Demolition/Relocation Requirements
Unit 1

1.0 Introduction

The purpose of this description is to describe the conceptual demolition and/or relocation requirements of the Ghent Plant existing site structures. The description covers, in general, the work involving the major items to be demolished or relocated. The following demolitions/relocations activities are listed in the sequential order they will be performed. In addition, it is expected that numerous small individual components, such as stairs, ladders, ductwork sections, ground slabs, etc., will require demolition and/or relocation to complete the works included in the scope of the Phase II AQC study. The specific impact on any one existing structure cannot be determined until the new equipment and structures have been procured and designed. Therefore, actual demolition/relocation requirements, including order of activities, will be determined during detailed design.

2.0 Requirements

There are no major demolitions or relocations required for Ghent Unit 1. The Unit 2 Cooling Tower Electrical Building lies within the footprint of the PJFF support structures proposed for Unit 1. It is intended that the PJFF support structures be erected around the Electrical Building and that no modifications or relocations will be required to that building.

Demolition/Relocation Requirements
Unit 2

1.0 Introduction

The purpose of this description is to describe the conceptual demolition and/or relocation requirements of the Ghent Plant existing site structures. The description covers, in general, the work involving the major items to be demolished or relocated. The following demolition/relocation activities are listed in the sequential order they will be preformed. In addition, it is expected that numerous small individual components, such as stairs, ladders, ductwork sections, ground slabs, etc., will require demolition and/or relocation to complete the work included in the scope of the Phase II AQC study. The specific impact on any one existing structure cannot be determined until the new equipment and structures have been procured and designed. Therefore, actual demolition/relocation requirements, including the sequence of execution, will be determined during detailed design.

2.0 Requirements

2.1 Duct Bypass

A section of the existing duct downstream of the air heaters will be bypassed for the installation of the pulse jet fabric filter (PJFF). The bypassed ductwork will be removed as required to allow installation of the PJFFs, booster fans, and associated ductwork.

2.2 Common Unit 1/Unit 2 Fly Ash Handling Facility

At the time of this report, a Fly Ash Handling Facility serving both Units 1 and 2 is under design and is expected to be in place and operational by the time of the Phase II AQCS modifications. This facility is located within the footprint of the PJFF support structure and adjacent to the ductwork to be bypassed and removed. It is intended that the "existing" Fly Ash Handling Facility will be accommodated by the foundation of the proposed PJFF support structure and the structure be erected around the facility. No significant modifications or demolition of the Fly Ash Handling Facility are intended.

2.3 Unit 3 WFGD High Voltage Overhead Power Lines and Transformers

For construction of the Unit 2 west SCR reactor, the Unit 3 WFGD high voltage overhead power lines will need to be relocated. It is currently expected that the Unit 3 WFGD transformers will not require relocation to accomplish relocation of the lines; however, this must be confirmed during detail design. Accordingly, only relocation of the overhead power lines is included in the basis of the cost estimate.

Demolition/Relocation Requirements
Unit 3

1.0 Introduction

The purpose of this description is to describe the conceptual demolition and/or relocation requirements of the Ghent Plant existing site structures. The description covers, in general, the work involving the major items to demolished or relocated. The following demolitions/relocations activities are listed in the sequential order they will be preformed. In addition, it is expected that numerous small individual components, such as stairs, ladders, ductwork sections, ground slabs, etc., will require demolition and/or relocation to complete the work included in the scope of the Phase II AQC study. The specific impact on any one existing structure cannot be determined until the new equipment and structures have been procured and designed. Therefore, actual demolition/relocation requirements, including sequence of execution, will be determined during detailed design.

2.0 Requirements

2.1 Maintenance Shop and Ground Level Walkway

The existing Maintenance Shop located at ground level between Units 2 and 3 and to the south of the ground level walkway will have to be relocated to make room for Unit 3 Pulse Jet Fabric Filter (PJFF). It is expected that the Maintenance Shop will be housed in a new pre-engineered metal building located as shown on the Site Plot Plan. The existing shop superstructure will be demolished and removed to make way for the PJFF. Foundations and underground utilities for the shop will be removed to the extent necessary to install new construction, with the remainder abandoned in place and covered with new construction.

The existing ground level walkway and utility chase will be left intact to the extent practical while the PJFF support is being installed. In any case, the piping and electrical tray therein will be left undisturbed and in operation during new construction. Once the PJFF and associated equipment is complete, any portion of the enclosure surrounding the utility chase modified or damaged will be repaired or replaced to fully reestablish the ground level walkway between Units 2 and 3.

2.2 Skywalk

The existing skywalk will be temporarily removed during construction of the Unit 3 PJFF and associated equipment. Design for the new construction will take into account a reestablished skywalk between Units 2 and 3 and supports for the replacement walkway will be incorporated accordingly. Once new construction is complete, the skywalk will

be reestablished, rerouted as required around the Unit 3 PJFF, to maintain direct access between Units 2 and 3 at the operating floor level.

2.3 Unit 3 Sorbent Silos

Installation of the Unit 3 PJFF and associated equipment will significantly impact truck access to the existing Unit 3 sorbent silos. It will be difficult to position trailers sufficiently close to the silos to allow sorbent unloading using the existing unloading systems. If practical, a pneumatic booster unloading pump facility will be added in the area still easily accessed by truck to allow remote truck unloading to the silos in their current location. Alternately, the existing silos could be relocated to a more accessible location and the sorbent transfer system modified accordingly. The estimate is based on the addition of a remote unloading station and keeping the Unit 3 sorbent silos in their current location.

2.4 Unit 3 ID Fans

Upon completion of the AQCS modifications proposed, the two existing axial ID fans at Unit 3 will be fully bypassed and superfluous. The fans themselves can then be physically removed from their foundations and reused elsewhere or sold for reuse. Ductwork immediately upstream and downstream of the fans can also be removed and scrapped if desired by LG&E/KU. It is intended that existing ductwork supports either side of Unit 3 ID fans remain in place and intact to simplify support of new ductwork installed. Due to the relatively small footprint involved and the cost of major concrete demolition, removal of the foundations under the removed ID fans is likely not warranted and the foundations will be abandoned in place. Removal of the axial fans from their foundation is included in the basis for the cost estimate.

2.5 Temporary Frac Tanks

Trailer-mounted temporary frac tanks have in the past been staged in the courtyard area for use in boiler chemical cleaning. Approximately 30 trailer-mounted 20,000 gallon frac tanks are required during cleaning. Installation of the AQCS modifications at Unit 3 will make parking of trailers in the courtyard area very difficult, if not impossible. Accordingly, a new permanent frac tank to replace the temporary trailer tanks is shown on the Site Plot Plan GCDS-1000. The permanent frac tank will be approximately 750,000 gallons and will have an epoxy coated interior to protect the tank from the chemical cleaning solution at a temperature up to 200 °F. With a permanent frac tank, parking of temporary frac tanks in the courtyard will no longer be required. The addition of a permanent frac tank is included in the basis for the cost estimate.

As an alternative to a permanent frac tank, a temporary trailer-mounted frac tank farm could be located remotely. Drain lines from the boiler to the remote frac tank farm could be permanently routed underground or could be temporarily routed above ground. Another alternative would be to temporarily erect a modular tank in the courtyard with the space remaining. Modular tanks are made from rectangular steel sections and can be

fit to the space available. An advantage to these two solutions is the ability to segregate the rinse water from the cleaning solution and cut down on the amount of hazardous liquid requiring disposal.

Demolition/Relocation Requirements
Unit 4

1.0 Introduction

The purpose of this description is to describe the conceptual demolition and/or relocation requirements of the Ghent Plant existing site structures. The description covers, in general, the work involving the major items to be demolished or relocated. The following demolition/relocation activities are listed in the sequential order they will be preformed. In addition, it is expected that numerous small individual components, such as stairs, ladders, ductwork sections, ground slabs, etc., will require demolition and/or relocation to complete the work included in the scope of the Phase II AQC study. The specific impact on any one existing structure cannot be determined until the new equipment and structures have been procured and designed. Therefore, actual demolition/relocation requirements, including sequence of execution, will be determined during detailed design.

2.0 Requirements

2.1 Warehouse

The existing Warehouse northwest of Unit 4 will be relocated to make room for the Unit 4 pulse jet fabric filter (PJFF). If practical, the existing warehouse superstructure will be moved to a new foundation located as shown on the Site Plot Plan. If the existing warehouse cannot be easily moved, a new pre-engineered metal building will be installed on that new foundation. Existing foundations and underground utilities for the warehouse will be demolished and removed to the extent necessary to install new construction, with the remainder abandoned in place and covered with new construction.

2.2 Unit 4 ID Fans

Upon completion of the AQCS modifications proposed, the two existing axial ID fans at Unit 4 will be fully bypassed and superfluous. The fans themselves can then be physically removed from their foundations and reused elsewhere or sold for reuse. Ductwork immediately upstream and downstream of the fans can also be removed and scrapped if desired by LG&E/KU. It is intended that existing ductwork supports either side of Unit 4 ID fans remain in place to the extent it is required to support new ductwork; any support steel not required for supporting new duct can also be demolished. Due to the relatively small footprint involved and the cost of major concrete demolition, removal of the foundations under the removed ID fans is likely not warranted and the foundations will be abandoned in place. Removal of the axial fans from their foundation is included as the basis for the cost estimate.