffin, which migrates to the resin surface and forms a wax film that limits the escape of vapors from the curing resin. The wax film also limits the diffusion of oxygen to the resin surface and causes a complete polymerization reaction of the catalyzed resin on the surface, as compared to resin without wax curing where exposure to the atmosphere allows oxygen bonding and prevents the occurrence of total polymerization. The latter is the desired condition because a bonding surface is allowed for the next application of resin in the lamination process. The fully cured surface layer obtained with the suppressed resin is not amenable to cross-linking with subsequent laminate layers and the potential for de-lamination of product is greater. Since the degree of bonding

between the successive layers of resin in the process greatly affects the strength of the material, the ability to utilize vapor surppressed resins is dependent upon the application. In the manufacture of high-performance boats, such as those manufactured by Sea Ray, maximum strength of the fiberglass bonds are critical. This is a direct result of the demanding use of the product; product liability and associated costs are also a factor.

The use of vapor suppressed resins is not considered by Sea Ray to be a viable method of additional VOC emissions control when additional layers of laminate are to be applied. The use of vapor suppressed gel coats have also proven to be unsatisfactory because the desired finish cannot be obtained.

Material Substitution - Water based and other non-VOC containing solvents have been evaluated by Sea Ray for use in lieu of styrene and other monomers in resin, gel coat, and urethane coating mixtures. However, when constructing fiberglass reinforced plastic boat parts using resins, styrene monomer and polyester solids are integral to the product. The styrene monomer serves a double purpose. When first applied, the styrene monomer acts as a thinning solvent and increases the workability of the mixture. Second, unlike paints and other coatings, the styrene monomer does not entirely evaporate but becomes the cross-linking agent, bonding the molecules of the mixture together during curing and remaining an integral part of the product. For this reason its replacement with water or other organic solvent materials is not technically feasible. Moreover, water based and other non-VOC materials are not available for constructing the boats that Sea Ray manufactures.

Water based coatings are used by Sea Ray for wood parts that are upholstered or are placed in other locations inside the boats that do not come in contact with water. The water-based paints have been found to be inferior in their ability to withstand exposure to the elements when used as exterior coatings and, therefore, are not a technically feasible option. When practical, water based paints and stains are used by Sea Ray and will continue to be evaluated for use especially as more water based paints and new material coatings become commercially available.

Application Methods - During the lamination process, the resins can be applied using either air pressure (atomized application) or fluid pressure (non-atomized application) to coat the chopped fiberglass and roving that is applied in layers. The non-atomized application methods, referred to as flow coaters, have lower VOC emissions and will be used at the Cape Canaveral Plant. Flow coaters are currently being implemented at the Sykes Creek Plant.

High Volume Low Pressure (HVLP) spray guns have been evaluated and some systems tested in the application of resin and gel coats. Of these systems tested by Sea Ray, results have shown limited success. The quality of the product (i.e., strength, durability and appearance) is of utmost importance in the manufacturing process as well as liability issues that may arise due to sub-quality product.

4.3.2.2 Add-On Controls

Thermal Oxidation - Thermal Oxidation is a common destruction method for controlling emissions of VOCs. In this process, the air containing the VOCs is collected from the process through ventilation exhaust systems and heated to high temperatures and oxidized into carbon dioxide and water. The VOC destruction efficiency of a thermal oxidizer is dependent on three main parameters:

- Temperature (oxidation occurs more rapidly at higher temperature),
- Time (oxidation occurs more completely as the retention time is increased), and
- Turbulence (well mixed products exposed to the incineration chamber result in greater destruction potential).

Several types of thermal oxidizers are commercially available. The devices are classified by the method in which the oxidation of VOC is accomplished and how heat energy from the plants ventilation exhaust is recovered.

Thermal and catalytic incinerators are in a classification that uses thermal energy to oxidize VOCs. A thermal incinerator, sometimes called an afterburner, uses direct thermal energy to destroy VOC vapors, usually at temperatures between 1000 and 2000 degrees Fahrenheit depending upon the VOC. Catalytic incinerators can thermally oxidize VOCs at lower temperatures and thus use less energy. Catalyst beds, consisting of precious metals or ceramics,

are placed in the exhaust air after heating. The VOC is oxidized on the surface of the catalyst. Catalytic oxidation occurs at much lower temperatures, around 600 degrees Fahrenheit for normal operation, than direct flame incineration.

Recuperative and regenerative thermal oxidizers are devices that recover and use heat energy in the exhaust stream after the VOCs are oxidized. This lowers the fuel costs required to heat the VOC laden exhaust air to oxidizing temperatures (whether direct flame or catalytic). Recuperative incinerators employ a heat exchanger that preheats the incoming combustion air prior to incineration. Heat recoveries of 40 to 60 percent are possible. Regenerative incinerators use an arrangement of thermal masses to cycle heat energy between an exhaust and intake stream. The thermal oxidizer's hot exhaust gas heats a storage mass, usually a ceramic material. Where the material reaches the VOC oxidation temperature, the VOC laden air is through the heated ceramic mass. Thermal energy is recovered in this way because the storage mass transfers its heat to the incoming VOC laden air before it enters the incineration chamber. With this device heat recoveries of up to 95 percent are possible.

EPA (1996) found that direct thermal flame oxidation and catalytic oxidation are potentially feasible. Both methods are currently used, albeit in a few applications. Because of the relatively lower VOC (styrene) concentration in the boat manufacturing process, regenerative or recuperative oxidation is preferred to lower control costs. The concentration of the VOCs in the exhaust due to ventilation requirements has almost no value as fuel in the oxidation process. Direct flame incineration was determined to be too costly due to high fuel consumption. The cost would be twenty times greater than that required for catalytic incineration due to the high volumes and low concentrations of VOCs in the VOC laden air stream. For catalytic incineration, styrene particles have the potential to polymerize on the catalyst neutralizing its activity. This can be eliminated through filtration. Even with recovery of the thermal exhaust energy, thermal and catalytic oxidation can be costly due to the high exhaust flows. A preconcentration of the VOC followed by lower flow rate oxidizer is the optimal design.

Activated carbon and Zeolite are two (2) types of concentrator systems that are available. Zeolite is a similar product to activated carbon but inorganic in nature, principally silicon

dioxide (SiO_2). Both systems involve the adsorption of VOCs from the large volume air stream onto a bed and then desorption of the bed with a small volume of hot air. The small volume of hot air, containing a much higher concentration of VOCs, after passing over the bed, is then incinerated. The disadvantage of the activated carbon concentrator was the tendency of the styrene monomer to polymerize on the filter media, reducing its effectiveness and the increasing possibility of fire in the carbon bed.

Activated Carbon - Absorption systems using activated carbon are a common control in certain types of VOC control applications. Activated carbon is effective due to its internal physical structure that provides a large surface area with corresponding adsorptive capacity. In addition, the absorbed VOC can be readily vaporized for either recovery or incineration. The re-activated carbon can be reused in some applications. In applications involving high-volume and low concentrations of VOC, carbon can be a lower cost option than incineration. However, regeneration is required that may include incineration (e.g., as a pre-concentrator) or condensation. Without such methods, the potential environmental effects for disposal and costs would be considerable.

Condensation/Recovery - Condensation/recovery involves cooling the exhaust air stream in a refrigerant system to condense the VOC. The condensed VOC can then be recovered for use. This control technique works best with exhaust air streams having high concentrations of vapors. These systems can be very efficient in such applications and may remove 95 percent or more of VOCs. In high volume low VOC concentration exhaust streams such as fiberglass boat building, condensation is not economical (EPA, 1996). In addition, since the condensate would contain several different VOC compounds, reuse in the process would not be possible and disposal with concomitant cost would be required. Condensation is not a feasible option for the proposed facility.

Chemical Scrubbers - This control technology involves gas absorption using specific chemicals. Gas absorption is a mass transfer method where soluble components of the air mixture are selectively dissolved in a liquid. The dissolved components can be recovered from the liquid by

stripping, desorption or other techniques. The technical feasibility of gas scrubbing depends upon (EPA,1996)

a. Availability of a suitable solvent,
b. VOC removal efficiency required,
c. Recovery value or terminal disposal costs,
d. Capacity for handling vapors, and
e. VOC concentration in the inlet vapor (absorption is usually considered when the VOC concentration is above 200-300 ppmv).

For fiberglass boat manufacturing, the use of gas absorption to control styrene and solvent emissions is limited by the low VOC concentrations and high exhaust flow rates. Also the use of water is not feasible due to the low water solubility of styrene and potential wastewater issues. Using a solvent that can be regenerated or easily disposed of is not available. In addition, the VOC in the exhaust gas streams from the boat manufacturing areas contain several different chemicals, with each chemical possibly requiring a separate solvent. Chemical scrubbing is not considered a feasible control method.

Biofiltration is a common air pollution control technology in Europe for controlling odors and is relatively new to the United States. Contaminated air is fed through an active bed of soil, compost or other suitable substrate that will ultimately be populated with micro-organisms that can metabolize the contaminates. The micro-organisms convert the contaminants to carbon dioxide and water. Biofilteration systems require relatively low gas velocities to allow microbiological activity sufficient time to "consume" the VOCs. As a result, biofilters require considerable land area or multiple levels. Also, biological systems require sufficient moisture and can be sensitive to external environmental conditions. Biofilters can also be sensitive to specific contaminants as well as concentration loading in a multi-compound gas mixture. Biofiltration for the removal of styrene from large fiberglass facilities has not been demonstrated. The uncertainty of using biofiltration and large volume required for control suggests that this technology is not yet feasible for controlling emissions at the proposed facility.

Technology Transfers Facilities permitted in Florida with processes emitting VOCs were evaluated for the potential for technology transfers. These facilities, while different from boat manufacturing, emit various types of VOCs and have control equipment potentially applicable.

- Macho Products, Inc.—This company is located in Indian River county and manufactures protective products for martial arts. In the process, VOC emissions are primarily solvents and include methyl ethyl ketone and toluene. The facility has a catalytic incinerator that has a flow rate of 10,000 acfm. Potential emissions are 52 tons/year with a potential solvent process input of about 1,500 tons/year. Analysis: The high application rate of solvents (i.e., uncontrolled VOC emissions of about 5 tons/hour), the volatile nature of the solvents, small parts (i.e., less than 1 ft) and the small flow rate (10,000 acfm) suggests the use of a catalytic incinerator. Application to the proposed Cape Canaveral Plant is inappropriate. This is due to the low uncontrolled VOC emission rate (<0.05 ton/hr), high space demands for large boats and high flow rate requirements for employee ventilation.
- Wolverine Gasket Division—This company is located in Lake County and manufactures parts for the automotive industry. The largest source is a totally enclosed coil coater. The coil coater places rubberized material on metal coils that are about 3 to 4 feet wide. The process is continuous and includes an oven to volatilize the solvents (about 35 percent of coating) when applied. The controls include a direct flame and regenerative incinerator with flow rates of 38,000 and 8,525 acfm. Potential controlled emissions are 96 tons/year. Only two operators are required for the operation with their space ventilated using fresh air drawn through the oven and incinerator. Analysis: The application of incineration for the coil coating operation is appropriate given the high uncontrolled VOC emissions of 0.25 tons/hour, the volatile nature of the solvents driven off by the oven, small coating area (i.e., less than 4 ft wide and 1 inch high) and the total enclosure. Application to the proposed Cape Canaveral Plant is inappropriate. This is due to the low uncontrolled VOC emission rate (<0.05 ton/hr), high space demands for large boats and high flow rate requirements for employee ventilation.
- Munters Corporation—This company is located in Lee County and manufactures corrugated pack material from thermo-setting plastics impregnated into fiberglass or

paper substrates. One of the buildings, Building 10, has a zeolite rotary concentrator with a catalytic incinerator to control VOC emissions from the gluing operation. The building is 100 feet by 100 feet with intake air taken from the packing lay-up lines at about 38,000 acfm. The solvents are MEK and toluene that are applied at about 0.07 tons/hour. The potential emissions are 132 tons VOC per year (96 tons per year MEK and 36-tons/year toluene). Testing has determined that the capture efficiency is 51 percent; the remainder becomes fugitive. Analysis: The application of preconcentrator with catalytic incineration is appropriate for this type of operation given the low VOC concentration, the volatile nature of the solvents (MEK and toluene) and relatively small relatively area for capturing VOCs. The application of the preconcentration with subsequent incineration is similar to that recommend in the EPA studies related to boat manufacturing. Such an application to the proposed Cape Canaveral Plant appears technical feasible. However, there are uncertainties that would affect the appropriateness as applied to boat manufacturing. This includes a lower uncontrolled VOC emission rate estimated for the Cape Canaveral plant (<0.05 ton/hr), high space demands for large boats with concomitant difficulty in capturing VOC and high flow rate requirements for employee ventilation. Capture efficiency is clearly a concern that will influence the success of any applied control technology. This is particularly important in the feasibility of applying preconcentration/incineration technology to the manufacture of large boats.

4.3.2.3 Feasible Control Technologies

The manufacturing of the large boats has conditions that must be considered in selection of a control device. These are summarized below:

- A majority of the VOC emissions occur from the lamination process in which 80 percent of the emissions generally occur over 5 percent of a boat's fabrication time.
- The lamination process is a highly manual operation in which from two to 5 workers are working at one time within the large boat hulls and decks.
- The production process requires workers to be close to the source of emissions during lamination to remove air from the fiberglass chop, woven roving and cloth and during the installation of strengthening and bracing materials.

- Occupational exposure limits for styrene (breathing as well and skin) must be achieved; the working environment produces a highly variable concentration during which respirators are required even when average concentrations are low.
- The variable nature of the emissions combined with the need to achieve occupational exposure requirement results in a low concentration of VOCs at high volume.
- For large boats, as those proposed for the Cape Canaveral facility, cranes must be used in the manufacturing process to handle the large hulls, decks and molds.

Taking together the constraints of the operation and the available technology, the most effective control option is using pre-concentration with thermal catalytic oxidation. This allows concentrating of the VOC vapors and subsequent thermal destruction at much lower (i.e., a factor of ten) flow rates. Moreover, the control application should focus on the highest emission rate process in both rate and amount. This occurs during the lamination process. These conclusions are consistent with EPA's assessment of the boat manufacturing emissions (EPA, 1996) and an analysis of cost templates provided.

To control the VOC emissions effectively the emissions must be captured. This will be difficult with the large size of the boats and the variable emission rates. For this reason, two approaches of capture were evaluated. First the feasibility of a large spray booth was evaluated. The booth must be of sufficient size to hold the largest single boat part and mold, that is the hull. For the largest boat (i.e., 75 ft) the dimensions of the hull and mold are about 80 feet in length, about 15 feet high and about 20 foot wide. To allow worker access to the molds, the booth must have sufficient space surrounding the mold. In addition, the booth must have freeboard to allow removal of the hulls and molds as required. For the evaluation a booth 100 feet long, 20 feet high and 40 feet wide was assumed.

The VOC emissions from the lamination process depend upon the boat part being processed. The hulls are the largest part and utilize the highest amount of VOC containing materials. This would provide the highest emission rate for evaluation. Sea Ray provided information on the VOC material requirements as well as time for processing.

There are two methods for ventilation in the booth to limit occupational exposure. The flow can occur along the length of the hull or across the hull. The former is not the preferred option since the VOC concentrations (i.e., styrene) can build up over a longer area. The work direction would be from the intake toward the fresh air exhaust. The ventilation across the hull provides the best working conditions. The ventilation requirements for the spray booth were based on the ACGIH recommendations, which are similar to those required by OSHA for velocity. The ACGIH design is 50 cfm per cross section of booth for large spray booths. For the booth size evaluated the flow requirements are 40,000 cfm for the length-wise flow (20ft x 40 ft x 50 cfm/ft^2) and 100,000 cfm for the length-wise flow (20ft x 100 ft x 50 cfm/ft^2). The capture efficiency for a properly designed spray booth will exceed 90 percent.

Estimated worst case VOC emission rates from the boat hull lamination process are presented in Tables 4-2 and 4-3 for 40,000 cfm and 100,000 cfm spray booths, respectively. The primary difference is the calculated average concentration in ppm. As shown in these tables the average concentration can have a significant range as an artifact of the process. It should be emphasized that the average concentration is not representative of employee exposure, which would expect to be higher. This is a result of the close proximity that some workers are to the emissions, the density of the gases, the configuration of the boat hull and the non-laminar flow that can occur in the spray booth.

The second method evaluated provides ventilation to the entire lamination area. As discussed in Section 2.0, this area is within the lamination building and is 300 ft long by 80 ft wide by about 50 feet high. To maintain a proper occupational exposure, the air flow requirements would be based on a working area of 250 ft wide by 30 ft high using a "push-pull" type ventilation system. The air flow requirements would be about 370,000 cfm (250 ft x 30 ft x 50 cfm/ft^2).

For the lamination area, the estimated emissions were presented in Table 2-1 and are 174 tons/year. For a whole room ventilation system using a push-pull method, a capture efficiency of 80 percent was assumed. Moving the large boat parts to the other processing areas (e.g., parts cutting, parts inspection and assembly) requires large openings where some of the VOCs would

become fugitive. This estimate is considered best-case given the time required to move the larger parts and the numerous transfers occurring between the lamination area and the downstream processes.

In evaluating the technical and economic feasibility of the available control technologies, two vendors were contacted. Crow Manufacturing was contacted for the spray booth. Anguil Environmental Systems, Inc. was contacted for the incineration system. Crow Manufacturing has supplied large spray booths to E-One who manufacturers large fire fighting equipment and Anguil has supplied a variety of incinerator designs. Crow suggested that the 100,000 cfm spray booth was the preferred alternative from an occupational exposure perspective. Anguil suggested that a pre-concentration regenerative catalytic incinerator was the most effective and cost effective for the proposed application. Information obtained from the vendors contacted is presented in the appendix.

4.3.3 IMPACT ANALYSES

4.3.3.1 Economic

The capital and annualized cost, and cost effectiveness of the spray booth options are presented in Table 4-4 and 4-5 for the 40,000 and 100,000 cfm flow rates, respectively. The cost effectiveness of these options range from $33,610 per ton of VOC removed a spray booth with a 40,000 cfm flow rate to $60,847 per ton of VOC removed for a 100,000 cfm flow rate. These cost effectiveness calculations are based on the maximum emission rate for the boat hulls which is the largest part. The cost effectiveness for the boat decks would be higher since the material requirements are much less. For the small parts, the cost effectiveness would likely not be any lower than that estimated for the boat hulls even assuming all parts could be manufactured in the same time frame as the hulls.

The cost effectiveness of the spray booth options does not consider the costs associated in moving the boat hulls and decks in and out of the booth. Additional man-hours and handling would be required.

The capital and annualized cost, and cost effectiveness for controlling VOC emissions from the entire lamination area is presented in Table 4-6. The estimated cost effectiveness is $12,011 per ton of VOC removed. This estimated cost effectiveness is considered best-case, since it assumes that the full production occurs and 80 percent capture of a primarily heavier than air VOC (i.e., styrene). The estimated cost effectiveness is proportional to the production rate since emissions would be controlled from the entire area. At one half-production rate the estimated cost effectiveness would be $24,011 per ton of VOC removed.

4.3.3.2 Environmental

The spray booth options and the lamination area option would remove 95.5 and 76.4 percent of the VOCs respectively. For a 40,000 cfm spray booth the combustion of natural gas would emit about 0.5 tons/year of criteria air pollutants (i.e., nitrogen oxides, carbon monoxide, particulate matter and sulfur dioxide) or about 4 percent of the VOC oxidized. A 100,000 cfm spray booth would emit about 1.7 tons/year of criteria air pollutants or about 13 percent of the VOC oxidized. The thermal oxidizer for the lamination area control option would emit about 6.7 tons per year of criteria pollutants or about 4 percent of the VOC oxidized.

4.3.3.3 Energy

The regenerative catalytic oxidizer would have energy and fuel requirements. For a 40,000 cfm spray booth the electric requirements would be 409,402 kW-hrs per year with a fuel energy requirement of 5,200 mmBtu/year. For a 100,000 cfm spray booth the electric requirements would be 954,285 kW-hrs per year with a fuel energy requirement of 16,500 mmBtu/year. The electric requirements for the lamination area option would be 3,131,457 kW-hrs per year with an additional fuel energy requirement of 67,000 mmBtu/year.

4.3.4 BACT MATRIX AND CONCLUSION

Table 4-7 presents a summary of the economic, environmental and energy impacts of the feasible control options for controlling VOC emissions from the proposed Sea Ray Cape Canaveral Plant. The evaluation clearly indicates that the use of conventional spray booths with a preconcentration/regenerative catalytic oxidizer is not cost effective and is inappropriate as BACT. The control of the VOC emissions from the entire lamination area would be more cost

effective than spray booth options but is still considerable from a cost effectiveness standpoint. At about $12,000 per ton of VOC removed with the best-case assumptions (i.e., VOC capture and production rate), the cost effectiveness is above that considered economically feasible in previous FDEP decisions. Moreover, the uncertainty associated with VOC capture for such a large operation suggests that such an option is unreasonable as BACT. Indeed, no boat manufacturing operation of this scale has been required in any state to meet a BACT requirement with the cost and uncertainties associated with controlling emissions from an entire lamination area for large boats. The add-on control options are rejected as BACT.

For the Cape Canaveral Plant, BACT is proposed as using low styrene content resins and gel coats as solvent replacements as proposed as MACT. Together, these pollution prevention methods would reduce VOC emissions by about 33 percent over what has been common practice in the industry.

Table 4-1. Summary of BACT Determinations for VOC Emissions from Lamination Processes (Fiberglass Boat Manufacturing)

Company	State	Permit No.	Permit Issue Date	Throughput	Emission Limit	Control Equipment	Control Efficiency	
BULLET FIBERGLASS	CA	A/C NO. C-2498-2-0	6/30/95	--	12.7 lb/day	LOW VOC RESIN AND GEL COAT	--	BACT-OTHER
SANGER BOATS, INC.	CA	C-1074-1-1	3/21/96	1,099 lb Resin/day	29 lb/day	LOW VOC RESIN (NO GREATER THAN 35% BY WT), AIR-LESS SPRAY GUN AND HAND LAYUP COMBINATION, NON-VOC CONTAINING CLEANUP SOLVENT	--	BACT-OTHER
TRACKER MARINE CORP	MO	1092-009A	12/9/94	913 TPY	250 TPY	INCREASE STACK HEIGHT	--	OTHER
TRACKER MARINE CORP	MO	1092-009A	12/9/94	236 TPY	250 TPY	INCREASE STACK HEIGHT	--	OTHER
KAWASAKI MOTORS USA	NE	064	12/28/92	12,000 Jetskis/yr	16.4 TPY	CLOSED MOLDING	65	BACT-OTHER
TILLOTSON-PEARSON	RI	90-1-AP	6/5/90	--	36% VOC by weight	LIMIT VOC CONTENT	--	RACT
TILLOTSON-PEARSON	RI	90-1-AP	6/5/90	--	50% VOC by weight	LIMIT VOC CONTENT	--	RACT
TILLOTSON-PEARSON	RI	90-1-AP	6/5/90	--	50% VOC by weight	LIMIT VOC CONTENT	--	RACT
TILLOTSON-PEARSON	RI	90-1-AP	6/5/90	--	45% VOC by weight	LIMIT VOC CONTENT	--	RACT
SUNBIRD BOAT CO., INC.	SC	1900-0094	12/13/91	135 Boats/day	57 lb/day	50% ACETONE REPLACEMENT, LIMITING TO 37% BY WT STYRENE IN GELCOAT & HOURS OPER	26	LAER
SUNBIRD BOAT CO., INC.	SC	1900-0094	12/13/91	135 Boats/day	125 lb/day	50% ACETONE REPLACEMENT, LIMITING TO 37% BY WT STYRENE IN GELCOAT & HOURS OPER	26	LAER
SUNBIRD BOAT CO., INC.	SC	1900-0094	12/13/91	135 Boats/day	21 lb/day	50% ACETONE REPLACEMENT, LIMITING TO 37% BY WT STYRENE IN GELCOAT & HOURS OPER	26	LAER

Source: EPA's RACT/BACT/LAER Clearinghouse, July 1999

Table 4-2. Estimated VOC Emissions from Lamination Process for 75 ft Boat Hull with 40,000 cfm Spray Booth

Process Description	Density (lb/gal)	VOC Content (%)	Activity Factor's (a)		Emission Factor (%)	Emissions		
			Time (hr/boat hull)	Chemical Usage (gal/boat hull)		(lb/boat hull) (a)	(ppm) (b)	(tons/yr/booth) (c)
Gel Coat	11	35	1.75	58	48	107.2	96.5	4.3
Skin Coat	9	35	3.5	63	48	95.3	42.9	3.8
Bulk Resin	9	35	23	190	11	65.8	4.5	2.6
Bracing	9	35	34.5	127	11	44.0	2.0	1.8
Total			62.75	438		312.3		12.4

notes:
(a) Based on estimates provided by Sea Ray for 75 foot boat.
(b) Based on booth flow rate of 40,000cfm.
(c) Based on 5,000 hr/yr.

Table 4-3. Estimated VOC Emissions from Lamination Process for 75 ft Boat Hull with 100,000 cfm Spray Booth

Process Description	Density (lb/gal)	VOC Content (%)	Activity Factor's (a) Time (hr/boat hull)	Activity Factor's (a) Chemical Usage (gal/boat hull)	Emission Factor (%)	Emissions (lb/boat hull) (a)	Emissions (ppm) (b)	Emissions (tons/yr/booth) (c)
Gel Coat	11	35	1.75	58	48	107.2	38.6	4.3
Skin Coat	9	35	3.5	63	48	95.3	17.2	3.8
Bulk Resin	9	35	23	190	11	65.8	1.8	2.6
Bracing	9	35	34.5	127	11	44.0	0.8	1.8
Total			62.75	438		312.3		12.4

notes:
(a) Based on estimates provided by Sea Ray for 75 foot boat.
(b) Based on booth flow rate of 100,000cfm.
(c) Based on 5,000 hr/yr.

Table 4-4. Cost Effectiveness for a Paint Booth and RC/RCO System (40,000 cfm) to Control VOC Emissions

Cost Items	Cost Factors	Paint Booth Cost	RTO System Cost	Total Cost
DIRECT CAPITAL COSTS (DCC):				
(1) Purchased Equipment Cost				
(a) Basic Equipment/Services	Based on Vendor Quote	$145,000	$650,000	$795,000
(b) Instrumentation & Controls	Based on Vendor Quote	included	included	included
(c) Ductwork from booth to RTO system	Based On Cost Manual Ch. 10; 4 Ducts	$74,026	included	$74,026
(d) Exhaust Fan	Based on Vendor Quote	included	included	included
(e) Freight	Based on Vendor Information	included	$20,000	$20,000
(f) Sales Tax (Florida)	0.06 x (1a..1e)	$13,142	$39,000	$52,142
(g) Subtotal	(1a..1f)	$232,167	$709,000	$941,167
(2) Direct Installation	Based on RTO System Vendor Quote (0.36 x 1a)	included	$234,000	$234,000
Total DCC:	(1i) + (2)	$232,167	$943,000	$1,175,167
INDIRECT CAPITAL COSTS (ICC): (a)				
(3) Indirect Installation Costs				
(a) Engineering	(0.1) x (DCC)	$23,217	$94,300	$117,517
(b) Construction & Field Expenses	(0.05) x (DCC)	$11,608	$47,150	$58,758
(c) Construction Contractor Fee	(0.10) x (DCC)	$23,217	$94,300	$117,517
(d) Contingencies	(0.10) x (DCC)	$23,217	$94,300	$117,517
(4) Other Indirect Costs (a)				
(a) Startup & Testing	Based on Vendor Quote	included	included	$0
(b) Working Capital	30-day DOC	$3,383	$6,448	$9,831
Total ICC:	(3) + (4)	$84,641	$336,498	$421,140
TOTAL CAPITAL INVESTMENT (TCI):	DCC + ICC	$316,809	$1,279,498	$1,596,307
DIRECT OPERATING COSTS (DOC): (a)				
(1) Operating Labor				
Operator	$22/hr; 400 hr/yr (Paint Booth); 550 hr/yr (RTO)	$8,800	$12,100	$20,900
Supervisor	15% of operator cost	$1,320	$1,815	$3,135
(2) Maintenance				
Labor	Equivalent to Operating Labor	$10,120	$13,915	$24,035
Materials	Vendor estimate	$10,120	$10,000	$20,120
(3) Utilities (c)				
(a) Electricity				
RCO	$4.23/hr (vendor quote); 5,000 hr/yr	–	$18,400	$18,400
Ductwork (pressure drop)	OAQPS Control Cost Manual; 4 Ducts; 5,000 hr/yr	$2,393	–	$2,393
Paint Booth	30 hp; 22.4 kW; 5,000 hr/yr (vendor information)	$7,840	–	$7,840
(b) Natural gas	1.04 MMBtu/h (vendor quote); 5,000 hr/yr	–	$21,150	$21,150
Total DOC:	(1) + (2) + (3) + (4)	$40,593	$77,380	$117,973
INDIRECT OPERATING COSTS (IOC): (a)				
(7) Overhead	60% of oper. labor & maintenance	$18,216	$22,698	$40,914
(8) Property Taxes	1% of total capital investment	$3,168	$12,795	$15,963
(9) Insurance	1% of total capital investment	$3,168	$12,795	$15,963
(10) Administration	2% of total capital investment	$6,336	$25,590	$31,926
Total IOC:	(7) + (8) + (9) + (10)	$30,888	$73,878	$104,766
CAPITAL RECOVERY COSTS (CRC):	CRF of 0.1098 times TCI (15 yrs @ 7%)	$34,785.58	$140,488.92	$175,274
ANNUALIZED COSTS (AC):	DOC + IOC + CRF	$106,266	$291,747	$398,013
UNCONTROLLED STYRENE EMISSIONS (TPY) :	Florida Interim Emission Factors for Styrene	–	–	12.4
TOTAL VOC REMOVED:	95.5%	–	–	11.8
COST EFFECTIVENESS:	$ per ton of VOC Removed	–	–	$33,610

Vendor: Anguil Rotary Concentrator/Regenerative Catalytic Oxidizer (RC/RCO), Crow Manufacturing (Paint Booth)

Notes:

(a) Factors and cost estimates reflect OAQPS Cost Manual, Section 3.

(b) Based on maximum potential emissions

(c) Based on $0.07/kWh; $4/Mscf

Table 4-5. Cost Effectiveness for a Paint Boot and RC/RCOSystem (100,000 cfm) to Control VOC Emissions

Cost Items	Cost Factors	Paint Booth Cost	RTO System Cost	Total Cost
DIRECT CAPITAL COSTS (DCC):				
(1) Purchased Equipment Cost				
(a) Basic Equipment/Services	Based on Vendor Quote	$145,000	$1,400,000	$1,545,000
(b) Instrumentation & Controls	Based on Vendor Quote	included	included	included
(c) Ductwork from booth to RTO system	Based On Cost Manual Ch. 10; 4 ducts	$74,026	included	$74,026
(d) Exhaust Fan	Based on Vendor Quote	included	included	included
(e) Freight	Based on Vendor Information	included	$52,000	$52,000
(f) Sales Tax (Florida)	0.06 x (1a..1e)	$13,142	$84,000	$97,142
(g) Subtotal	(1a..1f)	$232,167	$1,536,000	$1,768,167
(2) Direct Installation	Based on RTO System Vendor Quote (0.36 x 1a)	included	$504,000	$504,000
Total DCC:	(1i) + (2)	$232,167	$2,040,000	$2,272,167
INDIRECT CAPITAL COSTS (ICC): (a)				
(3) Indirect Installation Costs				
(a) Engineering	(0.1) x (DCC)	$23,217	$204,000	$227,217
(b) Construction & Field Expenses	(0.05) x (DCC)	$11,608	$102,000	$113,608
(c) Construction Contractor Fee	(0.10) x (DCC)	$23,217	$204,000	$227,217
(d) Contingencies	(0.10) x (DCC)	$23,217	$204,000	$227,217
(4) Other Indirect Costs (a)				
(a) Startup & Testing	Based on Vendor Quote	included	included	$0
(b) Working Capital	30-day DOC	$4,255	$13,369	$17,624
Total ICC:	(3) + (4)	$85,514	$727,369	$812,883
TOTAL CAPITAL INVESTMENT (TCI):	DCC + ICC	$317,681	$2,767,369	$3,085,050
DIRECT OPERATING COSTS (DOC): (a)				
(1) Operating Labor				
Operator	$22/hr; 400 hr/yr (Paint Booth); 550 hr/yr (RTO)	$8,800	$12,100	$20,900
Supervisor	15% of operator cost	$1,320	$1,815	$3,135
(2) Maintenance				
Labor	Equivalent to Operating Labor	$10,120	$13,915	$24,035
Materials	Vendor estimate	$10,120	$20,000	$30,120
(3) Utilities (c)				
(a) Electricity				
RCO	$9.22/hr (vendor quote); 5,000 hr/yr	--	$46,100	$46,100
Ductwork (pressure drop)	OAQPS Control Cost Manual; 5,000 hr/yr	$2,430	--	$2,430
Paint Booth	70 hp; 52.2 kW; 5,000 hr/yr (vendor information)	$18,270	--	$18,270
(b) Natural gas	3.3 MMBtu/h (vendor quote); 5,000 hr/yr	--	$66,500	$66,500
Total DOC:	(1) + (2) + (3) + (4)	$51,060	$160,430	$211,490
INDIRECT OPERATING COSTS (IOC): (a)				
(7) Overhead	60% of oper. labor & maintenance	$18,216	$28,698	$46,914
(8) Property Taxes	1% of total capital investment	$3,177	$27,674	$30,851
(9) Insurance	1% of total capital investment	$3,177	$27,674	$30,851
(10) Administration	2% of total capital investment	$6,354	$55,347	$61,701
Total IOC:	(7) + (8) + (9) + (10)	$30,923	$139,393	$170,316
CAPITAL RECOVERY COSTS (CRC):	CRF of 0.1098 times TCI (15 yrs @ 7%)	$34,881.36	$303,857.13	$338,738
ANNUALIZED COSTS (AC):	DOC + IOC + CRF	$116,864	$603,680	$720,544
UNCONTROLLED STYRENE EMISSIONS (TPY) :	Florida Interim Emission Factors for Styrene	--	--	12.4
TOTAL Styrene REMOVED:	95.5%	--	--	11.8
COST EFFECTIVENESS:	$ per ton of Styrene Removed	--	--	$60,847

Vendor: Anguil Rotary Concentrator/Regenerative Catalytic Oxidizer (RC/RCO), Crow Manufacturing (Paint Booth)

Notes:

(a) Factors and cost estimates reflect OAQPS Cost Manual, Section 3.

(b) Based on maximum potential emissions

(c) Based on $0.07/kWh; $4/Mscf

Table 4-6. Cost Effectiveness for a RC/RCO System (370,000 cfm) to Control VOC Emissions from Lamination Area

Cost Items	Cost Factors	RTO System Cost
DIRECT CAPITAL COSTS (DCC):		
(1) Purchased Equipment Cost		
(a) Basic Equipment/Services	Based on Vendor Quote	$4,600,000
(b) Instrumentation & Controls	Based on Vendor Quote	included
(c) Ductwork to RTO system	Based On Cost Manual Ch. 10; 8 Ducts	$246,753
(d) Exhaust Fan	Based on Vendor Quote	included
(e) Freight	Based on Vendor Information	$195,000
(f) Sales Tax (Florida)	0.06 x (1a..1e)	$290,805
(g) Subtotal	(1a..1f)	$5,332,558
(2) Direct Installation	Based on RTO System Vendor Quote (0.36 x 1a)	$1,656,000
Total DCC:	(1i) + (2)	$6,988,558
INDIRECT CAPITAL COSTS (ICC): (a)		
(3) Indirect Installation Costs		
(a) Engineering	(0.1) x (DCC)	$698,856
(b) Construction & Field Expenses	(0.05) x (DCC)	$349,428
(c) Construction Contractor Fee	(0.10) x (DCC)	$698,856
(d) Contingencies	(0.10) x (DCC)	$698,856
(4) Other Indirect Costs (a)		
(a) Startup & Testing	Based on Vendor Quote	included
(b) Working Capital	30-day DOC	$45,465
Total ICC:	(3) + (4)	$2,491,460
TOTAL CAPITAL INVESTMENT (TCI):	DCC + ICC	$9,480,018
DIRECT OPERATING COSTS (DOC): (a)		
(1) Operating Labor		
Operator	$22/hr; 550 hr/yr	$12,100
Supervisor	15% of operator cost	$1,815
(2) Maintenance		
Labor	Equivalent to Operating Labor	$13,915
Materials	Vendor estimate	$30,000
(3) Utilities (c)		
(a) Electricity		
RCO	$34.09/hr (vendor quote); 5000 hr/yr	$170,450
Ductwork (pressure drop)	OAQPS Control Cost Manual; 8 Ducts; 5,000 hr/yr	$48,752
(b) Natural gas	13.4 MMBtu/h (vendor quote); 5,000 hr/yr	$268,550
Total DOC:	(1) + (2) + (3) + (4)	$545,582
INDIRECT OPERATING COSTS (IOC): (a)		
(7) Overhead	60% of oper. labor & maintenance	$34,698
(8) Property Taxes	1% of total capital investment	$94,800
(9) Insurance	1% of total capital investment	$94,800
(10) Administration	2% of total capital investment	$189,600
Total IOC:	(7) + (8) + (9) + (10)	$413,899
CAPITAL RECOVERY COSTS (CRC):	CRF of 0.1098 times TCI (15 yrs @ 7%)	$1,040,905.98
ANNUALIZED COSTS (AC):	DOC + IOC + CRF	$2,000,386
UNCONTROLLED STYRENE EMISSIONS (TPY) :	Florida Interim Emission Factors for Styrene	218
CAPTURE EFFICIENCY	Conservative estimate - 80%	174
TOTAL VOC REMOVED:	RTO overall destruction efficiency 95.5%	167
COST EFFECTIVENESS:	$ per ton of Styrene Removed	12,011

Vendor: Anguil - Rotary Concentrator/Regenerative Catalytic Oxidizer (RC/RCO)

Notes:

(a) Factors and cost estimates reflect OAQPS Cost Manual, Section 3.

(b) Based on maximum potential emissions

(c) Based on $0.07/kWh; $4/Mscf

Table 4-7. Comparsion of Alternative Control Technologies

Impacts	Control Option		
	40,000 cfm Spray Booth	100,000 cfm Spray Booth	Lamination Area
Economic			
Cost Effectiveness ($/ton of VOC Removed)	$33,610	$60,847	$12,011
Environmental			
VOC Removed (tons/year)	12.4	12.4	167
Secondary Emissions (tons/year)	0.5	1.65	6.7
Secondary Emissions (% of VOC Removed)	4.03%	13.31%	4.01%
Energy			
Electricity (kW-hrs/year)	409,042	954,285	3,131,457
Electricity (kW-hrs/ton VOC Reomved)	32,987	76,958	18,751
Fuel Usage (mmBtu/yr)	5,200	16,500	67,000
Fuel Usage (mmBtu/ton of VOC Removed)	419	1331	401

5.0 AMBIENT MONITORING ANALYSIS

The CAA requires that an air quality analysis be conducted for each criteria and noncriteria pollutant subject to regulation under the act before a major stationary source is constructed. Criteria pollutants are those pollutants for which AAQS have been established. Noncriteria pollutants are those pollutants that may be regulated by emission standards, but no AAQS have been established. This analysis may be performed by the use of modeling and/or by monitoring the air quality.

A major source may waive the ambient monitoring analysis requirement if it can be demonstrated that the proposed source's maximum air quality impacts will not exceed the PSD de minimis concentration levels. The maximum impacts of the proposed source are compared with the PSD de minimis concentrations in Table 3-4. As can be seen from Table 3-4, the proposed plant's maximum air quality impacts will be well below the de minimis concentrations for all applicable pollutants, except for ozone. For ozone, the potential VOC emissions are higher than the de minimis monitoring emission level. Since the projected increase in VOC emissions are higher than the de minimis monitoring emission level, the project must provide preconstruction ambient ozone monitoring data.

Based on a review of existing ambient ozone monitoring stations in Brevard County and from discussions with the Florida DEP, existing ozone concentration data from two stations in the county can be used to satisfy this requirement for the project. The stations are located in Palm Bay and Cocoa Beach which are located to the south about 60 km and to the southeast about 14 km from the facility, respectively.

A summary of the maximum ozone concentration measured at these two stations from 1996 to 1999 is presented in Table 5-1. During 1999, the three-year averages of the fourth highest 8-hour average ozone concentration measured at the two monitoring stations were 0.077 and 0.071 ppm, respectively, which are less than the current 8-hour average NAAQS of 0.8 ppm. For comparative purposes, the maximum 1-hour average concentrations are also presented.

It should be noted that elevated ozone concentrations were measured throughout the state, including this region, in the spring and summer of 1998. These elevated concentrations have been attributed to wild fires in Mexico and Florida coupled with adverse meteorological conditions (drought conditions, winds). The Florida DEP has documented the suspected causes for these elevated concentrations and has submitted a request to the EPA to ignore the days of elevated ozone concentrations in determining an area's compliance with AAQS. At present, EPA has recognized that these elevated concentrations were due to anomalous events and has allowed certain days to be excluded for compliance determinations. However, EPA is waiting to make a final determination on the remaining days until more data have been collected in 1999.

It should also be noted that in May 1999, the U.S. Court of Appeals for the District of Columbia remanded EPA's 1997 revisions to the NAAQS. These revisions included two new PM2.5 standards, a short-term 24-hour average standard and an annual average standard, and a revised PM 10 standard. For ozone, the revisions included adopting a new averaging time (8 hours) and value (0.08 ppm) and eliminating the existing 1-hour NAAQS except in those areas that were not meeting the 1-hour NAAQS. The U.S. Court of Appeals held that EPA's interpretation of the Clean Air Act, as applied in setting the new public health air quality standards for ozone and particulate matter, constituted an unconstitutional delegation of legislative authority to the EPA. The Court did not question the science on which EPA relied to develop the health standards or criticize EPA's decision making process. Rather, EPA essentially was ordered to rewrite the NAAQS for particulate matter; the revised PM_{10} standard was vacated with the old PM_{10} remaining in effect; and the new PM2.5 standard should remain in place but could be vacated if "the presence of this standard threatens a more imminent harm". The "harm" refers to the burden on sources complying with the regulations. The Court did not vacate the new ozone standard but stated that it "cannot be enforced" under the CAA.

As expected, EPA strongly disagreed with the decision. On June 28, 1999 EPA and the Department of Justice filed a petition for rehearing asking the entire DC Circuit to reverse the decision of the panel.

At present, the State of Florida has retained its 1-hour average ozone concentration of 0.08 ppm as the AAQS for determining whether an area is in compliance with ambient standards.

Table 5-1. Summary of Maximum Ozone Concentrations Measured in Brevard County from 1996 to 1999

Site Number and Location		Measurement Period: Year	Measurement Period: Months	Number of Observation	Measured Concentration (ppm) (a)			
Florida AAQS					**8-Hour Average**			
					NA	**NA**		**0.08**
					1st	2nd	4th	3-year Average 4th (b)
12-009-4001	Cocoa Beach, 400 South 4th Street	1999	Jan-Aug	226	0.085	0.082	0.072	0.077
		1998	Jan-Dec	356	0.115	0.089	0.085	0.077
		1997	Jan-Dec	365	0.090	0.083	0.077	0.071
		1996	Jan-Dec	364	0.083	0.078	0.070	0.071
12-009-5001	Palm Bay, 525 Pepper Street	1999	Jan-Dec	222	0.082	0.071	0.069	0.071
		1998	Jan-Dec	362	0.094	0.083	0.079	0.070
		1997	Jan-Dec	365	0.082	0.080	0.068	0.066
		1996	Jan-Dec	365	0.074	0.073	0.065	0.066
Former AAQS					**1-Hour Average**			
					NA	**0.12**		
					1st	2nd		
12-009-4001	Cocoa Beach, 400 South 4th Street	1999	Jan-Aug	226	0.097	0.081		
		1998	Jan-Dec	356	0.150	0.111		
		1997	Jan-Dec	365	0.097	0.086		
		1996	Jan-Dec	364	0.093	0.086		
12-009-5001	Palm Bay, 525 Pepper Street	1999	Jan-Dec	222	0.086	0.079		
		1998	Jan-Dec	362	0.112	0.088		
		1997	Jan-Dec	365	0.090	0.086		
		1996	Jan-Dec	365	0.091	0.087		

Note: NA= not applicable; AAQS= ambient air quality standard.

(a) For comparative purposes, both the 1-hour and 8-hpur average concentrations are presented. At present, there is a stay for the 8-hour AAQS.
(b) Concentration value is the 3-year average of the 4th highest concentration.

6.0 AIR QUALITY IMPACT ANALYSIS

There are no AAQS or PSD Increments for VOCs; the applicable pollutant is ozone. While VOCs can affect ozone through atmospheric processes, there is no EPA or FDEP approved model for evaluating the influence of a single source. Ozone formation is a regional phenomena where a multitude of VOC sources, primarily vehicular emissions, contribute. In this regional context, the VOC emissions from the proposed Cape Canaveral Plant would be minor to the overall VOC loading, as well as NO_x emissions, that potentially form ozone. Moreover, the area of the plant is currently in compliance with the AAQS for ozone.

7.0 ADDITIONAL IMPACT ANALYSIS

7.1 IMPACTS DUE TO DIRECT GROWTH

The proposed project is being constructed to meet production demands for larger boats. The proposed plant is in an area where Sea Ray has similar manufacturing facilities. Additional growth as a direct result of project is not expected. The project will be constructed and operated with labor that is available from the local area. The area proposed for the plant is appropriately zoned for the manufacturing of large boats and is not expected to significantly affect growth in the area. As a result, air pollution impacts from additional growth are not anticipated.

7.2 IMPACT ON SOILS, VEGETATION AND WILDLIFE

The proposed project will emit VOCs for which there are no AAQS or PSD Increments. The contribution of the project's emissions to ozone formation will be insignificant given the regional nature of ozone formation and the small magnitude relative to other contributors. As a result, the project's impacts on soils, vegetation, and wildlife are also not expected to be significant.

7.3 IMPACTS UPON PSD CLASS I AREAS

The proposed project is located more than 150 km from any PSD Class I area. The nearest Class I area to the project site is the Chassahowitzka NWA, located about 193 km from the project. An air quality impact evaluation would not be required for this project, since the project's emissions are VOCs and there are no PSD Class I increments. Contribution to visibility impairment will be insignificant from the proposed project since the emissions will not be those associated with small particle formation or visibility effects (e.g., nitrogen oxides, sulfur oxides and PM_{10}). This is consistent with the EPA sponsored Interagency Workgroup on Air Quality Modeling (IWAQM) recommendations for analysis of visibility (regional haze) and deposition.

APPENDIX

VENDOR INFORMATION

ANGUIL

August 25, 1999

Mr. Robert Zeller
Golder Associates
6241 NW 23rd Street, Suite 500
Gainesville, FL 32653

SUBJECT: Budgetary Proposal #AES-3407 for VOC Concentrator Wheel and Oxidizer System

Dear Mr. Zeller:

Thank you for the opportunity to provide budgetary pricing for concentrator wheel and oxidizer systems for a boat manufacturing plant in Florida.

For your project, three exhaust volume options have been analyzed.
1) 40,000 SCFM at ambient temperature with 3-40 lbs/hr styrene or methyl methacrylate.
2) 100,000 SCFM at ambient temperature with 3-40 lbs/hr styrene or methyl methacrylate.
3) 370,000 SCFM at ambient temperature with 50 lbs/hr styrene or methyl methacrylate.

The high exhaust volume and low VOC concentration makes the concentrator wheel and oxidizer system the most cost effective solution for your application. A concentrator wheel with 10:1 concentration ratio and a catalytic oxidizer has been quoted at this time. Alternate technologies such as Regenerative Catalytic Oxidizer (RCO) and higher concentration ratio can be supplied to further reduce operating costs. Budgetary equipment prices and operating costs are summarized in the following table.

Concentrator Wheel with Catalytic Oxidizer (10:1 concentration ratio**)			
Flow	***Budgetary Equipment Price***	***Styrene Loading***	***Operating Cost****
40,000 SCFM	$650,000	40 lbs/hr	$7.91/hr
100,000 SCFM	$1,400,000	40 lbs/hr	$22.52/hr
370,000 SCFM	$4,600,000	50 lbs/hr	$87.80/hr

* Based on fuel cost of $4/MMBTU and electric cost of $0.07/KWH and loading stated
** Concentration ratio may increase to further reduce operating costs

As a background, ANGUIL engineers and manufactures cost effective catalytic and thermal recuperative oxidizers, catalytic and thermal regenerative systems, rotor concentrator wheels, self-cleaning filters, as well as odor abatement systems to destroy volatile organic compounds (VOCs), HAPs, NOx and odorous air emissions. Our goal is to provide pollution control solutions today to help our customers remain profitable tomorrow.

To date ANGUIL has furnished over 800 emission, fume and odor control systems. Equipment has been installed on paint spray booths, printing presses, drying ovens, curing ovens, coating and laminating lines, chemical processes, soil vapor extractors,

ANGUIL ENVIRONMENTAL SYSTEMS, INC.
8855 North 55th Street ▪ Milwaukee, Wisconsin 53223-2358 ▪ 414-365-6400 ▪ Fax: 414-365-6410
E-mail: sales@anguil.com ▪ Web Site: http://www.anguil.com

air strippers and other processing equipment. All systems are guaranteed to meet or exceed regulatory requirements.

If you have any further questions about air flow reduction or need additional information, please contact me at (330) 899-9383, or your local representative, Willy Culkar of Energy Control & Services, Inc. at (813) 989-1168. We look forward to having the opportunity of working with you.

Very truly yours,

ANGUIL ENVIRONMENTAL SYSTEMS, INC.

Robert Kirkland
Eastern Regional Manager

cc: Willy Culkar / Energy Control & Services, Inc.

ANGUIL ENVIRONMENTAL SYSTEMS, Inc.

Milwaukee, Wis.

ROTOR CONCENTRATOR AND OXIDIZER OPERATING COST SIMULATION REV. JAN. 3, 1996

CUSTOMER: Golder Associates — Modeled: 8/25/99 16:13

PROPOSAL No: AES-3407

LOCATION:

REMARKS: 40,000 CFM total exhaust
Rotor concentrator wheel with catalytic recuperative oxidizer (10:1 concentration)
40 lbs/hr Styrene

INPUT PARAMETERS		Assumes 460/60/3	
Heat Exchanger Efficiency	60 % shell side	Electricity Price	$0.07 per KWH
Process Temperature	70 °F	Fuel Price	$4.00 per MMBTU
Concentrator Process Flow	40000 SCFM	LEL of Mixture	1.10 % by Volume
Concentration Ratio	10 :1	Avg Vapor Density	0.27 Lb/ft3
System Inlet Flow	4002 SCFM	Pressure Drop	36 cm H20
Oxidizer inlet temperature	180 °F	Percent LEL	5.62 %LEL
Burner Setting	600 °F	Compound Average	619 ppmv
Pressure drop	14 in H20	Rotor Removal Efficiency	96.5%
Solvent Loading	40.00 lb/hr	Oxidizer Destruction Efficiency	99.0%
Solvent Calorific EQUIV.	17,423 Btu/lb	Overall Destruction Efficiency	95.5%

SYSTEM POINT	TEMP	Deg. F		Flow	SCFM
Oxidizer Inlet	T(1)	180		F(1)	4002
Heat Exchanger Cold Outlet	T(A)	395		F(A)	4002
Heat Exchanger Bypass	T(B)	180		F(B)	0
Burner Inlet	T(2)	600		F(2)	4002
Reactor Inlet	T(3)	600	Temp. Rise F	F(3)	4002
Reactor Outlet	T(4)	752	152	F(4)	4002
2nd Heat Exchanger Outlet	T(5)	521		F(5)	4002
Oxidizer Outlet	T(6)	317			

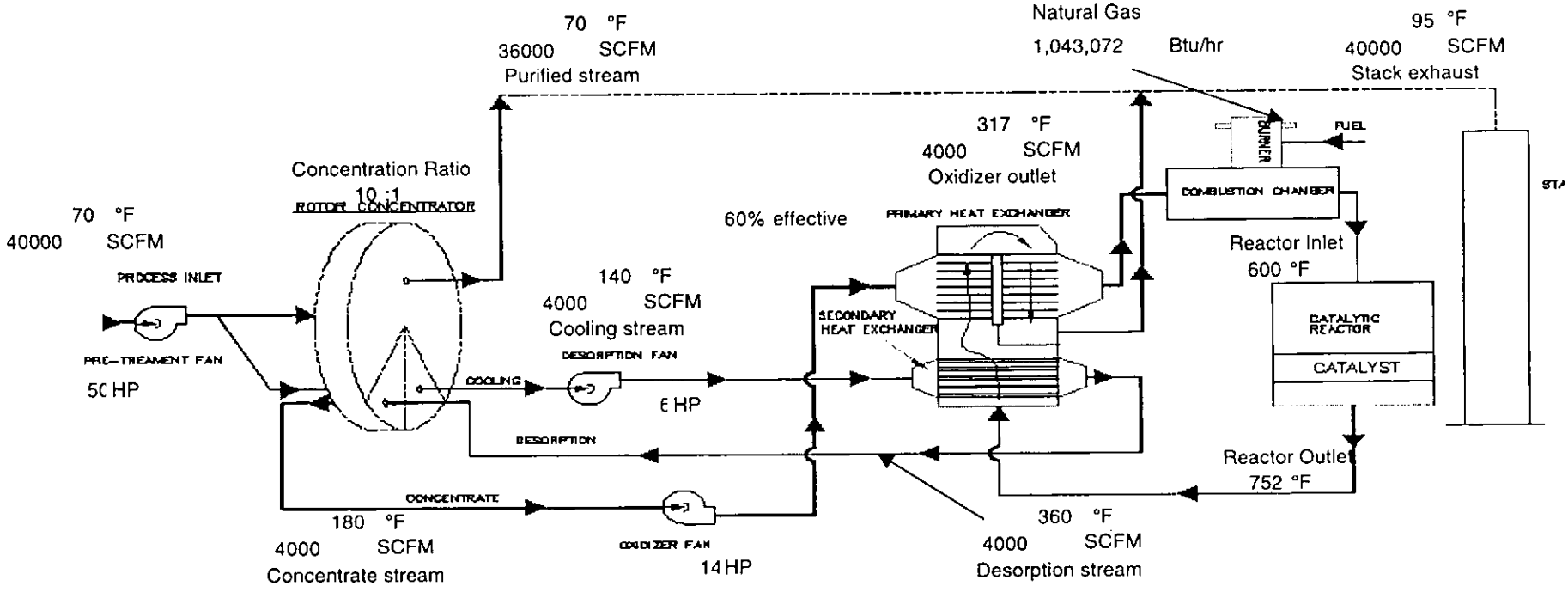
Results		Economics	
Firing Rate Pilot	13,715 Btu/hr	Fuel Cost	$4.23 per Hour
Firing Rate, HHV	1,043,072 Btu/hr	Electric Cost	
Oxidizer Fan Required(FD)	14 HP	Oxidizer Fan	$0.74 per Hour
Combustion Air Required	0 SCFM	Desorption Fan	$0.32 per Hour
Percent Bypass HX	0 %	Pre-treatment Fan	$2.63 per Hour
		Total Operating Cost	$7.91 per Hour

ANGUIL ENVIRONMENTAL SYSTEMS, Inc.

Milwaukee, Wis.

ROTOR CONCENTRATOR AND OXIDIZER OPERATING COST SIMULATION REV. JAN. 3, 1996

CUSTOMER:	**Golder Associates**
PROPOSAL No:	**AES-3407**
LOCATION:	
REMARKS:	**40,000 CFM total exhaust**
	Rotor concentrator wheel with catalytic recuperative oxidizer (10:1 concentration)
	40 lbs/hr Styrene



ANGUIL ENVIRONMENTAL SYSTEMS, Inc.

Milwaukee, Wis.

ROTOR CONCENTRATOR AND OXIDIZER OPERATING COST SIMULATION REV. JAN. 3, 1996

CUSTOMER: Golder Associates

Modeled: 8/25/99 16:10

PROPOSAL No: AES-3407

LOCATION:

REMARKS: 370,000 CFM total exhaust
Rotor concentrator wheel with catalytic recuperative oxidizer (10:1 concentration)
50 lbs/hr Styrene

INPUT PARAMETERS		Assumes 460/60/3	
Heat Exchanger Efficiency	60 % shell side	Electricity Price	$0.07 per KWH
Process Temperature	70 °F	Fuel Price	$4.00 per MMBTU
Concentrator Process Flow	370000 SCFM	LEL of Mixture	1.10 % by Volume
Concentration Ratio	10 :1	Avg Vapor Density	0.27 Lb/ft3
System Inlet Flow	37003 SCFM	Pressure Drop	36 cm H20
Oxidizer inlet temperature	180 °F	Percent LEL	0.76 %LEL
Burner Setting	600 °F	Compound Average	84 ppmv
Pressure drop	14 in H20	Rotor Removal Efficiency	96.5%
Solvent Loading	50.00 lb/hr	Oxidizer Destruction Efficiency	99.0%
Solvent Calorific EQUIV.	17,423 Btu/lb	Overall Destruction Efficiency	95.5%

SYSTEM POINT	TEMP	Deg. F		Flow	SCFM
Oxidizer Inlet	T(1)	180		F(1)	37003
Heat Exchanger Cold Outlet	T(A)	312		F(A)	37003
Heat Exchanger Bypass	T(B)	180		F(B)	0
Burner Inlet	T(2)	600		F(2)	37003
Reactor Inlet	T(3)	600	Temp. Rise F	F(3)	37003
Reactor Outlet	T(4)	621	21	F(4)	37003
2nd Heat Exchanger Outlet	T(5)	390		F(5)	37003
Oxidizer Outlet	T(6)	264			

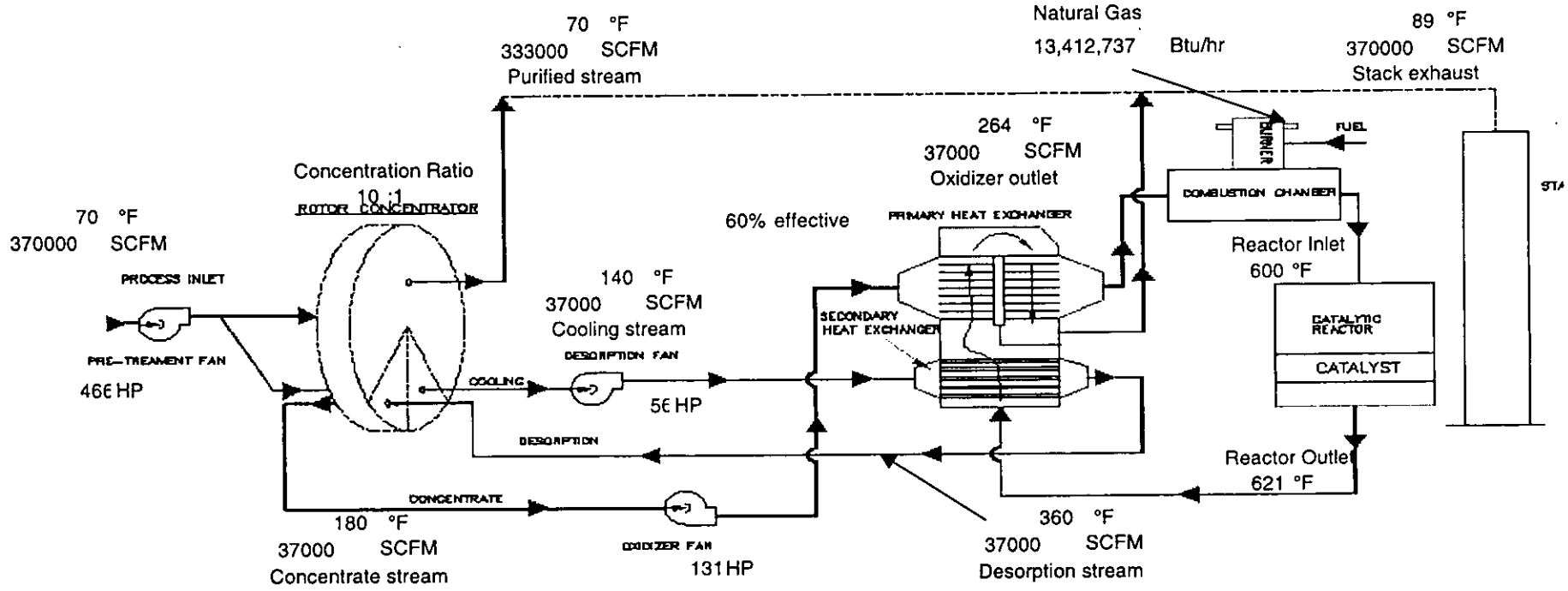
Results		Economics	
Firing Rate Pilot	13,715 Btu/hr	Fuel Cost	$53.71 per Hour
Firing Rate, HHV	13,412,737 Btu/hr	Electric Cost	
Oxidizer Fan Required(FD)	131 HP	Oxidizer Fan	$6.85 per Hour
Combustion Air Required	0 SCFM	Desorption Fan	$2.94 per Hour
Percent Bypass HX	0 %	Pre-treatment Fan	$24.31 per Hour
		Total Operating Cost	$87.80 per Hour

ANGUIL ENVIRONMENTAL SYSTEMS, Inc.

Milwaukee, Wis.

ROTOR CONCENTRATOR AND OXIDIZER OPERATING COST SIMULATION REV. JAN. 3, 1996

CUSTOMER:	**Golder Associates**
PROPOSAL No:	**AES-3407**
LOCATION:	
REMARKS:	**370,000 CFM total exhaust**
	Rotor concentrator wheel with catalytic recuperative oxidizer (10:1 concentration)
	50 lbs/hr Styrene



ANGUIL ENVIRONMENTAL SYSTEMS, Inc.

Milwaukee, Wis.

ROTOR CONCENTRATOR AND OXIDIZER OPERATING COST SIMULATION REV. JAN. 3, 1996

CUSTOMER: Golder Associates — Modeled: 8/25/99 16:10

PROPOSAL No: AES-3407

LOCATION:

REMARKS: 100,000 CFM total exhaust
Rotor concentrator wheel with catalytic recuperative oxidizer (10:1 concentration)
40 lbs/hr Styrene

INPUT PARAMETERS		Assumes 460/60/3	
Heat Exchanger Efficiency	60 % shell side	Electricity Price	$0.07 per KWH
Process Temperature	70 °F	Fuel Price	$4.00 per MMBTU
Concentrator Process Flow	100000 SCFM	LEL of Mixture	1.10 % by Volume
Concentration Ratio	10 :1	Avg Vapor Density	0.27 Lb/ft3
System Inlet Flow	10002 SCFM	Pressure Drop	36 cm H20
Oxidizer inlet temperature	180 °F	Percent LEL	2.25 %LEL
Burner Setting	600 °F	Compound Average	248 ppmv
Pressure drop	14 in H20	Rotor Removal Efficiency	96.5%
Solvent Loading	40.00 lb/hr	Oxidizer Destruction Efficiency	99.0%
Solvent Calorific EQUIV.	17,423 Btu/lb	Overall Destruction Efficiency	95.5%

SYSTEM POINT	TEMP	Deg. F		Flow	SCFM
Oxidizer Inlet	T(1)	180		F(1)	10002
Heat Exchanger Cold Outlet	T(A)	338		F(A)	10002
Heat Exchanger Bypass	T(B)	180		F(B)	0
Burner Inlet	T(2)	600		F(2)	10002
Reactor Inlet	T(3)	600	Temp. Rise F	F(3)	10002
Reactor Outlet	T(4)	661	61	F(4)	10002
2nd Heat Exchanger Outlet	T(5)	431		F(5)	10002
Oxidizer Outlet	T(6)	280			

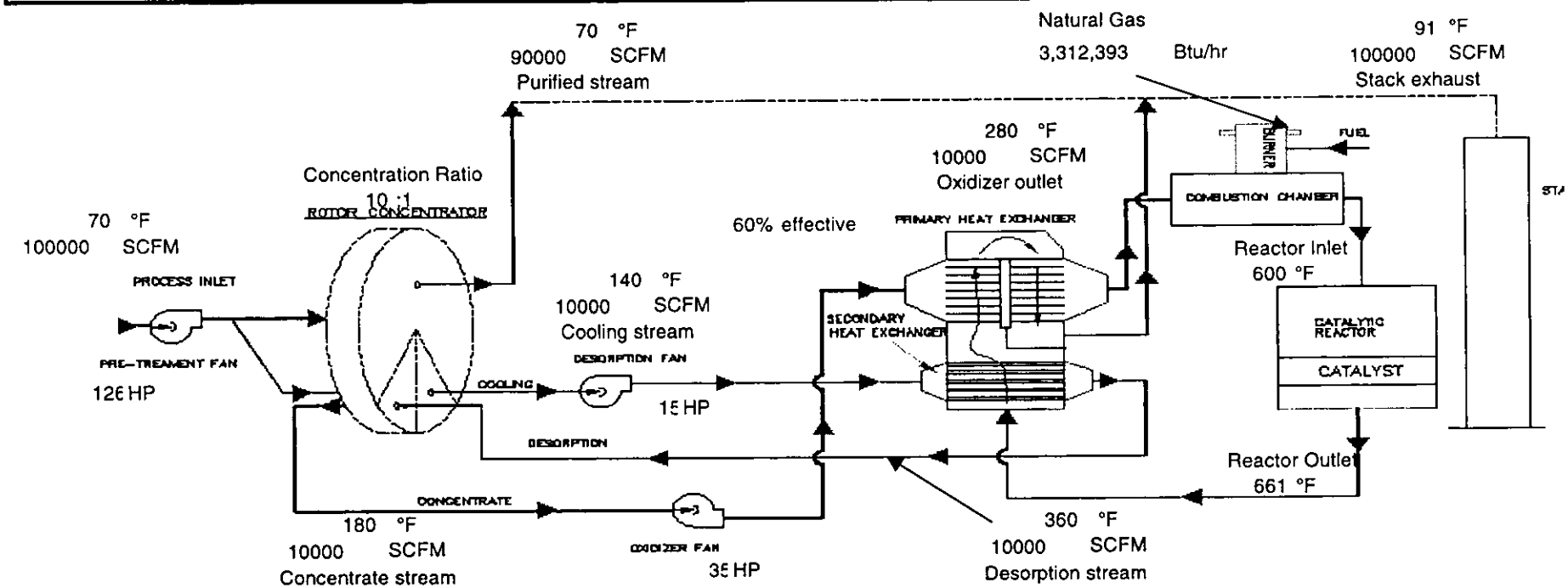
Results		Economics	
Firing Rate Pilot	13,715 Btu/hr	Fuel Cost	$13.30 per Hour
Firing Rate, HHV	3,312,393 Btu/hr	Electric Cost	
Oxidizer Fan Required(FD)	35 HP	Oxidizer Fan	$1.85 per Hour
Combustion Air Required	0 SCFM	Desorption Fan	$0.79 per Hour
Percent Bypass HX	0 %	Pre-treatment Fan	$6.57 per Hour
		Total Operating Cost	$22.52 per Hour

ANGUIL ENVIRONMENTAL SYSTEMS, Inc.

Milwaukee, Wis.

ROTOR CONCENTRATOR AND OXIDIZER OPERATING COST SIMULATION REV. JAN. 3, 1996

CUSTOMER:	**Golder Associates**
PROPOSAL No:	**AES-3407**
LOCATION:	
REMARKS:	**100,000 CFM total exhaust**
	Rotor concentrator wheel with catalytic recuperative oxidizer (10:1 concentration)
	40 lbs/hr Styrene



Rotor Removal Efficiency
96.5%

Oxidizer Destruction Efficiency
99.0%

Overall Destruction Efficiency
95.5%

ANGUIL ENVIRONMENTAL SYSTEMS, INC.

Innovative air pollution control solutions for industry.

Committed to Cleaner Air.

A LETTER FROM THE PRESIDENT

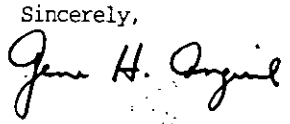
ANGUIL

As we travel through the capitals of the world, the level of air pollution in major cities shocks the senses. From the degradation of historical monuments to the wearing of masks by the local populace, pollution impacts our quality of life.

Our company has made the commitment to supply world-class equipment and services to help our industrial and process plant customers cost-effectively meet compliance standards. A solid base of oxidation technologies operational in Europe, Asia and North and South America demonstrates Anguil's status as a world leader.

Our business philosophy is to provide innovative pollution control technology, operate as a partner with our clients in order to develop the least costly, value-based solution for them and to service that equipment in order to assure compliance for the long term.

Sincerely,



Gene H. Anguil
President

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8855 North 55th Street • Milwaukee, Wisconsin 53223 • Phone: 414-365-6400 • Fax 414-365-6410
Email: sales@anguil.com • Web Site: http://www.anguil.com

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WORLD HEADQUARTERS
8855 N. 55th Street
Milwaukee, Wisconsin 53223
United States
Phone: 414-365-6400
Fax: 414-365-6410

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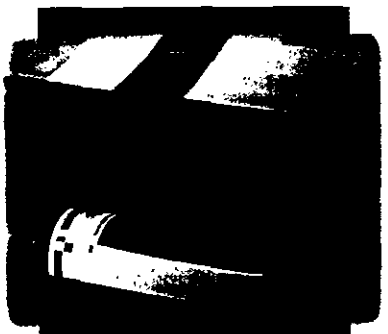
"We chose Anguil as our sole supplier of catalytic oxidation units because of their ability to provide custom solutions. They consistently respond well to the challenges of design change and improvement, and will be our vendor of choice for future purchases."

– Ed Wielecha, Borden Chemical



"I have purchased Anguil VOC control systems based on their willingness to design to our needs."

– Chris Krohn, Cello Bag

CUSTOMERS TRUST ANGUIL

Throughout North America and around the world, ANGUIL has built lasting relationships with a wide variety of valuable clients. No matter the industry, no matter the magnitude, wherever VOC emission control has been an issue, ANGUIL has designed a cost-effective, viable solution. ANGUIL's unique approach to VOC emission control has resulted in a track record of over eight hundred successful installations making ANGUIL ENVIRONMENTAL a PROVEN SOLUTIONS PROVIDER. The name ANGUIL has become a guarantee of EPA, state and international regulatory agency compliance.

Since 1979, companies both large and small have been placing their trust in ANGUIL's experts, for a variety of specific reasons:

- ANGUIL's professional staff comes from a broad range of industries giving them first-hand knowledge of your particular process.
- ANGUIL supplies a full range of technologies resulting in an unbiased approach to your requirements.
- ANGUIL has the ability to work within your time constraints.
- ANGUIL's base of knowledge along with its constant pursuit of a better solution has provided answers where others have failed.
- ANGUIL's combination of unique air volume reduction techniques, lower temperature requirement and relatively maintenance-free design results in lower capital and operating costs.

ANGUIL is committed to helping its customers achieve cost-effective compliance. On a larger scale, ANGUIL is committed to cleaner air. These commitments are what drive ANGUIL's dedication to innovative technologies, superior systems and satisfied customers. By choosing ANGUIL as your partner, you'll be joining us in making a substantial contribution to cleaner air.

ENGINEERING AND DESIGN

There are three steps ANGUIL takes in determining the solution to any VOC control issue.

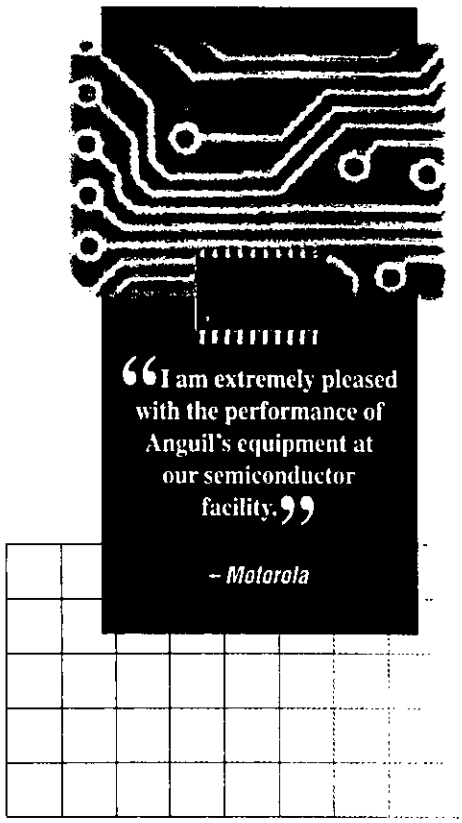
ENGINEERING STUDY: The first step in determining your solution is to quantify the problem through an ANGUIL Engineering Study. Our Engineering Study begins with a thorough assessment of your VOC situation. Our field engineers will work in partnership with you or your consultant to determine the best course of action. Our Engineering Study would typically include:

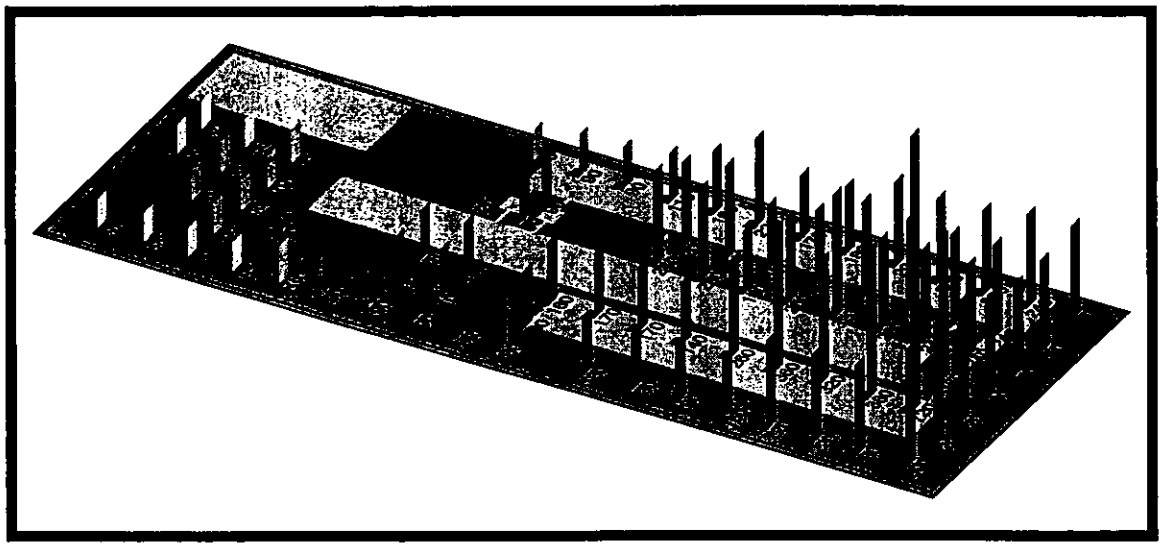
- fugitive vapor mapping
- fugitive emission capture design
- recirculation and air volume reduction
- recommendations for airflow modifications to your original process
- assistance with permit applications

The end result is a report recommending the most effective technology and system to meet your needs. Each submittal covers equipment alternatives, operating costs and conceptual layout and pricing.

MODULAR APPROACH: Using state-of-the-art CAD capabilities and value engineering principles, your new ANGUIL system evolves through a process that treats each feature as a module to be selected or modified, plus accesses an extensive database of components from our quality supplier network. This allows your system to be designed in the shortest amount of time, utilizing the minimum amount of space that is satisfactory in both form and function.

INTERNAL REVIEW: A rigorous internal review of your system design, insures that all project objectives have been met, including a hazardous operations review if needed.





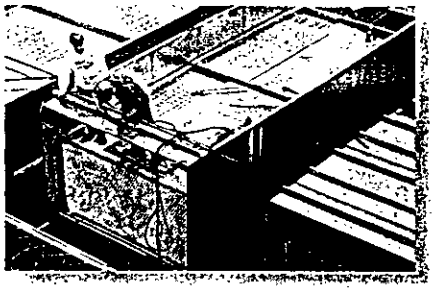
Data from fugitive vapor testing is used to create a 3-D concentration (ppmv) map.

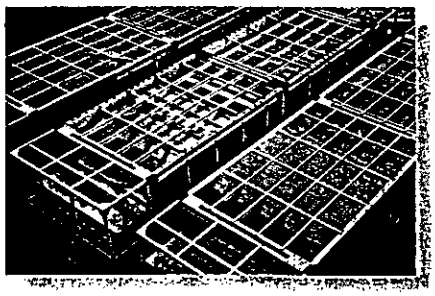
QUALITY FABRICATION

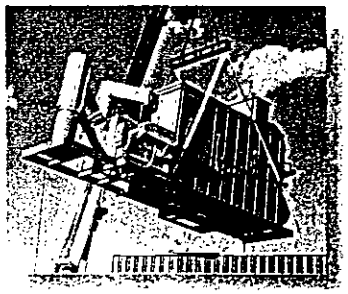
ANGUIL's modular units and complete systems are all manufactured to meet or exceed our customers' requirements. Each component is built to exacting specifications by experienced engineers and craftsmen, using the highest quality materials and finishes available.

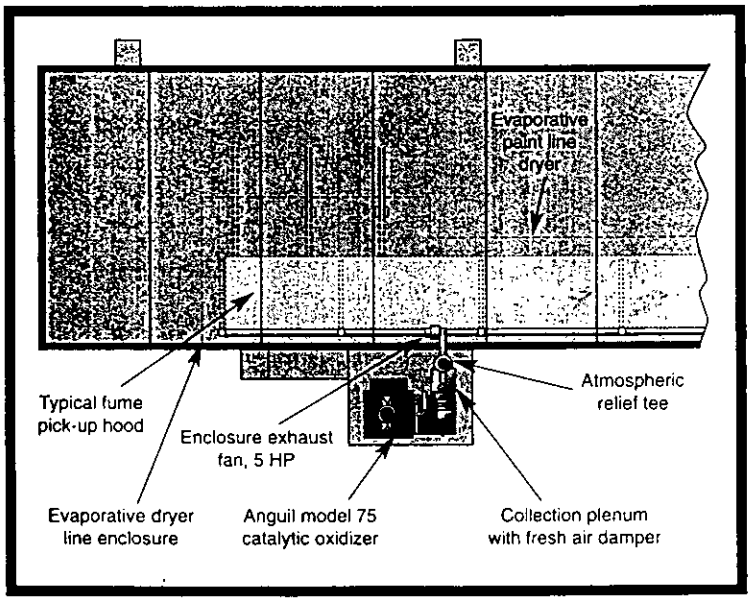
Integrity of the final product is dependent on a rigorous system of quality checks throughout each fabrication step. For instance, extreme care is taken at each phase of the welding process, including the spot welding of the inconel studs on thermal oxidizers, continous MIG/TIG and plasma arc welds on the 304 stainless steel internals of the catalytic reactors and crucial leakproof weldments on heat exchanger tube bundles of 309 or 316 stainless steel. Finally, final check-out and pressure testing occurs during operation of each system before it leaves the factory.

Throughout each step of the project, controls are implemented to assure quality, functionality and timeliness, beginning with a review of drawings and specifications from product engineering and ending with complete customer satisfaction upon delivery, installation and startup.

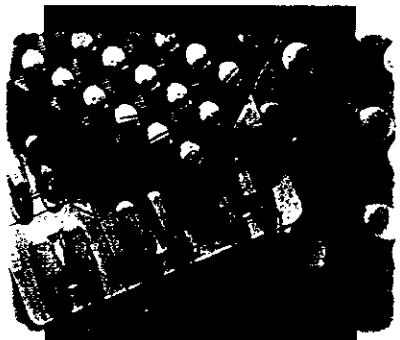








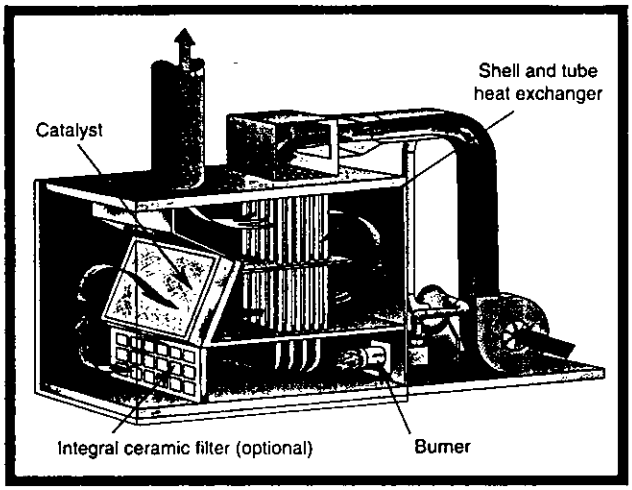
Typical configuration showing placement of catalytic oxidizer in customer's process line.



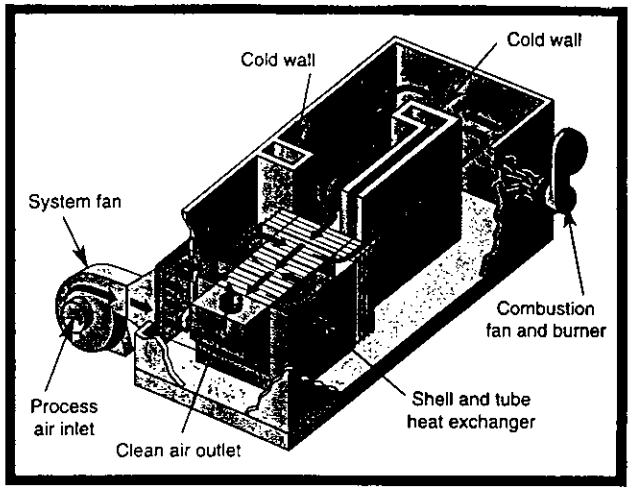
"I initially decided on Anguil for our pharmaceutical plant because they had a solid reputation, they were price-competitive and they could meet my delivery demand. They exceeded our expectations all the way through installation and start-up. I recommend them."

– Frank Prestage, Whitehall-Robins

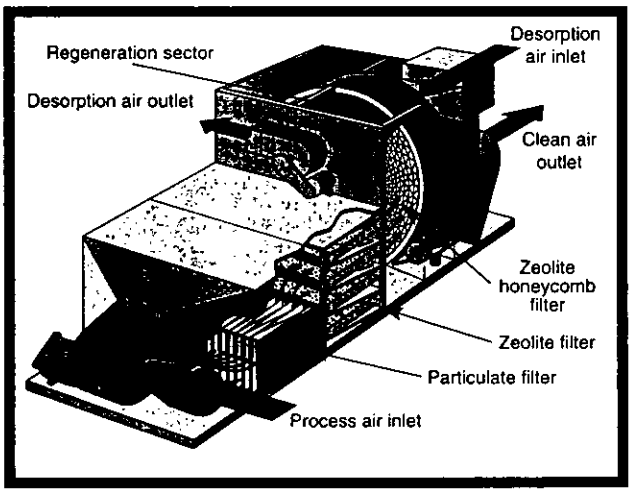
PROPER TECHNOLOGY SELECTION



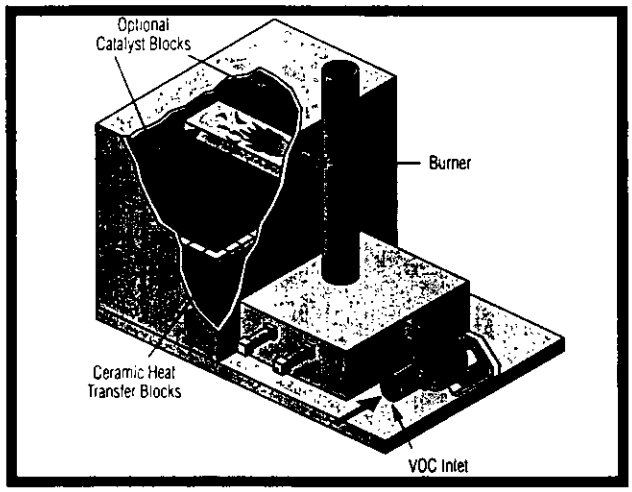
The ANGUIL Catalytic Oxidizer System *destroys air toxics and VOCs discharged in industrial process exhausts. The utilization of a catalyst allows the oxidation of hydrocarbons to carbon dioxide and water vapor at significantly lower temperatures than thermal oxidation. The process stream enters the system fan and is discharged into the system's heat exchanger which preheats the air. The air then passes through a catalyst producing an exothermic reaction wherein the VOCs are oxidized to water vapor and carbon dioxide. The hot, purified air is then used to preheat the incoming stream and is then exhausted into the atmosphere. The system is self-sustaining at low LEL levels.*



The ANGUIL Thermal Oxidizer System *destroys toxic and organic vapor contaminants that are initially discharged into a heat exchanger where they are preheated. The VOC laden air is then passed to the burner where it is elevated to the proper destruction temperature for an exothermic reaction to take place. All VOCs are oxidized to carbon dioxide and water vapor. The hot air is diverted back to the heat exchanger and used to preheat the incoming process stream. The purified, cooled air is then exhausted into the atmosphere.*



The ANGUIL Rotor Concentrator *is one of the most cost-effective technologies for processing high volume, low concentration air streams. The process stream is passed through a filter which removes dust and other particulates. In the case of a greatly varying VOC concentration, the stream may pass through a carbon filter that creates a uniform concentration. From here it is directed to a rotary honeycomb wheel with an impregnated hydrophobic zeolite which adsorbs the VOCs. The clean air is then exhausted into the atmosphere. As the wheel is slowly rotated, it passes through a regeneration sector where the VOCs are desorbed in a small concentrated stream. The concentrated stream is diverted to a small thermal or catalytic incinerator which oxidizes the VOCs. An integral secondary heat exchanger supplies the desorption heat.*



The ANGUIL Twin-Bed Regenerative Thermal/Catalytic Oxidizer *consists of two insulated, vertical thermal energy recovery chambers connected by an inverted "U shaped" insulated oxidation chamber. Flow diverter valves are located next to the thermal energy recovery chambers to divert the process air flow into and out of the chambers. The thermal energy recovery chambers are filled with structured ceramic media that provides for the recovery of up to 96% of the oxidation temperature thermal energy. The complete operation of the oxidizer system is controlled by a Programmable Logic Controller that optimizes both the VOC destruction efficiency and the thermal efficiency.*

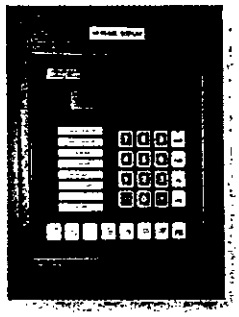
"Our system's been installed for two years now and we haven't had a single operational problem. I wish all my equipment was as reliable as Anguil's."

– Lyle Webster, Vons Bakery

INSTALLATION

ANGUIL's field teams are best qualified to install the systems that we design, engineer and fabricate. Our turnkey installation provides you with the option of single source responsibility. Our field installation team will introduce and correctly integrate your new ANGUIL system with minimal downtime. Additionally, our team can interface with the contractor of your choice. Destruction efficiency tests are conducted with a flame ionizing detector to demonstrate performance. Due to ANGUIL's customers' stringent time frames, ANGUIL pre-assembles, pre-wires and pre-tests each system prior to shipment.

EASY OPERATION



The Programmable Logic Controller keypad, a standard feature on all ANGUIL units, pinpoints system errors in the event of a fault and spells out possible avenues of service (a more effective system than relay switches and lights that simply indicate a shutdown). In addition to the PLC, ANGUIL's many other built-in, user-friendly features also provide you with more control, increased "up-time," efficient troubleshooting and reduced maintenance costs.

TECHNICAL SUPPORT

Education

ANGUIL's Personnel Education Program has been designed to give your staff a thorough working knowledge of the system operation, maintenance and trouble shooting procedures. After the program has been completed, Operation and Maintenance Manuals are provided with the system.

Service and Maintenance

For your assurance of continued optimal performance, ANGUIL provides a variety of preventive maintenance programs, including 24-hour emergency service.

Our sophisticated computerized communications interface package allows you to tie your new system directly into ANGUIL's computer base. This allows ANGUIL to provide remote system diagnostics, trouble shooting and correction procedures as though you had an ANGUIL engineer on site.

During formal compliance tests, ANGUIL will provide support by reviewing protocol and assisting during testing.

ANGUIL's PME Program

To protect your investment by ensuring continued compliance, ANGUIL offers an annual Preventive Maintenance Evaluation Program as mandated in some areas. Each PME is custom designed to correspond with your existing equipment, whether ANGUIL's or a competitor's. It is a complete technical evaluation of the performance of the oxidizer. As part of the analysis our Control Specialist will:

- inspect electrical components
- inspect mechanical integrity
- evaluate destruction efficiency
- inspect process control loops
- evaluate catalyst
- calibrate instrumentation
- implement or recommend corrective actions

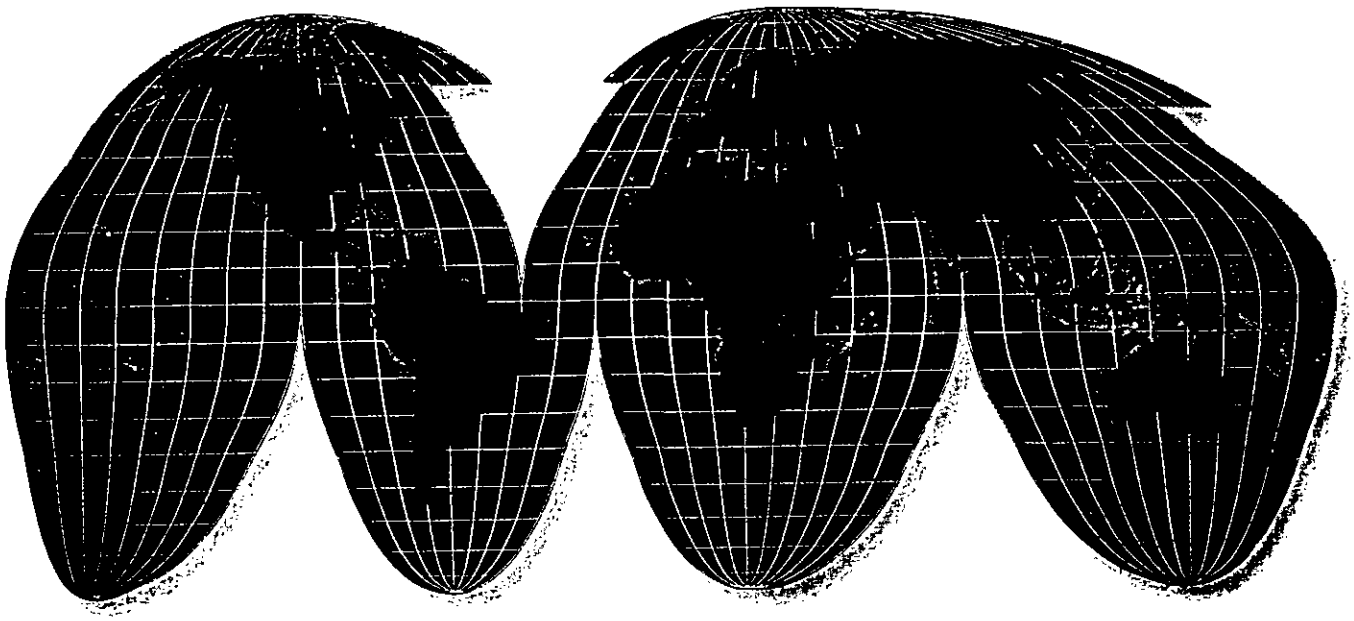
A thorough evaluation summary will be provided following each inspection.

GUARANTEE

Committed to Cleaner Air.

Our many repeat customers are a testimony to the reliability of our products. That is because each piece of equipment is thoroughly tested before shipment. Site destruction efficiency analyses are performed as your assurance of receiving the most reliable product possible.

Secondly, all ANGUIL's systems are **guaranteed to meet or exceed** Federal EPA, individual state and international regulatory agency requirements.



Anguil provides local support in all markets to assure that your Anguil pollution control system is kept at optimal operating level.

CONTACT:

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September 2, 1999

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Proposed Cape Canaveral Plant
DEP File No. 0090182-001-AC
Brevard County, Florida

Dear Mr. Fancy:

As you are aware, Sea Ray has proposed to construct a boat manufacturing plant in Brevard County (the "Cape Canaveral Plant"). The proposed Cape Canaveral Plant would produce fiberglass boats varying between 18 meters and 20 meters in length. Since some of the boats to be manufactured will be approximately 20 meters in length, a question has arisen as to the applicability of 40 CFR Part 63, Subpart II - National Emission Standards for Shipbuilding and Repair (Surface Coating), generally referred to as the "Shipbuilding NESHAP." Sea Ray contends that the Shipbuilding NESHAP applies only to the construction of ships, and not to noncommercial, nonmilitary boats, regardless of their length; whereas the Florida Department of Environmental Protection (DEP) has reached a preliminary conclusion based on input from EPA that the Shipbuilding NESHAP may apply to all boats over 20 meters, thereby covering the proposed Cape Canaveral Plant (which would be a major source of hazardous air pollutants). Sea Ray requests that a formal applicability determination be sought from EPA to resolve this matter.

There are three independent reasons why Sea Ray believes that the Shipbuilding NESHAP is inapplicable to boat manufacturers.[1] First, the boats that Sea Ray proposes to construct do not meet EPA's definition of "ship" as defined in the Shipbuilding NESHAP, so this rule is inapplicable. Second, the rulemaking record for the Shipbuilding NESHAP does not support applicability to boat manufacturers and demonstrates that boat manufacturers were not given adequate notice that they might be regulated under the Shipbuilding NESHAP. Third, boat manufacturers should be regulated under the forthcoming Boat Manufacturing NESHAP instead of the Shipbuilding NESHAP. Importantly, the ongoing development of the Boat Manufacturing NESHAP means that a determination that the Shipbuilding NESHAP does not apply would not leave Sea Ray unregulated.

[1] The National Marine Manufacturers Association (NMMA), which represents boat manufacturers nationwide, generally supports Sea Ray's positions as expressed in this letter. Similarly, Sea Ray supports the positions expressed by NMMA in its contemporaneous letter to John Rasnic, EPA on this same subject.

Sea Ray Will Not Be Building "Ships"

The Shipbuilding NESHAP applies to shipbuilding and ship repair operations at any facility that is a major source of hazardous air pollutants (HAPs). 40 CFR 63.781(a). "Ship" is defined under that NESHAP to be "any marine or fresh-water vessel *used for military or commercial operations*," and pleasure craft are expressly excluded from the definition of "ship." 63 CFR 63.782 (emphasis added). The rule defines "pleasure craft" as any vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than 20 meters in length. Id. Because of this definition, DEP suggests that the Shipbuilding NESHAP applies to the manufacture of all boats 20 meters or more in length. The term "ship," however, is limited by definition to military or commercial vessels. Therefore, boats intended for neither military nor commercial use are not "ships," regardless of their length.

Due to its use in the definition of "ship," the meaning of "commercial" is relevant to the applicability of the Shipbuilding NESHAP. While "commercial" is not defined in either the final or proposed Shipbuilding NESHAP rule, the term "commercial vessel" was *proposed* to be defined as any vessel not owned and operated by the U.S. military or the U.S. Coast Guard. 59 Fed. Reg. 62681 (December 6, 1994). One interpretation advanced by EPA is that this term originally covered the universe of all nonmilitary vessels, and the inclusion of the term "pleasure craft" in the final rule removed only noncommercial, nonmilitary, recreational vessels less than 20 meters in length from the definition of "ship," thus retaining recreational vessels 20 meters or longer within the definition of "ship" and within the ambit of the Shipbuilding NESHAP.

This interpretation does not survive scrutiny because the term "commercial" used in the definition of "ship" must have meaning. Since neither "commercial" nor "commercial vessel" is defined in the final rule, then "commercial" must be ascribed its common, everyday meaning.[2] "Commercial" means "engaged in commerce," and "commerce" means "the buying and selling of goods, especially on a large scale." The American Heritage Dictionary, Second College Edition.[3] Since the boats to be manufactured at Sea Ray's proposed Cape Canaveral Plant are intended for recreational use and not intended for use in "commerce," they are not vessels used for commercial operations, and thus are not "ships."[4]

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[2] When ascertaining the meaning of terms that are not defined by statute or regulation, courts routinely turn to dictionary definitions. See, MCI Telecommunications Corp. v. American Telephone and Telegraph Co., 512 US 218, 225, 129 L Ed 2d 182, 189 (1994).

[3] Similarly, Webster's Ninth New Collegiate Dictionary defines "commercial" as "engaged in commerce," and "commerce" as "buying and selling of commodities on a large scale."

[4] Moreover, it is apparent that EPA's definition of "ship" is not as narrow and focused as it should be in other respects as well. This term includes on its face all vessels used for commercial operations, without any limitation on their size. Literally thousands of vessels that are just 5 to 10 meters in length are engaged in commercial operations along the nation's coasts and rivers. In particular, commercial fishermen harvesting crabs and oysters commonly utilize boats this size in their trade, yet EPA is not attempting to regulate the manufacture of these commercial vessels under the Shipbuilding NESHAP even though they do fall within the definition of "ship."

We believe that this analysis definitively demonstrates that the Shipbuilding NESHAP is not applicable to boat manufacturers; however, below we advance two additional independent arguments to further support our position.

The Rulemaking Record Does Not Support Applicability of the Shipbuilding NESHAP to Boat Manufacturers

Based on the preliminary documents for the Shipbuilding NESHAP rulemaking, the final rule as promulgated, and the subsequent implementation guidance, it is evident that boats of any size are not covered by the Shipbuilding NESHAP. Moreover, the boat manufacturing industry was never provided adequate notice that the Shipbuilding NESHAP might apply to them. It would therefore be a denial of due process for DEP or EPA to attempt to apply the Shipbuilding NESHAP to the manufacture of any nonmilitary, noncommercial boats, regardless of length.

EPA's Developmental Documents for the Shipbuilding NESHAP

Identification of the Affected Industry in the Proposed Rule. The use of Standard Industrial Classification (SIC) codes shows which types of facilities EPA intended the Shipbuilding NESHAP to regulate. The preamble of the proposed rule states that "[i]n general, the shipbuilding industry covered by the proposed rule is represented by SIC Code 3731, 'Shipbuilding and Repairing.' This industry consists of establishments that build, repair, repaint, convert, and alter ships." 59 Fed. Reg. 62681, 62683/1 (December 6, 1994). EPA's Fact Sheet for the proposed Shipbuilding NESHAP also listed 3731 as the only applicable SIC Code. This SIC Code includes the building and repairing of: ships, combat ships, barges, cargo vessels, ferryboats, large fishing vessels, tankers and tugboats. Standard Industrial Classification Manual, Office of Management and Budget, p. 238 (1987). However, SIC Code 3732, which is not included in the proposed rule or its preamble, includes the building and repairing of: *fiberglass boats*, small fishing boats, houseboats, and motorboats. Id. at 239. (A reproduction of the full listings for 3731 and 3732 are attached as Exhibit A.) All manufacturers of fiberglass boats, *regardless of the size of the boats being built*, are classified under SIC Code 3732. Sea Ray's proposed Cape Canaveral Plant falls within SIC Code 3732, so it is not covered under the proposed rule's applicability discussion.

Background Information Document. In June 1994, approximately six months prior to formally proposing the Shipbuilding NESHAP, EPA published its Background Information Document (BID) for this proposed rule. The BID unambiguously states that "the shipbuilding and ship repair industry consists of establishments that build and repair ships *with metal hulls*." p. 3-1 (emphasis added). Further, "ship" is defined in the BID as "any *metal hulled* marine or fresh-water vessel used for military or commercial operations . . . ." Id. (emphasis added). Finally, the BID expressly states that "pleasure craft such as recreational boats and yachts are not included" in this definition of ship, without including a cutoff at 20 meters or any other length.[5]

[5] Note that yachts are generally understood to be recreational boats of considerable size.

Id. All boats to be manufactured at Sea Ray's proposed Cape Canaveral Plant, including those 20 meters or more in length, will be made of fiberglass. Industry wide, most pleasure craft are made of fiberglass as well. Therefore, fiberglass boats of any length and pleasure craft of any length were clearly excluded from the definition of ship contained in the BID.

Use of the term "commercial vessel." As stated previously, the proposed rule included the term "commercial vessel." While this proposed definition implicitly included boats of all sizes, it failed to provide adequate notice to boat manufacturers for two general reasons. First, by implicitly including recreational boats, this definition defies the commonly understood meaning of "commercial" (as discussed previously); it is much more expansive than definitions of "commercial vessel" established by the U.S. Congress;[6] and it is at odds with EPA's use of the term in other rules.[7] Second, the proposed rule language, including this definition, were not published in this *Federal Register* notice and the single reference to the term "commercial vessel" in the preamble did not indicate its unusually broad definition. Accordingly, boat manufacturers were not provided adequate notice that boat manufacturers might be drawn within the ambit of the Shipbuilding NESHAP by this proposed definition.

Information Collection Requests. Additionally, to Sea Ray's knowledge, no boat manufacturers received an Information Collection Request (ICR) from EPA as it was developing this rule. The ICR serves two essential purposes in the rulemaking process. First, it allows EPA to procure information from the industry it intends to regulate. Second, it puts the potentially affected industry on notice that it is facing regulation by EPA. Sea Ray never received an ICR during the development of the Shipbuilding NESHAP. And according to the National Marine Manufacturers Association (NMMA), not one company within the boat manufacturing industry that it represents received an ICR either, even though several members of NMMA manufacture boats longer than 20 meters. Compare this fact with the following public statement by EPA in the final rule:

> The EPA made [a] significant effort to hear from all levels of interest and all segments of the shipbuilding and ship repair industry. To facilitate comments and input, the EPA conducted comprehensive mailouts of draft and proposal package materials in 1993 and 1994 to shipyards . . . .

60 Fed. Reg. 64330, 64335/2 (December 15, 1995). Since the boat manufacturing industry

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[6] See, 33 U.S.C. §1322(a)(10) ("those vessels used in the business of transporting property for compensation or hire, or in transporting property in the business of the owner, lessee, or operator of the vessel"); 26 U.S.C. § 4462(a)(4) ("any vessel used (i) in transporting cargo by water for compensation or hire, [or] (ii) in transporting cargo by water in the business of the owner, lessee, or operator of the vessel").

[7] EPA recently stated that "commercial vessels" are often heavily used and designed primarily to efficiently move cargo, whereas "recreational vessels" are designed primarily for individual ownership and intermittent, personal use. 63 Fed. Reg. 68508, 68517/2 (December 11, 1998).

received neither these mailouts nor ICRs, the only conclusion that can be drawn is that EPA did not intend to regulate boat manufacturers under the Shipbuilding NESHAP. In stark contrast, the boat manufacturing industry has received ICRs and has been working extensively with EPA for almost five years to develop the forthcoming Boat Manufacturing NESHAP. Therefore, for failing to provide boat manufacturers with ICRs or otherwise involve this industry in the development of the Shipbuilding NESHAP, sufficient due process was not provided for EPA to now impose the Shipbuilding NESHAP on Sea Ray or other boat manufacturers.

Shipbuilding NESHAP Final Rule

Definition of "pleasure craft." The applicability of the Shipbuilding NESHAP to Sea Ray's proposed Cape Canaveral Plant is a question only because of the definition of "pleasure craft" in the final rule which limits pleasure craft to noncommercial, nonmilitary vessels less than 20 meters in length.[8] 40 CFR 63.782. However, this definition was not included in the December 4, 1994, proposed rule, so the boat manufacturing industry was not on notice that "pleasure craft" was being defined in the Shipbuilding NESHAP. If given proper notice, the boat manufacturing industry would have commented that nonmilitary, noncommercial, individually-owned, fiberglass vessels do not become "ships" by virtue of exceeding 20 meters in length.

The preamble to the Shipbuilding NESHAP final rule discusses this definition of pleasure craft. It states:

> A definition of pleasure craft has been added to ensure that the standards apply only to those coatings (and solvents) used on commercial and military vessels. Some commenters were concerned that, as proposed, the rule could be interpreted to regulate coatings used on pleasure crafts. Other commenters suggested that pleasure crafts should be included. **The EPA did not intend to include coatings used on pleasure crafts in these standards. Such coatings (applications) will be considered under the development of the Boat Manufacturing NESHAP.**

60 Fed. Reg. 64330, 64333/2 (December 15, 1995) (emphasis added). Regulation of boats greater than 20 meters in length under the Shipbuilding NESHAP is contrary to EPA's clear, unambiguously stated intent to exclude noncommercial, nonmilitary vessels from the Shipbuilding NESHAP and to instead address them in the forthcoming Boat Manufacturing NESHAP.

Response to Comments. In addition to the final rule preamble, EPA stated in the summary of its response to comments that it "never intended for these [recreational vessel]

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[8] This definition, even with the 20 meter limitation, does not change the fact that "ships" must have a commercial or military use in order to be regulated under the Shipbuilding NESHAP, as discussed above.

coatings to be included in these standards [the Shipbuilding NESHAP]." Shipbuilding NESHAP Background Information for Final Standards, Volume 2: Summary of Public Comments and Responses, p. 1-2. This document further states that the Shipbuilding NESHAP is intended to apply to commercial and military vessels, but not to vessels used by individuals for personal pleasure. Id. at 2-7. Again, the 20 meter limitation runs counter to this stated intent if it results in the application of the Shipbuilding NESHAP to the production of noncommercial, nonmilitary boats intended for use by individuals for personal pleasure. This response also provides a two-fold rationale for excluding recreational boats from the Shipbuilding NESHAP. First, EPA intends to address coating operations for them in its forthcoming Boat Manufacturing NESHAP. Second, most recreational boats are made of fiberglass and use coatings uniquely different from those used on the metal-hulled ships targeted by the Shipbuilding NESHAP. Id.

Implementation Guidance for the Shipbuilding NESHAP

Compliance Guidebook. Subsequent to the promulgation of the Shipbuilding NESHAP in 1995, EPA published the Guidebook on How to Comply with the Shipbuilding and Ship Repair NESHAP in January 1997 ("Compliance Guidebook"). The stated purpose of the Compliance Guidebook is to provide a straightforward overview of the Shipbuilding NESHAP and to assist the industry in complying with the regulation. Compliance Guidebook, p. 1. The Compliance Guidebook lists 35 shipyards that are estimated to be NESHAP major sources and covered by the rule. Id. at C-2. To our knowledge, all of these shipyards are classified under SIC Code 3731 for Ship Building and Repairing and do not manufacture fiberglass boats of any size.

Sector Profile. Later that year, EPA published its Office of Compliance Sector Notebook Project: Profile of the Shipbuilding and Repair Industry (November 1997) ("Sector Profile"). The Sector Notebook Project is intended to provide EPA, states, the public, and regulated interests an overview of specific industries, their pollution outputs, the applicable regulatory framework, and the compliance history for selected industries. Sector Profile, p. 1. The Sector Profile states that the Shipbuilding NESHAP applies to major source shipbuilding and ship repair facilities that carry out surface coating operations. Id. at 94. The Sector Profile defines the shipbuilding and ship repair industry as facilities classified under SIC Code 3731, and *expressly excludes the boat manufacturing and repair industry which is classified under SIC 3732.* Id. at 3.

Purpose of Rulemaking Procedural Requirements

EPA's extensive rulemaking record and subsequent implementation guidance for the Shipbuilding NESHAP clearly demonstrate that EPA did not intend to regulate boat manufacturers under the Shipbuilding NESHAP. The notice and comment requirements for agency rulemaking provided by the federal Administrative Procedures Act (APA) (5 U.S.C. §553) serve two purposes: "(1) to reintroduce public participation and fairness to affected parties

after governmental authority has been delegated to unrepresentative agencies; and (2) to assure that the agency will have before it the facts and information relevant to a particular administrative problem." National Electrical Manufacturers Ass'n v. EPA, 99 F.3d 1170, 1174 (D.C. Cir. 1996) (citing MCI Communications v. FCC, 57 F.3d 1136, 1141 (D.C. Cir. 1995)).

If the Shipbuilding NESHAP is applied to Sea Ray or others within the boat manufacturing industry, then EPA has failed to satisfy both of these requirements in its development of the Shipbuilding NESHAP. First, the boat manufacturers would become "affected parties," but they were not included by EPA in the development of the rule through the preamble statements of applicability or the issuance of ICRs or other materials it disseminated to potentially affected entities. Second, since information was not solicited from the boat manufacturing industry, EPA did not have the facts before it to justify the application of standards developed for metal-hulled ships to fiberglass boats. Therefore, regulation of boat manufacturers under the Shipbuilding NESHAP fails to satisfy due process requirements under the federal APA.

Environmental Protection will be Provided by the Boat Manufacturing NESHAP

There are substantial differences between the processes and emissions from building metal-hulled ships and manufacturing fiberglass boats, regardless of their respective sizes. The surface coatings and solvents used on metal-hulled ships result in quite different HAP emissions than do the epoxies and resins used on fiberglass boats. The only common emissions-generating process is the application of an exterior antifoulant coating, and this process can be addressed for fiberglass boats in the forthcoming Boat Manufacturing NESHAP. Further, commercial ships (inspected vessels) are built to different specifications than recreational boats (uninspected vessels), pursuant to U.S. Coast Guard requirements.[9] See generally, Titles 33 and 46 of the Code of Federal Regulations. Due to these differences, all fiberglass boats should be regulated under the forthcoming Boat Manufacturing NESHAP instead of the Shipbuilding NESHAP. Because the Boat Manufacturing NESHAP is currently under development, there is adequate opportunity to address the emissions from the application of exterior coatings to all boats, including those exceeding 20 meters, in that rulemaking.

Conclusion

The Shipbuilding NESHAP should be determined not to apply to Sea Ray's proposed Cape Canaveral Plant for three independent reasons. First, the boats that Sea Ray proposes to build are not "ships" as defined in the Shipbuilding NESHAP because they are not intended for use in commercial or military operations. Therefore, by its own terms, the Shipbuilding NESHAP does not apply to Sea Ray's proposed Cape Canaveral Plant.

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[9] Due to the technical nature of these differences and the presence of two other independent reasons not to apply the Shipbuilding NESHAP to boat manufacturers, Sea Ray will not explore this third justification in depth at this time.

Second, based on EPA's development documents for the Shipbuilding NESHAP rulemaking, the final rule as promulgated, and the subsequent implementation guidance, it is clear that EPA excluded fiberglass boats intended for individual personal use from the Shipbuilding NESHAP. Consideration of this entire record (particularly the use of SIC Code 3731 for ships in applicability discussions) shows that boat manufacturers did not have adequate notice that they might be regulated under the Shipbuilding NESHAP, and that to the contrary, EPA expressly stated at least twice in public documents that boat manufacturers would instead be regulated under the forthcoming Boat Manufacturing NESHAP. Therefore, it is improper to apply the Shipbuilding NESHAP to any boat manufacturer for due process reasons.

Third, Sea Ray and the boat manufacturing industry believe that it is more appropriate to regulate coatings for larger fiberglass boats under the forthcoming Boat Manufacturing NESHAP instead of the Shipbuilding NESHAP, as recognized by EPA itself on multiple occasions, due to the inherent differences between metal-hulled ships and fiberglass boats. Since the Boat Manufacturing NESHAP has not yet been proposed, EPA has ample opportunity to address emissions from this element of the boat manufacturing process in the Boat Manufacturing NESHAP.

Sea Ray wishes to emphasize that it is not attempting to circumvent regulation by requesting this applicability determination. The Boat Manufacturing NESHAP is expected to be finalized in approximately 18 months, and prior to that time, Sea Ray's proposed Cape Canaveral Plant would be subject to a case-by-case MACT determination. Therefore, Sea Ray is not attempting to compromise the environmental performance of the proposed Cape Canaveral Plant.

Sea Ray thanks you again for the time you have spent with us to address this issue. We would appreciate your forwarding this request for a formal applicability determination to John Rasnic and Anthony Raia with EPA's Office of Enforcement and Compliance Assurance, as well as the appropriate EPA Region IV representative, as soon as possible. If you have any questions, please contact me at (423) 522-4181, or Ms. Angela Morrison, Hopping Green Sams & Smith, P.A., at (850) 425-2258.

Sincerely,

Kevin Thompson
Director, Environmental Management

cc: Kirby Green, Deputy Secretary, DEP
Howard Rhodes, DEP DARM
Cindy Phillips, DEP BAR
Al Linero, DEP BAR
John Reynolds, DEP BAR
Pat Comer, DEP OGC
John Rasnic, EPA OECA
Anthony Raia, EPA OECA
Mark Morris, EPA OAQPS

Exhibit A

373 SHIP AND BOAT BUILDING AND REPAIRING

3731 Ship Building and Repairing

Establishments primarily engaged in building and repairing ships, barges, and lighters, whether self-propelled or towed by other craft. This industry also includes the conversion and alteration of ships and the manufacture of offshore oil and gas well drilling and production platforms (whether or not self-propelled). Establishments primarily engaged in fabricating structural assemblies or components for ships, or subcontractors engaged in ship painting, joinery, carpentry work, and electrical wiring installation, are classified in other industries.

Barges, building and repairing
Cargo vessels, building and repairing
Combat ships, building and repairing
Crew boats, building and repairing
Dredges, building and repairing
Drilling and production platforms, floating, oil and gas
Drydocks, floating
Ferryboats, building and repairing
Fireboats, building and repairing
Fishing vessels, large; seiners and trawlers – building and repairing
Hydrofoil vessels
Landing ships, building and repairing
Lighters, marine; building and repairing
Lighthouse tenders, building and repairing
Marine rigging
Naval ships, building and repairing
Offshore supply boats, building and repairing
Passenger-cargo vessels, building and repairing
Patrol boats, building and repairing
Radar towers, floating
Sailing vessels, commercial; building and repairing
Scows, building and repairing
Seiners, building and repairing
Shipbuilding and repairing
Submarine tenders, building and repairing
Tankers (ships), building and repairing
Tenders (ships), building and repairing
Towboats, building and repairing
Transport vessels, passenger and troop;
Trawlers, building and repairing
Tugboats, building and repairing

3732 Boat Building and Repairing

Establishments primarily engaged in building and repairing boats. Establishments primarily engaged in manufacturing rubber and nonrigid plastics boats are classified in Major Group 30. Establishments primarily engaged in operating marinas and which perform incidental boat repair are classified in Transportation, Industry 4493; membership yacht clubs are classified in Services, Industry 7997; and those performing outboard motor repair are classified in Services, Industry 7699.

Boat kits, not a model
Boats, fiberglass; building and repairing
Boats, rigid: plastics
Boats: motorboats, sailboats, rowboats, and canoes – building and repairing
Canoes, building and repairing
Dinghies, building and repairing
Dories, building and repairing
Fishing boats, small
Houseboats, building and repairing
Hydrofoil boats
Kayaks, building and repairing
Lifeboats, building and repairing
Liferafts, except inflatable (rubber and plastics)
Motorboats, inboard and outboard: building and repairing
Pontoons, except aircraft and inflatable (rubber and plastics)
Skiffs, building and repairing

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

September 2, 1999

9937586

Florida Department of Environmental Protection
New Source Review Section; Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: A.A. Linero, P.E., Administrator

RE: DEP File Nos. 0090182-001-AC, 0090093-003-AC
Sea Ray – Cape Canaveral Plant

Dear Al:

Please find enclosed four copies of a Prevention of Significant Deterioration (PSD) analysis for the Cape Canaveral Plant proposed by Sea Ray Boats, Inc. The PSD analysis was performed according to the regulations in Rule 62-212.400 Florida Administrative Code (F.A.C.). Also, we conducted the analysis with consideration of you August 17, 1999 letter to Mr. Dennis Wilson, Vice President and General Manager of Sea Ray Boats, Inc. Merritt Island, Florida. I have attached a summary that either directly addresses the information requested in the August 17, 1999 letter or where it can be found in the PSD analysis.

Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Ken

Kennard F. Kosky, P.E.
Principal

KFK/arz

Enclosures

cc: G. E. (Pete) Cantelou, Jr., P.E., Cantelou, Herrera & Powell, Inc.
Kevin Thompson, Sea Ray Boast, Inc.

F:\Projects\9937586Y\F1\WP\#01ltr

Information Addressing the August 17, 1999 FDEP Letter to Sea Ray

The following either directly addresses the information requested in the August 17, 1999 letter or where it can be found in the PSD analysis or previously submitted information. The order of presentation is the same as that in the August 17th letter.

- A description of nature, location, design capacity and typical operating schedule of the facility: The facility will initially consist of 3 buildings identified as Lamination Building 101, Warehouse Building 102 and Building 103. The locations of these buildings were identified in previous information supplied to the Department and are shown in Section 2.0 of the PSD analysis. The activities associated with lamination, assembly, final finish and mold maintenance will occur initially in Building 101. The maximum potential emissions of these activities are identified in Table 2-1 of the PSD analysis. These maximum emissions estimates are based on material usage at maximum capacity. The actual number of boats constructed will vary depending upon the type and length required. Lamination will occur within a closed off area in this building that is about 300 feet long and 80 feet wide. The area will be in the southwest corner of the building. The Warehouse Building 102 will be a storage facility and initially include the wood shop. There may be small amounts of fugitive emissions in the warehouse associated with the wood shop (see Table 2-1). The wood shop will have 99.92 percent efficient dust collector associated with wood working activities. The PM emissions will be less than 1 ton/year. Building 103 is a bulk storage area that will house the resin and gel coats in 3-6,000 gallon tanks. These tanks will have vapor recovery systems with no significant emissions of VOC. All VOC containing materials stored in 55-gallon drums will be closed except during the brief periods of use and transfer. Future Building 201 will be an assembly building that will house the assembly and final finish activities if and when the production in Building 101 increases to a point where all activities cannot occur within Building 101. At this time, some or all of the wood working activities may be incorporated within Building 101. Building 301 is currently planned as an additional warehouse. Table 2-1 in the PSD analysis presents the maximum potential emissions for each activity. This will not change as a result of adding buildings in subsequent phases. About 80 percent of the total potential VOC emissions will occur from the lamination and mold maintenance activities, which will always be conducted in Building 101. The maximum facility operation will be 5,000 hours per year. Initial operation will depend upon the production demand and will build up to the maximum level. This may occur within a two-year timeframe.
- A detailed schedule for construction: Phase I will be completed by early 2000 and consist of Buildings 101, 102 and 103. The construction of Phase 2 (i.e., Building 201) and Phase 3 (i.e., Building 301) will depend upon production.
- A detailed description of the system of continuous emission reduction proposed by the facility: Section 4.0 provided a proposed BACT for the facility.
- Information relating to the air quality impacts of the facility: Sections 3 and 6 in the PSD addresses the requirements of determining the impacts of the facility's emissions.
- Information relating to the air quality impacts associated with commercial, residential, industrial and other growth: This is addressed in Section 7 of the PSD analysis.

- Good engineering practice (GEP) stack height: Information related to GEP is presented in Section 3 of the PSD analysis.
- Description of Phases I, 2 and 3: See summary above.
- Ambient impact analysis-compliance with AAQS and PSD Increments: This information is addressed in Section 6 of the PSD analysis.
- Ambient impact analysis-visibility impairment: This information is address in Section 7 of the PSD analysis.
- Ambient impact analysis-associated growth: This information is addressed in Section 7 of the PSD analysis.

Preliminary Information Required for Sea Ray's PSD Application

The following either directly addresses the information requested in the attachment to the August 17, 1999 letter or where it can be found in the PSD analysis or previously submitted information. The order of presentation is the same as that in the attachment to the August 17th letter.

1. Provide detailed descriptions of Phase I, Phase II and Phase III of the proposed project: A description of the different phases is presented above. A description of each process and emissions is presented in Section 2 of the PSD analysis. The proposed BACT for VOCs is presented in Section 4 of the PSD analysis.

2. List each process or production activity that results in emissions of HAPs, PM or VOC and list quantity of emissions: Section 2 of the PSD analysis presents the process and emissions including HAPs and VOCs for the proposed Cape Canaveral Plant. The methods of control are discussed in Sections 2 and 4 of the analysis. As discussed in Section 3, PSD review is only applicable to VOC emissions. A minor amount of PM emissions (< 1 tons/year) will occur from sanding operations, which would be included under the categorical exemption, contained in Rule 62-210.300(3)a.11. F.A.C. Nonetheless, in these areas, recirculation type air filters will be installed. Information on these filters was provided to the Department in July, 1999. In the lamination area, air filters are installed on the exiting exhausts to capture any air borne particles from the gel coat and resin application. As discussed in Section 4, Sea Ray plans to install flow coaters for this purpose. In contrast, atomized application methods have higher PM emissions; the flow coaters will reduce particulate formation.

3. Provide a roughly scaled floor plan for each building: The building areas and a description of the layouts were previously provided to the Department and are summarized in Section 2 of the PSD analysis. For the lamination area, a 300-foot long by 80-foot wide area will be enclosed in the southwest corner of Building 101. This area will have large doors to allow the conveying of the large boat hulls and decks to the assembly and finish areas within Building 101. It should be noted that due to the size of the large boat parts, the buildings are substantially open space to allow the flexibility to construct several different boat sizes and move the product to subsequent process areas.

4. Provide emission estimates for each year following completion: Section 2 in the PSD analysis provides information on the maximum potential emissions for all Phases of the proposed plant. The time to reach the maximum potential emissions is highly dependent upon the demand for the product. It is estimated that this could occur from two to five year from initial operation in the spring of 2000. The emissions would be proportional to the production capacity (e.g., if the first year production rate is 40 percent than the emission would be about 40 percent).

5. Provide the ventilation plan: The ventilation plan is discussed in Section 2 of the PSD analysis. The ventilation will be of the "push-pull" type with air flowing down and across the width of the boat hulls and decks being laminated, with lower intakes on the opposite wall. The exact design has not yet been finalized. However, information on flow rates is provided.

6. Description of control equipment and methods to reduce emissions: Section 4 presents an evaluation of Best Available Control Technology (BACT) including project specific feasibility and economic, environmental and energy impacts. The economic impacts are supported by vendor information for technology that is technically feasible and available.

7. Evaluate the feasibility of enclosures used in conjunction with localized ventilation: Information on enclosures is presented in Section 4 of the PSD analysis. Vendors were also contacted and provided cost estimates for segregating components of the process.

8. Provide a detailed description of cleanup methods and materials: Section 2.0 provides information on each process including the material used in cleanup. Specifically, information is provided on mold maintenance, which is the greatest use of materials of clean molds for reuse.

9. Evaluate the possibility and implications of early implementation of MACT at the existing facility: Information on the utilization of flow coaters and low styrene resins is discussed in Section 4. These controls are currently being implemented in the production of boats at the Merritt Island and Sykes Creek Plants. Sea Ray estimates that implementation of these methods and materials will reduce actual emissions by about 30 tons/year.

August 30, 1999

VIA FACSIMILE
850 922 6979

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
(DEP File # 0090182-001-AC)
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Linero:

Attached please find a signed copy of the letter from Dennis Wilson which I faxed to you last Friday.

Sincerely,

SEA RAY BOATS

H. Douglas Kitts
Group Senior Vice President/General Counsel

HDK:la

August 27, 1999

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
(DEP File # 0090182-001-AC)
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Linero:

Please accept this letter as Sea Ray's request for additional time for the Department of Environmental Protection to review the air permit application for the above proposed facility dated May 4, 1999. Sea Ray requests an additional extension to review the permit application which will be through October 4, 1999. This extension is based upon the understanding that the permit intent letter will be issued on or before September 17, 1999.

Sea Ray remains committed to assist in the review of this application and if any additional information is required, please do not hesitate to contact either Kevin Thompson or our consultant, Pete Canteleu. We will immediately respond so that this process for approval can be completed within the above time period. Sea Ray does understand that DEP has committed to expedite this review and approval process in light of our current schedule for the project. Thank you for your assistance in this matter.

Sincerely,

SEA RAY BOATS

Dennis Wilson
Vice President/General Manager

DW:la

cc: Angela Morrison
Pete Canteleu

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

August 30, 1999

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Dennis Wilson, VP/General manager
Sea Ray Boats, Inc.
350 Sea ray Drive
Merritt Island, Florida 32953

Re: DEP File Nos. 0090182-001-AC, 0090093-003-AC
Sea Ray Cape Canaveral Plant

We received a letter dated August 26 from your Director of Environmental Affairs, Mr. Kevin Thompson, containing comments and concerns regarding the on-going case-by-case determination of Maximum Achievable Control Technology (MACT) for the control of hazardous air pollutants from the proposed Cape Canaveral Plant.

The draft circulated is a document that is undergoing internal review and which we shared with Sea Ray at the earliest possible date. We disagree with some of Sea Ray's interpretations of our comments made during the teleconference of August 18. However, the Department will consider the positions, comments, and concerns detailed in the letter when preparing the Intent for the proposed project. Further opportunities are available during the comment period available to the applicant, public, and other government agencies.

We will be happy to meet with Sea Ray on any matter related to the project. As mentioned in our letter of August 14, we already directed our staff to expedite work on your project. Until an Intent is issued, we believe most matters can and should be worked out directly with me and my staff.

Following our discussions with Sea Ray's representatives on August 20, our staff is making plans to visit the Sykes Creek Plant during the week of August 30. We also look forward to receipt of the documents detailing the control options. If you have any questions regarding this matter, please call me at 850/921-9503.

Sincerely,

Clair Fancy, P.E., Chief
Bureau of Air Regulation

CHF/t

Cc: Len Kozlov, DEP CD
Angela Morrison, HGSS
Kevin Thompsom, Sea Ray
Pete Cantelou, P.E., CHP

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write *"Return Receipt Requested"* on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Dennis Wilson
Sea Ray Boats
Sea Ray Drive
Merritt Island, Fl
32953

4a. Article Number
Z 333 618 130

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery
9. 1. 99

5. Received By: *(Print Name)*
L Johnson

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature: *(Addressee or Agent)*

PS Form 3800, April 1995 Receipt

Thank you for using Return Receipt Service.

Z 333 618 130

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
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Sent to Dennis Wilson	
Street & Number Sea Ray	
Post Office, State, & ZIP Code Merritt Island Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date 8-30-99	

PS Form 3800, April 1995

August 27, 1999

VIA FACSIMILE
850 922 6979

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
(DEP File # 0090182-001-AC)
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Linero:

Mr. Wilson is out of the office today. I will send you a signed copy of the attached letter on Monday.

Sincerely,

SEA RAY BOATS

H. Douglas Kitts
Group Senior Vice President/General Counsel

HDK:la

August 27, 1999

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
(DEP File # 0090182-001-AC)
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Linero:

Please accept this letter as Sea Ray's request for additional time for the Department of Environmental Protection to review the air permit application for the above proposed facility dated May 4, 1999. Sea Ray requests an additional extension to review the permit application which will be through October 4, 1999. This extension is based upon the understanding that the permit intent letter will be issued on or before September 17, 1999.

Sea Ray remains committed to assist in the review of this application and if any additional information is required, please do not hesitate to contact either Kevin Thompson or our consultant, Pete Cantelou. We will immediately respond so that this process for approval can be completed within the above time period. Sea Ray does understand that DEP has committed to expedite this review and approval process in light of our current schedule for the project. Thank you for your assistance in this matter.

Sincerely,

SEA RAY BOATS

459-2930 - Terry McNew

Dennis Wilson
Vice President/General Manager

DW:la

cc: Angela Morrison
Pete Cantelou

HOPPING GREEN SAMS & SMITH
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RANDOLPH M. GIDDINGS
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TIMOTHY G. SCHOENWALDER
ROBERT P. SMITH
DAN R. STENGLE
CHERYL G. STUART
W. STEVE SYKES
T. KENT WETHERELL, II

OF COUNSEL
ELIZABETH C. BOWMAN

August 27, 1999

Patricia Comer, Esquire
Office of General Counsel
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Sea Ray Boats, Inc.
Proposed Cape Canaveral Plant
DEP File Nos. 0090182-001-AC, 0090093-003-AC

Dear Pat:

This letter is being sent to confirm our telephone conversation today regarding the above-referenced project. During our call, I inquired as to whether the Department of Environmental Protection's letters dated August 13 and 17, 1999 (copies of which are attached) stating that review under the Prevention of Significant Deterioration (PSD) air permitting program is required for Sea Ray's proposed Cape Canaveral Plant would constitute "final agency action" under Florida's Administrative Procedures Act (Chapter 120, Florida Statutes). You agreed with my conclusion that these letters would *not* constitute final agency action for purposes of the Administrative Procedures Act. You also concurred during our call that the issue of whether PSD review was required could be challenged as part of the Department's intent to issue and proposed permit for the project.

This letter is not meant to imply that Sea Ray will object to the PSD applicability determination, but is meant to preserve the ability to raise that objection once the intent to issue and proposed permit are issued. I understand from our conversation that Sea Ray will have that ability.

I appreciate your concurrence on these issues, and if I have misunderstood or misstated any portions of our conversation, please let me know as soon as possible. Thank you for your assistance and cooperation.

Sincerely,

Angela R. Morrison

Enclosures

cc: Howard Rhodes, DEP DARM
Clair Fancy, DEP BAR
Al Linero, DEP BAR ✓
Doug Beason, DEP OGC
Doug Kitts, Sea Ray
Kevin Thompson, Sea Ray

cc: J. Reynolds, BAR
C. Phillips, BAR

Sea Ray

August 26, 1999

Via Fax

Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Proposed Cape Canaveral Plant
DEP File No. 0090182-001-AC
Brevard County, Florida

Dear Mr. Fancy:

Sea Ray would like to thank you and your staff for participating in our conference call last week, along with two representatives from the U.S. Environmental Protection Agency, Anthony Raia and Mark Morris. We believe that some of the issues related to the case-by-case MACT (Maximum Achievable Control Technology) determination for the above-referenced project were resolved during that conference call, and we would like to confirm those resolutions. In addition, there were several issues that were not resolved and with which Sea Ray continues to be concerned, as outlined below. We hope to continue to work with the Department to a reach mutually agreeable MACT determination, and would like to meet with you and your staff again soon to continue our discussions.

Averaging Periods. As we discussed during our conference call, we understand that the Department will incorporate a formula that has been prepared by EPA for determining compliance with the styrene limits for gel coats and resins over the various processes. Under the MACT, we understand that compliance will be determined for all gel coats and resins combined, and not for individual processes, using the formula developed by EPA for the Boat Manufacturing NESHAP (National Emissions Standards for Hazardous Air Pollutants). If our understanding is not consistent with the Department's position, please let us know.

Consistency With Final Boat Manufacturing NESHAP. As explained during the conference call, Sea Ray is very concerned that the conditions with which it must comply after promulgation of the final Boat Manufacturing NESHAP be no more stringent than required under that NESHAP. The federal rules for case-by-case MACT determinations, which the Department has incorporated by reference, provide that the permitting authority must require compliance with more stringent requirements that appear in a final NESHAP. The rules also provide that the permitting authority has the discretion to require compliance only with the final NESHAP or to require continued compliance with any more stringent requirements from a prior case-by-case MACT (40 CFR 63.56). Providing for compliance only with the final NESHAP is

especially appropriate where no add-on control or design requirements were established and the restrictions apply to the quality of raw materials or products purchased for use in an ongoing manufacturing process, such as Sea Ray's.

Sea Ray again requests that the Department identify its intent in the permit, providing notice to the public, that Sea Ray will be required to comply with the final NESHAP once it has been promulgated and that the final NESHAP will replace the case-by-case MACT, even if the MACT contained more stringent requirements. The Department expressed concerns that this was not legally possible. We know of no legal impediments, however, and there is precedent under the Florida Power Plant Siting Act for pre-authorizing compliance with less stringent requirements that might be promulgated after issuance of a permit (certification):

> Upon written notification to the department, any holder of a certification issued pursuant to this act may choose to operate the certified electrical power plant in compliance with any rule subsequently adopted by the department which prescribes criteria more lenient than the criteria required by the terms and conditions in the certification which are not site-specific.

Section 403.511(5)(b), Florida Statutes. In a similar situation, Sea Ray's permit would clarify that it must comply with the subsequently adopted Boat Manufacturing NESHAP, even if it included requirements "more lenient" than those in the case-by-case MACT. The Department must require compliance with the final NESHAP, and that could certainly be explained in the terms and conditions of the permit. The Department can also exercise its discretionary authority to replace the case-by-case MACT determination with the finally promulgated NESHAP, requiring compliance only with the latter. While a permit revision may be appropriate to clarify that the final NESHAP has been promulgated, provide an effective date for compliance, and provide additional public notice, the Department could nevertheless identify its intent in the original permit.

The Department representatives had also indicated during our conference call that such a revision might be treated as a "modification" since emissions would be increased. There would be no physical or operational change increasing emissions, however, because the original permit would authorize operation in compliance with the final NESHAP; therefore, a "modification" would not be triggered.

Sea Ray is specifically concerned about the eventual revision of its permit to be consistent with and no more stringent than the final Boat Manufacturing NESHAP because there are at least two instances where the Department currently intends to establish MACT

requirements that are more stringent than EPA's draft NESHAP. The particular standards are discussed in more detail below, but the Department has taken a tentative position that it must establish a case-by-case MACT based on the best controlled similar source, regardless of EPA's current position and the draft NESHAP language.

During our conference call, Sea Ray was given no assurances that the Department would revise Sea Ray's MACT requirements to be no more stringent than the final Boat Manufacturing NESHAP once promulgated. Sea Ray understands that Best Available Control Technology (BACT) requirements could result in more stringent standards than under either the MACT or final Boat Manufacturing NESHAP, and that those standards would therefore control. Nevertheless, this remains an important issue to Sea Ray. If the Department is unwilling to commit to this and to identify its intention in the permit, leaving open the possibility for maintaining requirements in Sea Ray's permit based on a MACT that is more stringent than the final Boat Manufacturing NESHAP, then Sea Ray will be placed at a disadvantage to its competitors and location of this facility in Florida becomes a significant concern. We would appreciate an opportunity to discuss this issue in particular with you, as well as Howard Rhodes and Kirby Green. Please let us know when you are available to meet to discuss this issue in particular.

Stringency of Case-by-Case MACT. As stated above, Department representatives indicated during our call that the case-by-case MACT will likely include more stringent requirements than currently being developed by EPA for the Boat Manufacturing NESHAP and the Department's preliminary MACT analysis dated July 30. The Department representatives cited the requirement to consider the best-controlled similar sources as their reasoning for the more stringent standards. The Department is also required, however, to consider any presumptive MACTs and proposed NESHAP rules. EPA guidance on this explains that a proposed standard is the "best estimator of the Agency's final action, and therefore should be considered in establishing a case-by-case MACT emissions limit, and followed unless the State can adequately support an alternative." 58 Fed. Reg. 37791 (July 13, 1993). In its case-by-case determination, the Department is supposed to do the same analysis that EPA conducts under Section 112(d) of the Clean Air Act, and just as EPA considers the best-controlled sources, the Department must as well. The Department, however, must additionally consider and take advantage of EPA's analysis and should follow EPA's lead. The Department's case-by-case MACT should be virtually identical to the final NESHAP and not necessarily more stringent. While EPA has not released a proposed version of the NESHAP, it has a draft rule under development, and the Department's permitting engineers have been in contact with the EPA representative Mark Morris, who participated in our conference call and who is developing the Boat Manufacturing NESHAP. The Department therefore has a very good understanding as to

EPA's current position, especially as to areas where the Department intends to be more stringent. Sea Ray requests that the Department reconsider its position and issue its MACT consistent with and no more stringent than EPA's draft rule to the extent possible, consistent with the MACT rules.

Applicability of Shipbuilding NESHAP. We understand from our conversation that EPA has not settled the issue of whether the Shipbuilding NESHAP applies to pleasure crafts over 20 meters in length. We also understand that the Department will abide by an EPA applicability determination on this issue. As we discussed, Sea Ray is in the process of preparing a request for a formal applicability determination regarding the Shipbuilding NESHAP, and we would like to continue our discussions on this issue. We appreciate the Department's willingness to be silent on this point in the MACT determination, and we understand that the Department intends to identify NESHAP applicability in the proposed PSD permit. We remain hopeful that this issue will be determined prior to issuance of the Department's proposed permit. As we discussed on our call and as explained in our letter of August 10, we do not believe that the Shipbuilding NESHAP applies to non-commercial pleasure craft, even if those vessels are over 20 meters in length. We plan to submit this applicability determination request next week to the Department and will ask that it be forwarded to Anthony Raia at EPA, as well as the appropriate EPA representatives at Region IV. We will contact the Department as well as EPA once the formal, written request has been submitted.

Antifoulant Coatings. If the Shipbuilding NESHAP is found to be applicable to the Cape Canaveral plant, then the antifoulant coating requirements in that rule would apply. If the Shipbuilding NESHAP does not apply, Sea Ray would agree to comply with the limitations set forth in the Shipbuilding NESHAP for antifoulant coatings as part of the case-by-case MACT determination, with the understanding that the condition would be revised eventually to be consistent with the finally promulgated Boat Manufacturing NESHAP. Cindy Phillips indicated, however, that she may include a *more stringent* requirement than the Shipbuilding NESHAP for antifoulants based on information in an EPA database from another fiberglass boat manufacturer, as part of her case-by-case MACT determination. Sea Ray would prefer that if the Shipbuilding NESHAP is found to be inapplicable, that no standard for antifoulant coatings be included as part of the case-by-case MACT since EPA does not intend to include such restrictions in the Boat Manufacturing NESHAP. EPA made this determination because such coatings result in negligible emissions and are not a significant part of the boat manufacturing process. In fact, Sea Ray expects emissions from this activity at the Cape Canaveral facility to amount to only about one ton per year. If a standard is included as part of the case-by-case MACT, however, Sea Ray requests that the standard from the Shipbuilding NESHAP be used as an interim standard until final promulgation of the Boat Manufacturing NESHAP.

Interior Wood Part Coatings. As explained in our August 10 letter, the coating of interior wood parts should not be restricted through the MACT determination or a NESHAP. If the Department believes that it is necessary to establish a standard for certain interior wood part coatings, Sea Ray requests that the MACT determination clarify what is meant by "interior wood parts" and "coatings." Sea Ray seeks clarification that the standard does not apply to integral parts of a boat coated with gel coat and resin, which are addressed by another part of the MACT. As also explained in our letter of August 10, if the Shipbuilding NESHAP does not apply, then the Wood Furniture NESHAP does not apply, and as we discussed during our call, we will await EPA's determination on that point.

During our call, Cindy Phillips indicated that the MACT would likely be revised to include a case-by-case limitation on interior wood part coatings that would be more stringent than the Wood Furniture NESHAP, even though EPA was not planning to propose and did not expect the final Boat Manufacturing NESHAP to regulate wood coating activities associated with the boat manufacturing process. The coating of interior wood parts is not a significant part of the boat manufacturing process as recognized by EPA, and the anticipated emissions from wood finishing stains and varnishes at the Cape Canaveral plant will be relatively minor, less than two tons per year. For these reasons, Sea Ray requests that the Department reconsider its position and omit any restrictions on internal wood part coatings, or at a minimum, establish standards consistent with the Wood Furniture NESHAP.

Adhesive Restrictions. As with the coating of interior wood parts, the Wood Furniture NESHAP and the restrictions on adhesives included in that NESHAP will not apply directly to the Cape Canaveral plant unless the Shipbuilding NESHAP applies, and we are awaiting an EPA determination on that issue. We understand from our conference call, however, that Cindy Phillips currently intends to propose more stringent requirements on adhesives than in the Wood Furniture NESHAP through the case-by-case MACT determination. Sea Ray requests that the standard established in the Wood Furniture NESHAP be used as a surrogate until the final Boat Manufacturing NESHAP is promulgated. Ms. Phillips indicated that based on information in an EPA database regarding adhesives used at Sea Ray's Palm Coast facility, only adhesives with zero hazardous air pollutant emissions would be allowed under the MACT. In any event, we understand from our conference call that aerosol adhesives and contact adhesives applied to nonporous substrates would not be regulated, consistent with the Wood Furniture NESHAP. As stated earlier in this letter, it is important to Sea Ray that once the final Boat Manufacturing NESHAP has been promulgated, that the permit be revised to be consistent with and no more stringent than that NESHAP.

Again, Sea Ray appreciates the willingness of the Department representatives to work with us on this project and to work though the issues identified above. We are hopeful that we can continue an open dialog among the various representatives to work toward an amicable resolution of the MACT determination and, ultimately, issuance of a permit within the next few weeks. Toward that end, we will contact you to schedule a meeting to further discuss the issues raised in this letter. If you or your staff have any questions in the meantime, please call me at 423-522-4181.

Sincerely,

Kevin Thompson

cc: Kirby Green, Deputy Secretary, DEP
Howard Rhodes, DEP DARM
Cindy Phillips, DEP BAR
Al Linero, DEP, BAR
John Reynolds, DEP BAR
Pat Comer, DEP BAR
Anthony Raia, EPA
Mark Morris, EPA

128577

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

August 17, 1999

CERTIFIED Mail – RETURN RECEIPT REQUESTED

Mr. Dennis Wilson, VP/General Manager
Sea Ray Boats, Inc.
350 Sea Ray Drive
Merritt Island, Florida 32953

Re: DEP File Nos. 0090182-001-AC, 0090093-003-AC
Sea Ray - Cape Canaveral Plant

As discussed on August 13 with your representatives, we are providing this overview of the submittals necessary to convert Sea Ray's application pursuant to the Prevention of Significant Deterioration (PSD) requirements of Rule 62-212.400., F.A.C. This requires the submittal of an additional $2,500 (PSD fee is $7,500) along with the additional information necessary to make the application complete. A Professional Engineer registered in Florida must seal the submittal.

To assist Sea Ray in expediting the submittal, we are enclosing a preliminary list of PSD items that should be completed by Sea Ray's consultant and submitted with the revised application. Other questions may need to be answered during the review process as they are identified. We have also included a general discussion of how a "top down" Best Available Control Technology (BACT) determination is typically done.

The essential elements of a PSD application should include the following based on Rule 62-212.400(5)(h), F.A.C.:

- A description of the nature, location, design capacity and typical operating schedule of the facility or modification, including specifications and drawings showing its design and plant layout;
- A detailed schedule for construction of the facility or modification;
- A detailed description of the system of continuous emissions reduction proposed by the facility or modification as BACT, emissions estimates and any other information as necessary to determine that BACT would be applied to the facility or modification;
- Information relating to the air quality impact of the facility or modification, including meteorological and topographical data necessary to estimate such impact;
- Information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect.
- A good engineering practice stack height, or other dispersion techniques, analysis to demonstrate compliance with Rule 62-210.550, F.A.C.

The information should be sufficient to allow the Department to make a BACT determination consistent with the requirements of Rule 62-212.400(6)(a), F.A.C. For example, we have few

details of Phases 2 and 3 of the development. We understand the purpose of Buildings 101, 102, and 103 but we have no information on Building 201 or 302, etc. We need to know how emissions are to be allocated throughout the three phases. Rule 62-212.400(6) has specific requirements for phased projects. The main one is that for phased construction projects, the determination of BACT shall be reviewed and modified in accordance with 40 CFR 51.166(j)(4), adopted and incorporated by reference in Rule 62-204.800, F.A.C. Basically, we must perform a BACT review that includes all phases and is regularly updated to reflect advances in technology at key points throughout the project.

The other main requirement is an Ambient Impact Analysis (key elements described below) using EPA-approved methods, if available. The submittal should include [Rule 62-212.400(5)(d) & (e), F.A.C.]

- A demonstration that the increase in allowable emissions from the project, together with all other applicable increases and decreases in emissions resulting from the project (including secondary emissions), will not cause or contribute to a violation of any ambient air quality standard or maximum allowable increase.
- An analysis of the impairment to visibility and soils, and to vegetation having a significant commercial or recreational value, that would occur as a result of the facility or modification and associated commercial, residential, industrial and other growth;
- An analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the project; and
- An analysis of the impairment to visibility, if any, which would occur in any Federal Class I area within 100 kilometers of the project.

Due to the circumstances of this application, we are working diligently toward being able to issue a PSD permit promptly once the necessary information has been obtained. If questions arise, please contact our permit engineer, John Reynolds, at 850/921-9536.

Sincerely,

A.A. Linero, P.E. Administrator
New Source Review Section

AAL/jr

Enclosures

c: Len Kozlov, DEP, Central District
Angela Morrison, HGSS
Pete Cantelou, P.E., CHP

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Mr. Dennis Wilson, VP
Sea Ray Boats
350 Sea Ray Dr.
Merritt Island, Fl
32953

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PS Form **3800**, April 1995

0090093-003-AC

Preliminary Information Required for Sea Ray's PSD Application

1. Provide detailed descriptions of Phase I, Phase II, and Phase III of the proposed project including a description of all products, processes or production lines, fabrication equipment, and air pollution control equipment and the buildings where they are housed.
2. List each process or production activity that results in emissions of HAPs, PM, or VOC and list quantities of emissions. For each emission point identified, describe methods of controlling emissions locally or in combination with a larger segment of the process or production line.
3. Provide a roughly scaled floor plan for each building that identifies: lamination/mold locations, assembly areas, office areas, storage, cutting/grinding areas, curing areas, gelcoat booths, permanent walls, particulate matter controls, raw material storage, the proposed overhead crane system, wood working operations, carpet and upholstery operations, cleanup stations, painting, bottom coating, and the general physical flow of work inside each building.
4. Provide emissions estimates for each year following completion of the initial construction for Phase I through Phase III and show all calculations for arriving at the emissions estimates.
5. Provide the ventilation plan detailing airflow rates, supply air locations over work areas, return air collector and sweep locations, general ductwork schematic, vents to the outside air, and any filter locations. Plan should include top and elevation views identifying the amount and velocity of each supply air register, as well as the collection flow rates and effective collection area or distance for each sweep. Explain how the ventilation system design affects comfort heating and cooling.
6. Describe control equipment and methods to reduce emissions employed in other Sea Ray facilities as well as other state-of-the-art boat-building facilities. Provide a comprehensive analysis of the economics and cost effectiveness of each control technology option as part of a top-down analysis of the best available control technology that could be applied to this proposed project. See the enclosure for a brief description of the BACT determination procedure. This analysis should include localized hooding and collection followed by treatment using pre-concentration, catalytic oxidation, thermal incineration, condensing, biofiltration, carbon adsorption, solvent replacement, raw material substitution, process modification, non-atomized resin and gelcoat application, closed molding, total enclosures, temporary enclosures, and any other available controls (including combination strategies) that could be applied to this project. If "product quality" or other reasons are used to reject a technology, provide supporting documentation.
7. Evaluate the feasibility of curtains, hanging "plastic-strip dividers" or other enclosures used in conjunction with localized hooding and venting to confine emissions to the emission-generating areas inside the buildings. Describe the frequency/necessity of opening large bay doors to transport boats or materials into and out of the buildings and how a localized hood and vent treatment system would be affected by such traffic.
8. Provide a detailed description of the cleanup methods and materials used and the types and quantities of VOC/HAPs they contain and the estimated emissions.
9. Evaluate the possibility and implications of early implementation of MACT at the existing facility in order to secure real emissions reductions that could be credited toward this project.

SUMMARY OF BACT DETERMINATION PROCEDURE

The EPA currently directs that BACT should be determined using the "top-down" approach. In this approach, the applicant ranks available control technologies in order of control effectiveness for the emissions unit under review. The most stringent control option is evaluated first and selected as BACT unless it is technically infeasible for the proposed project or rejected due to adverse energy, environmental or economic impacts. If the control option is eliminated, the next most stringent alternative is considered. This top-down approach continues until BACT is determined.

The BACT evaluation should be performed for each emissions unit and pollutant under consideration. In general, EPA has identified five key steps in the top-down BACT process: identify alternative control technologies; eliminate technically infeasible options; rank remaining technologies by control effectiveness; evaluate the most effective controls; and select BACT. A BACT determination must not result in the selection of control technology that would not meet any applicable emission limitation under 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants). Although an applicant proposes a technology intended to represent BACT, the Department may rely upon any other available information in making the final BACT determination.

In accordance with Chapter 62-212, F.A.C., a BACT determination is based on the maximum degree of reduction for each pollutant emitted that the Department determines is achievable through the application of production processes and available methods, systems, and techniques for control of each such pollutant. The Department's determination is made on a case-by-case basis for each proposed project and takes into account energy, environmental and economic impacts. In making the BACT determination, Rule 62-212.400(6)(a), F.A.C. requires the Department to consider:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169 of the Clean Air Act, and any emission limitation contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- All scientific, engineering, and technical material and other information available to the Department.
- The emission limiting standards or BACT determination of any other state.
- The social and economic impact of the application of such technology.

The Department will consider the control or reduction of "non-regulated" air pollutants when determining the BACT limit for regulated pollutants, and will weigh control of non-regulated air pollutants favorably when considering control technologies for regulated pollutants. The Department will also favorably consider control technologies that utilize pollution prevention strategies. These approaches are consistent with EPA's consideration of environmental impacts.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

August 13, 1999

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Dennis Wilson, VP/General Manager
Sea Ray Boats, Inc.
350 Sea ray Drive
Merritt Island, Florida 32953

Re: DEP File Nos. 0090182-001-AC, 0090093-003-AC
Sea Ray Cape Canaveral Plant

On August 11 we received the enclosed letters from the U.S. Environmental Protection Agency Region IV Office in Atlanta regarding Sea Ray projects. The first one confirms our preliminary decision, which was conveyed to your representatives on July 23 that the Cape Canaveral Project is subject to review under the rules for the Prevention of Significant Deterioration (PSD) at 62-212.400., F.A.C.

On July 19, we received an updated application from your engineer and proposal for a determination of Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAPs) as required by Rule 62-204.800., F.A.C. On August 3 and August 9, we received by FAX portions of a draft proposal for a separate Best Available Control Technology (BACT) as required under the PSD program. As discussed at our meeting today with your representatives, we are reviewing the information and will soon provide your engineer with a response along with a listing of the submittals needed for a PSD review.

We have been directed by our management to expedite all work on your project. We understand we will have a discussion with your representatives on August 23 to review all pending issues discussed at today's meeting. The Central District relinquished control of the application and our office is tracking it.

Our technical contact is John Reynolds. He was the permit engineer for the first two Sea Ray Projects at the Merritt Island Facility. You may call John at 850/921-9536.

Sincerely,

8/13

A.A. Linero, P.E. Administrator
New Source Review Section

AAL/al

Cc: Len Kozlov, DEP CD
Angela Morrison , HGSS
Pete Cantelou, P.E., CHP

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1. Article Addressed to:

Dennis Wilson
350 Sea Ray Drive
Merritt Island FL 32953

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 11 1999

4APT-ARB

Mr. C.H. Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, Florida 32399-2400

SUBJ: Applicability of Prevention of Significant Deterioration Permitting Requirements, Proposed Sea Ray Boats Facility, Merritt Island, Florida

Thank you for your letter of July 27, 1999, requesting comments on a permit application submitted by Sea Ray Boats, Inc. (Sea Ray). Sea Ray proposes to construct a fiberglass boat manufacturing facility in Merritt Island, Florida. The facility is referred to as the Cape Canaveral Plant and will be located approximately one mile from an existing Sea Ray fiberglass manufacturing facility referred to as the Merritt Island Plant.

Sea Ray contends that the two facilities should be viewed as separate emission sources. Further, Sea Ray proposes emissions for the Cape Canaveral Plant that are slightly less than the prevention of significant deterioration (PSD) permitting applicability threshold if the facility is treated as a separate source. You have requested comments from us on the question of PSD applicability.

For two facilities to be considered part of the same source under PSD regulations, generally they must be under common control, belong to the same major industrial grouping, and be located on one or more "contiguous or adjacent" properties. The two facilities are clearly under common control and belong to the same major industrial grouping. Our determination is that the Cape Canaveral Plant and the Merritt Island Plant are located on adjacent properties and should be considered as one source for PSD permitting purposes. This determination is based on the following considerations.

1. The separation distance of one mile is definitely within the distances previously determined by the U.S. Environmental Protection Agency (EPA) to deem separated facilities as adjacent. For example, in a letter from EPA Region 4 dated May 12, 1999, we rendered a determination on whether two facilities under common ownership and located approximately one mile apart should be considered adjacent for Title V permitting purposes. Although we concluded that the two facilities could be considered separate based primarily on a lack of interdependence, we also made the following statement: "For this and future such determinations, our position is that

separate facilities could be considered a single source for Title V permit applicability purposes strictly on the basis of proximity without regard to whether the facilities are dependent on each other or physically connected in some way." We are of the same opinion for PSD applicability determinations as for Title V applicability determinations.

2. The Cape Canaveral Plant raises our attention because it will not be a small emission source. It will have the potential to emit 211 tons per year (tpy) of volatile organic compounds (VOC). This potential emission rate is more than double the 100-tpy emissions threshold that would make the facility a major PSD source on its own if it were in one of the 28 listed PSD categories, and more than five times the PSD significant emission rate for VOC. Moreover, Sea Ray proposes to emit 125 tpy of styrene from the Cape Canaveral Plant. Styrene is a hazardous air pollutant (HAP), and the proposed styrene emission rate is more than ten times the amount (10 tpy) that would cause the proposed facility by itself to be classified as a major HAP source under the national emission standards for hazardous air pollutant (NESHAP) program and under the Title V operating permit program.

3. The existing Merritt Island Plant has a permit that allows 426 tpy of VOC emissions, a major portion of which we assume is styrene and other HAP emissions. The distance between the Merritt Island Plant and the proposed Cape Canaveral Plant is close enough that emissions from the two facilities could interact and impact the same ambient environment regardless of whether they are operationally independent. Therefore, within the broad air quality protection objectives of the prevention of significant deterioration regulations, a review of the control technology and ambient impact aspects of the Cape Canaveral Plant is certainly indicated if PSD review is merited on a procedural basis (that is, on the basis of site adjacency).

4. Sea Ray's letter dated July 14, 1999, makes a case for judging the proposed and existing facilities as having "no functional inter-relationship." However, Sea Ray chose for some definite reason to locate the proposed facility within close proximity of the existing facility. (We deem the proximity to be close in view of the fact that the separation distance between the two sites is less than the combined linear frontage of the sites.) We grant that the closeness of the sites may be merely a result of an area with features conducive for one boat manufacturing facility also being conducive for a similar facility. Nevertheless, Sea Ray's intentional selection of a site so close to the site of the existing facility appears at face value to suggest some sort of advantage in having the two facilities near each other, even if nothing more than the advantage of corporate communication efficiency. Please note, however, that the primary basis for our determination in this case is not whether the two facilities are interdependent.

Taking these various factors into account, we restate our determination that the Cape Canaveral Plant and the Merritt Island Plant should be considered as part of the same source for

PSD permitting applicability purposes. Should you agree with our determination, we recommend that you convey to Sea Ray the following advantages of having the Cape Canaveral facility undergo PSD review:

- Should Sea Ray decide at a future date to make the two facilities in some way functionally dependent or physically connected, the question of PSD permitting requirements will already be resolved.

- Similarly, should Sea Ray arrange in future to purchase or lease the property between the two sites, this would not trigger the need to re-visit the issue of adjacency.

- If the two facilities are treated as one source and a single PSD permit is issued for both facilities, Sea Ray will be able to credit emission reductions at one facility against future emission increases at the other. If FDEP decides to separate the two facilities for PSD permitting purposes, Sea Ray will not be allowed to use emission decreases at one facility in a netting analysis to avoid major or minor new source review (NSR) permitting for a future modification at the other facility.

- Grouping the two facilities as one source and obtaining a PSD permit will avoid any future investigation by EPA after the new facility begins operation as to whether Sea Ray improperly circumvented PSD regulations. Similar scrutiny by potential public intervenors would also be avoided.

If FEDP decides that the two facilities should be separated for PSD applicability purposes, none of these advantages would apply. Further, if the Cape Canaveral facility is permitted as a separate emission source and thereby avoids PSD review, we would view any "minor" modifications at the facility in the near term that result in VOC emission increases as a possible case of improper PSD circumvention.

If you have any questions or comments concerning this letter, please contact Jim Little at (404) 562-9118.

Sincerely,

Douglas Neeley

R. Douglas Neeley, Chief
Air and Radiation Technology Branch
Air, Pesticides, and Toxics
Management Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 11 1999

4APT-ARB

David G. Carson, Chief
New Source Permitting Program
Division of Air Pollution Control
Tennessee Department of Environment & Conservation
9th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1531

Re: Sea Ray Boats, Inc., Monroe County, Tennessee (PSD-TN-159)

Dear Mr. Carson:

This correspondence acknowledges the receipt of the following documents related to a proposed modification by Sea Ray Boats, Inc. (SRB): revised prevention of significant deterioration (PSD) permit application dated February 1999, submitted to us as an attachment to a letter dated April 30, 1999, from the Tennessee Division of Air Pollution Control (TDAPC); additional information sent by fax from TDAPC on July 7, 1999. SRB proposes to increase production levels and to upgrade a dust collection system at the Tellico Lake facility in Monroe County, Tennessee. SRB currently manufactures 17 to 26 foot fiberglass pleasure boats via a gelcoat and polyester resin lamination process. Currently, the facility is permitted to emit 249.48 tons per year (tpy) (via old AP-42 emission factors) or 360.84 tpy (via National Marine Manufacturers Association (NMMA) emissions factors) of VOC's, with styrene as the most significant pollutant of concern. The proposed PSD major modification relates to an increased production level which will increase VOC emissions by 324.37 tpy. This will increase the facility's total emissions to 684.85 tpy. All emissions estimations used in this review will refer to the NMMA emission factors. We have reviewed the package as submitted and have the following significant comments:

A. Best Available Control Technology (BACT) Analysis

1. The submitted PSD application is significantly lacking critical elements of a true top-down BACT analysis as outlined in the October 1990, "New Source Review Workshop Manual". We recommend that the applicant review this manual and revise the BACT analysis as appropriate. As you are aware, the top-down BACT process comprises the following steps: (1) identification of potential control alternatives; (2) elimination of technically infeasible alternatives based on sound physical and chemical principles; (3) ranking of technically feasible alternatives (including reasonable combinations of individual alternatives where appropriate); and (4) acceptance of the top feasible control alternatives

or elimination of top alternatives on the basis of economic, energy, and environmental considerations. Step 4 is missing entirely from the application for the proposed SRB modification and should be provided. Related to Steps 1 and 2, we recommend that the applicant at a minimum identify any VOC control alternatives in use at other SRB manufacturing facilities that have been deemed not appropriate for the Lake Tellico modification and explain why these alternatives are inappropriate. We further recommend for Steps 1 and 2 that the applicant review current RACT BACT LEAR Clearinghouse (RBLC) listings located on the world wide web at http://www.mapsweb.rtpnc.epa.gov/RBLCWeb/b102.htm and the extensive database compiled by EPA for development of this industry's MACT standards.

2. The applicant should specify where and when the use of 35 percent styrene resin, low vapor pressure solvents and water based emulsifiers are applicable. The language used in the application indicates that the 35 percent resins will be used only when and where applicable, if the internal testing proves acceptable, denoting a discretion left only to the facility without quantifiable emissions control. Additional documentation should include both the full potential and availability of current low styrene resins and applicable high volume/low pressure technologies, and a complete assessment of their feasibility. A review of current publications including the "polyester resin/fiberglass" document, developed by the Compliance Assistance Program within the California Environmental Protection Agency, Air Resources Board, Compliance Division, dated April 1999, and others within the fiberglass industry should be evaluated. Copies of the aforementioned document and other fiberglass BACT documents are enclosed. This evaluation should provide a basis to determine potential process and add-on control alternatives to include material and solvent substitution and/or replacements. A detailed evaluation of BACT is critical to this facility in lieu of current industry statistics which indicate that this facility would become a significant styrene source, contributing approximately 680 tpy or 6.8 percent of total industry styrene emissions.

   Based on this high styrene emissions rate we would recommend that this facility provide a detailed feasibility and cost evaluation of available add-on controls as well as individual controls. We would suggest that the detailed evaluation of control options focus on process operations that produce the highest VOC emissions - specifically, gelcoat application, lamination, assembly, and final finish.

3. Due to the extended time period between this final PSD application addendum (dated February 1999) and the initial PSD submittal (dated 1996), a current review and analysis of the proposed application should be provided for the alternatives presented in the BACT analysis by the applicant. This request is especially applicable to this facility, in view of the verbally reported modifications to plant operations and equipment. For example, on page 44 of the 1999 application revision, the applicant dismisses activated carbon adsorption as a technically feasible control method based on a publication that is now nearly 10 years old. As another example, although the applicant concludes on pages 45

and 46 of the 1999 application revision that use of a concentrator/thermal oxidizer was "not an option," we understand that this control method is now being considered by the applicant.

4. The PSD application lists the net emissions increase to be based on the difference between the previously permitted maximum emissions and the proposed maximum emissions. The net emissions increase should be based on the difference between the average actual emissions over the most recent two (2) years and the maximum potential to emit after the modifications.

5. Particulate emissions estimates were not provided. The application assumed these emissions to be negligible based on the planned operation and efficiency of cyclone, dust collectors and filter systems. No quantitative information is provided as a basis for this assumption.

6. The applicant has listed the use of AP-42 emission factors for the estimation of current and future potential emissions from styrene. The applicant should not use the AP-42 emissions estimation data as these data are no longer considered valid.

B. Ambient Impact Assessments

1. Class I Area Impact Analysis - Four Class I areas are within 100 km of the SRB facility. Of these, two are within 30 km. As with the Class II impact analysis, no quantitative impact assessments were provided for these areas. Our comments on the three qualitative assessments that were provided are as follows:

   Prevailing wind analysis - Knoxville, Tennessee, meteorological data were used to represent the wind direction frequency expected at Vonore, TN. The Knoxville meteorological data display a SW to NE predominant flow that may be caused by local Knoxville terrain features not representative of the Vonore site.

   Biogenic vs. anthropogenic VOC emissions - The application notes that, over the southeastern region, biogenic VOC emissions are much larger than anthropogenic emissions. This fact is associated with the long-term values over the whole southeast and does not address the short-term, location-dependent impact concerns associated with the effect of SRB's VOC emissions at the nearest Class I area.

   Visibility - Although not addressed quantitatively, the facility was indicated to be an insignificant emitter of pollutants contributing to visibility impairment - sulfates, particulate matter, and nitrogen oxides.

   We understand that the Federal Land Managers (FLM's) for the four Class I areas within 100 km of the plant were notified about the proposed modification in late 1997.

However, due to the substantially increased VOC emission rate estimates since this initial notification, the FLM's should be re-notified and provided with current estimates.

2. Monitoring Data - The 1999 application revision did not contain any ozone monitoring data to address current ozone levels in the local area near the facility and in the Class I areas within 100 km of the facility. The current background levels of ozone are important in order to evaluate the significance of the VOC emissions increase expected from the proposed modification.

   According to recent information from TDAPC, SRB will be conducting post-construction ambient ozone monitoring. If this is the case, we recommend that monitoring be continued at least as long as required to determine compliance under the new 8-hour national ambient air quality standard for ozone.

Thank you for the opportunity to comment on this package. If you have any questions, please contact Mr. Leonardo Ceron of the EPA Region 4 staff at (404) 562-9129.

Sincerely,

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides, and Toxics
Management Division

Enclosures

BACT Analysis for Master Craft Boat Company, Vonore, Tennessee
Polyester Resin/Fiberglass Technical Manual, California Air Resources Board

RECEIVED
AUG 16 1999
BUREAU OF AIR REGULATION

August 12, 1999

Mr. Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

Re: Proposed Cape Canaveral Plant
(DEP File #0090182-001-AC)
Sea Ray Boats, Inc.
Merritt Island, FL

Dear Mr. Linero:

Please accept this letter as Sea Ray's response to the Department of Environmental Protection's request for additional time to review the air permit application for the above proposed facility, dated May 4, 1999. Pursuant to Florida Statutes Sections 120.60 and 402.0876, Sea Ray consents to additional time for the department to review the permit application beyond the 90 day period that was to expire on August 5, 1999.

Sea Ray agrees to provide an additional two week extension to review the permit application which will be through September 15, 1999. This extension is based upon the understanding that the permit intent letter will be issued on or before August 27, 1999.

Sea Ray remains committed to assist in the review of this application and if any additional information is required, please do not hesitate to contact either Kevin Thompson or our consultant, Pete Cantelou. We will immediately respond so that this process for approval can be completed within the above time period. Sea Ray does understand that DEP has committed to expedite this review and approval process in light of our current schedule for the project. Thank you for your assistance in this matter.

Sincerely,

SEA RAY BOATS

Dennis Wilson
Vice President/General Manager

DW:dn

cc: Angela Morrison
Pete Cantelou

Sea Ray Boats, Inc., Sykes Creek, 350 Sea Ray Drive, Merritt Island, FL 32953
407-459-2930/Fax 407-452-6158

SEA RAY BOATS, INC.
LEGAL DEPARTMENT

Attorney Work Product
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Date: 8/12/99

To: Al Linero (850) 522-6979

From: Sea Ray Legal

Pages including cover sheet: 2

Sea Ray Operator (423) 522-4181
Preferred Fax: (423) 971-6434
Alternate Fax: (423) 971-6423

Doug Kitts (423) 971-6503
Allen McDonald (423) 971-6502
Ellen O'Regan (423) 971-6558
Linda Andrews (423) 971-6542

Remarks:

HOPPING GREEN SAMS & SMITH

PROFESSIONAL ASSOCIATION
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JAMES S. ALVES
BRIAN H. BIBEAU
RICHARD S. BRIGHTMAN
KEVIN B. COVINGTON
PETER C. CUNNINGHAM
RALPH A. DEMEO
RANDOLPH M. GIDDINGS
WILLIAM H. GREEN
WADE L. HOPPING
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CHERYL G. STUART
W. STEVE SYKES
T. KENT WETHERELL, II

OF COUNSEL
ELIZABETH C. BOWMAN

August 12, 1999

FAX COVER SHEET

Please deliver the following pages to:

Name: Clair Fancy **Fax No.:** 922-6979

Firm: DEP **Phone No.:**

Message:

Please see attached re. Sea Ray Boats, Inc.

FROM: Angela Morrison

We are transmitting __2__ pages (including this cover sheet). If you do not receive all of the pages, please call (850) 222-7500 and ask for the Fax Desk.

Client/Matter: SEARAY/001 (5303)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

AUG 11 1999

4APT-ARB

David G. Carson, Chief
New Source Permitting Program
Division of Air Pollution Control
Tennessee Department of Environment & Conservation
9th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1531

Re: Sea Ray Boats, Inc., Monroe County, Tennessee (PSD-TN-159)

Dear Mr. Carson:

This correspondence acknowledges the receipt of the following documents related to a proposed modification by Sea Ray Boats, Inc. (SRB): revised prevention of significant deterioration (PSD) permit application dated February 1999, submitted to us as an attachment to a letter dated April 30, 1999, from the Tennessee Division of Air Pollution Control (TDAPC); additional information sent by fax from TDAPC on July 7, 1999. SRB proposes to increase production levels and to upgrade a dust collection system at the Tellico Lake facility in Monroe County, Tennessee. SRB currently manufactures 17 to 26 foot fiberglass pleasure boats via a gelcoat and polyester resin lamination process. Currently, the facility is permitted to emit 249.48 tons per year (tpy) (via old AP-42 emission factors) or 360.84 tpy (via National Marine Manufacturers Association (NMMA) emissions factors) of VOC's, with styrene as the most significant pollutant of concern. The proposed PSD major modification relates to an increased production level which will increase VOC emissions by 324.37 tpy. This will increase the facility's total emissions to 684.85 tpy. All emissions estimations used in this review will refer to the NMMA emission factors. We have reviewed the package as submitted and have the following significant comments:

A. Best Available Control Technology (BACT) Analysis

1. The submitted PSD application is significantly lacking critical elements of a true top-down BACT analysis as outlined in the October 1990, "New Source Review Workshop Manual". We recommend that the applicant review this manual and revise the BACT analysis as appropriate. As you are aware, the top-down BACT process comprises the following steps: (1) identification of potential control alternatives; (2) elimination of technically infeasible alternatives based on sound physical and chemical principles; (3) ranking of technically feasible alternatives (including reasonable combinations of individual alternatives where appropriate); and (4) acceptance of the top feasible control alternatives

or elimination of top alternatives on the basis of economic, energy, and environmental considerations. Step 4 is missing entirely from the application for the proposed SRB modification and should be provided. Related to Steps 1 and 2, we recommend that the applicant at a minimum identify any VOC control alternatives in use at other SRB manufacturing facilities that have been deemed not appropriate for the Lake Tellico modification and explain why these alternatives are inappropriate. We further recommend for Steps 1 and 2 that the applicant review current RACT BACT LEAR Clearinghouse (RBLC) listings located on the world wide web at http://www.mapsweb.rtpnc.epa.gov/RBLCWeb/b102.htm and the extensive database compiled by EPA for development of this industry's MACT standards.

2. The applicant should specify where and when the use of 35 percent styrene resin, low vapor pressure solvents and water based emulsifiers are applicable. The language used in the application indicates that the 35 percent resins will be used only when and where applicable, if the internal testing proves acceptable, denoting a discretion left only to the facility without quantifiable emissions control. Additional documentation should include both the full potential and availability of current low styrene resins and applicable high volume/low pressure technologies, and a complete assessment of their feasibility. A review of current publications including the "polyester resin/fiberglass" document, developed by the Compliance Assistance Program within the California Environmental Protection Agency, Air Resources Board, Compliance Division, dated April 1999, and others within the fiberglass industry should be evaluated. Copies of the aforementioned document and other fiberglass BACT documents are enclosed. This evaluation should provide a basis to determine potential process and add-on control alternatives to include material and solvent substitution and/or replacements. A detailed evaluation of BACT is critical to this facility in lieu of current industry statistics which indicate that this facility would become a significant styrene source, contributing approximately 680 tpy or 6.8 percent of total industry styrene emissions.

   Based on this high styrene emissions rate we would recommend that this facility provide a detailed feasibility and cost evaluation of available add-on controls as well as individual controls. We would suggest that the detailed evaluation of control options focus on process operations that produce the highest VOC emissions - specifically, gelcoat application, lamination, assembly, and final finish.

3. Due to the extended time period between this final PSD application addendum (dated February 1999) and the initial PSD submittal (dated 1996), a current review and analysis of the proposed application should be provided for the alternatives presented in the BACT analysis by the applicant. This request is especially applicable to this facility, in view of the verbally reported modifications to plant operations and equipment. For example, on page 44 of the 1999 application revision, the applicant dismisses activated carbon adsorption as a technically feasible control method based on a publication that is now nearly 10 years old. As another example, although the applicant concludes on pages 45

and 46 of the 1999 application revision that use of a concentrator/thermal oxidizer was "not an option," we understand that this control method is now being considered by the applicant.

4. The PSD application lists the net emissions increase to be based on the difference between the previously permitted maximum emissions and the proposed maximum emissions. The net emissions increase should be based on the difference between the average actual emissions over the most recent two (2) years and the maximum potential to emit after the modifications.

5. Particulate emissions estimates were not provided. The application assumed these emissions to be negligible based on the planned operation and efficiency of cyclone, dust collectors and filter systems. No quantitative information is provided as a basis for this assumption.

6. The applicant has listed the use of AP-42 emission factors for the estimation of current and future potential emissions from styrene. The applicant should not use the AP-42 emissions estimation data as these data are no longer considered valid.

B. Ambient Impact Assessments

1. Class I Area Impact Analysis - Four Class I areas are within 100 km of the SRB facility. Of these, two are within 30 km. As with the Class II impact analysis, no quantitative impact assessments were provided for these areas. Our comments on the three qualitative assessments that were provided are as follows:

   Prevailing wind analysis - Knoxville, Tennessee, meteorological data were used to represent the wind direction frequency expected at Vonore, TN. The Knoxville meteorological data display a SW to NE predominant flow that may be caused by local Knoxville terrain features not representative of the Vonore site.

   Biogenic vs. anthropogenic VOC emissions - The application notes that, over the southeastern region, biogenic VOC emissions are much larger than anthropogenic emissions. This fact is associated with the long-term values over the whole southeast and does not address the short-term, location-dependent impact concerns associated with the effect of SRB's VOC emissions at the nearest Class I area.

   Visibility - Although not addressed quantitatively, the facility was indicated to be an insignificant emitter of pollutants contributing to visibility impairment - sulfates, particulate matter, and nitrogen oxides.

   We understand that the Federal Land Managers (FLM's) for the four Class I areas within 100 km of the plant were notified about the proposed modification in late 1997.

However, due to the substantially increased VOC emission rate estimates since this initial notification, the FLM's should be re-notified and provided with current estimates.

2. Monitoring Data - The 1999 application revision did not contain any ozone monitoring data to address current ozone levels in the local area near the facility and in the Class I areas within 100 km of the facility. The current background levels of ozone are important in order to evaluate the significance of the VOC emissions increase expected from the proposed modification.

   According to recent information from TDAPC, SRB will be conducting post-construction ambient ozone monitoring. If this is the case, we recommend that monitoring be continued at least as long as required to determine compliance under the new 8-hour national ambient air quality standard for ozone.

Thank you for the opportunity to comment on this package. If you have any questions, please contact Mr. Leonardo Ceron of the EPA Region 4 staff at (404) 562-9129.

Sincerely,

Douglas Neeley

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides, and Toxics
Management Division

Enclosures

BACT Analysis for Master Craft Boat Company, Vonore, Tennessee
Polyester Resin/Fiberglass Technical Manual, California Air Resources Board

EPA United States of America
Environmental Protection Agency

A FAX FROM Region 4

TO:	FAX NO:
Al Linero - Divison of Air Resources Management	(850) 922-6979
SUBJECT: Sea Ray Boats - Vonore, TN	
FROM: Jim Little	PHONE NO: (404) 562-9118
OFFICE: APTMD	FAX NO. FOR: (404) 562-9095

COMMENTS:
Attached is a copy of our letter on the Sea Ray Boats facility located near Vonore, TN. I will send our letter on the Cape Canaveral facility later this morning.

DATE and TIME:	NO. OF PAGES
08/11/99 08:37:30 AM	5 (incl. cover)

EPA FAX FORM (E-Forms 4.3)

Received August 23 rd

(received Friday August 27)

August 10, 1999

Via Fax

Al Linero, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Proposed Cape Canaveral Plant
DEP File No. 0090182-001-AC
Brevard County, Florida

Dear Mr. Linero:

Thank you and others with the Department for meeting with representatives of Sea Ray Boats, Inc., on July 23 and for continuing to work with Sea Ray since that date toward the issuance of a proposed air construction permit for the proposed Cape Canaveral Plant. Based on our discussions, we hope to receive the proposed permit by August 13. As part of that proposed permit, we understand that conditions will be included to address Maximum Achievable Control Technology (MACT) requirements consistent with the preliminary determination made by Cindy Phillips on July 30, which you recently forwarded to us. In response to that preliminary determination, we offer the following comments.

Averaging Periods. Sea Ray proposed 12-month rolling averages, with compliance to be determined on a plant-wide basis, consistent with its understanding of what the U.S. Environmental Protection Agency (EPA) is considering for the Boat Manufacturing NESHAP expected to be formally proposed late this year or early next year. The Department, on the other hand, has proposed 3-month rolling averages with compliance determined for each process individually. Sea Ray requests that the air construction permit include a provision that the averaging periods and methodology for determining compliance (e.g., individually vs. plant wide) will be revised to be consistent with EPA's formally proposed NESHAP. Because the formal proposal is expected late this year or early next year, this revision can occur prior to initial operation of the plant.

Bottom and Exterior Coatings. The MACT as proposed by the Department would require compliance with the NESHAP for Shipbuilding and Ship Repair (Surface Coating) for bottom coatings and any other exterior coatings. The Shipbuilding NESHAP does not apply to pleasure crafts, which are covered by the NESHAP for Boat Manufacturing. The Shipbuilding NESHAP was intended to apply only to commercial and military vessels, and EPA specifically did not intend to include coatings used on pleasure crafts in the Shipbuilding NESHAP standards (see preamble statement attached, 60 Federal Register 64333 (Dec. 15, 1995)). While the

SEA RAY BOATS
2600 Sea Ray Blvd.
Knoxville, TN 37914
(423)522-4181 (phone)
(423)971-6423 (fax)

To: Al Linero
850-922-6979

From: Kevin Thompson

Date: 8/10/99
No. of Pages 4

Please copy and distribute to:
Cindy Phillips
Clair Fanny
Howard Rhodes

spray and other environmental elements. These parts are very different than typical wood furniture and are not being regulated under the Boat Manufacturing NESHAP. Sea Ray therefore requests that the proposed condition requiring compliance with the Wood Furniture NESHAP be deleted. If EPA decides in the future to regulate wood coatings under the Boat Manufacturing NESHAP, the permit would, of course, be revised accordingly.

Carpet and Fabric Adhesives. Sea Ray understands that the use of carpet and fabric adhesives will not be regulated by EPA under the Boat Manufacturing NESHAP. The Department understands otherwise, apparently, and has proposed to require compliance with the Wood Furniture NESHAP for contact adhesives under 40 CFR 63.803(b)(2). As explained above, the Wood Furniture NESHAP is not applicable to the boat manufacturing industry, nor is the Shipbuilding NESHAP. Sea Ray therefore requests that this condition be deleted at this time. If EPA proposes standards for carpet and fabric adhesives as part of the Boat Manufacturing NESHAP, the Cape Canaveral Plant would, of course, be required to comply at that time. It is unnecessary and inappropriate, at this time, to establish such requirements.

Thank you for considering these comments. We would like to meet with you at your earliest convenience this week, by phone or in person, to discuss these issues in greater detail. In addition, we are attempting to schedule a meeting with Gregg Worley with EPA's Region IV in Atlanta on August 26 to resolve the issue of whether the Cape Canaveral Plant is "adjacent" to another Sea Ray facility located approximately 1.2 miles away, as we have previously discussed. We will be contacting you soon, but if you have any questions in the meantime, please call me at 423-522-4181 or Pete Cantelou at 407-259-1525.

Sincerely,

Kevin Thompson

cc: Cindy Phillips, DEP BAR
Pat Comer, Esq., DEP OGC
Clair Fancy, DEP BAR
Howard Rhodes, DEP DARM
Doug Kitts, Sea Ray
Pete Cantelou, CHP
Angela Morrison, HGSS

pleasure crafts planned for the Cape Canaveral Plant may exceed 20 meters, they will be subject to the NESHAP for Boat Manufacturing as EPA intended. EPA never identified any boat manufacturing facilities as potentially being subject to the Shipbuilding NESHAP during the development and proposal of that NESHAP--even for vessels over 20 meters in length. Commercial and military ships are much different than pleasure craft boats, regardless of the lengths. They are constructed using different processes and materials, fall under separate four-digit Standard Industrial Classification codes (3731 and 3732), are subject to different specifications and regulations under Titles 33 and 46 of the Code of Federal Regulations, and were intended to be subject to separate NESHAPs under the source categories developed by EPA.

Sea Ray understands that EPA is in the process of issuing a formal determination as to the applicability of the Shipbuilding NESHAP for pleasure crafts over 20 meters. Pending this formal determination, Sea Ray requests that the Department omit any conditions requiring compliance with the Shipbuilding NESHAP. If such conditions are included in the permit, Sea Ray requests that, at a minimum, language be included to clarify that if EPA subsequently determines that the Shipbuilding NESHAP is not applicable to pleasure crafts over 20 meters or if EPA develops a separate bottom coating and exterior coating standard under the Boat Manufacturing NESHAP, then such conditions will be revised accordingly (either before the permit becomes final or as a permit amendment after it becomes final).

Interior Wood Parts. As recognized in the Department's preliminary MACT determination, EPA does not intend to require the control of hazardous air pollutant emissions from wood coating under the Boat Manufacturing NESHAP. Moreover, the Wood Furniture NESHAP does not apply directly to the boat manufacturing industry, which falls under a separate Standard Industrial Classification code (see 40 CFR 63.801, definition of "wood furniture"). Contrary to EPA's position, the Department is attempting to require compliance with the Wood Furniture NESHAP. Cindy Phillips mentioned in our July 23 meeting that the Wood Furniture NESHAP may apply to the Cape Canaveral Plant because she believed that it was subject to the Shipbuilding NESHAP and EPA had previously determined that the Wood Furniture NESHAP applied to facilities subject to the Shipbuilding NESHAP. As explained above, the Shipbuilding NESHAP does not apply to the Cape Canaveral Plant because it manufactures pleasure crafts and is subject instead to the Boat Manufacturing NESHAP which will not regulate wood coating. In further support of Sea Ray's position that the Wood Furniture NESHAP should not apply, many of the "interior wood parts"(an undefined term) that are coated as part of the boat manufacturing process are much different than a "wood furniture" operation covered under the Wood Furniture NESHAP (SIC Codes 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, and 5712). For example, some interior wood parts are coated with resin and gelcoats as part of bulkheads. Other interior wood parts are coated with products to result in a deep gloss that prevent erosion by sea

incl - Ship Furniture

Florida Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Jeb Bush
Governor

David Struhs
Secretary

FAX TRANSMITTAL SHEET

DATE: 8/5/99

TO: Angela Morrison + Kevin Thompson
HGSS SEA RAY

PHONE: _____ **FAX:** _____

FROM: A. Linero **PHONE:** _____

Division of Air Resources Management **FAX:** **850.922.6979**

RE: _____

CC: _____

Total number of pages including cover sheet: 3

Message

As I discussed with Kevin, We are required to provide 30 days for public comment. We have a case in Brevard County per attached. Think as to whether you want to schedule a public meeting within the Notice or if you want to wait and see if such is requested.

Thank You Al Linero

If there are any problems with this fax transmittal, please call the above phone number.

6/8/99

To: Elizabeth Augulo.

From: **Vivian F. Garfein**

This should go to Division of Air.

Mary -
This needs to go to Air. Probably no response necessary but lets track it.
Thanks.
Pat
6/11

OUTING AND TRANSMITTAL SLIP

3. _____

4. _____

5. _____

COMMENTS:

Please let me know if you plan on responding to this letter. If you do respond, I will need a copy of the response for Howard's files. Thank you.

[illegible]

RECEIVED
JUN 14 1999
BUREAU OF REGULATION

DATE: 6/14 PHONE: 1-9559

State of Florida Department of Environmental Protection

08/05/99

DOAH Case Information

Case No.: 99-2581
Judge: DANIEL MANRY

Petitioner: CLARENCE ROWE
vs.
Respondent: OLEANDER POWER PROJECT, L.P., AND DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date Filed: 06/09/99
Date Assigned: 06/15/99
Location: Viera, FL
District: Middle
Agency: Department of Environmental Protection

Status: Set for Hearing on 08/30/99

Docket
Parties
Weekly Calendar

State of Florida ● Division of Administrative Hearings
The Desoto Building ● 1230 Apalachee Parkway ● Tallahassee, Florida 32399-3060
(850) 488-9675 ● SUNCOM 278-9675 ● Fax Filing (850) 921-6847

CENT-DIST

BREVARD County
BOARD OF COUNTY COMMISSIONERS
FLORIDA'S SPACE COAST

JUN 1999
RECEIVED
DEP
Central District

TRUMAN SCARBOROUGH, JR., Commissioner, District 1,
400 South Street, First Floor, Ste. 1A
Titusville, FL 32780-7698

264-6750

JUN 11 1999
DIVISION OF AIR
RESOURCES MANAGEMENT

May 25, 1999

RECEIVED
JUN - 2 1999
DEP SECRETARY

Florida, Department of Environmental Protection
David Struhs, Secretary
Marjory Stoneman Douglass Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3900

Dear Mr. Struhs:

The purpose of this letter is to relay community concern about the public's opportunity to participate in the DEP permitting process. As you may be aware, DEP has recently reviewed an application for a power plant proposed to be located in Brevard County. A Notice of Intent to issue a permit was published in the legal section of the Florida Today on April 8, 1999, advertising a public meeting date scheduled for May 13, 1999. Members of the public have suggested that notice of this DEP Hearing was insufficient.

Although the minimum notice requirements may have been met, it appears that the pertinent information was not efficiently provided to allow for participation by all interested parties in the permitting process. As a local government official, I am mindful of the costs to provide notice beyond the minimum legal requirements. However, when dealing with controversial public issues, such as the Oleander Power Project, it benefits all parties to maximize the opportunity for public participation.

In the future, I encourage the state make the extra effort to notify potentially impacted parties in a more comprehensive fashion and to call upon local officials and local media to optimize the opportunities to educate the public about DEP's permitting process.

Very truly yours,

Truman G. Scarborough, Jr.

facsimile TRANSMITTAL

to: Al Linero - FDEP
fax #: (850) 922-6979
re: Sea Ray Boats
date: August 2, 1999
pages: 8 (including this cover sheet)

Al -

I spoke this morning with Joe Kahn about Sea Ray Boats. We will use the information you sent about the project plus other information relayed to Joe to develop a determination about PSD applicability. In the meanwhile, please review the attached letter containing a recent determination we made in a similar but not identical situation. Although we concluded in this instance that the two facilities in question could be considered separately for Title V purposes, I have marked sections on page 6 indicating that we could have arrived at a different decision simply on the basis of proximity (about a mile separation distance). Also, this situation differs from Sea Ray Boats in that PSD applicability was not in question, the facilities were not major for hazardous air pollutants, and the question of adjacency arose because of a purchase of an existing facility and not because the owner of an existing facility decided to build a new facility in the vicinity of the existing facility.

From ...

Jim Little
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303

Phone: (404) 562-9118
Fax: (404) 562-9095

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAY 19 1999

4APT-ARB

Mr. Randy C. Poole
Air Hygienist II
Mecklenburg County Department of Environmental Protection
700 N. Tryon Street, Suite 205
Charlotte, North Carolina 28202-2236

SUBJ: Applicability of Title V Permitting Requirements to Gasoline Bulk Terminals Owned by Williams Energy Ventures, Inc.

Dear Mr. Poole:

Thank you for your letter of April 15, 1999 requesting an opinion on the applicability of Title V major source operating permit requirements to two bulk gasoline terminals owned by Williams Energy Ventures, Inc. (WEV) in the Paw Creek area of Mecklenburg County. The specific question is whether emissions from the two terminals should be aggregated for Title V applicability purposes. Our determination is that the terminals can be considered as separate sources without aggregation of emissions, subject to certain qualifications.

Background

Under the Title V permit program, a major source is defined in 40 CFR 70.2 as follows:

"Major source means any stationary source (or any group of sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping and that are described in paragraph (1), (2), or (3) of this definition. For the purposes of defining 'major source,' a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987."

Paragraph (1) referred to in this definition pertains to major source classification based on potential emissions of hazardous air pollutants; paragraph (2) pertains to major source classification based on potential emissions of any air pollutant in amounts of 100 tons per year or more; and paragraph (3) pertains to major source classification based on emissions of regulated pollutants in ozone, carbon monoxide, and particulate matter nonattainment areas.

The Environmental Protection Agency (EPA) Region 4 understands that Mecklenburg County Department of Environmental Protection (MCDEP) has determined conclusively that the two WEV terminals are under "common control of the same person" and belong "to a single major industrial grouping." The remaining question is whether they should be considered as "located on one or more contiguous or adjacent properties." In developing our determination, we have taken note of the following information presented in your letter, in the letter from Williams Energy Services attached to your letter, and during telephone calls to you to obtain additional information.

- The two terminals are approximately nine-tenths of a mile apart "by public road." (The quoted phrase is from your April 15, 1999 letter.) We assume that this is the approximate straight-line separation distance as well.

- The only operating relationship between the two terminals currently is that some WEV employees have responsibilities at both terminals and the terminals are served by common delivery pipelines. The two terminals are not connected by pipelines or other utilities that allow the terminals to exchange liquid fuels or utilities such as water and electric power. Therefore, neither terminal is a support facility for the other, and each terminal can be operated independently.

- Other terminals occupy most of the land area between the two WEV terminals.

- If the two WEV terminals were combined as one source, the combination would be a major Title V source for volatile organic compounds but not for hazardous air pollutants.

Further, although not specifically stated in either your letter or the Williams Energy letter, we assume that WEV does not own, lease, or otherwise control the properties between the two terminals.

Regulatory and Policy Guidance

EPA has never specifically defined by regulation an exact separation distance that would cause two facilities to be considered as located on adjacent or contiguous properties. Case-by-case variations preclude a "one size fits all" definition that would be reasonable in every instance. Nevertheless, regulatory and policy guidance exists to help us develop a determination in response to your request. The following discussion summarizes some of the numerous EPA documents that are available as guidance. The ordering of these documents is chronological and not degree of importance. We can provide copies of any or all of these documents at your request. Also, please note that some of these documents refer to prevention of significant deterioration (PSD) and to nonattainment area determinations and not to Title V determinations specifically. Use of documents not directly related to Title V is appropriate because the Title V

definition of major source is an outgrowth of the definitions used for PSD and nonattainment area new source review purposes.

The Williams Energy letter included with your request letter refers to a discussion with a representative of the Georgia Environmental Protection Division (GA EPD) concerning decisions that the agency might make in the future. Since GA EPD has no jurisdiction over terminals in Charlotte, North Carolina, the comments Williams Energy may have received during this discussion with GA EPD are neither persuasive nor relevant.

Summary of documents:

1. Preamble to the August 7, 1980 final PSD regulations.

   The preamble language at 45 FR 52695 is often cited as confirmation that "contiguous and adjacent" assessments are case-by-case and that two facilities separated by a distance of 20 miles would be too far apart to treat as one source. Relevant language in the preamble includes the following: "EPA is unable to say precisely at this point how far apart activities must be in order to be treated separately. The Agency can answer that question only through case-by-case determinations."

2. Memo dated June 30, 1981 from EPA Division of Stationary Source Enforcement to EPA Region 5 concerning treatment of two separated facilities as one source. (This is document No. 3.18 in the New Source Review (NSR) Guidance Notebook series.)

   The situation addressed in this memo consisted of two General Motors plants separated by a distance of approximately 4,500 feet. One plant made auto bodies that were transported to the other plant by truck for use in final assembly. Additionally, the two plants were the only facilities served by a rail spur for materials delivery. The Division concurred that the two General Motors plants should be considered as one source "Based on the unique set up of these facilities," namely, that they "are approximately one mile apart, have a dedicated railroad line between them and are programmed together to produce one line of automobiles."

3. Letter dated May 18, 1995 from EPA Region 4 to the GA EPD regarding two separated fuel terminals in the context of Title V (part 70) applicability.

   The two terminals in question were under common ownership and located approximately one-half mile apart. In addition, diesel fuel and water pipelines linked the two terminals. EPA concluded that the two facilities should be treated as one source based on the following reasoning: "Based on the information provided, we have concluded the two facilities are in close proximity and should be treated as one source under Part 70. Additionally, we have noted that both facilities use the same access road, share diesel fuel and water pipelines, and interestingly, have their storage tank numbers listed sequentially

on the air quality permits issued to both facilities." Physical proximity was the main factor in the determination.

4. EPA summary discussing the topics for a January 25, 1996 conference call on contiguous or adjacent properties as related to Title V.

This summary contains the following comments:

> "A physical separation of property does not in itself constitute separate sources, for example, the fact that some property at a plant site is divided by a highway or railroad right-of-way does not create separate and distinct sources;"
>
> "EPA made a determination that two GM auto plants, separated from each other by approximately one mile (and connected by a private rail), could be considered one major source;" [The referenced determination is discussed above.]
>
> "Region 4 determined that two bulk gasoline terminals located approximately one-half mile from each other should be considered one source primarily based upon geographic proximity and secondarily upon shared diesel and water pipelines;" [The referenced determination is discussed above.]
>
> "There are some other factors you may wish to consider when evaluating sources which are physically separated: like whether there are any unique structures (i.e., private rail line, pipelines, etc.) that 'tie' the sources together;"

5. Memo dated August 27, 1996 from the Office of Air Quality Planning and Standards (OAQPS) to EPA Region 8 concerning whether a brewery and an off-site land farm under common ownership should be treated as a single source.

This memo concerned a brewery and an associated wastewater disposal land farm separated by a distance of about 6 miles and connected by a pipeline. OAQPS agreed with Region 8 that the land farm and brewery should be considered a single source for PSD applicability purposes. The opinion from OAQPS reads in part as follows:

> "A specific distance between pollutant emitting activities has never been established by EPA for determining when facilities should be considered separate or one source for PSD purposes. Whether facilities are contiguous or adjacent is determined on a case-by-case basis, based on the relationship between the facilities. The EPA considers the brewery and land farm to be contiguous or adjacent since the land farm operation is an integral part of the brewery operations, i.e., land application at the land farm is the means chosen by Anheuser-Busch to dispose of the ethanol contaminated process water from the brewery operations. Without a means of waste water disposal the brewery cannot

operate. The additional fact that a pipeline physically connects the brewery and land farm strengthens the conclusion that the brewery operation is dependent on land farm operations. For this case, the distance between the brewery and land farm does not support a PSD determination that the brewery proper and the land farm constitute separate sources for PSD purposes."

6. Letter dated March 13, 1998, from EPA Region 5 to the Illinois Environmental Protection Agency regarding a NSR permitting action.

The facilities addressed in this letter were two steel mill facilities located 3.7 miles apart. One of EPA's concluding statements is as follows: "Although the two sites are separated by Lake Calumet, landfills, I-94, and the Little Calumet River, ISOPIA considers that the close proximity of the sites, along with the interdependency of the operations and their historical operation as one source, as sufficient reasons to group these two facilities as one."

7. Letter dated May 21, 1998, from EPA Region 8 to the Utah Division of Air Quality responding to a request for guidance in defining "adjacent" for Title V and NSR source aggregation purposes.

The issue involved can be summarized by the following statement from the letter: "We could not find any previous EPA determination for any case that is precisely like Utility Trailer, i.e., two facilities under common control, with the same primary 2-digit SIC code, located about a mile apart, both producing very similar products, but claimed by the company to be independent production lines." In providing a response to the state agency, EPA first stated that deciding what "adjacent" means should take into account a "common sense notion" of source. (This phrase appears in the August 7, 1980 final PSD rule preamble discussed above and in the prior *Alabama Power* court case.) The letter then goes on to recommend that the state agency ask the following questions to decide if the two facilities should be considered "adjacent" and therefore one source:

"Was the location of the new facility chosen primarily because of its proximity to the existing facility, to enable the operation of the two facilities to be integrated? In other words, if the two facilities were sited much farther apart, would that significantly affect the degree to which they may be dependent on each other?"

"Will materials be routinely transferred between the facilities? Supporting evidence for this could include a physical link or transportation link between the facilities, such as a pipeline, railway, special-purpose or public road, channel or conduit."

"Will managers or other workers shuttle back and forth to be involved actively in both facilities? Besides production line staff, this might include maintenance and repair crews, or security or administrative personnel."

"Will the production process itself be split in any way between the facilities, i.e., will one facility produce an intermediate product that requires further processing at the other facility, with associated air pollutant emissions?"

The letter concludes by saying that, if the facilities are treated as separate sources, "no emission netting between them can be allowed, to avoid major source NSR permitting at either facility, in the event of future facility modifications."

Determination

Before restating our determination, we list first some of the considerations on which our determination is based:

- For this and future such determinations, our position is that separate facilities could be considered a single source for Title V permit applicability purposes strictly on the basis of proximity without regard to whether the facilities are dependent on each other or physically connected in some way.

- The separation distance of nine-tenths of a mile between the two WEV terminals certainly does not eliminate consideration of the two facilities as one source. Many of EPA's past determinations that two separated facilities should be treated as one source have involved situations where the separation distance was considerably more than a mile.

- In most of the EPA documents we reviewed, the key factor in deciding that separate facilities should be considered as one source was that the facilities were interdependent or linked in some sense. Our understanding of the WEV terminals is that they can and do operate independently, that one terminal does not act as a support operation for the other, and that they are not physically connected by a structure such as a pipeline dedicated to the transfer of material or energy between the two terminals. Although this understanding is based solely on information supplied by MCDEP and Williams Energy and not independently verified, it is supported by the fact that the two terminals were at one time under separate ownership and presumably operated independently when owned separately.

EPA Region 4 considers the separation distance of nine-tenths of a mile close enough for the two terminals to be considered one source; however, based primarily on the lack of interdependence, we conclude that the two WEV terminals can be considered as two separate

sources for Title V (part 70) permit applicability purposes. Furthermore, we add the following qualifications to our determination:

1. If MCDEP does in fact separate the two terminals for Title V purposes, WEV (or any future owner) will not be allowed to use emission decreases at one terminal in a netting analysis to avoid major or minor source NSR permitting for a future modification at the other facility.

2. WEV must notify MCDEP if property is purchased to expand the boundaries of either terminal. Likewise, WEV must notify MCDEP if partial or total ownership interest is acquired in any of the other liquid fuels terminals in the Paw Creek area. Upon receipt of such notifications, MCDEP should determine whether to reopen the question of Title V permit applicability.

3. If WEV adds a physical link between the two terminals or otherwise changes operations to increase the interrelationships between the two terminals, the determination in this letter is no longer applicable.

If you have any questions or comments concerning this letter, please contact Jim Little at (404) 562-9118 or Kelly Fortin at (404) 562-9117.

Sincerely,

James Kutzman for

Winston A. Smith
Director
Air, Pesticides and Toxics
Management Division