

INNOVATIVE RECYCLING GRANT
On-line Sorting of Recovered Wood Waste Using
Automated X-ray Technology

PROGRESS REPORT #1
For Work Period Ending December 31, 2006

Submitted by Town of Medley
(Roy Danziger, Project Manager)

ACTIVITIES COMPLETED DURING REPORTING PERIOD

Project Administration

- The contract was executed between the FDEP and the Town of Medley on July 2006. The Environmental Certification Form and the Scope of Services were submitted to the FDEP prior to this time.
- A subcontract has since been prepared for the University of Miami. This subcontract has since been signed by the University of Miami. The delay between the execution of the FDEP contract and the University of Miami subcontract was due to the need to obtain insurance for the XRF unit prior to the University accepting the subcontract. This was resolved through Harvey Schneider, President of Florida Wood Recycling, who agreed to include insurance for the XRF unit within his facility's insurance. The University also required that the budget be modified to show that the insurance would be covered. Approval of the budget modification was provided by Jill Scarborough on December 19, 2006.
- A post doctoral associate, Dr. Yang Deng, has been hired and assigned to the project. Also Paul Lopez Collado, a master degree candidate, has provided support in the design of the XRF sorting system.

Design of XRF Sorting System

- A safety manual has been prepared for the hand-held XRF units and for the on-line XRF units.
- The research team is currently working with Austin AI to finalize the design drawings for the XRF system. Conceptual drawings are provided in Figures 1 and 2.

Research Meetings

- Helena Solo-Gabriele, Paul Lopez Collado, and Harvey Schneider met at Florida Wood Recycling on June 29th to collect measurements and photos of the existing sorting system.
- A follow up conference call was held (Harvey Schneider, Helena Solo-Gabriele, Paul Lopez Collado) with Austin AI (Rick Comtois, Julie Villesces, and John Schindler) on July 21, 2006 to discuss the design of the XRF unit. During this

conference call, a request was made for John Schindler of Austin AI to visit Florida Wood Recycling as part of the design process.

- John Schindler of Austin AI visited Florida Wood Recycling on September 26th at which point in time Harvey Schneider provided details of the upgrades to his new picking line system. Those present at the meeting included: Helena Solo-Gabriele and Paul Lopez Collado, in addition to John Schindler and Harvey Schneider.
- A meeting was held at Florida Wood Recycling on October 24, 2006 to discuss the potential of collaborating with a group from Japan. Present at the meeting included: Dr. Toshimitsu Hata of Kyoto University - Japan, Helena Solo-Gabriele, Yang Deng, and Harvey Schneider.
- A conference call was held on October 27, 2006 to discuss John Schindler's design that was an outcome from his September 26th visit. Minutes from this conference call are attached, along with conceptual drawings of the updated design.

ACTIVITIES ANTICIPATED FOR NEXT REPORTING PERIOD

We plan to execute the subcontract between the Town of Medley and the University of Miami. We plan to continue working with Austin AI on the design of the XRF unit and obtain final dimensional design drawings. Once Florida Wood Recycling receives its permit for the new picking line, the team plans to begin working on a requisition for the purchase of the XRF unit.

Problems Encountered and Problem Resolutions: With the exception of the delay of the contract and permit, no problems have been encountered. Progress during the next reporting period will help us better determine whether or not the project can be completed on time.

Financial Summary of the Project (including matching and in-kind services):

The Town of Medley are currently in the process of executing a sub-contract to the University of Miami (Solo-Gabriele, Department of Civil and Environmental Engineering) for the amount of \$192,000. In-kind services have been provided by Harvey Schneider of Florida Wood Recycling for the installation of a new picking line and associated permits.

APPENDIX

MINUTES OF OCTOBER 27, 2006 CONFERENCE CALL

From: Julie Villescascas [mailto:jvillescascas@austinaai.com]
Sent: Friday, October 27, 2006 10:36 AM
To: Solo-Gabriele, Helena M; RickyCom@aol.com
Cc: jschindler@austinaai.com; flawood@bellsouth.net; 'deng yang'
Subject: RE: Conference Call Minutes

Friday 10-27
10:30 AM EST

Clarification of A/B picking lines discussed. Also discuss was the repositioning of XRF out put lines to eliminate concerns for material back-up/piling. Revision will include addition of concrete block, half-wall separation barrier to aide material removal by loader.

Expectations are for two – three weeks before official approval and go-ahead orders are placed; with 3 to 4 months allotted for build and install.

Action Items:

- Florida Wood to provide specifications on half wall SS barriers (estimated now < 5 feet).
- Florida Wood to add XRF system to insurance policy.
- Austin AI to investigate costing of electric operated diverter.
- Austin AI to provide (hand-sketched) drawings – one of new XRF layout, one of cross section under picking line.
- Austin AI to send videos of prior XRF systems.
- Austin AI to contact Premier (Howard Feedler, P: 207-233-8621) to discuss layout, visit and control panel integration.
- UM – misc. paperwork items and notification of final approval for go-ahead.

I think that covers the main points... please let me know if I missed anything.

Best regards,
Julie Villescascas
Sales Manager
Austin AI, Inc.
8603 Hartwood Place
Laurel, MD 20724
P: (240) 350-9763

Austin AI, Inc.
Headquarters
2101 Donley Drive, Suite 108
Austin, TX 78758
Phone: (512) 837 9400 x 116
Fax: (512) 837 9434

This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version. Austin AI, LLC, 2101 Donley Drive, Ste. 108, Austin, TX 78758 USA

From: julievillescascas [mailto:julievillescascas@comcast.net]
Sent: Wednesday, November 22, 2006 10:26 AM
To: Solo-Gabriele, Helena M; flawood@bellsouth.net
Cc: rcomtois@austinai.com; 'John Schindler'
Subject: Drawings
Importance: High

Dear Helena & Harvey,

Please find the attached drawings of the picking line with integrated QXR-W.

View 1 - The view faces towards the existing line. The picking line chutes are oriented 90 degrees to the slideway-table with integrated XRF (XRF not shown, this view). The chutes from the picking line are moved left, to provide adequate room for the conveyor dedicated to diverted materials. The vibrational shaker table is shown mounted below both the picking line chutes & XRF integrated slideway-table. The XRF slideway-table extends over a wall to the "wood" bunker. The XRF slideway-table has a "trap" diverter which opens when treated wood material is identified. This material is taken away via a belt driven incline conveyor, over another wall to a separate collection area.

View 2 – The view is opposite View 1. It shows the XRF sensor in red, looking through a hole in the side of the XRF slideway-table.

These conceptual drawings are adequate representations of the components, but it is anticipated that some tweaking will be necessary. For example, the take away conveyor for the diverted materials will need to be lowered to allow the trap-door of the diverter to open fully. I believe this should be done at the site meeting at Austin AI. December is a holiday month, so I recommend starting planning and coordinating schedules as soon as possible.

I will call you (both) today to discuss this, as well as order placement. It is getting to be pretty important to order parts, as pricing has been held throughout the project and the longer this stretches out... the harder it is to do so. I hope you understand.

Happy Thanksgiving,
Julie Villescascas
Austin AI, LLC
8603 Hartwood Place
Laurel, MD 20724
P: (240) 350-9763
F: (845) 698-6085

Austin AI, HQ
2101 Donley Dr. # 108
Austin, TX 78758
P: (512) 837-9400
F: (512) 837-9434
I: www.austinai.com

This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. E-mail transmission cannot be guaranteed to be secure or error-free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. The sender therefore does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. If verification is required please request a hard-copy version. Austin AI, LLC, 2101 Donley Drive, Ste. 108, Austin, TX 78758 USA.

Figure 1: Conceptual Design of XRF and Sorting Conveyors. Red corresponds to the face of the XRF unit.

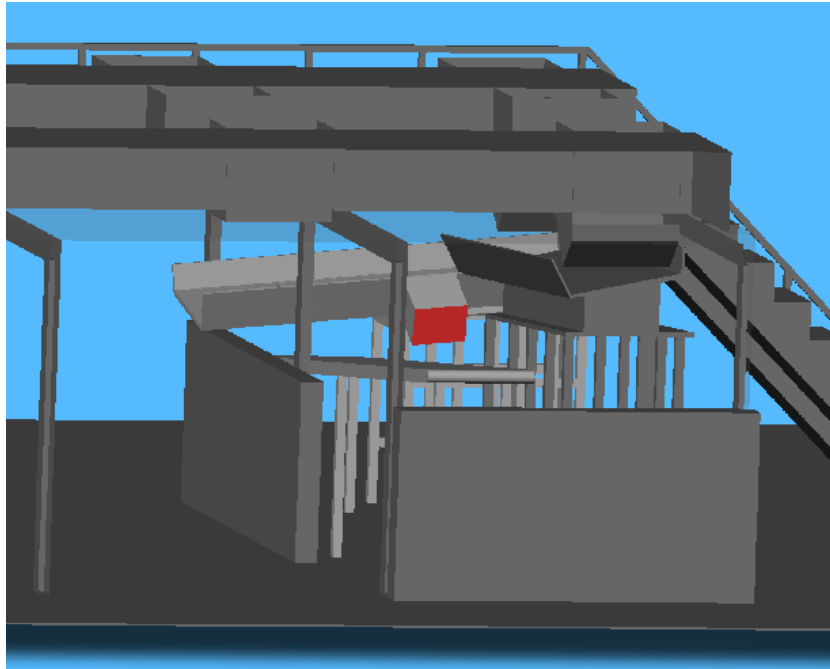


Figure 2: Conceptual Design of XRF and Sorting Conveyors. Back-side of XRF unit.

