Merillat.

RECEIVED
JAN 24 2005
BUREAU OF AIR REGULATION

January 18, 2005

Mr. A.A. Linero
Administrator – South Air Permitting Section
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Request for Additional Information
Merillat Corporation – Ocala Facility Proposed Expansion

Dear Mr. Linero:

In response to the request dated November 8, 2004, from the Florida Department of Environmental Quality (DEP), the Merillat Corporation (Merillat) is providing additional information regarding the proposed expansion of the Ocala facility. Also, we want to thank you and other DEP staff for meeting with us and visiting the Ocala facility on December 16, 2004. We trust that the facility tour and discussions were informative and provided you with additional insights regarding our operations in Ocala. Below are responses for each item as requested in the November 8th letter.

I. Project Description

To clarify a few items described in the November 8th request letter and as discussed in detail during the December 16th meeting, the following points are important to note with respect to the Ocala facility's history:

When the facility was initially planned and an air permit application submitted to DEP-Orlando in May 1999, there were no defined construction plans for a four line operation. At the time, Merillat proposed to install a finishing system consisting of a series of spray booths, flash areas, and curing ovens. The plant evolved into the current three line system over time as dictated by consumer demand for complete kitchen cabinet sets within an aggressive delivery time to meet builder installation schedules. The facility is based on a "lean", "on-time", "no inventory" concept of manufacturing which is the first of its type for Merillat where a kitchen cabinet set is produced from milled lumber to assembly entirely at one plant. While there is extra space in the building to accommodate a 4th finishing line and/or other equipment, this was not part of the original plans when

the company filed for an air permit in May 1999. The commitments and goals that were initially made in 1999 were to reach a production level of approximately 2600 cabinets per day, employ 350 people on a full-time basis, and construct a facility for a cost of at least $16 million dollars. Each of these commitments has been met with the current three line system. Documentation of these commitments and goals (as contained in internal company documents and an agreement with the City of Ocala) has been provided via e-mail to DEP on January 7, 2005.

1. *Control equipment cost effectiveness on the basis that all VOC from original development plus the expansion are available for control. However, add-on control might maintain emissions at their pre-expansion level in which case Merillat would not trigger PSD and would only need to maintain emissions at 249 TPY or less.*

   Please see the response below under Section II. BACT analysis item 10) which includes control equipment cost effectiveness for control of all VOC from the original facility plus the proposed expansion.

2. *Site plans and floor plans showing equipment layouts before and after the expansion. (This should include a description of any foundation or infrastructure completed for future building expansion).*

   Floor plan drawings are provided in **Attachment I** showing the equipment layout for the current finishing system (3 lines) as **Figure I-1** and for the finishing system including the proposed additional equipment (4 lines) as **Figure I-2**. As discussed above, there is space in the finishing area of the manufacturing building to accommodate the proposed finishing equipment without infrastructure work or building expansion.

3. *Description of completed construction. Identify each individual coating line and each individual piece of equipment on that line. This includes, but is not limited to, each spray booth, flash area, and curing oven.*

   The current finishing system in-place at the Ocala facility is comprised of three lines. Each line includes the following equipment:

   - Back-to-back toner, stain, sealer, and topcoat booths
   - Sealer and Topcoat flash areas
   - Sealer and Topcoat cool down areas
   - Toner, stain, sealer, and topcoat ovens
   - Stain wipe areas

Merillat®

Ancillary finishing equipment includes:

- Glaze spray booths (2) and accessory spray booth (1)
- Glaze flash area
- Glaze oven and off-line oven
- Glaze wipe area

4. *Please clarify the construction plans for this specific project request including a timeline for planned stages of construction and amount of equipment involved. Identify each individual piece of equipment for the new line. This includes, but is not limited to, each spray booth, flash area, and curing oven.*

   The proposed plans to install additional finishing equipment will take approximately 6 months. This 6-month timeline consists of approximately 2 months for in-shop, pre-build of the finishing equipment by the equipment supplier; 2 months for installation on-site by the equipment supplier and other contractors; and 2 months for troubleshooting and equipment start-up by Merillat. The equipment to be installed includes the following:

   - Back-to-back toner, stain, sealer, and topcoat booths
   - Sealer and Topcoat flash areas
   - Sealer and Topcoat cool down areas
   - Toner, stain, sealer, and topcoat ovens
   - Stain wipe areas

   Also, an accessory booth and an off-line oven are planned as part of the proposed expansion project.

5. *If the project is for the addition of one coating line, explain why this line has such a high potential compared to the three existing lines. Explain why the original permit application did not include a request for a higher PTE.*

   The requested increase in VOC emissions and new finishing line is based on projected increases in demand for kitchen cabinets and the new styles being demanded involving colors and glazes. These newer styles require additional finishing application steps which generate higher VOC emissions on a per cabinet basis in comparison with natural product finishes. Therefore, Merillat is requesting additional VOC capacity at this time in response to consumer demands for more cabinets and for greater percentages of cabinets produced with color finishes.

Merillat.

At the time the original permit application was prepared and the facility was being planned, demand for kitchen cabinets in the regional area to be served by the Ocala facility was 1,200 cabinets per day. This level of demand equates to approximately 110-120 tons/year of VOC emissions assuming a 250 day/year operating schedule (typical for Merillat plants) and an estimated mix of color and natural finished cabinets. In order to facilitate a reasonable level of growth beyond the 1,200 cabinet per day level and flexibility with respect to product mix (color vs. natural finishes), a request for additional VOC throughput was requested to facilitate additional production (2,500 cabinets per day) while staying below the 250 ton/year PSD permitting threshold. It is important to recognize that in 1999 the company did not know if the facility would ever reach this production level. Demand for kitchen cabinets is often cyclic, extremely difficult to predict over a long term basis (beyond 6-12 months), and is tied to constantly changing economic conditions. This point is illustrated by the fact that the Ocala facility was reviewed as a candidate for shutdown by Merillat corporate management in 2001 when demand fell to 800 cabinets per day. Currently, the facility is producing about 2,500 cabinets per day and future projections suggest demand above this level will soon occur. As such, Merillat is now requesting an increase in the VOC emission limit so that additional kitchen cabinets and varying color styles demanded by the consumer can be produced.

6. *Describe whether the current potential VOC emissions are limited by the existing woodworking operations and clarify plans for any additions or expansions of these areas.*

   Currently, VOC emissions are not limited by the existing woodworking operations and the woodworking operations are not a "bottleneck" in terms of production capacity of the plant. Production capacity is currently limited by the assembly and finishing areas. There are no current plans to expand the woodworking area or add a new set of woodworking machinery. However, Merillat will likely move or re-arrange certain pieces of machinery within the woodworking area as part of the expansion project to enhance production operations.

7. Quantify the amounts of VOCs from glues and adhesives and describe the locations where they are applied.

   Glues/adhesives are used in the component and cabinet assembly area. In the assembly process, Merillat uses a water-based glue which contains a very trace (essentially negligible) level of VOC and a hot melt adhesive with no VOC. Also, since the facility uses self-adhesive, peel-back type labels, no VOC containing glues are used for product labeling.

Merillat.

II. BACT Analysis

1. *Describe the existing exhaust system and baghouse equipment used to control particulate matter. Identify the cost of these systems.*

   An extensive dust collection system is used to control particulate matter emissions from the woodworking area of the facility. This system collects wood dust and chips from the machining operations. The dust collection system is comprised of a network of ductwork with pick-up points at each piece of machinery generating dust and the collected particulate matter is then routed to fabric filter devices. There are three units (each rated at 80,000 cfm) drawing dust from the woodworking machinery. Although the dust collection system can be operated with an exhaust from the fabric filters to the atmosphere, the current operating mode is 100 percent recirculation of air back into the manufacturing building with no direct exhaust to the atmosphere.

   The cost to install the dust collection system including the three fabric filter units and ductwork, supports, electrical, and other direct capital cost items was approximately 3.7 million dollars.

2. *Describe the existing ventilation systems. For each existing spray booth, flash area, curing oven identify:*
   - *Quantity of each*
   - *VOC emissions from each*
   - *Flow rate (scfm) from each*
   - *Amount (feet) and cost of existing ductwork used to directly vent VOC emissions to the atmosphere*
   - *Size, flow rate, and cost of each existing fan*

   The ventilation system used to exhaust fumes from the finishing system consists of multiple ventilation fans, ductwork, exhaust pick-ups, and numerous exhaust stacks located on the roof-top of the manufacturing building. Below is a breakdown of individual exhausts and associated flow rates on a per line basis for each of the three current finishing lines:

   - Spray booths – 8 exhaust fans at 7,625 cfm each (61,000 cfm total)
   - Flash areas – 4 fans at 3,000 cfm each (12,000 cfm total)
   - Cool down – 2 fans at 6,000 cfm each (12,000 cfm total)
   - Curing ovens – 1 fan at 1,000 cfm for toner and 6 fans at 2,000 cfm (13,000 cfm total)

- Stain wipe area - 2 fans at 9,000 cfm (18,000 cfm total)

Therefore, the total exhaust rating per line is 116,000 cfm and the total rated exhaust for all three current lines is 348,000 cfm. In addition there are the following exhausts for the Glazeing Area:

- Glaze spray booths, flash area, and oven – 4 fans at 2,000 cfm (8,000 cfm total)
- Glaze wipe area – 1 fan at 3,000 cfm
- Accessory spray booth – 1 fan at 10,500 cfm
- Accessory off-line oven – 1 fan at 1,000 cfm

VOC emissions from each exhaust will vary based on the types of finishes being applied. Merillat estimates that most of the VOCs will be emitted from the spray booths (approximately 90 percent or more) and the balance from the flash areas and curing ovens. Typically, an estimated 50-60 percent of the VOC materials are applied in the sealer and topcoat spray booths. The remaining 40-50 percent of VOC materials is applied in the toner, stain, glaze and accessory spray booths and wipe areas. It is important to recognize that this estimated breakdown is dependent on the types of cabinets being produced (natural or color finishes). If consumer demand continues to shift towards the color products (as is the current trend), then a greater percentage of VOCs will be applied outside of the sealer and topcoat booths.

Below is a summary of costs and sizes regarding the ductwork and fans used to ventilate the finishing application areas. This information is provided on a per line basis and these costs do not include installation costs.

- Spray booths exhaust ductwork (23" diameter) - $20,170
- Spray booths exhaust fans (7,625 cfm/fan; 8 fans) - $15,840
- Flash areas exhaust ductwork (16" diameter) - $6,720
- Flash areas exhaust fans (3,000 cfm/fan; 4 fans) - $2,980
- Cool down areas exhaust ductwork (20" diameter) – $4,000
- Cool down areas exhaust fans (6,000 cfm/fan; 1 fan) - $3,160
- Toner curing oven exhaust ductwork (10" diameter) – $1,460
- Toner curing oven exhaust fan (1,000 cfm) - $600
- Stain, sealer, topcoat ovens exhaust ductwork (12" diameter) - $9,120
- Stain, sealer, topcoat ovens exhaust fans (2,000 cfm/fan; 6 fans) - $3,720
- Stain wipe area exhaust ductwork (24" diameter) - $6,200
- Stain wipe area exhaust fans (9,000 cfm/fan; 2 fans) - $4,840

(Note: the average length of exhaust ductwork for each of the above items is approximately 30 feet per fan.)

Merillat.

3. *Clarify that the cost of ductwork/fans included with the control equipment was discounted by the amount equal to the cost of ductwork/fans typically used to vent VOC emissions directly to the atmosphere when performing cost analyses.*

   Yes, the cost of ductwork and fans included as part of the economic impact analysis was discounted for ductwork and ventilation fans that would be necessary for venting the finishing system fumes directly to atmosphere (costs for directly venting the exhausts to atmosphere were excluded from the ductwork cost estimate). The cost estimate for ductwork as shown in the cost tables in Appendix B of the permit application document includes only additional costs associated with routing the exhausts through a common header system to a control device (thermal oxidizer) and costs for required diversion valves, dampers, and booster fans required to properly balance the system.

4. *Describe the area covered by the two 60,000 cfm control systems. Describe whether exhaust from any of the three existing coating lines is to be included in possible control systems.*

   In the BACT Analysis presented in Appendix B of the permit application, the economic analysis was performed for two 60,000 cfm control systems to control emissions from only the proposed 4th finishing line. To control VOC emissions from the three existing finishing lines would require additional control devices and modifications to the ductwork systems. Each line would require a similar sized control system (two 60,000 cfm systems or possibly one 120,000 cfm system per line).

5. *Please obtain two or more current vendor quotes for an RTO designed specifically for the proposed system and also for the cost of an RTO had it been installed with the existing equipment. Provide copies of these quotes along with all related vendor correspondence to the Department. As discussed previously on the phone, revise each cost analysis to reflect actual budget estimates from control equipment vendors. The revised estimates will also affect other cost items such as the pressure differential through the system and the fan electricity costs. Also note that control equipment fan electricity costs would be offset by the ventilation fan electricity costs.*

   Revised economic impact analyses have been performed for the proposed new finishing equipment and for control of the entire finishing system. This analysis is based on a recent vendor quotation obtained from Durr Environmental, Inc. for a 120,000 cfm RTO. This price quotation is provided in **Attachment II**. Based on our experience with Durr units (including the recent installation at our facility in Atkins, Virginia), Durr provides high quality, reliable equipment with a proven track record

which is particularly important as equipment malfunctions and downtime creates significant environmental issues and directly impacts our customers (as we build only to order units with a 5-day lead time on most products). Further, we have found others in the wood furniture industry including the Steelcase facility in Michigan, have also selected to use Durr RTO units for control of VOCs from finishing systems demonstrating confidence in their reliability.

The revised analysis was completed based on a similar approach using the methodology from the USEPA's Control Cost Manual as was used in the original analysis presented in the permit application. However, the equipment cost and many of the other capital cost items (ductwork, freight, and certain installation and indirect cost items) as well as certain operating costs (electrical and natural gas) were included in the quote provided by Durr. Also, a 20-year equipment life was assumed as requested by DEP. The table presented below summarizes the results from the revised economic impact analysis. Detailed cost tables are provided in **Attachment II** as **Table II-1** for control of the proposed new finishing line and **Table II-2** for control of the entire finishing system.

Equipment Controlled	Emissions Reduced (tons VOC/yr)	Total Annualized Cost ($/yr)	Cost Effectiveness ($/ton VOC)
Proposed Finishing Line	145.8	1,338,649	9,181
Entire Finishing System	369.9	5,354,596	14,476

6. *Provide a cost analysis for a rotary concentrator with oxidizer based on a current vendor quote designed specifically for the proposed system had it been installed on the original equipment. The application states that Merillat has evaluated the use of these systems. Include this evaluation with the requested information.*

Over the past few years, Merillat has requested information regarding rotary concentrators from a vendor specializing in this technology (Anguil Environmental Systems, Inc.). We have learned that this technology has not been applied on a full-scale finishing system in the wood furniture industry and has only been implemented at a few facilities in other types of industries. A recent discussion with an Anguil regional vice president held on January 7, 2005, clearly indicates the mixed level of success they have experienced with the concentrators. When asked about reliability, equipment up-time, and performance guarantees, the Anguil response is non-specific and in our view ambiguous. They have also stated that a traditional RTO system is their preference for demonstrating compliance with environmental permit

requirements. Further, they did not provide the name and location of an example facility where a rotary concentrator has been installed and operated. This information was desired to obtain actual data on system performance and reliability.

The Anguil concentrators utilize zeolite as the adsorbent material. While this material performs well under certain conditions, it is subject to fouling from contaminants, metals, and moisture and the exhaust temperature stream must be less than 110 degrees F. These operational limitations are important considerations when evaluating technical suitability to the finishing system in Ocala since the exhaust is at an elevated temperature and often has a high humidity level. In light of the above factors, Merillat is not able to provide a cost analysis for a rotary concentrator nor would funding be made available to purchase this equipment without a firm performance guarantee from a vendor with a demonstrated performance record implementing this technology on an exhaust stream similar to the Ocala finishing system's exhaust stream.

7. *As discussed during previous phone conversations, revise the cost analysis to reflect a 20-year life for the control equipment.*

The revised cost analyses (in response to item 5. above and item 10. below) are all based on a 20-year control equipment life as requested. Nonetheless, based on operating experience Merillat believes a 15-year equipment life is more appropriate and the latest version of the U.S. EPA Air Pollution Control Cost Manual suggests a 10-year equipment life should be used for thermal oxidizers. We are not aware of any RTO in the industry that has been in operation for 20-years without a major re-build.

8. *Based on the application, the RACT/BACT/LAER Clearinghouse (RBLC) identifies at least one facility that operates an RTO as BACT to reduce VOC emissions. Discuss why an RTO was a cost effective and appropriate control technology for that facility and is not for the project.*

There are two facilities listed in the RBLC which were permitted based on the operation of RTOs. The first facility, Masterbrand Cabinets (Indiana), operates an electrostatic finishing line. This type of application system is different from the manual application system in place at the Ocala facility and involves enclosed application areas with substantially lower exhaust air volumes thus making add-on controls more cost effective. We understand that the Masterbrand facility is very similar to the Merillat Atkins, Virginia facility which has also implemented an RTO (see further discussion below regarding the Atkins facility under items 9 and 11). The second facility, Steelcase Wood Furniture (Michigan), does not manufacture kitchen cabinets but produces wood office furniture. The Steelcase process is also

different from Ocala in that it consists primarily of enclosed flat line spray booths with a few manual hang-line spray booths. Steelcase controls VOC emissions with RTOs from a portion of its finishing system (washcoats and tiecoats application). Emissions from four flat-line enclosed spray booths and two manual hang-line booths are controlled. Further, a limited portion of the VOCs are required to be captured (85%) and vented to the RTOs. Since the operations are comprised of primarily enclosed areas, they provide for a more cost effective scenario (lower exhaust volumes and higher VOC concentrations) for implementing an RTO system.

It is important to recognize that all other facilities listed in the RBLC were permitted without add-on controls. This list includes wood cabinet coating operations recently permitted in the 2001-2004 time period.

9. *Based on discussions with other permitting agencies, other facilities not identified in the RBLC (including other Merillat facilities) operate RTOs as BACT to reduce VOC emissions or to avoid BACT or PSD review. Discuss why an RTO was cost effective and appropriate control technology for other Merillat facilities and not for this project.*

An RTO is not cost effective for application to the type of finishing system is use at the Ocala facility. This is due to the high volumes of exhaust air required to properly ventilate the manual application spray booths and flash areas. As stated above, approximately 120,000 cfm of exhaust air is generated per finishing line. Further, the VOC concentration in the exhaust stream is dilute (well less than 100 ppm_v). This combination of high exhaust volume and low VOC concentration results in an RTO not being cost effective. As noted and as explained during the December 16th meeting, other Merillat facilities have installed and currently operate RTOs to reduce VOC emissions from finishing operations. However, these RTOs have been implemented on enclosed, automated finishing operations. The RTO in operation at Merillat's Atkins, Virginia facility is rated at 25,000 cfm and the RTO at Merillat's Jackson, Ohio facility is rated at 45,000 cfm. These RTOs are more cost effective due to much lower exhaust air volumes and higher VOC concentrations.

As discussed during the meeting on December 16th, Merillat selected the manual application finishing process for the Ocala facility for specific reasons. These reasons include both operational and environmental benefits and are based on decades of experience in finishing wood cabinet components. In comparison with the highly automated systems, hand application systems using well-trained operators and efficient spray technologies result in higher material transfer efficiency, less production flaws and wasted product (believed to be due primarily to the multiple

inspection points within the process), and significantly lower use of clean-up solvents.

10. *Revise the cost analysis to reflect cost per ton of VOC removed by subtracting the actual emissions value (166 tons/year) from the newly proposed potential emissions value (411 TPY) and applying a 90 percent overall control efficiency factor to the remaining 245 tons. Also include a cost per ton analysis applying a 95 percent overall control efficiency factor. Supply an additional cost analysis to reflect cost per ton of VOC removed assuming control of the entire future potential emissions (411 TPY) with a 90 and 95 percent overall control efficiency factor.*

    Revised cost analyses are provided as indicated above in response to item 5. An analysis was not performed by subtracting the actual emissions value (166 tons/year) from the newly proposed emissions limit (411 tons/year) since this type of past actual to future potential emissions analysis only has relevance with respect to PSD applicability for major PSD sources. However, an analysis based on control of the entire system (411 tons/year) is appropriate under the PSD regulations and was completed as requested and is described under item 5. above. The issue of 90 and 95 percent overall control efficiency has been further considered and for the technical reasons related to capture efficiency and low VOC concentration as discussed in detail in the permit application (please see page Appendix B-5), it is inappropriate to perform an analysis based on a 95 percent overall control efficiency. Merillat would not be able to obtain the performance guarantees required to secure funding for meeting a 95 percent overall control level. In actuality, achieving the 90 percent level on an Ocala-type manual spray finishing system would be extremely challenging. This position is further supported by control requirements at other facilities. For example, the Steelcase facility listed in the RBLC was permitted based on a control system with a collection efficiency of only 85 percent (overall control efficiency of 80 percent) in recognition that it is not technically feasible to achieve a capture efficiency approaching 100 percent.

11. *Provide information to support the statement that the existing facilities employing RTOs have "highly automated" spray application systems and not trained operators with HVLP systems. Is this also true for the other Merillat facility utilizing RTO?*

    The two facilities with RTOs referenced in the RBLC primarily utilize automated, spray application in enclosed areas. The controlled finishing equipment at the Masterbrand facility in Indiana is automated and enclosed with electrostatic spray and at the Steelcase facility in Michigan the controlled application equipment consists of four flat-line, enclosed booths and two manual spray booths with limited exhaust

flows. The other Merillat facilities with RTOs (Atkins, Virginia and Jackson, Ohio), also use automated spray systems in well-enclosed application areas.

12. *The application describes "non-destructive" control options as "not as effective" in reducing VOC emissions and were eliminated from consideration. In a top-down BACT determination, controls are ranked according to effectiveness. If a top control is rejected, the next most effective control option must be reviewed. Please revise the top-down BACT analysis accordingly.*

The non-destructive control options (carbon adsorption, absorption, and condensation) were eliminated as BACT candidates and not further evaluated in the top-down process for specific reasons related to technical feasibility and a lack of demonstrated use in the wood furniture industry or similar industries. Due to the wide range of various VOCs in the exhaust stream from the finishing system as well as the low ppm_v loading, Florida humidity levels and air stream temperature, the performance of these non-destructive control options would not be reliable. For example, a carbon adsorber may be highly effective in reducing emissions of certain types of VOCs including many high molecular weight or long-chain structured compounds such as toluene and xylene, but it would be very ineffective in controlling emissions of smaller compounds like methanol. Similarly, the performance of an absorption/scrubbing system is dependent on pollutant-specific properties (such as solubility) of the organics in the exhaust stream. Consequently, these types of pollutant sensitive controls are not used to reduce emissions from multi-pollutant process exhaust streams and satisfactory performance guarantees from equipment manufacturers can not be obtained. This is evident by the fact that these systems have not been commercially demonstrated for use to control VOC emissions from finishing systems in the wood cabinet industry.

13. *The application states that the VOC concentration in the exhaust stream can be as low as 100 ppm_v. Identify the maximum and average VOC concentration expected in the exhaust stream.*

The VOC concentration in the exhaust stream from the finishing system will vary based on the various finishing materials applied, which depend on the types of cabinet finishes demanded by the consumer. Prior to 2004, the facility was producing cabinets which generated approximately 0.7 pounds of VOC per cabinet. Current trends are shifting towards more color and specialty finished products requiring additional finishing material application steps per cabinet and an average approaching 1 pound of VOC per cabinet. Based on a finishing system exhaust rate of approximately 116,000 cfm per line (464,000 cfm total for 4 lines), a maximum production level of approximately 3,460 cabinets per day, 16 hours per day of

operation, and conservatively assuming a high percentage of color products and a representative VOC molecular weight of 46 (ethyl alcohol), the average and maximum VOC concentration expected in the exhaust stream is estimated to be:

- Average (0.9 lb VOC/cabinet): 60 - 70 ppm_v
- Maximum (1.2 lb/VOC/cabinet): 80 - 90 ppm_v

These average and maximum estimated values are both below the 100 ppm_v level stated in the permit application. The 100 ppm_v level was conservatively estimated based on potentially recirculating a portion of the exhaust air. This possible approach would need to be further evaluated for technical feasibility including an assessment of worker exposure issues and would entail extra capital costs (not accounted for in the BACT analysis) if implemented.

III. Modeling Requirements

1. *Submit the representative monitoring ozone data the applicant refers to and the locations of the monitors with respect to the facility.*

Ozone data is available from the state of Florida's ambient air monitoring network (Florida's Air Quality System). Ambient data from the network is available on the DEP's website at http://www.dep.state.fl.us/air/flaqs.htm. There are two ozone monitors in close proximity to the Merillat Ocala facility. Below is information for these ozone monitors and averages calculated from ozone concentration data (in units of parts per billion) for the most recent three year period 2002-2004.

Location	Distance from Merillat Facility	8-Hr Ozone Concentration, ppb (2002-2004 average of 4th high)
YMCA	6.4 miles (E)	73
County Sheriff Impound	2.4 miles (NE)	74

Data from the above monitors indicates compliance with the 8-hour ozone standard since the three year averages are below 85 parts per billion at both monitors. Further, compliance with the former 1-hour ozone standard has been demonstrated based on historical 1-hour ozone concentrations less than 120 parts per billion.

2. *Identify the chemical sources of VOC this project will be emitting.*

   The facility uses and will continue to use a variety of finishing materials (stains, toners, sealers, top-coatings, glazes and other specialty finishes) to address the constantly changing styles and colors demanded in the kitchen cabinet industry. These materials contain a variety of VOCs which are closely tracked by Merillat via a specialized computer software system (REGMET). Below are examples of VOCs commonly found in the finishing materials currently in use at the facility. It is important to recognize that this is a non-exhaustive list of VOCs and there are numerous other compounds often contained at low levels in the varying material formulations.

Ethyl alcohol	Butyl acetate
Isopropyl alcohol	Methanol
N-butyl alcohol	Toluene
Isobutyl alcohol	Xylene
1,2,4-Trimethylbenzene	Methyl ethyl ketone
Ethylbenzene	Methyl propyl ketone
Isobutyl acetate	Methyl N-amyl ketone

3. *Perform an ambient air impact analysis for ozone as is required for projects with greater than 100 TPY VOC emissions, including impacts on soils and vegetation, impacts on the Class I and Class II areas.*

   Studies have shown that high levels of ozone are potentially damaging to soils and vegetation. Sensitivity to ozone varies between vegetation species and effects on plants will vary based on other factors including soil moisture content and nutrient levels. Damage to certain crops from high ozone levels has occurred in Southern California where ozone concentrations exceed 100 ppb for considerable periods of time. In contrast, ozone levels in the Ocala area are below the established National Ambient Air Quality Standard (NAAQS) and are not at levels typically associated with adverse impacts to soils and vegetation. The increase in VOC emissions associated with the proposed project is not expected to result in an increase in ozone levels for the Ocala area. Consequently, impacts on soils and vegetation from the proposed facility expansion are anticipated to be negligible.

4. *Evaluate odor from sources of VOC with regards to this project, including an evaluation of the extent and degree of odor impacts.*

   Many of the finishing materials used by Merillat do have noticeable odors and their presence is evident primarily in the application areas inside the manufacturing building. However, due to a well-designed and operated ventilation system, odors

Merillat®

outside the manufacturing building are either very faint or non-detectable. To date, the facility has not received any complaints of odorous emissions from the general public or neighboring properties. Similarly, the proposed facility expansion is not expected to cause any off-site odorous emissions problems.

5. *Satisfy the requirements of Rule 62-212.400(3)(h)(5) as it relates to the Merillat project by submitting the appropriate information.*

   This item relates to the impact that commercial, residential, industrial and other growth occurring in the area since August 7, 1977 has had on air quality. The Ocala and Marion County area has experienced moderate growth since 1977. Nonetheless, the area has been and is presently in compliance with all established National Ambient Air Quality Standards (NAAQS). Therefore, this growth has not had a detrimental impact on air quality. The proposed Merillat facility expansion will potentially result in 245 tons/year of additional VOC emissions. This represents approximately 1 percent of total VOC emissions for Marion County based on area source and point source emissions data from U.S. EPA's AirData website (indicating 17,664 tons/year of VOC emissions for Marion County). No adverse impacts on air quality in the Ocala and Marion County areas are anticipated from the project.

We appreciate your continued assistance during the permitting process. If you have any questions, please contact Jim Olszewski at (517) 264-9228.

Sincerely,

MERILLAT CORPORATION

Michael Stickles
Plant Manager

Attachments

Copy: Trina Vielhauer, Florida DEP
John Ray, Enterprise Florida

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: David Cibik
   Registration Number: 55467
2. Professional Engineer Mailing Address...
   Organization/Firm: Malcolm Pirnie, Inc.
   Street Address: 1715 East 9th Avenue
   City: Tampa State: Florida Zip Code: 33605
3. Professional Engineer Telephone Numbers...
   Telephone: (813) 248-6900 ext. 166 Fax: (813) 248-8085
4. Professional Engineer Email Address: Dcibik@pirnie.com
5. 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.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal 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.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal 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.

David Cibik
Signature

1/18/05
Date

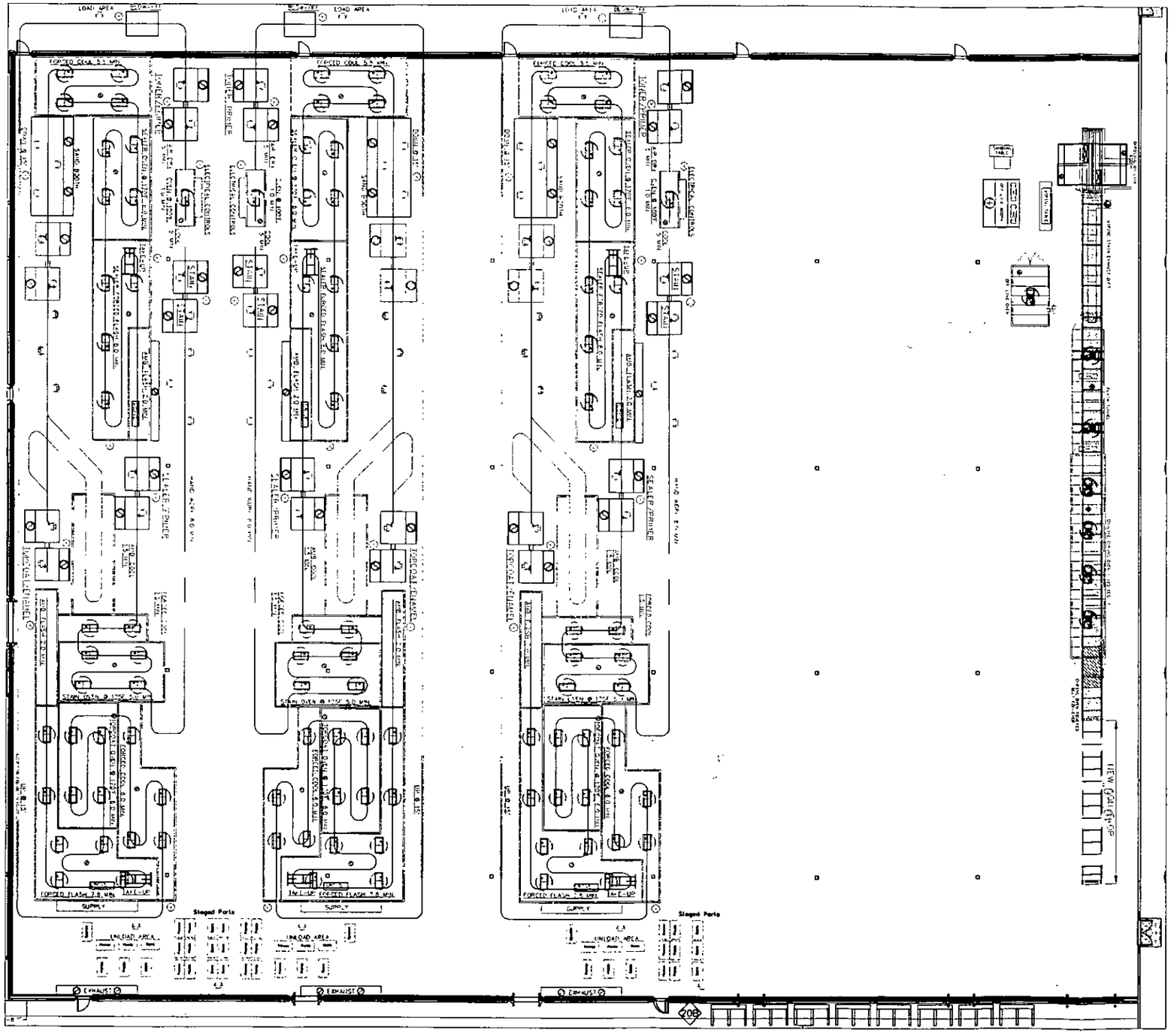
(seal)

* Attach any exception to certification statement.

ATTACHMENT I

FINISHING SYSTEM DRAWINGS (CURRENT AND EXPANDED)

FIGURE I-1



JANUARY 2005

CURRENT FINISHING SYSTEM

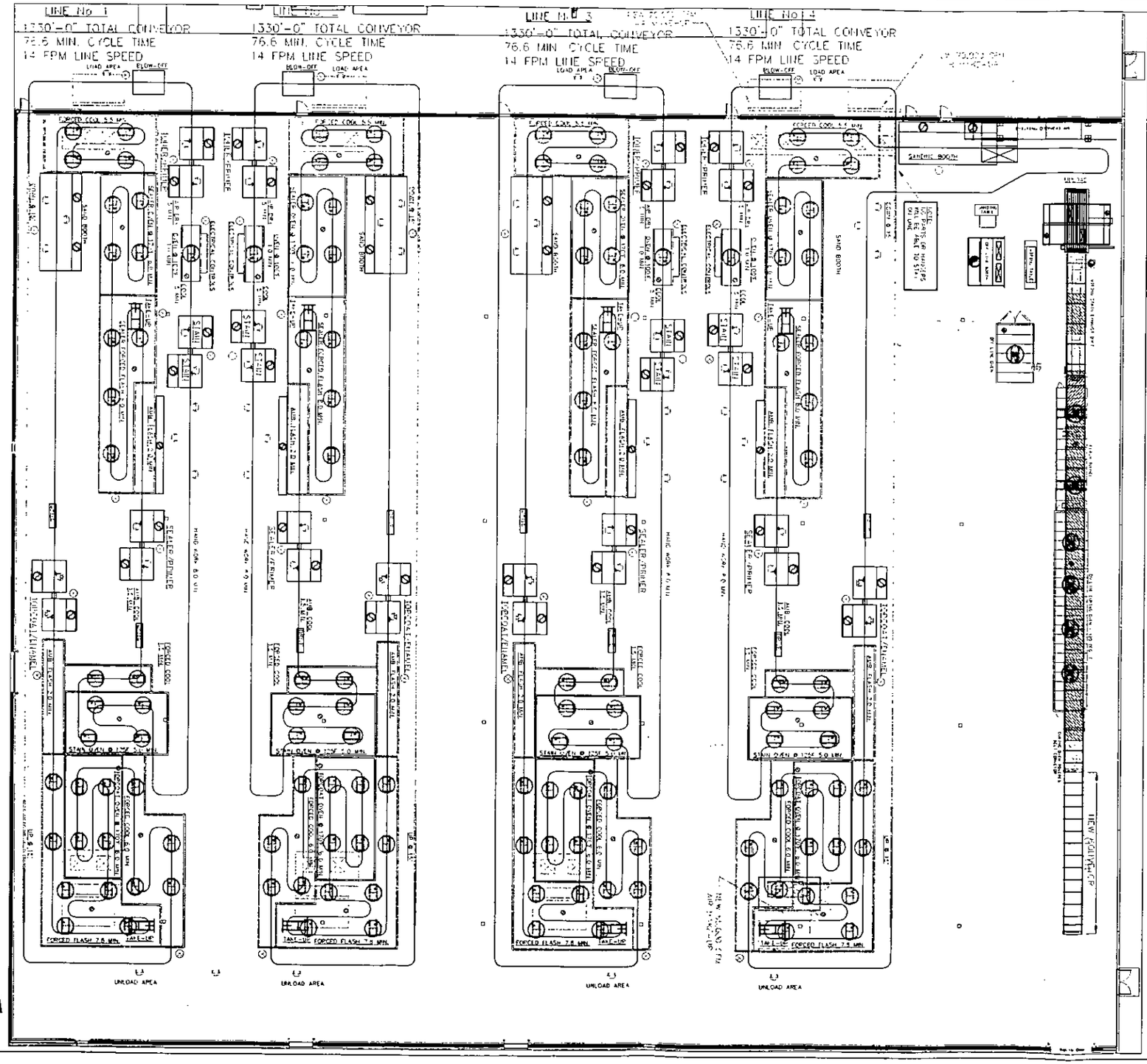
150 0 150 300

SCALE: 1" = 300'

MALCOLM PIRNIE

XREFS: IMAGES: None

FIGURE I-2



JANUARY 2005

EXPANDED FINISHING SYSTEM

150 0 150 300

SCALE: 1" = 300'

MALCOLM PIRNIE

ATTACHMENT II

- **BACT ECONOMIC IMPACT TABLES**
- **VENDOR QUOTE FOR RTO SYSTEM**

TABLE II-1
REGENERATIVE THERMAL OXIDATION CAPITAL COST COMPONENTS
MERILLAT CORPORATION - OCALA, FLORIDA

DIRECT COSTS:	FACTOR	(1)	EQUIPMENT* COST ($)
(1) Purchased Equipment Costs (for one 120,000 cfm RTO unit)			
a) Basic Equipment			
1) Basic Equipment and Auxiliaries (from vendor)		(2)	3,800,000
2) Ductwork (included above)			
Subtotal of Basic Equipment	A		3,800,000
b) Instruments and Controls	0.1 A		
c) Sales Tax	0.03A		114,000
d) Freight	0.05A		
Total Purchased Equipment Cost	**B = 1.18 A**		**3,914,000**
(2) Direct Installation Costs			
a) Foundations and Supports	0.08 B		313,120
b) Handling and Erection	0.14 B		
c) Electrical	0.04 B		156,560
d) Piping	0.02 B		
e) Insulation	0.01 B		
f) Painting	0.01 B		
Total Installed Direct Cost	**0.30 B**		**469,680**
TOTAL DIRECT COST	**1.30 B**		**4,383,680**
INDIRECT COSTS:			
(3) Engineering	0.10 B		
(4) Construction and Field Expenses	0.05 B		
(5) Contractor Fees	0.10 B		
(6) Start-up	0.02 B		78,280
(7) Performance Test	0.01 B		39,140
(8) Contingency	0.03 B		117,420
TOTAL INDIRECT COST	**0.31 B**		**234,840**
TOTAL CAPITAL COST	1.61 B		4,618,520

* Cost items left blank indicate these items are included as part of vendor's price quotation.

TABLE II-1 (Continued)
REGENERATIVE THERMAL OXIDATION OPERATING COST COMPONENTS
MERILLAT CORPORATION - OCALA, FLORIDA

DIRECT OPERATING COSTS:	FACTOR	(1)	COST ($)
Operating Labor (2 shifts/day)	1/2 hour per shift ($30/hr)		7,500
Supervisory Labor	15% of Operating Labor		1,125
Maintenance Labor (2 shifts/day)	1/2 hour per shift ($30/hr)		7,500
Maintenance Materials	100% of Maintenance Labor		7,500
Utilities			
a) Electricity	$37.57/hour (vendor)	(3)	150,280
b) Natural Gas (auxiliary fuel usage)	$132.46/hour (vendor)	(4)	529,840
Total Direct Operating Cost			703,745
INDIRECT OPERATING COSTS:			
Overhead	60% of Labor and Materials		14,175
Administrative charges	2% of Total Capital Cost		92,370
Property Tax	1% of Total Capital Cost		46,185
Insurance	1% of Total Capital Cost		46,185
Capital Recovery	[CRF (5)][Total Capital Cost]		435,988
Total Indirect Operating Cost			634,904
TOTAL ANNUALIZED COST (per unit)			**1,338,649**
Total Estimated Annualized Cost for 1 Unit		(6)	1,338,649
Tons Per Year of VOC Removed by Oxidation (90% overall C.E. basis)			145.8
COST EFFECTIVENESS ($/ton VOC Removed)			**9,181**

NOTES:

1. Source: Section 3.2, Chapter 2 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001, January 2002, U.S. EPA Office of Air Quality Planning and Standards (OAQPS).
2. Purchased equipment cost & auxiliaries represents budget estimates from vendor.
3. Electricity cost based on estimate provided by equipment vendor and 4,000 hours/year operation.
4. Natural gas cost based on estimate provided by equipment vendor and 4,000 hours/year operation.
5. CRF (Capital Recovery Factor) = 0.0944 and is based on 20 year equipment life and 7 percent interest rate.
6. Total annual cost is for a single regenerative thermal oxidation system to process approximately 120,000 cfm of exhaust air from a single line (proposed 4th finishing line).

TABLE II-2
REGENERATIVE THERMAL OXIDATION CAPITAL COST COMPONENTS
MERILLAT CORPORATION - OCALA, FLORIDA

DIRECT COSTS:	FACTOR	(1)	EQUIPMENT* COST ($)
(1) Purchased Equipment Costs (for one 120,000 cfm RTO unit)			
a) Basic Equipment			
1) Basic Equipment and Auxiliaries (from vendor)		(2)	3,800,000
2) Ductwork (included above)			
Subtotal of Basic Equipment	A		3,800,000
b) Instruments and Controls	0.1 A		
c) Sales Tax	0.03A		114,000
d) Freight	0.05A		
Total Purchased Equipment Cost	B = 1.18 A		3,914,000
(2) Direct Installation Costs			
a) Foundations and Supports	0.08 B		313,120
b) Handling and Erection	0.14 B		
c) Electrical	0.04 B		156,560
d) Piping	0.02 B		
e) Insulation	0.01 B		
f) Painting	0.01 B		
Total Installed Direct Cost	0.30 B		469,680
TOTAL DIRECT COST	**1.30 B**		**4,383,680**
INDIRECT COSTS:			
(3) Engineering	0.10 B		
(4) Construction and Field Expenses	0.05 B		
(5) Contractor Fees	0.10 B		
(6) Start-up	0.02 B		78,280
(7) Performance Test	0.01 B		39,140
(8) Contingency	0.03 B		117,420
TOTAL INDIRECT COST	**0.31 B**		**234,840**
TOTAL CAPITAL COST	1.61 B		4,618,520

* Cost items left blank indicate these items are included as part of vendor's price quotation.

TABLE II-2 (Continued)
REGENERATIVE THERMAL OXIDATION OPERATING COST COMPONENTS
MERILLAT CORPORATION - OCALA, FLORIDA

DIRECT OPERATING COSTS:	FACTOR	(1)	COST ($)
Operating Labor (2 shifts/day)	1/2 hour per shift ($30/hr)		7,500
Supervisory Labor	15% of Operating Labor		1,125
Maintenance Labor (2 shifts/day)	1/2 hour per shift ($30/hr)		7,500
Maintenance Materials	100% of Maintenance Labor		7,500
Utilities			
a) Electricity	$37.57/hour (vendor)	(3)	150,280
b) Natural Gas (auxiliary fuel usage)	$132.46/hour (vendor)	(4)	529,840
Total Direct Operating Cost			703,745
INDIRECT OPERATING COSTS:			
Overhead	60% of Labor and Materials		14,175
Administrative charges	2% of Total Capital Cost		92,370
Property Tax	1% of Total Capital Cost		46,185
Insurance	1% of Total Capital Cost		46,185
Capital Recovery	[CRF (5)][Total Capital Cost]		435,988
Total Indirect Operating Cost			634,904
TOTAL ANNUALIZED COST (per unit)			**1,338,649**
Total Estimated Annualized Cost for 4 Units		(6)	5,354,596
Tons Per Year of VOC Removed by Oxidation (90% overall C.E. basis)			369.9
COST EFFECTIVENESS ($/ton VOC Removed)			**14,476**

NOTES:

1. Source: Section 3.2, Chapter 2 of EPA Air Pollution Control Cost Manual (Sixth Edition) EPA/452/B-02-001, January 2002, U.S. EPA Office of Air Quality Planning and Standards (OAQPS).
2. Purchased equipment cost & auxiliaries represents budget estimates from vendor.
3. Electricity cost based on estimate provided by equipment vendor and 4,000 hours/year operation.
4. Natural gas cost based on estimate provided by equipment vendor and 4,000 hours/year operation.
5. CRF (Capital Recovery Factor) = 0.0944 and is based on 20 year equipment life and 7 percent interest rate.
6. A total of 4 regenerative thermal oxidation systems are required to process approximately 480,000 cfm of exhaust air (120,000 cfm per unit) from the modified wood products finishing system.

DÜRR

December 8, 2004

Mr. Jim Olszewski
Merillat Industries
Corporate Headquarters
5353 West US 223 / PO Box 1946
Adrian, MI 49221

Subject: Dürr Environmental, Inc. Budget Proposal No. 2004-EA-6379
Regenerative Thermal Oxidizer System for Ocala Florida

Dear Mr. Olszewski:

We are pleased to offer the above referenced proposal for your consideration.

Dürr Environmental, Inc. has installed systems in many different industries and the proposed equipment, a multi-tower RTO with Structured Block has been the type of units most recently installed in the cabinet finishing industry. While there are many different types of equipment, valve and heat sink options available today, a multi-tower RTO with Structured Block Media continues to be a high percentage of our installed base.

I hope that this proposal suits your needs at this time; if not, or should you require any additional information, please do not hesitate to contact me either by phone at 734.459.6800 Ext. 596 or by e-mail at dtyksinski@durrusa.com. We feel that if Dürr was awarded this project, the finished project would be one both of our companies would be proud of.

Sincerely,
DÜRR ENVIRONMENTAL, INC.

David Tyksinski
Manager, After Market Projects

Dürr Environmental, Inc.
40600 Plymouth Road
Plymouth, MI 48170-4297

Phone 734.459.6800
Fax 734.459.5837

www.durrenvironmental.com

MERILLAT

OCALA, FLORIDA

REGENERATIVE THERMAL OXIDIZER SYSTEM

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

Dürr Environmental, Inc. is pleased to propose a Regenerative Thermal Oxidizer (RTO) for the Merillat facility in Ocala Florida, The unit is a five-tower RTO with Structured block heat recovery media. Included is the main source ductwork, roof mounted duct stands and atmosphere / oxidizer dampers.

Dürr Environmental, Inc. is one of the largest suppliers of VOC control equipment worldwide. Dürr's capabilities are outlined in greater detail in section 2.0 of this proposal. In this section, the Dürr Group and its company relationships are explained along with the organization of Dürr Environmental. Scheduling, quality management, safety programs and training specific to this project are discussed.

Since Dürr Environmental is part of the Dürr Group of companies and has a presence in 26 countries, Dürr is uniquely qualified to work with Merillat on environmental projects. Dürr also has the staff necessary to execute a number of large projects at the same time and can self manufacture in the Plymouth shop (approximately 250,000 ft^2) or through subcontract fabrication facilities.

Dürr Environmental also has a full AfterMarket Services group that can provide Merillat with all its after sales support: spare parts, emergency service, inspections and rebuilds and retrofits as the equipment ages. The AMS group can also evaluate existing equipment for energy consumption and can often retrofit the equipment to save utilities and/or increase capacity of existing systems.

2.0 GENERAL DESCRIPTION

REGENERATIVE THERMAL OXIDIZER

A Dürr Regenerative Thermal Oxidizer (RTO) is a sophisticated high efficiency heat exchanger system that is designed for the destruction of volatile organic compounds (VOCs) through oxidation. The basic operation of the RTO is to accept solvent-laden air as it leaves the source, elevate the airstream's temperature to an oxidation temperature of approximately 1500°F, convert the VOCs to carbon dioxide and water vapor, and then recover most of the heat from the airstream prior to discharging it to atmosphere.

The RTO consists of a purification chamber (also referred to as a combustion chamber) which is located above five (5) energy recovery towers. The energy recovery towers are filled with a ceramic heat exchanger media.

The solvent-laden air enters the inlet header and is directed to one of the energy recovery towers through an inlet control valve. The air passes through the heat exchange media where it absorbs heat from the media. It enters the purification chamber very close to the oxidation temperature.

The oxidation process is completed in the combustion chamber. A burner system, controlled by a PID loop in the PLC logic, is used to provide the energy required to make up the heat loss of the process and complete oxidation. A high solvent concentration would provide enough thermal energy through auto-ignition for the process to be self-sustaining without requiring the burner for make-up energy. In this event, the burner will be disabled. Should the solvent load decrease and the combustion chamber temperature begin to drop, the burner will reignite. This will occur at a point above 1400°F. to eliminate the requirement for repurging.

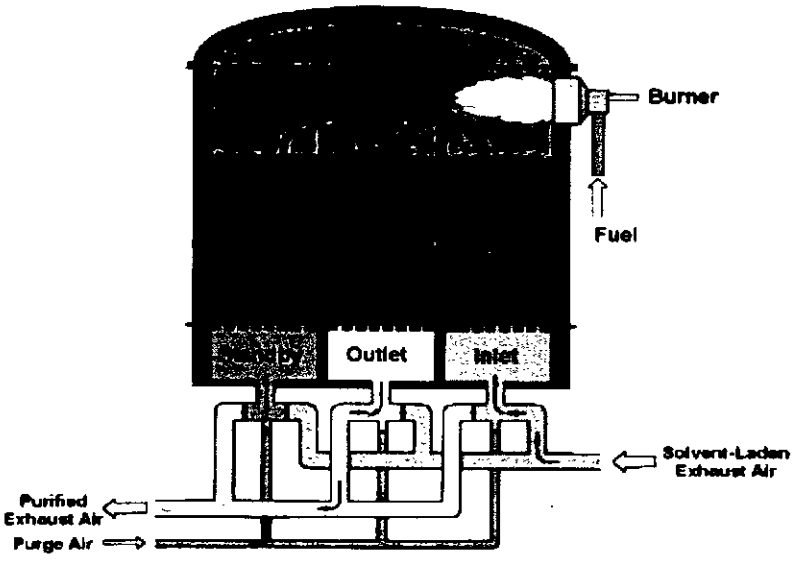
The operating temperature of the oxidizer depends upon the type and nature of the contaminants and the control regulations for the area in which the oxidizer is operating. The minimum temperature at which the unit is usually operated is that at which the contaminants are reduced to harmless water vapor or carbon dioxide, thus maintaining the level of contaminants exhausted within acceptable limits.

The cleansed air leaves the unit through the heat exchange media of an adjacent tower. The heat in the hot air is transferred for storage to the heat exchange media. The clean air then passes through the exhaust fan and is discharged to atmosphere. The temperature of the air as it leaves the unit is slightly higher than the temperature of the polluted air entering the RTO.

The RTO is equipped with a purge system which allows the evacuation of solvent-laden air trapped below the heat exchange media. The automatic purge cycle draws this polluted air from the inlet beds and heat exchange media back into the inlet of

the forced draft fans to be processed through the purification chambers that are on inlet. This feature insures continuously high destruction efficiency.

While two towers are on inlet, one tower is on purge and two towers are on exhaust, allowing the RTO to continuously process a polluted air stream.



RTO AIR FLOW DIAGRAM

SCOPE OF SUPPLY - RTO

Dürr Environmental proposes to provide one (1) 120,000 scfm regenerative thermal oxidation system. The unit is designed to provide the guaranteed VOC destruction while operating at a combustion chamber temperature of 1,500°F. The unit will be provided with five (5) thermal energy recovery chambers.

Thermal Energy Recovery Chambers

Thermal energy recovery is accomplished by alternating flow through a series of chambers. Each recovery chamber will be rectangular in configuration and fabricated from heavy gauge ASTM grade A36 carbon steel plate continuously welded, airtight construction. The external plate will be braced with structural angles adequate for the application temperatures and pressures.

Internal to each recovery chamber will be a media support grid fabricated from alloy steel suitable for the weight and temperatures involved. The grid is designed to

support the weight of the heat recovery media and allows for thermal expansion during operation of the unit.

The combustion chamber will be lined with ceramics fiber refractory. The lining is a soft, flexible fiber blanket module with integral stainless steel reinforcement and mounting components. It is capable of operation up to 1,800°F, and designed to provide a skin temperature of 160°F during normal operation.

Combustion Chamber

VOC/HAP destruction is completed in the combustion chamber, which is gasketed and bolted to each of the thermal energy recovery chambers. The combustion chamber will be rectangular in configuration to provide an average retention time of 0.5 second, and fabricated from heavy gauge, ASTM grade A36 carbon steel plate continuously welded, and airtight construction. The external plate will be braced with structural angles adequate for the application temperatures and pressures. One refractory lined bolted door is provided for access to the combustion chamber.

The combustion chamber will be lined with ceramic fiber refractory. The lining is a soft, flexible fiber block module with integral stainless steel reinforcement and mounting components.

Heat Recovery Media

Each recovery chamber will be filled with ceramic block media sufficient to provide greater than 93% thermal energy recovery (mass corrected). This efficiency is achieved by using a uniform bed of ceramic media on a fabricated support and air distribution grid. The grid is used as an air diffuser to assure even distribution while the ceramic media provides high heat transfer and low-pressure drop.

Inlet / Outlet Transition

The inlet / outlet transition is designed to distribute the process exhaust gas and minimize the contaminant "slug" which occurs during valve cycling. The inlet / outlet transition is fabricated from heavy gauge carbon steel with reinforcement for the application temperatures and pressures. This transition is gasketed and bolted to the bottom of each thermal energy recovery chamber.

Structural Steel

The heat energy recovery chambers are supported by a base grid, fabricated from grade A36 structural carbon steel in accordance with AISC specifications. The steel is cleaned, and receives one prime and one finish coat of paint in the shop prior to shipment.

Combustion System

The oxidizer is provided with four (4) Maxon, or equal, natural gas burners designed to provide fast warm-up. The burners include factory assembled, Factory Mutual (FM) and Industrial Risk Insurers (IRI) approved gas train, combustion blower and required safeties.

Exhaust Stack

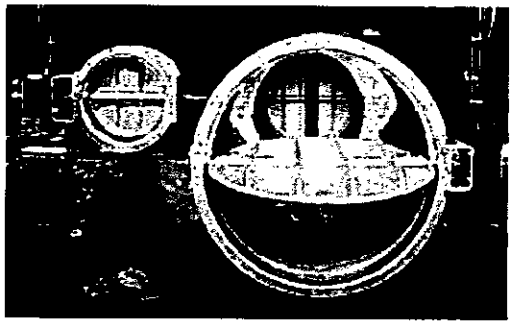
The oxidizer exhaust stack will be a free standing and fabricated from Cor-Ten steel complete with a 180° sampling platform and caged access ladder

Combustion Chamber Platform

The combustion chamber will be provided with a platform for access to the burner and the combustion chamber door. The platform will be provided with walkway grating, 4" toe plate, bolt-on railings, and an access ladder (with cage, if applicable).

Flow Control Valves

Three (3) hydraulically operated high performance butterfly style valves are included with each tower. The valve body and disc will be fabricated from carbon steel and connects the inlet / outlet transition with the inlet and outlet manifolds. These valves control airflow into and out of each chamber. Cycle rates are controlled in the PLC and preset to applicable operating standards. These settings can be easily modified during start-up to optimize thermal and destruction efficiencies.



The typical valve sequencing cycle for an odd tower RTO ranges from 120 seconds to 240 seconds. We historically see a pressure fluctuation of approximately +/- 0.25" for every 2.0" of inlet static. With an expected inlet pressure of -2.0" WC, we estimate a pressure fluctuation during valve cycling at +/- 0.25" WC.

Painting

All mild steel will be primed and painted with one (1) coat of primer and one (1) coat of finish paint prior to shipment. All OEM equipment will retain their factory finish.

Freight

The RTO system as quoted in this proposal includes freight to the job site. All components will be shipped F.O.B. destination, freight pre-paid.

Installation

Installation by a Dürr erection crew or subcontractor is based on the following items:

- There are no overhead obstructions.
- There is clear access to at least two sides of the site.
- There are no site constraints (i.e. drug testing, fire watch, safety orientations, etc.)
- The work will be performed by a non-union contractor.
- The work will be done on a straight time labor rate based on an eight hour day, five days a week (Monday through Friday), forty hours a week total. Any work required to be performed on Saturdays, Sundays, holidays or on an overtime basis will be to Purchaser's account. Process changeover from the existing flare abatement system is excluded from this requirement. Any costs due to delays beyond Dürr's control will be to Purchaser's account.

3.0 RESPONSIBILITY MATRIX

	Work Item	Owner	Dürr	Remarks
1.0	**General Conditions**			
1.1	Building permits	X		
1.2	EPA permits	X		
1.3	Taxes	X		
1.4	Engineering certifications	X		If required
1.5	Labor relations		X	
1.6	Local ordinances		X	
1.7	Bonding			NA
2.0	**General Site Work Conditions**			
2.1	Site office	X		Including phone access
2.2	Temporary field office		X	If required
2.3	Temporary utilities	X		Temp Sanitary Facilities by Dürr
2.4	Daily job site clean-up		X	
2.5	Construction openings	X		
2.6	Building alterations, penetrations, demolition and disposal work	X		
2.7	Storage area on-site	X		Within 100'-0"
2.8	Storage area off-site			NA
2.9	Main utilities	X		
3.0	**Civil**			
3.1	Footings and foundations	X		
3.2	Structural support steel		X	
3.3	Soil testing, 3,000 psf @ 3 ft depth minimum	X		Uncontaminated soil
4.0	**Mechanical**			
4.1	Gas piping	X		To gas train
4.3	Hydraulic piping		X	
4.4	City water piping	X		If required
4.5	Fire protection	X		If required
5.0	**Electrical**			
5.1	Substation	X		
5.2	Bus-duct (power – 480V / 3 Phase / 60 Hertz)	X		To power distribution panel
5.3	Temporary lighting		X	For installation
5.4	Interface process equipment (Process ready signal wired to MCP)		X	Source valves
6.0	**Abatement Equipment**			
6.1	Engineering and fabrication of the abatement equipment as described in Technical Section		X	
6.2	All components shipped F. O. B. destination, freight prepaid		X	
6.3	Field engineering		X	
6.4	Installation		X	RTO and ductwork
6.5	Installation supervision		X	RTO and ductwork
6.6	Wiring		X	RTO and source ductwork
6.7	Piping		X	RTO only
6.8	Start-up		X	RTO and source systems
6.9	Stand-by assistance		X	5 – 8 hour days
6.10	Operator training		X	
6.11	Abatement equipment area lighting	X		
6.12	Source ductwork system to inlet flange of abatement equipment		X	
6.13	Equipment specifications	X		
6.14	General specifications	X		
7.0	**Plant Acceptance**			
7.1	Performance testing	X		
7.2	Compliance testing	X		
7.3	Spare parts		X	List only
7.4	Maintenance and operating manuals		X	3 sets
7.5	Record mechanical and electrical drawings		X	3 sets

4.0 CAPITAL COSTS, PAYMENT TERMS / SCHEDULE, AND OPERATING COSTS

CAPITAL COSTS

BASE BID (BUDGET)

Dürr Environmental, Inc. will provide a VOC abatement system consisting of one (1) 5 Tower (98% destruction efficiency) Regenerative Thermal Oxidizer System, rated of 120,000 scfm at 90°F. Scope of work as described in the Technical Specifications and Responsibility Matrix of this proposal. Including source ductwork, roof mounted stands, face by-pass dampers for 23 sources	**$3,800,000**
Additional amount for 99% Destruction Efficiency	**$103,000**
Additional source ductwork required if the RTO is located away from the building (Approx. 120' of 82" Ø duct and trestle to bridge roadway)	**$170,000**

Dürr Environmental, Inc.

By: _____
David M. Tyksinski
Regional Sales Manager

By: _____
Frank Fenbert
Applications Engineer

PAYMENT TERMS AND PAYMENT SCHEDULE

25%	due upon receipt and acceptance of purchase order
25%	invoiced with drawing submittal, due net 30 days
45%	due upon equipment ready for shipment, due net 30 days
5%	due after successful performance testing. - OR - Thirty days after equipment is made operational. - OR - If due to delays beyond Dürr's control, 90 days after final material shipment, **which ever occurs first.**

CONDITIONS OF SALE

This proposal is based on Dürr Environmental Inc.'s General Terms and Conditions of Sale, which are attached, and will form the basis of a commercial agreement.

Dürr Environmental, Inc.'s acceptance of any order or contract (commercial agreement) resulting from this proposal is subject to and expressly contingent upon the prior credit review and approval of Buyer and/or Buyer's client by Dürr's Finance department.

BID VALIDITY

This bid will remain valid or a period of sixty (60) days.

ESTIMATED OPERATING COSTS

OPERATING STATUS	PROCES FLOW TO RTO SCFM	TOTAL FLOW SCFM	VOC LB/HR	ELECTRIC COST $/HR	GAS COST $/HR
NO SOLVENTS	PROCESS MAXIMUM FLOW (116,000)	116,000	0	$37,89	$143,43
SOLVENTS	116,000	116,000	100	$37.57	$132.46

OPERATING COST ASSUMPTIONS

Maximum Solvent Loading:		lbs/hr @ 15,000 Btu/lb
Inlet Static Pressure	-2	" w.c.
Inlet Temperature	90	°F (average)
Electrical Costs	$0.09	KWh
Nat Gas Costs	$9.00	Mcf (1000Btu/cf)

Note: Operating consumptions include heat and radiation losses.

5.0 CLARIFICATIONS

PRICING

The following items are included in this quotation:

- One (1) complete 5-Tower regenerative Thermal Oxidizer installed and start-up
- Main source ductwork from the RTO to the stain line # 2, including bypass dampers at each of the 23 sources (wiring from the main panel to the source valves)
- Battery limit wiring and piping of the RTO system

GENERAL

Owner will be responsible for any costs associated with owner related schedule modifications except those agreed upon by the owner (or its representatives) and Dürr Environmental, Inc.

Unless otherwise stated elsewhere in this proposal, Buyer certifies that there are no acids or acid-generating compounds, e.g., halogenated or sulfonated compounds, among others, or particulate or particulate-generating compounds, e.g., silicon-bearing compounds, among others.

No taxes are included. Any taxes incurred will be charged to the purchaser at cost.

EQUIPMENT

The following items are not included in the above listed pricing:

- Added source ductwork design for (hurricane standards) if required
- Roof penetrations and flashing for the source and main ductwork
- Freight (Pre-pay and add)
- Additional structure or roof supports for the source ductwork
- RTO pad or control room
- 480VAC power to the control panel and VFD
- Source interlock wiring between the RTO and the source control panels

SOUND LEVEL

The sound power levels of the RTO components are designed for 85 dBA at 5 feet, free field, test block conditions. Noise variables in conjunction with actual installation surroundings cannot be predetermined. Based on the advice of sound experts, we recommend that sound power levels for the system be determined after the equipment is installed and operating. At that time, if the noise level from the system, or as amplified by harmonics of other equipment exceeds the site requirements Dürr

Environmental, Inc. will furnish the necessary sound absorption materials at additional cost to purchaser.

DRAWINGS

General arrangement and layout drawings will be furnished within six (6) weeks after receipt of order.

Any additional costs or fees incurred for preparation of special drawings or data required by purchaser and state or local agencies will be paid by purchaser.

6.0 PROJECT SCHEDULE

Dürr will furnish detailed project schedule to meet the customer's needs after receipt of purchase order.

TYPICAL MILESTONES

Delivery	22-24 weeks after receipt of purchase order
Installation	4-6 additional weeks
Start-Up	3-4 additional weeks

7.0 PERFORMANCE GUARANTEE

VOCs

Subject to the General Provisions, below, Dürr guarantees that when the Inlet VOC concentration is above 700 ppm_v as methane (C1), the Regenerative Thermal Oxidizer (RTO) will destroy or convert at least 98% of the incoming gaseous, non-methane volatile organic compounds (Inlet VOC). When the Inlet VOC concentration is below 700 ppm_v as methane (C1), the outlet non-methane VOC concentration will not exceed 14 ppm_v as methane(C1).

GENERAL PROVISIONS

The following General Provisions will apply to all of the above guarantees:

a) The RTO will be installed (if applicable), operated and maintained by Buyer in accordance with Dürr instructions. This will include replacing of consumable or replaceable components by Buyer, as required.

b) Buyer agrees to operate the system within the system design data as specified in this proposal.

c) Compliance testing will be performed at the maximum Inlet VOC loading specified in this proposal.

d) Performance results will be based on three test samples taken consecutively. The reported result will be the arithmetic average of the three tests.

e) The performance guarantees apply only during normal operation, not during any maintenance procedures.

f) All performance tests will be arranged and paid for by Buyer. Dürr will be notified in writing 14 days prior to the tests.

g) EPA Method 25A will be used to determine VOC performance.

h) Methane is excluded from outlet emissions.

If Dürr fails to meet the Performance Guarantee, Dürr will be given reasonable time to investigate and take corrective action within the scope of this contract.

8.0 MATERIAL / WORKMANSHIP WARRANTY

The system is provided with a one-year material and workmanship warranty, which is detailed in the attached General Terms and Conditions of Sale. Major items covered will be the oxidizer vessel, heat recovery media, insulation and inlet/outlet valves.

9.0 FIELD SERVICE RATES

From the hour the Seller's representative leaves the basing point and including the hour of Seller's representative's return to its basing point, payment shall be made by Buyer to Seller at the rates listed below.

A workday is defined as any day, Monday through Friday, whether actual work is performed or not. Also, any travel time to or from the base point is considered a workday and payment shall made in accordance with the applicable workday rates defined herein.

If the service is non-warranty, an invoice for service will be sent based on the following rates:

		US, Canada Mexico Rates
Field Service	Straight Time	$120/hr.
	Overtime	$150/hr.
	Sun/Holiday	$180/hr.
	Travel Time	$100/hr.

** Billed in ¼ hour segments, with 1 hour minimum, unused portion credited against future support.

The minimum workday charge will be based on a full eight (8) hour day.

EXPENSES

TRANSPORTATION

Travel by air will be Coach Class for US, Canada and Mexico, Business Class for International. Round trip transportation to and from the job site location will be billed at cost plus a ten (10)% percent processing fee.

ROOM, BOARD AND LOCAL TRANSPORTATION

Meals, living expenses, such as lodging, laundry, etc., and local car/equipment rental will be billed at cost plus a ten (10)% percent processing fee.

SUBCONTRACTOR CHARGES

Charges from Seller's subcontractors will be billed at cost plus a fifteen (15)% percent processing and administration fee.

10.0 TRAINING

Dürr will conduct a training program that is organized and designed specifically to meet the needs of the plant personnel responsible for operating and maintaining the new abatement system.

Both on-site training and classroom training will be utilized. Approximately one-half of the training time is classroom and one-half hands-on training. One (1) training class up to eight (8) hours in length, to be held at the customer's site during normal business hours of 8:00 a.m. to 5:00 p.m., has been included in our pricing.

GENERAL OUTLINE

A. Dürr will provide system training of operating, maintenance, and supervisory personnel at the plant. This training will include operating and maintenance instructions.

B. Training for general purpose equipment is not included. Operating and maintenance personnel are expected to have knowledge from existing operations in the following areas:

- Fans
- Gas Trains
- Programmable Controllers
- Motors
- Temperature Controllers
- Dampers, Damper Actuators
- Hydraulics/Pneumatics

TRAINING SPECIFICS

A. Dürr training is conducted by experienced engineers familiar with the project.

B. Training for the abatement system will utilize the following outline:

Mechanical Class

- Introduction to the equipment and its location
- Discussion of the equipment's purpose
- Detailed description of the design and theory of operation using the construction flow diagrams
- Operating procedures
- Shutdown procedures
- Safety considerations
- Maintenance procedures
- Troubleshooting

Mechanical Field

- Introduction to all component parts
- System start-up
- System shutdown
- System monitoring

Electrical Class

- Description of equipment and panel locations
- Review of mechanical system operation
- Detailed description of sequence of operation
- Discussion of alarms and proper response to alarms
- Start-up and shutdown procedures
- Safety
- Troubleshooting

Electrical Field

- View location of all field devices
- System start-up
- System shutdown
- System monitoring

STANDARD TRAINING MATERIALS

Prior to each training class, each employee will be given a written Employee Training Manual that will contain all of the information that will be discussed in class. Visual aids such as drawings, electrical prints, and overhead projection transparencies may be utilized.

11.0 STANDARD TERMS AND CONDITIONS OF SALE

Please see the attached.

DÜRR STANDARD CONDITIONS OF SALE

DÜRR shall provide the materials, equipment, and where applicable, the labor and services described in this proposal strictly in accordance with, and subject to, the following terms and conditions which are part of the contract between DÜRR and Purchaser and which shall be deemed to have been accepted by Purchaser in the event Purchaser either issues a purchase order covering the work or otherwise authorizes DÜRR, in writing or orally, to perform the work.

1.0 TERM OF PROPOSAL: This Proposal is subject to acceptance by Purchaser within sixty (60) days from the proposal date.

2.0 PROPRIETARY & CONFIDENTIAL MATERIALS: All drawings, patterns, specifications and information included in DÜRR's proposal or contract, and all other information otherwise supplied by DÜRR as to design, manufacture, erection, operation and maintenance of the equipment, shall be the proprietary and confidential property of DÜRR and shall be returned to DÜRR at its request. Purchaser shall have no rights in DÜRR's proprietary and confidential property and shall not disclose such proprietary and confidential property to others or allow others to use such property, except as required for the Purchaser to obtain service, maintenance, and installation for the equipment purchased from the DÜRR. This clause shall survive the termination of this contract and be in effect as long as the Purchaser has possession of any of the DÜRR's proprietary or confidential property. Additionally, should Purchaser's and/or End User's use of the equipment provided hereunder create VOC credits under any applicable federal or state laws or regulations, including, without limitation, the Clean Air Act, such credits shall be the sole and exclusive property of DÜRR, and Purchaser and/or End User hereby agree to provide at DÜRR's expense any and all assistance reasonably requested in order to determine and confirm the amount of such credits available to DÜRR. Purchaser, if not the End User, agrees to incorporate in any agreement with an End User, a provision protecting DÜRR's ownership of such credits.

3.0 TAXES: Sales Tax, Personal Property Tax, Use Tax, Excise Tax, or other Taxes imposed by the Federal, State or municipal Authority and incurred by DÜRR through performance on the contract shall be to the Purchaser's account and are in addition to the prices quoted in the proposal. DÜRR shall not be responsible for any additional cost associated with the Purchasers tax exemption certificate and the governing body's acceptance of same.

4.0 DELIVERY: Title to all equipment shall pass to Purchaser at the FOB point or points of shipment and risk of loss will thereafter be borne by Purchaser. DÜRR shall retain a security interest in any equipment not paid for in full. If the Purchaser declines or is unable to take delivery at the time(s) specified in the proposal or contract, DÜRR will have the equipment stored for Purchaser at Purchaser's risk and account, and the materials shall be considered "shipped." Purchaser shall pay storage, handling and rehandling charges and continue to make payments according to the payment terms contained herein.

5.0 SUSPENSION: In the event Purchaser suspends the execution of work on this contract, Purchaser shall reimburse DÜRR for all costs incurred by DÜRR as a result of such suspension, including, without limitation, all borrowing and opportunity costs. In the event the suspension exceeds 180 days in duration, in addition to being entitled to full reimbursement of costs as aforesaid, DÜRR shall have the unqualified right to cancel the unfinished portion of the contract without liability to Purchaser of any kind. Should the contract be canceled the provisions of Article 15.0 shall apply.

6.0 CHANGES & EXTRA WORK: Purchaser, by written order accepted by DÜRR, may make reasonable changes in the scope of the work subject to equitable adjustments in the Contract price and schedule, including an allowance for increased overhead and profit. DÜRR is not obligated to incur any expense or do any work in excess of that reasonably anticipated unless the Purchaser issues a written order for such expense or work with mutually acceptable terms and conditions.

7.0 MATERIAL/WORKMANSHIP WARRANTY: DÜRR warrants that all materials and equipment which it manufactures and furnishes and work provided will be free from defects in materials and workmanship for a period of twelve (12) months after initial operation or eighteen (18) months after the first item is shipped, whichever is sooner. Initial operation is defined as the date of first burner ignition of the equipment.

DÜRR's sole obligation hereunder is to repair or replace F.O.B. point of shipment, any item which after DÜRR's inspection proves to be defective, provided that DÜRR shall not be obligated for any removal, shipping, or reinstallation costs.

DÜRR's obligations hereunder are subject to the following conditions:

a) Receipt from Purchaser within the warranty period of prompt written notice of any defect containing a full description thereof.
b) Purchaser shall not without DÜRR's approval have attempted to correct the defect.
c) Purchaser shall have installed (if applicable), operated and maintained the equipment strictly in accordance with DÜRR's operating and maintenance instructions.
d) The defect has been caused solely by faulty materials or workmanship for which DÜRR is responsible, and is not due to such things as erosion, corrosion, or deterioration resulting from the manner in which the equipment is operated.

To the extent that the materials and equipment furnished consist of products manufactured by other parties, such manufacturer's warranty is hereby assigned to Purchaser, and DÜRR's responsibility with respect to any such products shall not extend beyond the manufacturer's warranty with respect thereto.

8.0 PATENT WARRANTY: DÜRR shall defend at its expense any suit or proceeding brought against Purchaser based on any claim that the equipment covered herein, except for equipment/material manufactured and/or designed to Purchaser's specifications, infringes any United States patent issued as of the date of this proposal and pay any court imposed damages and costs finally awarded against Purchaser, but not to exceed the amount theretofore paid to DÜRR by Purchaser hereunder provided:

a) DÜRR is promptly notified by Purchaser in writing of such claim; and
b) DÜRR is given full authority, information, and assistance by Purchaser which DÜRR deems necessary for the conduct of such defense.

DÜRR shall have the right and option at any time in order to avoid such claims or actions and minimize potential liability to:

a) procure for the Purchaser the right to use the equipment; or
b) modify the equipment so that it no longer infringes; or
c) replace the equipment with non-infringing equipment.

9.0 PERFORMANCE GUARANTEE: DÜRR's sole guarantees are those contained in its proposal to Purchaser. These guarantees are contingent upon the correctness and accuracy of the information provided by the Purchaser and are based upon the operating conditions specified in DÜRR's proposal. These guarantees will be deemed satisfied by successful completion of

performance tests in accordance with applicable standard procedures as specified in the proposal and in effect on the date of this proposal. Performance tests shall be conducted by the Purchaser, (unless otherwise specified in DÜRR's proposal), and witnessed by DÜRR within ninety (90) days of the date of initial operation of the equipment. In the event the said tests are not conducted within ninety (90) days of initial operation or within six (6) months of shipment, whichever is earlier, and through no fault of DÜRR, the equipment shall be deemed accepted by the Purchaser and in compliance with all contractual requirements. In the event the equipment fails to meet the contract performance guarantees as verified by certified test results, DÜRR will supply, at its sole option, repaired or replacement parts pursuant to the delivery terms of the proposal subject to the limitations stated in Article 13.0.

10.0 IMPLIED WARRANTIES/GUARANTEES DISCLAIMER: THE WARRANTIES/GUARANTEES FURNISHED BY DÜRR, AS EXPRESSLY INCLUDED HEREIN, CONSTITUTE DÜRR'S SOLE OBLIGATION HEREUNDER AND ARE IN LIEU OF ANY OTHER WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

11.0 DISCLAIMER OF CONSEQUENTIAL DAMAGES: DÜRR shall not be liable to Purchaser for indirect or consequential damages including, but not limited to, loss of profits or revenue, loss of use of equipment, costs of replacement power, or product, additional expenses incurred in the use of equipment or facilities, or the claims of third parties. This disclaimer shall apply to consequential damages based upon any cause of action whatsoever asserted against DÜRR, including one arising out of any Breach of Warranty, Express or Implied; Guarantee; Products Liability, Negligence; Tort; or any other theory of liability.

12.0 PURCHASER'S NEGLIGENCE & INSURANCE: DÜRR shall not be responsible for losses or damages arising out of the negligence of the Purchaser, its employees, agents or architects or those of third parties whom DÜRR is not responsible, or losses for which the Purchaser has agreed to provide insurance. In the event that both DÜRR and the Purchaser are negligent and the negligence of both is approximate cause of the accident, then in such event each party will be responsible for its portion of the liability or damages (excluding consequential or indirect damages which are disclaimed by DÜRR) resulting therefrom equal to such party's comparative share of the total negligence.

13.0 LIMITATION OF LIABILITY: In no event will DÜRR's liability to the Purchaser for any and all claims, including property damage and personal injury claims, allegedly resulting from breach of contract, tort, or any other theory of liability exceed the amount of the initial purchase price paid to DÜRR.

14.0 DELAYS & DAMAGES - FORCE MAJEURE: In the event of delays or damages due to conditions beyond DÜRR's reasonable control, including, but not limited to Acts of God, Acts of Purchaser, or Purchaser's customer or of other contractors employed by Purchaser, Acts of Civil or Military Authority, priorities, fire, strikes, floods, epidemics, quarantine restrictions, war, riot, delays in transportation, car shortages, or DÜRR's inability to obtain necessary labor, materials, or manufacturing facilities, the Contract dates shall be extended by an equitable period of time and DÜRR shall be entitled to an equitable adjustment in the contract price.

15.0 CANCELLATION: Purchaser's cancellation of the contract is subject to a cancellation charge of 10% of the total price of the contract, plus DÜRR's actual expenses and expenses to which DÜRR has become committed for fulfillment of the contract before notice of cancellation is received.

16.0 PAYMENT: Unless otherwise agreed, payment shall be as outlined in the proposal and payments shall be made within thirty (30) days of presentation of an invoice. Payments not received by the due date shall be subject to a monthly interest charge at the rate of 2% per month or the maximum allowed by law, whichever is less, due and payable until the payment is received.

In the event a retention value is required and agreed, it shall accrue interest at the rate of 1% per month on the outstanding balance until exchanged for a letter of credit or paid to DÜRR. DÜRR retains the unqualified option to provide Purchaser with a letter of credit in lieu of retention at any time during the performance of the contract.

16.1 DEFAULT IN PAYMENT: A. If any payment due to DÜRR is more than thirty (30) days past due, DÜRR shall have the right at its sole option to accelerate the payment of all outstanding amounts, including, but not limited to, amounts previously retained pursuant to the agreement, by notifying Purchaser in writing that all outstanding amounts are immediately due and presenting Purchaser with an invoice for said amount. DÜRR shall also have the right in such event to discontinue all work on the project without incurring any liability to Purchaser for such action. B. In the event the total aggregate amount of delinquent payments exceeds at any point during the term of the agreement ten (10%) percent of the total contract amount, Purchaser shall provide at DÜRR's request, additional collateral, including but not limited to irrevocable letters of credit, sufficient to secure payment of all contract amounts. C. The foregoing remedies of DÜRR are in addition to all other remedies DÜRR may have at law or in equity, including but not limited to the right to obtain liens on Purchaser's assets through legal or equitable proceedings.

16.2 SECURITY AGREEMENTS: A. Purchaser hereby grants to DÜRR a security interest in the equipment and/or materials sold hereunder to secure the purchase price of same. Purchaser shall execute any financing or other statements or filings which in DÜRR's sole judgment are necessary or appropriate to evidence or perfect such security interest, which shall thereafter be filed by Purchaser with the appropriate recording officer. This contract shall constitute the security agreement between the parties and is intended to and shall afford the DÜRR all rights of a secured party under Article 9 of the Uniform Commercial Code. B. Until Purchaser has paid the full amount due and owing for any equipment or materials purchased hereunder, Purchaser shall be prohibited from transferring such equipment or materials to any creditor of Purchaser other than DÜRR, unless DÜRR provides its prior written consent to such transfer, such consent not to be unreasonably withheld. C. In the event Purchaser becomes insolvent, files for bankruptcy, or goes into receivership or liquidation, Purchaser agrees to use its best efforts and to provide all assistance requested by DÜRR in order to secure DÜRR's position as a preferred creditor with respect to all amounts due to DÜRR.

16.3 PAYMENT OF RETAINED AMOUNTS: A. If this contract permits Purchaser to withhold final payment, and acceptance is not based upon performance tests, such final payments shall be due and payable within thirty (30) days after the equipment is ready for operation. B. If such deferred payment is contingent upon tests and such tests are delayed through no fault of DÜRR for more than thirty (30) days after the equipment is first ready for operation, final payment shall be due and payable upon expiration of such thirty (30) day period.

DÜRR STANDARD CONDITIONS OF SALE

17.0 PRICE ADJUSTMENT: Except as noted in DÜRR's Proposal, the Contract price is firm for delivery and installation (if applicable) in accordance with the schedule therein. In the event the schedule is modified due to acts of Purchaser or conditions beyond the control of DÜRR and DÜRR's cost escalate, an equitable adjustment to the contract price shall be granted to DÜRR.

18.0 DIFFERING CONDITIONS: In the event DÜRR is installing the equipment and any of the conditions of the construction site at that time of erection differ materially from those evident at the time of DÜRR's pre-bid site visit (if applicable), Purchaser's representations, sub-surface conditions (if applicable), and conditions ordinary to similar projects, then any additional costs occasioned by such differing site conditions shall be subject to equitable adjustment to the Contract price and schedule.

The following, except as specifically waived in writing by DÜRR shall be available to DÜRR throughout the duration of the work at no cost to DÜRR.

a) A safety buffer zone shall be established nominally fifty (50) feet all around the base of the structure which will be maintained free and clear of all work, contractors, equipment and personnel.
b) An adequate construction staging, laydown and material storage area for DÜRR's exclusive use shall be available adjacent to the safety buffer area. This area and the safety buffer shall be graded, leveled, well drained, even with the top of foundation and be suitable for delivery vehicles and DÜRR's equipment in all weather conditions.
c) All weather access roads shall be made available and maintained by Purchaser from a main highway and from the railroad sidings (if applicable) to DÜRR's area and the location of construction.
d) Purchaser's rail siding, (if applicable), shall be available to DÜRR with 300 feet, by the normal routing, from DÜRR's area.

In the event activities or operations at the site by parties other than DÜRR interfere with the execution of the work, an equitable adjustment shall be made to the Contract Price and schedule.

19.0 UNLOADING & STORAGE: DÜRR may have certain materials or equipment delivered to the construction site prior to his arrival and mobilization (if applicable). Purchaser shall receive, unload and store such materials and equipment.

20.0 PERMITS & LICENSES: DÜRR shall obtain and pay for all licenses and permits required to be obtained in his name to do business within the political jurisdiction containing the construction site. Purchaser will obtain and pay for all other licenses and permits, including any required to be obtained in the Owners name, any required for the construction of permanent structures, and all pollution control, zoning, Federal or regional air, navigation or building permits and all other permits and licenses related to the physical work.

21.0 OSHA - FEDERAL, STATE, & LOCAL: DÜRR agrees to comply with the Federal OSHA requirements in effect as of the date of this proposal relative to the work performed hereunder. DÜRR's sole responsibility is limited to modification or replacement of the equipment cited as violating such standards. OSHA requirements with respect to noise are specifically excluded. Where state, local or Purchaser's safety and health requirements differ from the Federal OSHA requirements, modifications or changes in design to meet such requirements will be incorporated at Purchaser's request. Additional costs arising from such requests and from erection procedures required by state, local or Purchaser's safety and health regulations which deviate from Federal OSHA requirements will be for Purchaser's account.

22.0 ASSIGNMENT/SUBCONTRACTS: DÜRR retains the right to assign this contract to any subsidiary or affiliated company of DÜRR without the Purchaser's prior approval. All other assignments by either DÜRR or Purchaser require the prior written consent of the other party. DÜRR may subcontract any portion of the work.

23.0 HAZARDOUS MATERIALS: If the Purchaser's facilities contain hazardous materials, including asbestos bearing materials and any such materials are encountered, DÜRR shall have no obligation to remove or remediate them in the absence of a separate agreement which includes separate consideration to DÜRR for such work. If DÜRR or any of its subcontractors is required to perform work within or immediately adjacent to any facilities that are determined to contain hazardous materials and/or asbestos, and the said work must be interrupted to allow for the remediation or removal of such materials by others, DÜRR shall be entitled to any and all costs and other expenses associated with such interruption in work. Purchaser shall fully defend, hold harmless and indemnify DÜRR and its agents from and against any claim arising out of exposure to such hazardous and/or asbestos bearing materials.

24.0 HEALTH AND SAFETY: DÜRR shall not be responsible for health or safety programs or precautions related to Purchaser's activities or operations, Purchaser's other contractors, the work of any other person or entity, or Purchaser's site conditions. DÜRR shall not be responsible for inspecting, observing, reporting or correcting health or safety conditions or deficiencies of Purchaser or others at Purchaser's site, and Purchaser agrees to indemnify, hold harmless and defend DÜRR against any claims arising out of such conditions or deficiencies. So as not to discourage DÜRR from voluntarily addressing health or safety issues while at Purchaser's site, in the event DÜRR does not address such issues by making observations, reports, suggestions or otherwise, it is understood and agreed that DÜRR shall nevertheless have no liability or responsibility arising on account thereof.

25.0 OTHER CONTRACTORS: DÜRR shall not have any duty or authority to direct, supervise or oversee any contractors of Purchaser or their work or to provide the means, methods or sequence of their work or to stop their work. DÜRR's services and/or presence at a site shall not relieve others of their responsibility to Purchaser or to others. DÜRR shall not be liable for the failure of Purchaser's contractors or others to fulfill their responsibilities, and Purchaser agrees to indemnify, hold harmless and defend DÜRR against any claims arising out of such failures.

26.0 DISPUTES: In the event of a dispute arising hereunder, the parties will confer and attempt to amicably resolve the dispute. If after good faith negotiation, the parties cannot reach agreement, then the matter will be finally resolved in any court having jurisdiction.

27.0 CONTRACT INTERPRETATION: If any of the provisions of these Standard Conditions of Sale (including statements made in the proposal) conflict with any provisions in the Purchaser's documents, the former shall govern unless DÜRR expressly agrees to the contrary in writing. Any contract resulting from this proposal shall be construed, and the legal regulations of DÜRR and the Purchaser shall be determined in accordance with the laws of the State of New Jersey, U.S.A.

All communications written and verbal, between the parties hereto with reference to the subject of this proposal prior to the date of its acceptance are merged herein, and this proposal, when duly accepted and approved, shall constitute the sole and entire agreement and contract between the parties as to the subject matter

thereof. No change in or modifications of said agreement shall be binding upon the parties or either of them, unless the changes or modifications shall be duly accepted in writing by the Purchaser and approved in writing by DÜRR.

28.0 SEVERABILITY: Should any part of this Agreement be declared invalid or unenforceable, such decision shall not affect the validity of any remaining portion, which remaining portion shall remain in full force and effect, and DÜRR shall have the right to replace the part declared invalid or unenforceable with a provision which serves as much as validly possible the same commercial purpose as the part determined to be invalid or unenforceable.