

**Koerner, Jeff**

---

**From:** Buff, Dave [DBuff@GOLDER.com]  
**Sent:** Thursday, July 27, 2006 3:50 PM  
**To:** Koerner, Jeff  
**Cc:** Don Griffin; pbriggs@ussugar.com  
**Subject:** White Sugar Dryer

Jeff, here are responses to your questions. Pls email or call if you have additional ones. Thanks.

Remove shrouds; (Where are these located? Describe designed function and current problem. How will removal improve performance?)

There is a blanking plate (or shroud) on the bottom section of the vane cage. There are four vane cage sections total. The blanking plate was installed to increase the velocity through the vane cage. This had to be done because the operating flow rate of 97,000 cfm was less than the design flow rate of 104,000 cfm. After inspection, Dave Taub determined that this shroud was hindering the scrubbing capabilities of the vane cage. Water was building up in the bottom of the vane cage and pouring over the shroud in surges, so instead of a constant 'cloud of mist' around the vane cage the cloud would appear intermittently between surges. Dave recommended removing the shroud AND the bottom section of the vane cage to get the performance expected.

This work is complete. We will run the scrubber early next week and visually inspect for proper cloud formation.

Increase duct dimensions; (Specifically, where will duct dimensions be increased?)

The duct dimensions would be increased downstream of the existing duct which exhausts to the atmosphere, as part of an extension to the existing duct.

Add ~ 40 ft. horizontal extension and test ports to existing exhaust vent;

We are investigating the effect of adding about 25' of duct – 1' for a transition, 16' of straight run before the test ports, and 8' of straight run after the test ports

Increase diameter of the new extension to reduce exhaust flow rates; and

The current exhaust duct is 6' wide by 7' tall. If installed the new duct would be 6' wide by 8' tall

Add drains to new extension and existing silencer.

If the duct is extended a drop out and drain line to the transition on the new duct would be installed to capture all moisture on the bottom of the duct before exhausting to atmosphere. However, it is uncertain as to the benefit of the duct modifications. We plan to retest the scrubber after the vane cage modification and then proceed as necessary.

David A. Buff, P.E., Q. E. P.  
Golder Associates Inc.  
Phone: (352)336-5600 x 545  
Fax: (352)336-6603 Mobile: (325)514-5600  
E-Mail: [dbuff@golder.com](mailto:dbuff@golder.com)

8/12/2006

**Disclaimer Notice:**

This e-mail transmission is confidential and may contain proprietary information for the express use of the intended recipient. Any use, distribution or copying of this transmission, other than by the intended recipient, is strictly prohibited. If you are not the intended recipient, please notify the sender and delete all copies. Electronic media are susceptible to unauthorized modification, deterioration, and incompatibility. Accordingly, the electronic media version of any work product may not be relied upon.

## Koerner, Jeff

---

**From:** Koerner, Jeff  
**Sent:** Wednesday, July 26, 2006 1:24 PM  
**To:** 'Buff, Dave'; Don Griffin  
**Subject:** White Sugar Dryer

Dave and Don,

From our meeting this week, you mentioned the following changes to the new dryer system.

Remove shrouds; (Where are these located? Describe designed function and current problem. How will removal improve performance?)

Increase duct dimensions; (Specifically, where will duct dimensions be increased?)

Add ~ 40 ft. horizontal extension and test ports to existing exhaust vent;

Increase diameter of the new extension to reduce exhaust flow rates; and

Add drains to new extension and existing silencer.

Please answer the above questions and add anything else you plan to do to improve performance. Provide a preliminary schedule for completing each of these items. The sooner the better. Email is fine.

Thanks!

Jeff Koerner, BAR - Air Permitting North  
Florida Department of Environmental Protection  
850/921-9536

## Koerner, Jeff

---

**From:** Little.James@epamail.epa.gov  
**Sent:** Friday, July 21, 2006 3:34 PM  
**To:** Koerner, Jeff  
**Subject:** U.S. Sugar Clewiston Dryer

Jeff -

I have taken a quick look at the application to revise the PM emissions limit for White Sugar Dryer No. 2 at the U.S. Sugar Clewiston Mill. I have a few questions. For example, how does the proposed emissions rate of 25 lb/hr compare to emissions from similar dryers in the industry? Please call me. I will be in the office all next week.

Jim Little - EPA Region 4  
(404) 562-9118

## Koerner, Jeff

---

**From:** Koerner, Jeff  
**Sent:** Wednesday, July 12, 2006 4:37 PM  
**To:** 'Buff, Dave'  
**Cc:** Nelson, Deborah; Don Griffin  
**Subject:** White Sugar Dryer - Request for Additional Information & Modeling

David Buff, P.E.  
Golder Associates Inc.  
6241 NW 23rd Street, Suite 500  
Gainesville, FL 32653  
(352) 336-5600

Dave,

We received the application for the white sugar dryer on July 3rd. I'll be out all next week (17th - 21st) and wanted to get you my initial request for additional information. I'll be meeting with Don Griffin and Peter Briggs on July 24th at Clewiston to look at the facility and see the dryer and refinery. Here's my initial questions.

1. A modeling analyses was not provided with the application. Debbie Nelson was the meteorologist on the original project and will be working on this revision as well. She is reviewing the original project to see what was provided and what was "exempted" by rule. She is also reviewing our current rules, which were revised in February of this year. She will review and let you know what modeling analyses must be provided for this project.
2. Page 2-2 of the application indicates that 25% of the dryer exhaust bypasses the cyclones directly to the wet scrubber. Please describe how the bypass is introduced into the scrubber and are the flows well mixed? Can another cyclone be added prior to the wet scrubber to avoid the bypass? What would be the additional capital and annualized costs?
3. The original application indicated that the scrubber exhaust would be horizontally out of the side of the building. The recent application indicates that the scrubber exhaust is vertical (Page 2-3). Is the scrubber exhaust horizontal or vertical? Was the exhaust stream tested for cyclonic flow?
4. The second paragraph on page 4-6 of the application indicates that the "... an outlet dust loading of 0.005 gr/dscf (proposed limit for permitting purposes is 0.00729 gr/dscf)." Please explain this statement.
5. Please describe any other engineering solutions that are being pursued.

After my site visit, I may have additional questions.

Sincerely,

Jeff Koerner, BAR - Air Permitting North  
Florida Department of Environmental Protection  
850/921-9536

## Koerner, Jeff

---

**From:** Nelson, Deborah  
**Sent:** Tuesday, July 11, 2006 10:21 AM  
**To:** Koerner, Jeff  
**Subject:** RE: US Sugar - White Sugar Dryer

That same section states that the project is no longer exempt from the rule below. I was expecting a report. I have not spoke to them. I'll have to look further into it if they were not preparing a report like the application states.

**Debbie Nelson**  
**Meteorologist**  
**Air Permitting South**  
**850-921-9537**  
**deborah.nelson@dep.state.fl.us**

---

**From:** Koerner, Jeff  
**Sent:** Tuesday, July 11, 2006 10:16 AM  
**To:** Nelson, Deborah  
**Subject:** US Sugar - White Sugar Dryer

Debbie,

I only saw one place in the application (Page 3-1) that even mentioned modeling. It just states, "The reviews required by FDEP, other than the BACT review, will be presented in a separate report." I think they mean, if we want to see a modeling analysis, they will provide us with one. Have you had any conversations with them?

In the application, they request that the PM10 limit remain unchanged at 4.2 lb/hour (18.4 TPY) and to add a total PM limit of 25 lb/hr (109.5 TPY) to recognize the large sugar water droplets (~ 200 microns in size). For reference, the original application stated:

Although the exemption in Rule 62-212.400(3)(d), F.A.C does not extend to modeling for Class I impacts, the applicant submitted a request to the National Park Service for a determination of the Class I modeling requirements for the project. Based on the specific details of the project, the National Park Service concluded that a Class I analysis (including a Class I increment analysis and an Air Quality Related Values analysis) would not be required. The Department deferred to the determination made by the National Park Service. Therefore, the applicant must only conduct a modeling analysis to demonstrate that the modification will not cause or contribute to a violation of an Ambient Air Quality Standard for PM10.

Modeling indicated that the project was significant for the 24-hour AAQS average for PM10. Refined modeling showed a 24-hour average PM10 level of 68.5 ug/m3, which is below the AAS of 150.

If we wanted to grant their request (not sure at this time), should they do any more modeling?

Thanks!

Jeff

## Koerner, Jeff

---

**From:** Koerner, Jeff  
**Sent:** Tuesday, July 11, 2006 10:16 AM  
**To:** Nelson, Deborah  
**Subject:** US Sugar - White Sugar Dryer

Debbie,

I only saw one place in the application (Page 3-1) that even mentioned modeling. It just states, "The reviews required by FDEP, other than the BACT review, will be presented in a separate report." I think they mean, if we want to see a modeling analysis, they will provide us with one. Have you had any conversations with them?

In the application, they request that the PM10 limit remain unchanged at 4.2 lb/hour (18.4 TPY) and to add a total PM limit of 25 lb/hr (109.5 TPY) to recognize the large sugar water droplets (~ 200 microns in size). For reference, the original application stated:

Although the exemption in Rule 62-212.400(3)(d), F.A.C does not extend to modeling for Class I impacts, the applicant submitted a request to the National Park Service for a determination of the Class I modeling requirements for the project. Based on the specific details of the project, the National Park Service concluded that a Class I analysis (including a Class I increment analysis and an Air Quality Related Values analysis) would not be required. The Department deferred to the determination made by the National Park Service. Therefore, the applicant must only conduct a modeling analysis to demonstrate that the modification will not cause or contribute to a violation of an Ambient Air Quality Standard for PM10.

Modeling indicated that the project was significant for the 24-hour AAQS average for PM10. Refined modeling showed a 24-hour average PM10 level of 68.5 ug/m3, which is below the AAS of 150.

If we wanted to grant their request (not sure at this time), should they do any more modeling?

Thanks!

Jeff

**Koerner, Jeff**

---

**From:** Adams, Patty  
**Sent:** Thursday, July 06, 2006 2:14 PM  
**To:** Nelson, Deborah  
**Cc:** Koerner, Jeff  
**Subject:** U.S. Sugar

Debbie,

FYI. The project numbers for the U.S. Sugar application received this week are 0510003-038-AC, and PSD-FL-346A.

Thanks,  
Patty

8/12/2006