TECHNICAL MEMORANDUM
BROWNFIELDS SUSTAINABILITY PILOT
LANGDALE MILL, VALLEY, ALABAMA

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Brownfields Program empowers states, communities, and other stakeholders to work together to prevent, assess, safely clean up, and sustainably reuse brownfields. Under this program, EPA's Brownfields Sustainability Pilots are providing technical assistance to support communities in achieving greener, more sustainable assessment, cleanup, and redevelopment at their brownfields projects. EPA selected the Langdale Mill in Valley, Alabama, where a mixed use development is planned, as a Brownfields sustainability pilot. As part of this pilot, Tetra Tech EM Inc., (Tetra Tech), through a subcontract to SRA International, Inc., provided assistance for the City of Valley to create an inventory of materials that can be reused or recycled from the Langdale Mill site through deconstruction of buildings and other structures on portions of the site. The reuse of deconstructed materials on site will help achieve several of Valley's goals for the project, such as implementing and promoting sustainable redevelopment opportunities, interpreting the site's rich architectural and industrial heritage, and creating local jobs or volunteer opportunities.

This technical memorandum presents the sustainability pilot activities, a summary of inventory results, and other observations and recommendations for sustainable redevelopment identified during the pilot activities. A figure showing the general layout of the Langdale Mill is included as Attachment A; the inventory of materials is included as Attachment B; and a photographic log is provided as Attachment C. Tools and resources used to calculate material quantities are provided in Attachment D.

SUSTAINABILITY PILOT ACTIVITIES

Tetra Tech conducted several pilot activities before the field inventory. First, Tetra Tech developed a draft material reuse inventory tool to collect information on building materials, estimated salvageable quantities, and estimated costs or income values. EPA and the City of Valley reviewed the draft tool, and Tetra Tech revised the tool based on comments received. Tetra Tech also participated in several conference calls with EPA and the City of Valley to refine the inventory tool and establish the scope of the pilot activities. In addition, Tetra Tech reviewed resources and site-specific information prior to the field inventory, including site maps and photos, an initial materials evaluation conducted by EPA, and site development plans.

Tetra Tech conducted the initial field inventory at the Langdale Mill site in October 2008 and a follow-up visit in February 2009. Based on discussions with the pilot team and a review of available pilot resources, the following site areas were surveyed during the inventory:

- Warehouses 1 through 5
- Farmer's Market Area
- Rooftop air handling unit above Weave Room No. 1.

Miscellaneous aboveground storage tanks were also evaluated for potential reuse. These areas are shown on the figure in Attachment A. The inventory activities focused on agreed-upon primary materials, including: (1) lumber, (2) metal for scrap or reuse, (3) brick, (4) concrete, and (5) other items for potential reuse in the proposed redevelopment—particularly those items of potential value or that may highlight the industrial heritage of the site. Field measurements of the dimensions of the inventory materials were made, as possible in the field. Items identified during the field inventory are presented in detail in the inventory tool (see Attachment B).

After the field inventory was completed, quantities of each building material type were calculated based on field observations and measurements. Lumber types were quantified primarily as board feet (BF) or square feet (sf), and metals were quantified in weight. The quantity calculations were documented in the inventory tool. Local vendors were contacted to determine appropriate quantity conversion factors and units to use in calculations; vendors also provided input regarding costs or values associated with the materials inventoried. The following local salvage vendors provided information that supported the approximation of the value of salvaged lumber, scrap metal, and other materials:

- L. Roy Lumber Co.
  Bessemer, AL
  Phone: 800-476-8169
- Wadkins Metal and Recycling
  Salem, AL
  334-297-2552
- Waste Recycling, Inc.
  Opelika, AL
  334-745-2921
- CCR of Alabama
  Smiths Station, AL
  334-297-1761
- Opelika Scrap, Inc.
  Opelika, AL
  334-745-2622
- Reaves Wrecking Company
  Columbus, GA
  706-322-8923
- EJ Knight Scrap Material Co.
  Columbus, GA
  706-322-5435

These vendors may also be considered as potential bidders or team members for contractors bidding to implement deconstruction activities at the site.

INVENTORY RESULTS

The primary inventoried types of materials of potential value for deconstruction of the Langdale Mill buildings include lumber, scrap metal/steel, concrete, and brick. Table 1 presents a summary of these materials, including the material type, quantity, and potential market value. Complete inventory results are included in Attachment B. Assumptions and uncertainties associated with material quantities and potential value are discussed below.

Material Quantity Assumptions and Uncertainties

Several assumptions were used to calculate material quantities. Available computer-aided design (CAD) drawings of the site were also referenced for calculations when field measurements were not available or to check estimated field measurements. As noted previously, quantity units are based on information from vendors regarding local industry standards; for example, lumber dealers use BF (or for some sheet lumber types, sf), while metal scrap businesses deal in weight. Lumber calculation assumptions were based on the percent salvageable material estimated during field inventory activities. Metal pipe weight calculations were based on linear pipe estimates and do not include the various sized joints, valves, flanges, and connectors associated with piping systems; therefore, the quantity calculations for piping systems are likely conservatively low. Uncertainties in the metal inventory quantities also exist because the age or nature of the materials did not allow easy conversions into weight; for example, some materials had non-standard dimensions or the material alloy or density was unknown. Assumptions were made based on professional judgment, metal weight calculators, conversion factors, and other resources (see Attachment D) to determine the weight of the various metal components for the inventory.

TABLE 1
MATERIAL INVENTORY SUMMARY
LANGDALE MILL BUILDINGS
VALLEY, ALABAMA

Lumber		
Material Type	**Estimated Quantity (board feet)**	**Approximate Value**
<2-inch width (2x) painted	11,500	$11,500
<2-inch width (2x) unpainted	49,300	$49,300
>2-inch width (2x) painted	22,500	$33,750
>2-inch width (2x) unpainted	25,700	$38,550
Total	**109,000**	**$133,100**
Metal		
Material Type	**Estimated Quantity (pounds)**	**Approximate Value**
Pipe/conduit/handrails	74,700	$3,700
Metal Coils	7,400	$400
Metal Shelving	24,600	$1,200
Structural Steel (I-beams, support posts, etc.)	51,000	$2,600
Floor Plates	52,900	$2,700
Walkway grating	8,300	$400
AST and Compressor tanks	53,800	$2,700
Fluorescent light fixtures	2,100	$100
Other Metal (flashing, gutter plates, doors, exterior wall siding, machinery)	15,000	$800
Total	**289,800**	**$14,500**
Other Materials		
Material Type	**Estimated Quantity (bricks)**	**Approximate Value**
Brick	63,100	$15,800

Notes:

"2x" lumber refers to boards that are 2-inch width.
Lumber less than 2x was estimated at a value of $1.00 per board foot; prices range in price based on size and wood type.
Lumber greater than 2x was estimated at a value of $1.50 per board foot; prices range in price based on size and wood type.
Metal was estimated at a scrap value of $5.00 per 100 pounds based on current market value.
Bricks were estimated at a value $0.25 per brick if cleaned and palletized; unit price fluctuates greatly with market demands.

In addition to the uncertainties associated with the assumptions required, the material quantities and values presented are approximate based on dimensions and other building parameters that could be measured during the field survey. Certain building elements, such as unexposed sub-floors, foundations, and ceiling/roofing materials, could not be readily observed or measured in the field and are not included in the inventory. If these materials are in suitable condition for salvaging through deconstruction, overall material quantities and potential value would increase. Furthermore, the percent of damaged material not suitable for salvaging due to rotting or insect activity was assessed during the field survey based on visual observations. More or less actual damage than that estimated from observations during the field inventory could decrease or increase the amount of salvageable material, particularly for lumber. Additional damage (as much as 30 percent or more) could occur during the deconstruction process, depending on the deconstructability of the buildings—further decreasing the amount of salvageable material. However, as discussed in the next section, a preliminary feasibility assessment for deconstruction of the inventoried buildings indicates a number of assessment criteria are met for successful deconstruction, thus reducing the percent damage to materials anticipated during the deconstruction process.

Salvage Value Assumptions and Uncertainties

Potential salvage value is based on information provided by local vendors. Specifically, lumber and scrap metal value was based on information provided by A.L. Roy Lumber Company and EJ Knight Scrap Material Company, respectively. Metal value was calculated based on the likely assumption that the material would be recycled as scrap for approximately $5.00 per 100 pounds. However, if the material could be sold for reuse for its intended purpose (for example, as piping or structural steel), the value could increase.

Vendor information indicates a fairly strong usual market for lumber, with minimum searching effort required. Based on information provided by A. L. Roy Lumber Company, Bessemer, Alabama, the type of lumber at the site is generally hard pine, which has a market value of about $1.50/BF. This would apply primarily to larger (greater than 2-inch-width or “2x”) lumber. Smaller (2x or less) would be of lesser value; therefore, an average value of $1.00/BF foot was assumed.

Deconstruction and transportation costs are not included in the value estimates. For both lumber and metal, transportation and container costs could be significant, depending on the market and vendor

location. In addition, depending on the deconstruction time frame, market fluctuations may also influence the value. For example, scrap metal value has decreased approximately 50 percent in the past year, but vendors contacted anticipate a partial market rebound within the next six months.

The large air handling units on top of Weave Room No. 2 (see Attachment C, Photo No. 1) must be dismantled if intended for removal for scrap or reuse. If the air handling units are to be sold for reuse, additional effort to identify a specialty market buyer will be required. Regardless of the end use, dismantling costs for the air handling units and associated structural support would be significant, and efficient deconstruction sequencing (for example, utilizing a crane or other heavy equipment for multiple deconstruction or construction purposes) should be considered. The scrap metal value presented in the inventory includes the structural support steel, walkways, rails, and piping, but not the two large air handling units or other support features for which the weight could not be estimated based on available information.

OBSERVATIONS AND RECOMMENDATIONS

Tetra Tech used the *"Building Deconstruction Feasibility - Preliminary Assessment"* criteria established by Guy and Williams (2004) to qualitatively assess the feasibility of deconstructing the inventoried buildings. General observations and recommendations associated with these criteria and recommendations for material reuse on site are presented below.

Deconstruction Feasibility

- Overall Building Condition and Safety: Some water and insect damage was observed, particularly in Warehouses No. 1 and 2 where holes in the roof exist. However, the buildings appeared generally safe, and the lumber and other building materials inventoried are mostly salvageable. Larger dimensional lumber used as structural members should be removed by properly trained or experienced workers
- Building Dimensions, Accessibility, and Complexity: Single-story building heights, few interior walls or partitions, gently sloped roofs, and clear access to multiple sides of Warehouses No. 1 though 5 and the Farmer's Market will help facilitate a successful deconstruction. However, access to the rooftop air handling unit will be difficult due to the height of the building and the size and weight of the structural steel and other elements of the unit. Warehouses No. 1 and 2 should be deconstructed first to facilitate access to the other structures.
- Entanglement: Fire suppression and electrical systems are present, but they are visible and accessible and should not pose significant obstacles to deconstruction. These systems can provide scrap metal value.

- Asbestos and Hazardous Materials: According to field measurements, approximately 4,200 sf of exterior siding that appeared to be asbestos-containing material (ACM) is present on Warehouses No. 1 and 2 (see Photo No. 2); ACM may also be present in the roof coating materials. ACM material should be properly tested and managed accordingly; associated ACM management and disposal costs should be added to the cost of deconstruction. In addition, more than 400 fluorescent light fixtures were also present; light fixtures may be salvaged for scrap metal value, but the associated fluorescent lamps should be removed and disposed of as "universal waste" according to the applicable regulations found in Alabama Department of Environmental management (ADEM) Administrative Code Chapter 335-14-11.
- Materials and Salvage Potential: As noted in the inventory, the percent damaged dimensional lumber and other salvageable material is relatively low. However, some of the dimensional lumber present is painted; based on the age of the buildings, coating materials may be lead-based paint (LBP). Stripping paint from smaller (1x and 2x) pieces will be less cost-effective than stripping larger (greater than 6x) timbers. Proper health and safety precautions and management must be applied for LBP materials.
- Mobilization: The buildings to be deconstructed are in close proximity to each other and readily accessible from local streets. Therefore, mobilizing equipment, workers, roll-off boxes, supplies, and support facilities to the site should not be a problem, and re-mobilization for deconstruction of different buildings should not be necessary.
- Garbage: The garbage observed in the buildings should not be a significant hindrance to the deconstruction process. However, the buildings (particularly the Farmer's Market Area and Warehouse No. 3) are being used for storage of materials associated with ongoing activities at the facility. In addition, shelving units and fiberboard containers that may be salvaged as scrap or reused on site (see below) were present. These materials must be removed prior to deconstruction.
- Labor: Community revitalization goals for the redevelopment project include creation of new jobs during and after redevelopment. Based on the building dimensions, accessibility, and complexity, the portion of hand labor required for the deconstruction is relatively high and could create local unskilled jobs or volunteer opportunities while keeping overall deconstruction costs relatively low. Skilled labor to operate equipment for activities such as concrete removal/crushing and deconstruction of the rooftop air handling units will also be required.

Recommendations for On-Site Reuse

As discussed above, materials such as dimensional lumber and scrap metal could be salvaged for profit. However, the following recommendations for reusing these materials on site as part of the redevelopment project should also be considered:

- Lumber: As noted above, lumber could be sold for salvage at up to $1.50/BF. However, on-site reuse of this material as part of redevelopment efforts will promote sustainability aspects of the project and highlight the site's rich architectural and industrial heritage. Milling and reusing the lumber in an on-site artist studio or carpentry/furniture shop would provide additional job opportunities and may generate additional income for the project. Smaller (less than 2x) lumber, which is of lesser value on the salvage market than larger timbers, would be best used for the

shops or on-site reuse milling. This smaller lumber, particularly the 2x4 framing structure of the Farmer's Market Area, could also be reused for local, low-income housing redevelopment. Lumber with no salvage value or reuse potential could be shredded for use as mulch on site.

- Metal Shelving Units: The metal-framed shelving units (see Photograph No. 3) could provide up to $1,200 in scrap metal value, and the 2x4 lumber shelving slats have some limited salvageable lumber value. However, if dimensional lumber is to be kept on site for milling and reuse as discussed above, these shelving units could be used in the carpentry shop or elsewhere at the site to store lumber (or other materials) prior to reuse. These shelving units could provide more than 14,600 cubic feet (CF) of storage space. Shelving frames or brackets could also be used by local artists as materials for metal sculptures or other artwork.

- Pressed Metal Fascia: Approximately 2,700 sf of pressed metal (likely tin), faux brick fascia was noted on site (see Photograph 4). This material could be refinished and reused on walls or ceilings of the redevelopment to highlight the historical architecture of the mill and promote the sustainability aspects of the project.

- Sliding Doors: One large (approximately 6- by 6-foot) sliding track, wooden door with an interesting pressed metal finish could be reused in the redevelopment rather than salvaging the lumber and metal for relatively little value (see Photograph No. 5). This door is located between Warehouses 4 and 5. Incorporating this and other similar doors into the redevelopment project would highlight the site's architectural and industrial heritage

- Oil Storage and Compressor Tanks: Two large oil storage tanks and several compressor tanks (see Photographs No. 6 and 7) could be sold as scrap metal for approximately $2,700. However, the tanks could also be reused on site as cisterns to collect rainwater for irrigating a community garden at the site, irrigating general site landscaping, or supplying water for other gray water applications. This reuse would allow for more sustainable operation of the facility, reduce site operating costs, and provide an opportunity for public interpretation of these sustainable practices. The tanks could also be used by local artists as material for sculptures or other artwork. Proper cleaning the tanks, particularly the oil storage tanks, would be required before reuse.

- Sprinkler System and Plates: The sprinkler or fire suppression system piping in Warehouses No. 1 through 5 can be salvaged for scrap metal value. However, certain interesting features such as valves and manufacturer or other system identification plates (see Photograph No. 8) could be refinished and reused decoratively in the redevelopment project and to highlight the site history.

- Metal Walkway Grating and Hand Rails: Approximately 350 feet of metal walkway grating and associated handrails from the rooftop air handling unit (see Photograph No. 9) could be salvaged as scrap metal for an approximate value of $600. These items should be considered for on-site reuse in the redevelopment in areas that may require a walkway, such as within the community garden area. On-site reuse would provide an opportunity to further interpret and promote the sustainability aspects of the project.

- Corrugated Metal Sheeting: The walls of the current structure in the Farmer's Market Area contain about 2,000 sf of corrugated metal sheeting. This metal sheeting could be sold as scrap metal for approximately $400. However, the condition of about 1,900 sf of this material is good, such that it could be reused on site as siding or roofing material for a small building or shed. Potential uses for such a building include storage of (1) equipment, mulch, or other supplies for a community garden or other site landscaping activities or (2) other deconstructed building materials to be used on site. The 2x4 framing that currently supports the corrugated metal sheeting, which was a relatively low salvage value, could be used to frame the new building.

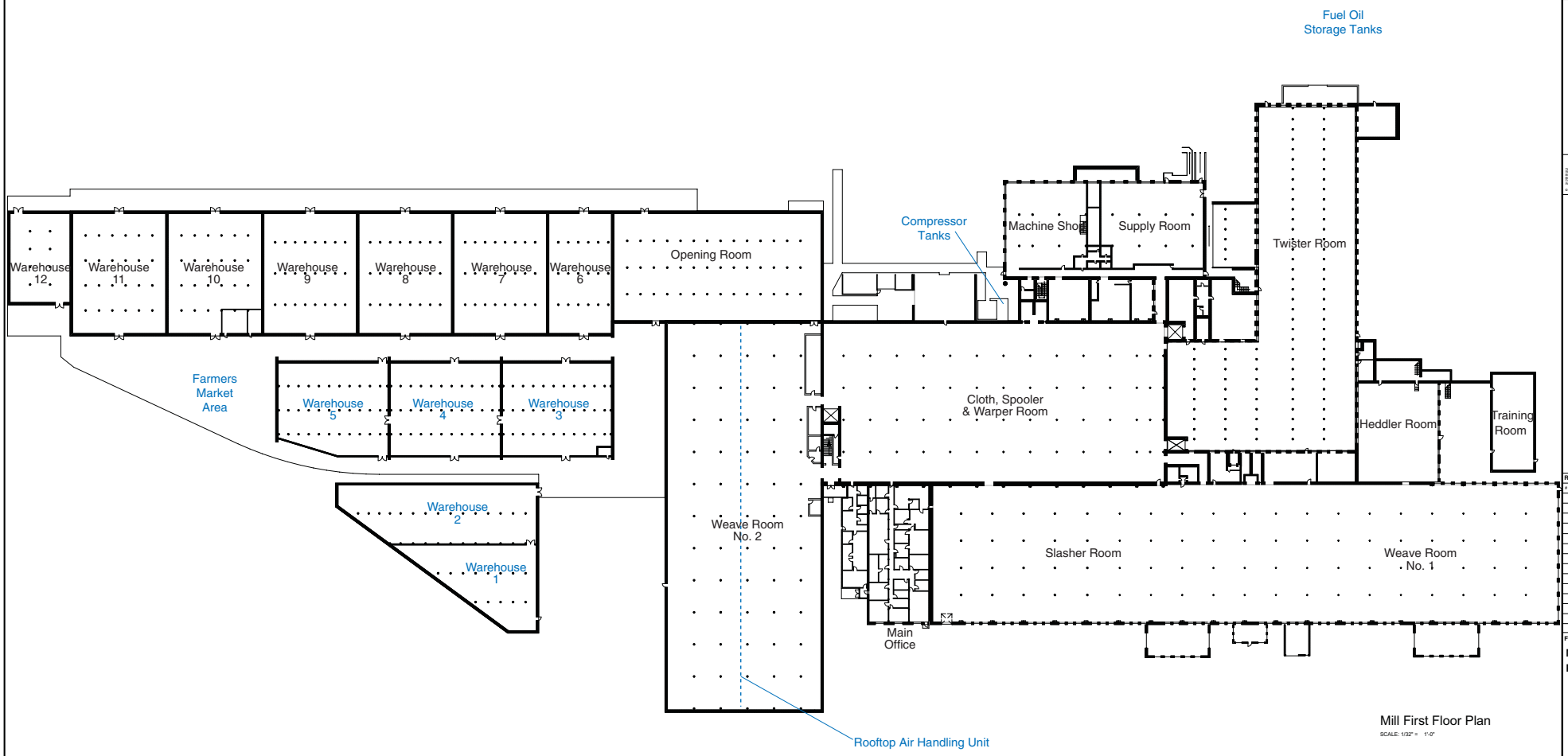
- Storage Containers: Approximately 2,900, 16-inch-diameter by 36-inch tall fiberglass/fiberboard storage containers with metal coils to spring-load the bottoms were observed in Warehouses No. 2 and 5 (see Photograph No. 10). These containers could be sold for reuse or recycled. The approximately 7,400 pounds of steel coils could also be salvaged as scrap metal for an approximate value of $370.
- Concrete: According to field measurements, approximately 2,900 CF of exposed concrete walkways, pilings, floors, and foundation elements exist in Warehouses No. 1 through 5 that could be segregated, and crushed if necessary, for reuse on site use as rip-rap, aggregate, fill, or sub-base for roads, sidewalks, or walking trails. Unexposed sub-floors and foundations that could not be readily observed or measured in the field are not included in the inventory and could significantly increase the quantity of this material available for reuse.
- Brick: According to field measurements and the dimensions and arrangement of bricks in Warehouses No. 1 through 5, approximately 63,100 individual bricks could be salvaged if the walls would be carefully deconstructed and the bricks segregated. If carefully deconstructed, cleaned, and palletized, the bricks could be sold for reuse. The value depends on market demands, but the bricks could sell for $0.25 each or approximately $15,800. However, according to local vendors contacted, current market demand may not allow for sale of the brick. Where structurally appropriate, the bricks could also be reused as part of the on-site redevelopment to recreate the historic architectural masonry of the site or as retaining walls or other decorative structures. The manual labor required to segregate, clean, and palletize the bricks for reuse could create low-skilled jobs or volunteer opportunities for the local community. Brick that cannot be reused on site could also be crushed for reuse on site as material for roads, sidewalks, or walking trails.

The information gathered as part of this inventory can be used for determining whether building materials should be salvaged for re-sale, on-site reuses, or off-site disposal. Based on discussions with local vendors, off-site disposal and transportation may range in price from $20 to $120 per ton of material, depending on the level of transportation or other support needed in removal. Local landfill tipping fees for construction and demolition waste disposal would be about $20 per ton for nonhazardous materials and debris.

Based on discussions with the pilot project partners, Tetra Tech recommends that the decision to reuse, dispose of, or sell deconstructed materials should not be regarded as a simple cost-benefit analysis for this site. Factors such as the potential for job creation and opportunities to enhance and promote sustainability of the redevelopment project should also be considered. Specific items intended for salvage or on-site reuse should be identified in the deconstruction bid package specifications for consideration in the deconstruction contractor's waste management plan.

ATTACHMENT A

SITE LAYOUT



Mill First Floor Plan

SCALE: 1/32" = 1'-0"

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Existing Conditions
Langdale Mill Complex
6000 20th Avenue, Valley Alabama

REVISIONS

DATE	DESCRIPTION

Floor Plans

Mill First Floor Plan

JOB NUMBER
0512

DATE
12/20/2007

SHEET NUMBER
A2.1

ATTACHMENT B

DECONSTRUCTION INVENTORY
LANGDALE MILL, VALLEY, ALABAMA

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 1

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
1	concrete	foundation and flooring	—	610	SF	Unpainted, mostly good condition	—	610	SF	Disposal, on-site reuse	—	
2	concrete	support posts	50, 12" X 12" X 48"	200	SF	Unpainted, mostly good condition	—	200	SF	Disposal, on-site reuse	—	
3	lumber	floor joist	7.5" x 11.5" x 12' 3", actual	3420	BF	Unpainted, mostly good condition, unsalvagable due to water damage	20%	2730	BF	Sell for salvage, on-site reuse	$5,000	
4	lumber	posts	5.5" x 5.5"x 8'4", actual	530	BF	Painted, mostly good condition	0%	530	BF	Sell for salvage, on-site reuse	$795	Possible LBP
5	lumber	wall materials	4" x 8" x 4'	520	BF	Painted	15%	440	BF	Sell for salvage, on-site reuse	$660	Possible LBP
6	lumber	wall materials	2" x 6", various lengths	980	BF	Painted	15%	830	BF	Sell for salvage, on-site reuse	$830	Possible LBP
7	lumber	wall materials	4" x 6" x 7'	1370	BF	Painted	15%	1160	BF	Sell for salvage, on-site reuse	$1,700	Possible LBP
8	lumber	ceiling beam	13" x 8" x 24'	4130	BF	Painted	15%	3510	BF	Sell for salvage, on-site reuse	$5,300	Possible LBP
9	lumber	ceiling materials	3.5" x 8", assumed to be 10' and 12' lengths	8090	BF	Painted	15%	6870	BF	Sell for salvage, on-site reuse	$10,300	Possible LBP
10	lumber	ceiling materials	3.5" x 6", assumed to be 10' and 12' lengths	8090	BF	Painted	15%	6870	BF	Sell for salvage, on-site reuse	$10,300	Possible LBP
11	lumber - plywood	wall materials	Mostly standard size, 4' x 8' x 0.75"	410	SF	Painted	15%	340	SF	Disposal	—	Possible LBP
12	lumber - tongue & groove	floor materials	3.5"x6" mostly 10' in length some 12' lengths, actual	2260	BF	Unpainted, mostly good condition, unsalvagable due to water damage	20%	1800	BF	Sell for salvage, on-site reuse	$2,700	
13	lumber - tongue & groove	floor materials	3.5"x8" mostly 10' in length some 12' lengths, actual	2290	BF	Unpainted, mostly good condition, unsalvagable due to water damage	20%	1830	BF	Sell for salvage, on-site reuse	$2,750	
14	lumber - tongue & groove	wall materials	1" x 6", various lengths	1100	BF	Unpainted, mostly good condition, unsalvagable due to water damage	15%	930	BF	Sell for salvage, on-site reuse	$930	
15	lumber - tongue & groove	wall materials, partition wall between warehouses 1 and 2, listed here only	1" x 6", various lengths	140	BF	Painted, mostly good condition, unsalvagable due to water damage	15%	110	BF	Sell for salvage, on-site reuse	$110	Possible LBP
16	metal	post reinforcement	2" x 0.5" x 30" -49 pieces	120	ft	Painted, mostly good condition	—	120	ft	Sell for scrap metal value	$50	Possible LBP
17	metal	flourescent light fixtures	fixtures fitting 2, 4' bulbs	20	ea	Damaged	—	20	ea	Sell for scrap metal value	$10	
18	metal	flourescent light fixtures	fixtures fitting 4, 4' bulbs	1	ea	Damaged	—	0	ea	Sell for scrap metal value	$1	
19	metal	metal machinery, roller	81" x 81" x 102"	1	ea	Damaged	—	0	ea	Sell for scrap metal value, sell for reuse	Unknown	

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 1

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
20	metal - cast iron	exterior pipes that drain the gutter, warehouses 1 and 2, listed here only	4.5" diameter	80	ft	Unpainted, mostly good condition	—	80	ft	Sell for scrap metal value	$70	
21	metal - cast iron	sprinkler system pipes	1" diameter	70	ft	Unpainted, mostly good condition	—	70	ft	Sell for scrap metal value	$5	Possible LBP
22	metal - cast iron	sprinkler system pipes	1.5" diameter	70	ft	Unpainted, mostly good condition	—	70	ft	Sell for scrap metal value	$5	Possible LBP
23	metal - cast iron	sprinkler system pipes	1.75" diameter	200	ft	Unpainted, mostly good condition	—	200	ft	Sell for scrap metal value	$20	Possible LBP
24	metal - cast iron	sprinkler system pipes	2.5" diameter	140	ft	Unpainted, mostly good condition	—	140	ft	Sell for scrap metal value	$60	Possible LBP
25	metal - cast iron	sprinkler system pipes	4" diameter	110	ft	Unpainted, mostly good condition	—	110	ft	Sell for scrap metal value	$80	Possible LBP
26	metal - cast iron	sprinkler system pipes	6" diameter	10	ft	Unpainted, mostly good condition	—	10	ft	Sell for scrap metal value	$10	Possible LBP
27	metal - galv. steel	gutter, warehouses 1 and 2, listed here only	Runs the perimeter of warehouses 1 and 2, 10" x 6"	520	ft	Unpainted, mostly good condition	—	520	ft	Sell for scrap metal value	$50	
28	metal - galv. steel	electrical conduit pipe	0.75" diameter	2170	ft	Unpainted, mostly good condition	—	2170	ft	Sell for scrap metal value	$50	
29	metal - galv. steel	electrical conduit pipe	2" diameter	60	ft	Unpainted, mostly good condition	—	60	ft	Sell for scrap metal value	$5	
30	other - 6 glass panes and metal framed	window panes	2' x 4'	10	SF	Painted, mostly good condition	0%	10	SF	Disposal, on-site reuse	—	Possible LBP
31	other - foam	ceiling tiles	Area of ceiling covered is 40' N to S, WH1 only	2720	SF	Unsalvagable, Painted	100%	0	SF	Disposal	—	Possible LBP
32	other - masonite	exterior siding, warehouses 1 and 2, listed here only	—	630	SF	Poor Condition, Painted	0%	630	SF	Disposal	—	Possible LBP, Possible ACM
33	other - shingles	exterior siding, warehouses 1 and 2, listed here only	12" x 24" x 0.25"	3600	SF	Variable Condition, many crumbling	20%	2880	SF	Disposal	—	Possible ACM

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.
Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.

[2] Metal values are based on $5.00 per 100 lbs of metal
Bricks are estimated based on $0.25 per brick if cleaned and palletized

LBP Lead-based paint
ACM Asbestos Containing Material
BF Board feet
CF Cubic feet
SF Square feet
ft Linear feet
ea Each

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 2

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
1	brick	foundation	8" x 4" x 2"	250	ea	Variable condition, many crumbling, not able to see exact quantity	__	250	BF	Sell for salvage (if condition permits), on-site reuse	__	
2	concrete	foundation	2, 10'8" x 49' x 4' slabs	170	CF	Unpainted, good condition	__	170	BF	Disposal, on-site reuse	__	
3	concrete	pilings	12" x 12" x 48"	200	CF	Unpainted, good condition	__	200	BF	Disposal, on-site reuse	__	
4	concrete blocks	foundation	Standard size	Unknown	__	Visible blocks in good condition	__	0	BF	Disposal, on-site reuse	__	
5	lumber	floor joist	7.5" x 11.5" x 12' 3", actual	5540	BF	Unpainted, mostly good condition, unsalvagable due to water damage	20%	4430	BF	Sell for salvage, on-site reuse	$6,650	
6	lumber	posts	5.5"x5.5"x8'4", actual	1030	BF	Unpainted, good condition	__	1030	BF	Sell for salvage, on-site reuse	$1,550	
7	lumber	posts	2" x 6" x 8'4" actual	220	BF	Unpainted	15%	180	SF	Sell for salvage, on-site reuse	$180	
8	lumber	wall materials	2" x 6", various lengths	2730	BF	Unpainted	15%	2320	BF	Sell for salvage, on-site reuse	$2,300	
9	lumber	ceiling beams	8" x 13" x 24'	6740	BF	Unpainted	15%	5720	BF	Sell for salvage, on-site reuse	$8,600	
10	lumber	ceiling materials	3.5" x 6", assumed to be 10' and 12' lengths	3460	BF	Painted	15%	2940	BF	Sell for salvage, on-site reuse	$4,400	
11	lumber	ceiling materials	3.5" x 8", assumed to be 10' and 12' lengths	3460	BF	Unpainted	15%	2940	BF	Sell for salvage, on-site reuse	$4,400	
12	lumber	lumber - pallet #5	2" x 4", 4 to 12' lengths	270	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	270	BF	Sell for salvage, on-site reuse	$300	Possible LBP
13	lumber - plywood	wall materials	Mostly standard size, 4' x 8' x 0.75"	550	SF	Painted	15%	460	BF	Disposal	__	Possible LBP
14	lumber - tongue & groove	floor materials	3.5"x8" mostly 10' in length some 12' lengths, actual	25900	BF	Unpainted, mostly good condition, unsalvagable due to water damage	20%	20720	BF	Sell for salvage, on-site reuse	$31,050	
15	lumber - tongue & groove	wall materials	1" x 6", various lengths	1990	BF	Unpainted, mostly good condition, unsalvagable due to water damage	15%	1690	BF	Sell for salvage, on-site reuse	$1,700	
16	lumber - tongue & groove	lumber - pallet #1	1" x 4", 10' to 12' lengths	1580	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	1580	BF	Sell for salvage, on-site reuse	$1,600	Possible LBP
17	lumber - tongue & groove	lumber - pallet #2	1" x 4", 2' to 4' lengths	140	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	140	BF	Sell for salvage, on-site reuse	$140	Possible LBP
18	lumber - tongue & groove	lumber - pallet #3	1" x 4", 2' to 4' lengths	140	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	140	BF	Sell for salvage, on-site reuse	$140	Possible LBP
19	lumber - tongue & groove	lumber - pallet #4	1" x 4", 2' to 4' lengths	150	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	150	BF	Sell for salvage, on-site reuse	$150	Possible LBP
20	lumber - tongue & groove	lumber - pallet #6	1" x 4" x 4'	580	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	580	BF	Sell for salvage, on-site reuse	$600	Possible LBP
21	lumber - tongue & groove	lumber - pallet #7	1" x 4" x , 3' to 8' lengths	590	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	590	BF	Sell for salvage, on-site reuse	$600	Possible LBP
22	lumber - tongue & groove	lumber - pallet #8	1" x 4" x 5'	720	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	720	SF	Sell for salvage, on-site reuse	$700	Possible LBP
23	lumber - tongue & groove	lumber - pallet #9	1" x 4" x 8', (90%) 1" x 4" x 2', (10%)	3150	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	3150	ft	Sell for salvage, on-site reuse	$3,150	Possible LBP

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 2

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
24	lumber - tongue & groove	lumber - pallet #10	1" x 4" average length 6', range 2 to 12' lengths	790	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	790	ea	Sell for salvage, on-site reuse	$800	Possible LBP
25	lumber - tongue & groove	lumber - pallet #11	1" x 4" x 8',(ave length), range 6 to 10'	580	BF	Painted and unpainted, mostly good condition, likely former interior wall	0%	580	ea	Sell for salvage, on-site reuse	$600	Possible LBP
26	lumber (no notes on tongue in groove)	floor materials	1"x4", unknown lengths due to excessive debris	490	BF	Unpainted, mostly good condition, unsalvagable due to water damage	20%	390	ft	Sell for salvage, on-site reuse	$400	
27	lumber finished (quantity not available)	floor materials	1"x10", unknown lengths due to excessive debris	0	ft	Unpainted, unsalvagable due to water damage	0%	0	ft	Disposal, on-site reuse	$0	
28	metal	floor materials	4' x 8' x 0.25" -10 plates	320	SF	Unpainted, good condition	—	320	ft	Sell for scrap metal value	$140	
29	metal	post reinforcement	0.5" x 2" x 30" -200 pieces	500	ft	Unpainted, mostly good condition	—	500	ft	Sell for scrap metal value	$200	
30	metal	flourescent light fixtures	fixtures fitting 2, 4' bulbs	50	ea	Mostly damaged	—	50	ft	Sell for scrap metal value	$25	
31	metal	flourescent light fixtures	fixtures fitting 4, 4' bulbs	2	ea	Mostly damaged	—	0	ft	Sell for scrap metal value	$1	
32	metal - cast iron	exterior pipes that drain the gutter	3 pipes 12' in length and 3.5" diameter	30	ft	Unpainted	—	30	ft	Sell for scrap metal value	$20	
33	metal - cast iron	sprinkler system pipes	1" diameter	580	ft	Unpainted, mostly good condition	—	580	ft	Sell for scrap metal value	$30	
34	metal - cast iron	sprinkler system pipes	1.75" diameter	150	ft	Unpainted, mostly good condition	—	150	ea	Sell for scrap metal value	$20	
35	metal - cast iron	sprinkler system pipes	4" diameter	180	ft	Unpainted, mostly good condition	—	180	ea	Sell for scrap metal value	$130	
36	metal - cast iron	sprinkler system pipes	1.5" diameter	50	ft	Unpainted, mostly good condition	—	50	ft	Sell for scrap metal value	$5	
37	metal - galv. steel	exterior pipes that drain the gutter	3 pipes 12' in length and 3.5" diameter	30	ft	Unpainted, good condition	—	30	ft	Sell for scrap metal value	$20	
38	metal flashing	ceiling materials	13" x 0.25"	60	ft	Unpainted, mostly good condition	—	60	ft	Sell for scrap metal value	$30	
39	metal galv. steel	electrical conduit pipe	0.75" diameter	1570	ft	Unpainted, mostly good condition	—	1570	ft	Sell for scrap metal value	$40	
40	other	flourescent light bulbs	4'	90	ea	Used		90	ea	Disposal		Universal Waste
41	other - fiber board cotton barrels	mill materials	15" diameter 36" tall	400	ea	~50% in good shape, many full of cotton, may have wire coils	50%	200	ea	Sell for reuse, disposal	—	

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.
Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.

[2] Metal values are based on $5.00 per 100 lbs of metal
Bricks are estimated based on $0.25 per brick if cleaned and palletized

LBP Lead-based paint
BF Board feet
CF Cubic feet
SF Square feet
ft Linear feet
ea Each

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 3

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
1	brick	foundation	2" x 4" x 8"	8960	ea	Variable condition, many crumbling	35%	5820	ea	Sell for salvage, on-site reuse	$1,460	
2	brick	wall materials	2" x 4" x 8"	24010	ea	Variable condition, many crumbling	35%	15600	ea	Sell for salvage, on-site reuse	$3,900	
3	concrete	floors	—	340	CF	Unpainted, good condition	—	340	CF	Disposal, on-site reuse	—	
4	concrete	walkway and pilings	—	1400	CF	Unpainted, good condition	—	1400	CF	Disposal, on-site reuse	—	
5	lumber	exterior wall materials	2" x 8", 8 to 11' lengths	350	BF	Painted, good condition	10%	310	BF	Sell for salvage, on-site reuse	$310	Possible LBP
6	lumber	floor materials	1" x 8" x 8 to 16' lengths	6160	BF	Unpainted, good condition, worn, no rot	10%	5540	BF	Sell for salvage, on-site reuse	$5,540	
7	lumber	floor materials	1" x 4", no visible lengths	1510	BF	Unpainted, good condition, worn, no rot	10%	1350	BF	Sell for salvage, on-site reuse	$1,350	
8	lumber	ceiling beams	2" x 12" x 18' (average) range of 16 to 20'	6840	BF	Unpainted, good condition	15%	5810	BF	Sell for salvage, on-site reuse	$5,800	
9	lumber	ceiling materials	2" x 12", visible lengths are 16'	14400	BF	Unpainted, good condition	15%	12240	BF	Sell for salvage, on-site reuse	$12,240	
10	lumber	ceiling materials	1" x 8" no visible lengths	7200	BF	Unpainted, good condition	15%	6120	BF	Sell for salvage, on-site reuse	$6,120	
11	lumber	posts	6" x 6", 8.5' length in center row of building, 7.5' on two outer rows	710	BF	Unpainted, good condition, worn, no rot	5%	670	BF	Sell for salvage, on-site reuse	$1,000	
12	lumber	wall materials	2" x 6" x 7.5'	140	BF	Unpainted, good condition	5%	130	BF	Sell for salvage, on-site reuse	$130	
13	lumber	wall posts	4" x 8" x 6.5'	190	BF	Unpainted, good condition	5%	180	BF	Sell for salvage, on-site reuse	$270	
14	lumber	wall materials	1" x 7.5', 9 to 12" widths	630	BF	Unpainted, good condition	5%	590	BF	Sell for salvage, on-site reuse	$600	
15	lumber	wall materials	2" x 6", varying lengths	80	BF	Unpainted, good condition	5%	70	BF	Sell for salvage, on-site reuse	$70	
16	lumber	wall materials	2" x 4", varying lengths	60	BF	Unpainted, good condition	5%	50	BF	Sell for salvage, on-site reuse	$50	
17	lumber	stored lumber	3" x 8" x 16'	190	BF	Unpainted, good condition	5%	180	BF	Sell for salvage, on-site reuse	$270	
18	lumber	shelving unit inserts	2' x 4" x 36" (280 slats)	560	BF	Unpainted, mostly good condition	0%	560	BF	Sell for salvage, on-site reuse	$840	
19	lumber - plywood	break room walls	4' x 8'	1060	SF	Painted, mostly good condition	0%	1060	SF	Disposal	—	Possible LBP
20	lumber - tongue & groove	exterior wall materials	1" x 5" x 9'	310	BF	Painted, good condition	10%	270	BF	Sell for salvage, on-site reuse	$270	Possible LBP
21	lumber - tongue & groove	wall materials	1" x 6" x 7.5'	630	BF	Unpainted, good condition	5%	590	BF	Sell for salvage, on-site reuse	$600	
22	metal	flourescent light fixtures	fixtures fitting 2, 4' bulbs	50	ea	Mostly damaged	—	50	ea	Sell for scrap metal value	$25	
23	metal	shelving unit	58" x 36" x 6' -10 units	730	ft	Unpainted, mostly good condition	—	730	ft	Sell for scrap metal value, on-site reuse	$110	
24	metal - cast iron	exterior pipes that drain the gutter	6" diameter	50	ft	Painted, mostly good condition	—	50	ft	Sell for scrap metal value	$50	Possible LBP
25	metal - cast iron	sprinkler system pipes	1" diameter	80	ft	Painted, mostly good condition	—	80	ft	Sell for scrap metal value	$5	Possible LBP
26	metal - cast iron	sprinkler system pipes	2" diameter	1200	ft	Painted, mostly good condition	—	1200	ft	Sell for scrap metal value	$160	Possible LBP
27	metal - cast iron	sprinkler system pipes	2.5" diameter	270	ft	Painted, mostly good condition	—	270	ft	Sell for scrap metal value	$60	Possible LBP

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 3

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
28	metal - cast iron	sprinkler system pipes	3.5" diameter	30	ft	Painted, mostly good condition	—	30	ft	Sell for scrap metal value	$20	Possible LBP
29	metal - cast iron	sprinkler system pipes	4.5" diameter	270	ft	Painted, mostly good condition	—	270	ft	Sell for scrap metal value	$225	Possible LBP
30	metal - cast iron	sprinkler system pipes	7" diameter	10	ft	Painted, mostly good condition	—	10	ft	Sell for scrap metal value	$15	Possible LBP
31	metal - cast iron	sprinkler system pipes	6" diameter	40	ft	Painted, mostly good condition	—	40	ft	Sell for scrap metal value	$40	Possible LBP
32	metal - diamond plate steel sheet	floor materials	4' x 8' x 0.25"- 100 plates	3200	SF	Unpainted, good condition	—	3200	SF	Sell for scrap metal value	$1,400	
33	metal - galvanized steel	gutter on eastern exterior walls of WH 3,4, and 5	6" x 10"	270	ft	Unpainted	—	270	ft	Sell for scrap metal value	$20	
34	metal - galvanized steel	electrical conduit pipe	2" diameter	260	ft	Unpainted, mostly good condition	—	260	ft	Sell for scrap metal value	$20	
35	metal - galvanized steel	electrical conduit pipe	1" diameter	880	ft	Unpainted, mostly good condition	—	880	ft	Sell for scrap metal value	$45	
36	other - fiber board ceiling tiles	break room ceiling materials	2' x 3'	340	SF	Approx. 56 tiles, mostly good condition	—	340	SF	Disposal	—	
37	other - pressed tin, brick shape pattern	exterior/interior siding, western wall of WH 3, 4, and 5.	panels in various shapes	1240	SF	Painted, good condition	10%	1110	SF	onsite reuse, or sell for reuse	—	Possible LBP
38	other	flourescent light bulbs	4'	100	ea	Used	—	100	ea	Disposal	—	Universal waste

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.

[2] Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.
Metal values are based on $5.00 per 100 lbs of metal
Bricks are estimated based on $0.25 per brick if cleaned and palletized

LBP Lead-based paint
CF Cubic Feet
SF Square feet
ft Linear feet
ea Each

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 4

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
1	brick	wall materials	2" x 4" x 8"	45840	ea	Variable condition, many crumbling	35%	29790	ea	Sell for salvage, on-site reuse	$7,450	
2	brick	foundation	2" x 4" x 8"	8960	ea	Variable condition, many crumbling	35%	5820	ea	Sell for salvage, on-site reuse	$1,450	
3	concrete	walkways	—	included in warehouse 3	—	—	—	—	—	Disposal, on-site reuse	—	
4	lumber	wall materials, eastern wall	1" x 7.5" x 8'	570	BF	Unpainted, good condition 640 (minus 67.5 for opening)	5%	540	BF	Sell for salvage, on-site reuse	$540	
5	lumber	wall materials	2" x 7", 8 to 11' lengths	80	BF	Unpainted, good condition	5%	70	BF	Sell for salvage, on-site reuse	$70	
6	lumber	wall materials	plywood, various sizes	190	SF	Unpainted, good condition	5%	180	SF	Disposal	—	
7	lumber	floor materials	1" x 8" x 8 to 16' lengths	6330	BF	Unpainted, good condition, worn, no rot	5%	6010	BF	Sell for salvage, on-site reuse	$6,000	
8	lumber	floor materials	1" x 4", no visible lengths	1840	BF	Unpainted, good condition, worn, no rot	5%	1740	BF	Sell for salvage, on-site reuse	$1,750	
9	lumber	wall materials	1" x widths range 9 to 12" x 7.5'	540	BF	Unpainted, good condition, worn, no rot	5%	510	BF	Sell for salvage, on-site reuse	$500	
10	lumber	wall materials/ vertical and horizontal studs	4" x 4" x 8'	370	BF	Unpainted, good condition, worn, no rot	5%	350	BF	Sell for salvage, on-site reuse	$525	
11	lumber	wall materials/ support post on exterior wall	4" x 8" x 7' 6"	320	BF	Unpainted, good condition, worn, no rot	0%	320	BF	Sell for salvage, on-site reuse	$480	
12	lumber	ceiling beams	2" x 12" x 18' (average) range of 16 to 20'	160	BF	Unpainted, good condition	15%	130	BF	Sell for salvage, on-site reuse	$130	
13	lumber	ceiling materials	2" x 12", visible lengths are 16'	12800	BF	Unpainted, good condition	15%	10880	BF	Sell for salvage, on-site reuse	$10,900	
14	lumber	ceiling materials	1" x 8" no visible lengths	6400	BF	Unpainted, good condition	15%	5440	BF	Sell for salvage, on-site reuse	$5,440	
15	lumber	posts	6" x 6" x 8.5' length in center row of building,	180	BF	Unpainted, good condition, worn, no rot	5%	170	BF	Sell for salvage, on-site reuse	$250	
16	lumber	posts	6" x 6" x 7.5' on two outer rows	320	BF	Unpainted, good condition, worn, no rot	5%	300	BF	Sell for salvage, on-site reuse	$450	
17	lumber	shelving unit inserts	2' x 4" x 36"	2520	BF	Unpainted, mostly good condition- 2 bd ft per slat	0%	2520	BF	Sell for salvage, on-site reuse	$3,800	
18	lumber	shelving unit inserts	2' x 4" x 61"	3829	BF	Unpainted, mostly good condition - 3.39 board ft per slat	0%	3820	BF	Sell for salvage, on-site reuse	$5,700	
19	lumber	shelving unit inserts	2' x 4" x 97"	1455	BF	Unpainted, mostly good condition - 5.39 board ft per slat	0%	1450	BF	Sell for salvage, on-site reuse	$2,200	
20	metal	flourescent light fixtures	fixtures fitting 2, 4' bulbs	40	ea	Mostly damaged	—	40	ea	Sell for scrap metal value	$20	
21	metal	shelving unit	58" x 36" x 6' (3 shelves per) 10 ea	730	ft	Unpainted, mostly good condition	—	730	ft	Sell for scrap metal value, on-site reuse	$110	
22	metal	shelving unit	68" x 36" x 6' (3 shelves) 35 ea	2680	ft	Unpainted, mostly good condition	—	2680	ft	Sell for scrap metal value, on-site reuse	$410	

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 4

Item No.	Building Materials			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
23	metal	shelving unit	68" x 61" x 6' (3 shelves per) 19 ea	1700	ft	Unpainted, mostly good condition	—	1700	ft	Sell for scrap metal value, on-site reuse	$260	
24	metal	shelving unit	68" x 97" x 6' (3 shelves per) 14 ea	1500	ft	Unpainted, mostly good condition	—	1500	ft	Sell for scrap metal value, on-site reuse	$230	
25	metal	shelving unit	84" x 61" x 6' (4 shelves per) 9 ea	1050	ft	Unpainted, mostly good condition	—	1050	ft	Sell for scrap metal value, on-site reuse	$160	
26	metal - cast iron	exterior pipes that drain the gutter	6" diameter (7' each)	30	ft	Unpainted, mostly good condition	—	30	ft	Sell for scrap metal value	$30	
27	metal - cast iron	sprinkler system pipes	2" diameter	930	ft	Painted, mostly good condition	—	930	ft	Sell for scrap metal value	$130	Possible LBP
28	metal - cast iron	sprinkler system pipes	4.5" diameter	10	ft	Painted, mostly good condition	—	10	ft	Sell for scrap metal value	$10	Possible LBP
29	metal - cast iron	sprinkler system pipes	3.5" diameter	30	ft	Painted, mostly good condition	—	30	ft	Sell for scrap metal value	$20	Possible LBP
30	metal - diamond plate steel sheet	floor materials	3, 3.5' x 6' x 0.25"	20	SF	Unpainted, good condition	—	20	SF	Sell for scrap metal value, on-site reuse	$10	
31	metal - galv. Steel	electrical conduit pipe	1" diameter	800	ft	Unpainted, mostly good condition	—	800	ft	Sell for scrap metal value	$30	
32	metal - galv. Steel	electrical conduit pipe	2" diameter	320	ft	Unpainted, mostly good condition	—	320	ft	Sell for scrap metal value	$25	
33	other	flourescent light bulbs	4'	80	ea	Used	—	80	ea	Disposal	—	Universal Waste
34	other - pressed tin, brick shape pattern	exterior wall siding	panels in various shapes	330	SF	Painted, mostly good condition. 400 minus 67.5 sq. ft. for opening	10%	290	SF	sell for reuse, or on-site reuse	varies	Possible LBP

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.
Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.

[2] Metal values are based on $5.00 per 100 lbs of metal
Bricks are estimated based on $0.25 per brick if cleaned and palletized

LBP Lead-based paint
SF Square feet
ft Linear feet
ea Each

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 5

Item No.	Building Material			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
1	brick	foundation	2" x 4" x 8"	8960	ea	Variable condition, many crumbling	35%	5820	ea	Sell for salvage, onsite reuse	$1,450	
2	concrete	walkways	—	included in warehouse 3	—	—	—	—	—	Disposal, on-site reuse	—	
3	lumber	wall materials	1" x 7', widths range 9.5 to 11", average width 9.5"	650	BF	Painted, good condition	10%	580	BF	Sell for salvage, onsite reuse	$580	Possible LBP
4	lumber	wall materials	1" x 7.5', widths range 9.5 to 11", average width 9.5"	650	BF	Painted, good condition	10%	580	BF	Sell for salvage, onsite reuse	$580	Possible LBP
5	lumber	wall materials	2" x 4" actual	680	BF	Painted, good condition	10%	610	BF	Sell for salvage, onsite reuse	$610	Possible LBP
6	lumber	wall materials	4" x 4" actual	120	BF	Painted, good condition	10%	100	BF	Sell for salvage, onsite reuse	$150	Possible LBP
7	lumber	wall materials	1" x 6" actual	80	BF	Painted, good condition	10%	70	BF	Sell for salvage, onsite reuse	$70	Possible LBP
8	lumber	wall materials	2" x 7", 8 to 11' lengths	110	BF	Unpainted, good condition	5%	100	BF	Sell for salvage, onsite reuse	$100	
9	lumber	posts	6" x 6", 8.5' length in center row of building, 7.5' on two outer rows	810	BF	Unpainted, good condition, worn, no rot	5%	760	BF	Sell for salvage, onsite reuse	$1,140	
10	lumber	ceiling beams	2" x 12" x 18' (average) range of 16 to 20'	6000	BF	Unpainted, good condition	5%	5700	BF	Sell for salvage, onsite reuse	$5,700	
11	lumber	ceiling materials	2" x 12", visible lengths are 16'	1070	BF	Unpainted, good condition	5%	1010	BF	Sell for salvage, onsite reuse	$1,000	
12	lumber	ceiling materials	1" x 8" no visible lengths	530	BF	Unpainted, good condition	5%	500	BF	Sell for salvage, onsite reuse	$500	
13	lumber	floor materials	1" x 8" x 8 to 16' lengths	8000	BF	Unpainted, good condition	10%	7200	BF	Sell for salvage, onsite reuse	$7,200	
14	lumber	floor materials	1" x 4", no visible lengths	2220	BF	Visible portions show 10% damaged	10%	1990	BF	Sell for salvage, onsite reuse	$2,000	
15	metal	door	6' x 6' hollow (0.25" each plate)	70	SF	Good condition	—	1	SF	Sell for scrap metal value, onsite reuse	$40	
16	metal	flourescent light fixtures	fixtures fitting 2, 4' bulbs	50	ea	Mostly damaged	—	50	ea	Sell for scrap metal value	$25	
17	metal - cast iron	sprinkler system pipes	1" diameter	1140	ft	Painted, mostly good condition	—	1140	ft	Sell for scrap metal value	$65	Possible LBP
18	metal - cast iron	sprinkler system pipes	2" diameter	70	ft	Painted, mostly good condition	—	70	ft	Sell for scrap metal value	$10	Possible LBP
19	metal - cast iron	sprinkler system pipes	3.5" diameter	10	ft	Painted, mostly good condition	—	10	ft	Sell for scrap metal value	$10	Possible LBP
20	metal - cast iron	sprinkler system pipes	7" diameter	10	ft	Painted, mostly good condition	—	10	ft	Sell for scrap metal value	$20	Possible LBP
21	metal - cast iron	sprinkler system pipes	3.5" diameter	30	ft	Painted, mostly good condition	—	30	ft	Sell for scrap metal value	$20	Possible LBP
22	metal - diamond plate steel sheet	floor materials	4' x 8' x 0.25", 26 sheets, as many as 78 beneath stored materials. used average	1000	SF	Unpainted, good condition	10%	900	SF	Sell for scrap metal value	$400	

Deconstruction Inventory
Langdale Mill, Valley, AL
Warehouse No. 5

Item No.	Building Material			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]	Regulatory Considerations
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options		
23	metal - galv. steel	electrical conduit pipe	1" diameter	1300	ft	Unpainted, mostly good condition	—	1300	ft	Sell for scrap metal value	$40	
24	metal - galv. steel	electrical conduit pipe	2" diameter	100	ft	Unpainted, mostly good condition	—	100	ft	Sell for scrap metal value	$10	
25	metal wire coil inserts	mill materials	31.4' x 3/16" -2000 ea	62800	ft	Cotton barrel wire coil inserts	5%	59660	ft	Sell for reuse, sell for scrap metal value	$280	
26	other	flourescent light bulbs	4'	210	ea	Used	—	210	ea	Disposal	—	Universal Waste
27	other - cotton barrels	mill materials	15" diameter 36" tall	2500	ea	many have wire coils	5%	2370	ea	Sell for reuse, disposal	—	
28	other - pressed tin, brick shape pattern	exterior wall siding	panels in various shapes	1440	SF	Painted, mostly good condition. Minus doorway space	10%	1290	SF	Sell for reuse, onsite reuse	Varies	Possible LBP

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.

[2] Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.
Metal values are based on $5.00 per 100 lbs of metal
Bricks are estimated based on $0.25 per brick if cleaned and palletized

LBP Lead-based paint
BF Board feet
SF Square feet
ft Linear feet
ea Each

Deconstruction Inventory
Langdale Mill, Valley, AL
Compressor and Fuel Oil Storage Tank Areas

Item No.	Building Material			Quantity	Reuse, Salvage, Disposal Options			Potential Value[2]	Regulatory Considerations[3]
	Material	Elements	Dimensions	Quantity (each)	Description/ Condition	Estimated Percent Damage[1]	Options		
1	metal	tank* #4	12.'7' circumference, 11' height, 0.5" thickness	1	Compressed gas tank	—	Sell for scrap metal value, on-site reuse	$170	Decontaminate as necessary
2	metal	tank* #5	12.'7' circumference, 11' height, 0.25" thickness	1	Compressed gas tank	—	Sell for scrap metal value, on-site reuse	$85	Decontaminate as necessary
3	metal	tank* #1	11' circumference, 9.5' height, 0.25" thickness	1	Compressed gas tank	—	Sell for scrap metal value, on-site reuse	$65	Decontaminate as necessary
4	metal	tank* #6	12.7' circumference, 12.5' height, 0.5" thickness	1	Compressed gas tank	—	Sell for scrap metal value, on-site reuse	$190	Decontaminate as necessary
5	metal	tank* #2	11' circumference, 9' height, 0.5" thickness	1	Compressed gas tank	—	Sell for scrap metal value, on-site reuse	$120	Decontaminate as necessary
6	metal	tank* #3	8' circumference, 6.5' height, 0.25" thickness	1	Compressed gas tank	—	Sell for scrap metal value, on-site reuse	$30	Decontaminate as necessary
7	metal	storage tank* #1	15000 gal, 31' length	1	Empty #6 fuel oil AST	—	Sell for scrap metal value, on-site reuse	$1,020	Decontaminate as necessary
8	metal	storage tank* #2	15000 gal, 31' length	1	Empty #6 fuel oil AST	—	Sell for scrap metal value, on-site reuse	$1,020	Decontaminate as necessary

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.
Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.

[2] Metal values are based on $5.00 per 100 lbs of metal.
Bricks are estimated based on $0.25 per brick if cleaned and palletized.

[3] Follow applicable ADEM regulations for decontaminating tanks prior to reuse.

Deconstruction Inventory
Langdale Mill, Valley AL
Farmer's Market Area

Item No.	Building Material			Quantity		Reuse, Salvage, Disposal Options					Potential Value[2]
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Estimated Percent Damage[1]	Estimated Quantity for reuse or salvage	Units	Options	
1	lumber	wall studs	2" x 4" x 10'	1340	BF	relatively new and mostly in good shape	5%	1270	BF	Sell for salvage, on-site reuse	$1,270
2	lumber	loose	2" x 9" x ~20'	30	BF	two boards	0%	30	BF	Sell for salvage, on-site reuse	$30
3	metal - corrugated sheeting	exterior wall materials	200' x 10'	2000	SF	relatively new and mostly in good shape	5%	1900	SF	Sell for scrap metal value, on-site reuse	$420
4	metal flashing	exterior wall materials	10" wide	140	SF	relatively new and mostly in good shape	5%	130	SF	Sell for scrap metal value, on-site reuse	$70
5	metal channel beam	door frame	6.5" x 10'	1	ea	good	__	1	ea	Sell for scrap metal value	$10
6	metal channel beam	door frame	6.5" x 8'	2	ea	good	__	2	ea	Sell for scrap metal value	$10

Notes:

[1] "Estimated Percent Damage" provided for salvagable materials (lumber, brick, etc.) only. Based on field observations where possible.
Lumber value was estimated by an average of $1.00 per board foot for anything less than 2x boards and $1.50 per board foot for anything over 2x boards.

[2] Metal values are based on $5.00 per 100 lbs of metal
Bricks are estimated based on $0.25 per brick if cleaned and palletized

BF Board feet
SF Square feet
ea Each

Deconstruction Inventory
Langdale Mill, Valley, AL
Rooftop Air Handling Unit on Top of Weave Room No. 2

Item No.	Building Material			Quantity		Reuse, Salvage, Disposal Options		Potential Value*
	Material	Elements	Dimensions	Estimated Quantity	Units	Description/ Condition	Options	
1	metal	air handling units	150" x 50'	2	ea	good	Sell for scrap metal value, sell for reuse	—
2	metal	walkway grate	325' x 5' x 9", 1625 sqft @ 5lbs/sqft	1630	SF	metal walkway	Sell for scrap metal value, on-site reuse	$400
3	metal	hand rail segments	2" diameter x 4' x 7'. 1/8 in thickness	1100	ft	hollow pipes	Sell for scrap metal value, onsite reuse	$200
4	metal	walkway support posts	3" x 3" x 5'	30	ea	supports elevated walkway	Sell for scrap metal value, sell for reuse	$50
5	metal	walkway support posts	4" x 4" x 5'	30	ea	supports elevated walkway	Sell for scrap metal value, sell for reuse	$50
6	metal	walkway hand rail L braces	8" wide, 4 ' long	70	ea	supports the posts of the hand rails	Sell for scrap metal value	$100
7	metal	various supports	various sizes	—	—	—	Sell for scrap metal value	—
8	metal - carbon steel	I - beams	25 ft of 6W	120	ft	walkway support	Sell for scrap metal value, sell for reuse	$20
9	metal - carbon steel	I - beams	17 ft of 12W (16 pieces)	2800	ft	walkway support	Sell for scrap metal value, sell for reuse	$963
10	metal - carbon steel	I - beams	275' of 12W (2 pieces)	550	ft	walkway support	Sell for scrap metal value, sell for reuse	$490
11	metal - carbon steel	I - beams	12.5' of 12W (12 pieces)	150	ft	walkway support	Sell for scrap metal value, sell for reuse	$263
12	metal - carbon steel	I - beams	230 ft of 14W	230 ft	ft	walkway support	Sell for scrap metal value, sell for reuse	$500
13	metal - carbon steel	I - beams	25 ft of 4W	330	ft	walkway support	Sell for scrap metal value, sell for reuse	$90
14	metal - cast iron	pipes	4" diameter, 205'	210	ft	not insulated	Sell for scrap metal value	$150
15	metal - cast iron	pipes	4.5" diameter, 255'	300	ft	not insulated	Sell for scrap metal value	$210
16	metal - cast iron	pipes	3" diameter, 20'	20	ft	not insulated	Sell for scrap metal value	$10
17	metal - cast iron	pipes	3.5" diameter, 280'	280	ft	Insulated, insulation generally styrofoam	Sell for scrap metal value	$170
18	metal - cast iron	pipes	6.5" diameter, 260'	200	ft	Insulated, insulation generally styrofoam	Sell for scrap metal value	$250
19	metal - cast iron	pipes	9" diameter, 205'	200	ft	Insulated, insulation generally styrofoam	Sell for scrap metal value	$500
20	metal - cast iron	pipes	3.5" diameter, 275'	280	ft	Insulated, insulation generally styrofoam	Sell for scrap metal value	$170
21	metal - cast iron	pipes	4" diameter, 245'	250	ft	Insulated, insulation generally styrofoam	Sell for scrap metal value	$185
22	metal - galv. steel	conduit	1" diameter	280	ft	electrical conduit	Sell for scrap metal value	$10
23	metal	50 Gal. hot water heater	50 gals	1	ea	unknown	Sell for scrap metal value	$10

Notes:

Lumber value was estimated by an average of $1.00

* Metal values are based on $5.00 per 100 lbs of
Bricks are estimated based on $0.25 per brick if

SF Square Feet
ft Feet
ea Each

ATTACHMENT C
PHOTOGRAPHIC LOG

Photograph No. 1: Rooftop air handling units and associated steel support structure above Weave Room No. 2.

Photograph No. 2: Possible asbestos containing material (ACM) shingles on exterior of Warehouse No. 1.

Photograph No. 3: Typical metal shelving unit in Warehouse No. 4.

Photograph No. 4: Pressed metal, faux brick fascia on wall of Warehouse No. 4.

Photograph No. 5: Typical sliding track, wooden doors with pressed metal finish in Warehouse No. 5.

Photograph No. 6: Compressor tanks.

Photograph No. 7: Fuel oil storage tanks.

Photograph No. 8: Sprinkler system inspector test plate.

Photograph No. 9: Metal walkway grating and associated handrails of the rooftop air handling unit above Weave Room No. 2.

Photograph No. 10: Fiberglass/fiberboard storage containers with metal coils in Warehouse No. 5.

ATTACHMENT D

INVENTORY QUANTITY CALCULATION TOOLS AND RESOURCES

In addition to field measurements and observations, the following on-line and other resources were used to calculate quantities of materials for the deconstruction inventory:

Piping and Other Metal

American Institute of Steel Construction, Inc. 2007. *Steel Construction Manual.* Thirteenth Edition

Cast Iron Pipe Weight Standards
http://www.gizmology.net/pipe.htm

Electrical Conduit Weight Standards
http://www.steelconduit.com/docs/EMTspecs.pdf

Metal Weights Calculator
http://www.bostoncenterless.com/weightcalc.htm
http://www.steelforge.com/steelweights.htm

Saginaw Pipe: Steel Reference Handbook
http://www.saginawpipe.com/Sheets.pdf
http://www.saginawpipe.com/Plates.pdf

Brick

http://www.mc2-ice.com/support/estref/popular_conversion_files/masonry/brick.htm