

# CITY/CUB

## EX. 7.1

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**City of Chicago's Data Request 2.01-2.33**  
**Dated: September 12, 2014**

**REQUEST NO. 2.24:**

Please refer to JA Ex. 3.0 at 30:610: Explain in detail how the Transaction would enable PGL "to complete more of its planned investment program using internally generated cash than it would absent the Transaction."

- a. Does this statement refer to investment expenditures in addition to those covered by Rider QIP?
- b. Are any such expenditures planned for PGL?
- c. If Rider QIP and Rider VBA are in effect, is there some circumstance under which PGL's planned investment expenditures would not be covered by Rider QIP?

**RESPONSE:**

- (a) Potentially, yes, as such investment expenditures become necessary. Without additional expenditures having been identified at the present, it is difficult to speculate how such expenditures might be funded.
- (b) At the present time, the Joint Applicants do not have any investment expenditures planned for Peoples Gas other than those indicated in the Joint Applicants' response to Staff data requests ENG 1.02 and 1.03.
- (c) The operation of Rider VBA is not connected to and has no impact on the operation of Rider QIP. Rider QIP only covers particular investment expenditures and only investment expenditures above a baseline level. Further, if Peoples Gas did not file rate cases in the future at such time as the cap in Rider QIP is reached in order to re-set the cap, investment expenditures above the cap would not be recoverable under Rider QIP.

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**City of Chicago's Data Requests 10.01-10.61**  
**Dated: December 31, 2014**

**REQUEST NO. 10.37:**

Do the Joint Applicants agree that the Board of Directors of Integrys Energy Group makes decisions which affect PGL's AMRP?

**RESPONSE:**

The Board of Directors of Integrys Energy Group makes decisions regarding the overall resources for AMRP based upon business plans for the program presented by Peoples Gas management.

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**City of Chicago's Data Requests 10.01-10.61**  
**Dated: December 31, 2014**

**REQUEST NO. 10.39:**

**Please refer to the Rebuttal Testimony of Mr. Allen Leverett, JA Ex. 6.0, at lines 506-508:** Why is Wisconsin Energy's experience overseeing infrastructure investment programs "highly relevant" to PGL's AMRP?

**RESPONSE:**

The Joint Applicants believe that Wisconsin Energy's experience overseeing infrastructure investment programs is highly relevant because it demonstrates that the expected senior management of the new holding company for Peoples Gas is knowledgeable and experienced in the management and oversight of large capital projects like Peoples Gas' AMRP.

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**Illinois Attorney General's Data Requests AG 10.01-10.20**  
**Dated: December 23, 2014**

**REQUEST NO. AG 10.14:**

Refer to JA Ex. 10.1 CONFIDENTIAL, page 7 and 8. Please:

- a. Provide the detailed analysis and findings related to the following areas: 1d-g, 1k-l and 2a.
- b. Explain why many of the corrective actions identified in this exhibit have completion date in mid-2014 when in response to ENG 2.08, the JA provided a schedule showing completion of similar corrective actions in March 2015.
- c. Refer to page 11. Please provide the operating model referred in 3.1a which was scheduled to be completed by December 31, 2014.
- d. Refer to page 16. Please provide the performance metrics referred in 3.5.1b which were completed by August 30, 2014.
- e. Refer to page 17 and 18. The action plan says that this action was completed on June 30, 2014. Please confirm that this completed action step entailed only developing a plan for an integrated PMIS and no new PMIS has been completed. If not confirming, please explain. Provide a copy of the plan to develop a PMIS and the related start and completion date for this new system.
- f. Refer to page 18. Please provide the operating model referred in 3.1a which was scheduled to be completed by December 31, 2014.
- g. Provide a copy of the risk plan and register referred in 3.7.1 a-b.

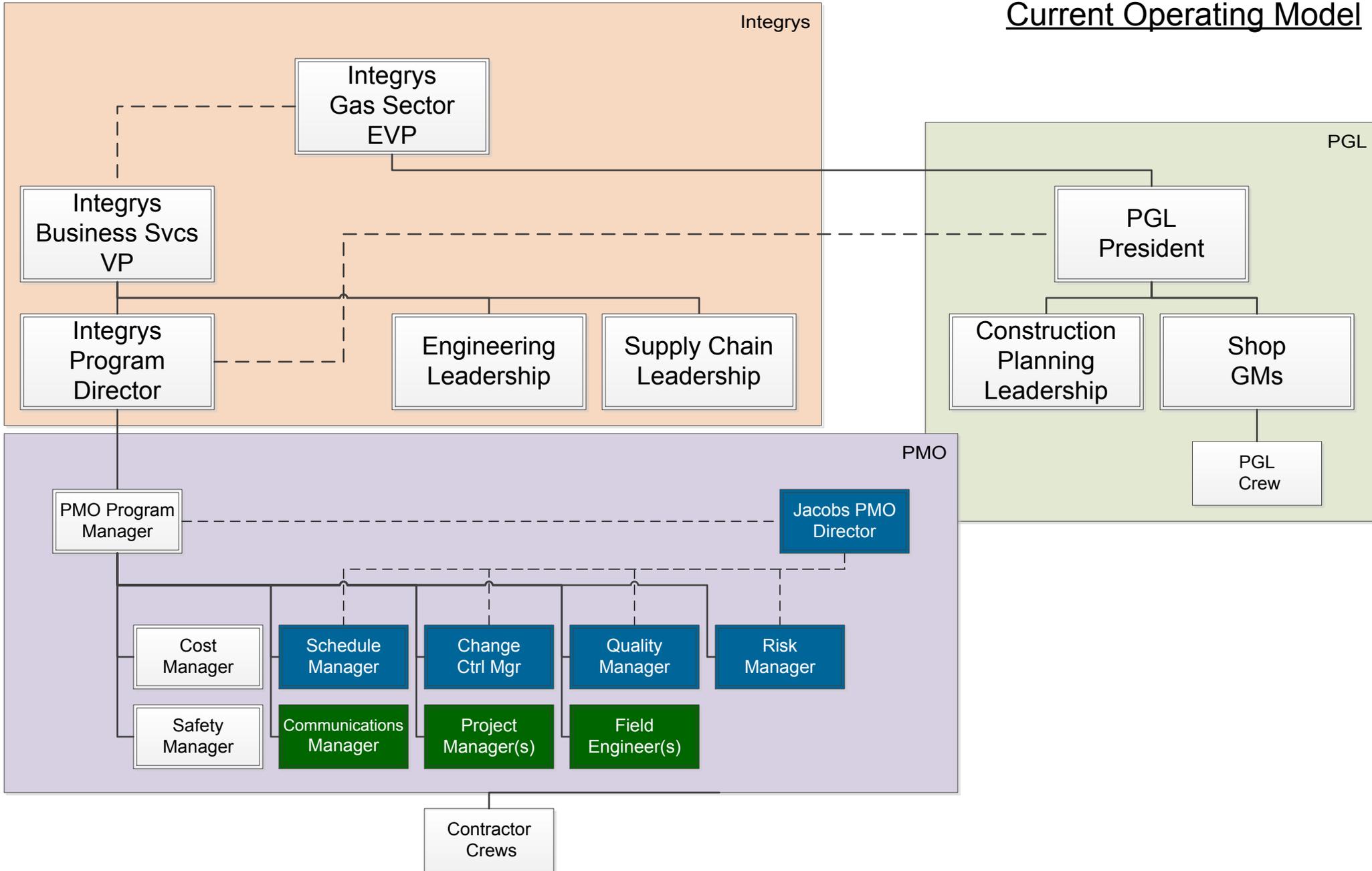
**RESPONSE:**

Joint Applicants object to this data request on the grounds that the information sought is beyond the scope of and not relevant to the subject matter of this proceeding and is not reasonably calculated to lead to the discovery of relevant and admissible evidence. Without waiving this objection or the Joint Applicants' General Objections, the Joint Applicants state as follows:

- a. Please see the three attached "quick win" documents (combined in Attach 01).
- b. In the response to Staff data request ENG 2.08, the Joint Applicants provided a projected due date for the completion in the first quarter of 2015 for all items provided in the response to ENG 2.07. This referenced document shows a projected completion date for each item separately.

- c. Please see Attach 02.
- d. The current performance metrics track and report completion date variances between the approved baseline and the current schedule update for the projects. Other metrics in development are expected to include comparison of current production rates to planned rates and Schedule Performance Index (SPI), which is the earned value divided by the planned value.
- e. Yes, Joint Applicants confirm that this completed action step entailed only developing a plan for an integrated PMIS and no new PMIS has been completed. Reference JA City 8.03 Attach 01 for the Business Case to roll out “Unifier” as the enhanced system.
- f. Please see the response to subpart (c).
- g. The current Risk Plan (Attach 03) and Risk Register (Attach 04 CONFIDENTIAL) are attached.

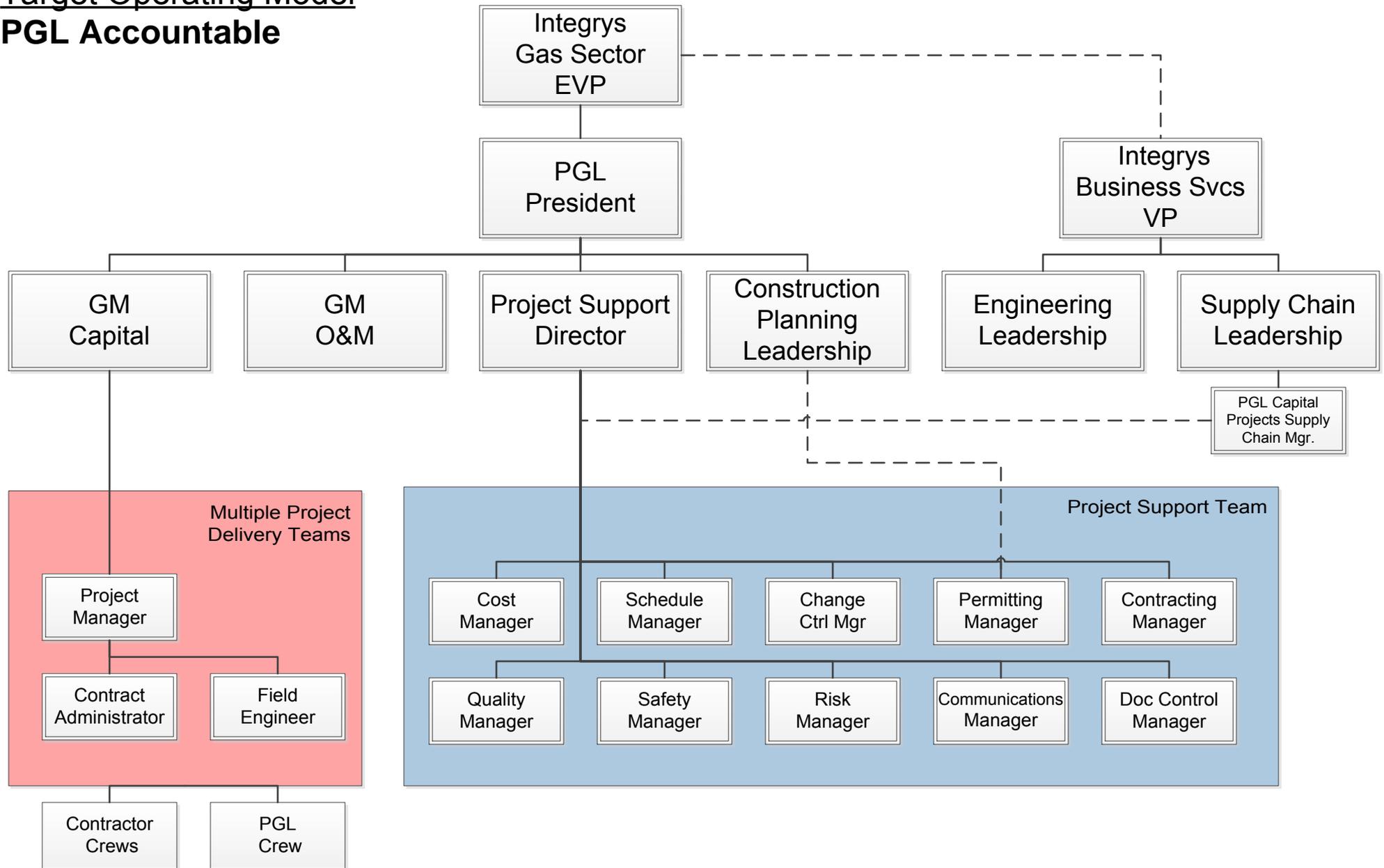
## Current Operating Model



**Notes:**

- IntegrYS is accountable for capital project delivery.
- PMO provides project support and execution.
- Blue boxes indicate roles filled by Jacobs staff. Green boxes indicate roles that PGL is currently recruiting for.
- There is currently no single role to which a contractor reports to, and contractor reporting is instead performed across several functions.

## Target Operating Model PGL Accountable



Notes:

- PGL is accountable for capital project delivery.
- Project Support Team (PST) establishes standards for Project Delivery Teams (PDTs) to comply with; provides guidance, resources, training, and oversight to the PDTs; aggregates project reporting for each function to support program reporting; and provides an avenue for issue escalation. The primary goal of the PST is to establish consistent project delivery.
- Project Delivery Teams (PDTs) consist of a Project Manager, a Contract Administrator, and a Field Engineer, the respective responsibilities of which are discussed in detail in the accompanying RACI matrices.

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**City of Chicago's Data Requests 8.01-8.17**  
**Dated: October 24, 2014**

**REQUEST NO. 8.02:**

**Please refer to page 4 (Issue ID 231) of the Joint Applicants' Response to Staff Data Request ENG 3.05, Attach 01:** Please provide copies of any reports, analyses, presentations, or any other documents regarding processes or procedures for PGL to identify, manage, and correct any "gateways" for fraud or bad behavior related to AMRP.

**RESPONSE:**

See response to JA City 8.14 for the reconciliation of materials.

See JA City 8.02 Attach 01 for the Integrys Corporate Approval policy.

See JA City 8.02 Attach 02 for the Integrys Procurement Controls. Employee names have been redacted.

City-CIP Ex. 71  
**Controls - IBS 06.01: Procurement**

Process Owner: ██████████

Sub-process Owner: ██████████

09/11/2014

Business Unit	Process	Sub Process	Sub Process Objective	Risk	Risk Desc	Control #	Control Owner	Control Description	Impact	Control Category	Control Occurrence	Control Type	Classification	Assertions
IBS	IBS 06. Requisition to Pay	IBS 06.01. Procurement	To ensure proper authorization of requisitions.	Risk 01	Unauthorized preparation of requisitions may lead to unnecessary or inappropriate procurement of goods and/or services.	Control 06.01.06	██████████	On a quarterly basis, Purchasing management reviews requisition, purchase order, and receipt queries that display transactions by employees with elevated access, which creates a segregation of duties issue. The review provides assurance that the purchase of goods and/or services are authorized and appropriate.	Key	Management Approvals/Review	Quarterly	Manual	Detect	Valuation or Allocation; Existence or Occurrence

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**City of Chicago's Data Requests 8.01-8.17**  
**Dated: October 24, 2014**

**REQUEST NO. 8.03:**

**Please refer to page 5 (Issue ID 240) of the Joint Applicants' Response to Staff Data Request ENG 3.05, Attach 01:** Please provide copies of any reports, analyses, presentations, or any other documents regarding manual stop-gap measures for the transfer of cost data from one system to another in implementing PGL's AMRP.

- (a) When did the process begin?
- (b) When was the process replaced by an IT solution?

**RESPONSE:**

Peoples Gas continues to use Integrys' PowerPlant and PeopleSoft systems for cost data.

- (a) Need for a single source of cost data was identified in 2012 and the AMRP Project Controls leaders began to question industry practices. Unifier was identified as a potential market leader as it integrates cost and schedule. The Project Controls leaders attended the 2013 Primavera Executive Conference (providing a high level system overview), and subsequently the annual Primavera Users Conference (Unifier track) with a small group of Integrys IT professionals
- (b) A business case was written and Integrys IT resources were committed to define the system requirements and evaluate implementation costs for the remainder of 2013. System implementation began in 2014 on a modular or phased basis with replacement of PCM (Primavera Contract Manager), with Unifier.

See JA City 8.03 Attach 01 for the Business Case Summary of Unifier for Peoples Gas. Employee names have been redacted.

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**City of Chicago's Data Requests 8.01-8.17**  
**Dated: October 24, 2014**

**REQUEST NO. 8.14:**

**Please refer to page 14 (Issue ID 300) of the Joint Applicants' Response to Staff Data Request ENG 3.05, Attach 01:** Please provide copies of any reports, analyses, presentations, or any other documents regarding reconciliations of materials by project.

**RESPONSE:**

Please see JA City 8.14 Attach 01 for the 2015 Construction Contract. Section 322 (VI.) outlines the reconciliation of materials.

**GENERAL CONSTRUCTION SPECIFICATION**  
**FOR**  
**INSTALLATION OF NATURAL GAS FACILITIES**  
**JANUARY 1, 2015**

## TABLE OF CONTENTS

<b>SECTION 1 – PURPOSE AND SCOPE.....</b>	<b>4</b>
100. PURPOSE .....	4
101. SCOPE .....	4
102. SAFETY .....	4
103. OPERATOR QUALIFICATIONS (“OQ”).....	4
<b>SECTION 2 — STANDARDS, CODES, AND DRAWINGS.....</b>	<b>6</b>
201. CODES .....	7
202. DRAWINGS .....	7
203. SPECIFICATION REQUIREMENTS.....	7
<b>SECTION 3 — REQUIREMENTS FOR GENERAL CONSTRUCTION.....</b>	<b>9</b>
300. ARCHEOLOGICAL FINDS .....	9
301. AS-BUILT DRAWING REQUIREMENTS.....	9
302. BACKFILL MATERIAL .....	10
303. COMMUNICATION MEETINGS .....	11
304. COMPANY COMPUTER APPLICATIONS .....	11
305. COMPANY FORMS AND TICKET WORK .....	11
306. COMPANY PERSONNEL AND RESPONSIBILITIES .....	13
307. CONSTRUCTION PROGRESS REPORTING .....	13
308. CONTRACTOR IDENTIFICATION .....	13
309. CONTRACTOR PERSONNEL AND RESPONSIBILITIES .....	14
310. CONTRACTOR SCHEDULE .....	15
311. CROSSING RAILROADS, HIGHWAYS, PIPELINES OR ROADS .....	15
312. DAMAGES AND CLAIMS .....	16
313. EQUIPMENT AND MATERIAL STAGING .....	16
314. EXTRA WORK.....	17
315. FACILITY LOCATING AND MARKING.....	17
316. FUSING EQUIPMENT CERTIFICATION.....	18
317. GAS MAIN AND SERVICE ABANDONMENT IN PLACE AND/OR REMOVAL .....	19
318. GENERAL SURVEY COORDINATES.....	19
319. HYDROSTATIC AND AIR TESTING OF GAS FACILITIES.....	21
320. INSTALLATION IN OR AROUND STREET, ALLEY AND SIDEWALK.....	21

321.	INSTALLATION REQUIREMENTS AND INSTALLATION METHODS.....	22
322.	MATERIAL FURNISHED BY COMPANY .....	23
323.	MATERIAL, TOOLS AND EQUIPMENT FURNISHED BY CONTRACTOR	25
324.	MOBILIZATION, DEMOBILIZATION AND STANDBY .....	26
325.	NON-CONFORMANCE .....	26
326.	PERMITS AND LAND RIGHT DOCUMENTS.....	27
326A.	PHOTOGRAPHIC AND VIDEO DOCUMENTATION .....	28
327.	PRESSURE RECORDERS .....	29
328.	[INTENTIONALLY OMITTED].....	30
329.	PROPERTIES PROTECTION .....	30
330.	RAILROAD AND TIES .....	30
331.	RELOCATION OF FACILITIES .....	30
331A.	REPORTING PLATFORM .....	30
332.	REQUEST FOR INFORMATION (RFI).....	31
333.	RESTORATION – PAVING AND LANDSCAPING .....	32
334.	SERVICE INSTALLATIONS AND TRANSFERS .....	34
335.	SITE FAMILIARIZATION .....	34
336.	SPOIL REMOVAL, DISPOSAL OF DEBRIS AND SITE CLEANLINESS.....	34
337.	TELECOMMUNICATIONS .....	35
338.	TRAFFIC CONTROL .....	35
339.	TRAINING AND QUALIFICATION.....	35
340.	TREES.....	36
341.	TRENCHLESS TECHNOLOGIES .....	36
342.	UTILITY SERVICE INTERRUPTION.....	38

## SECTION 1 – PURPOSE AND SCOPE

100. PURPOSE

The purpose of this General Construction Specification for Installation of Natural Gas Facilities is to provide documentation and guidance concerning Work related to the installation modification and retirement of gas facilities performed for the Company by the Contractor. Contractor shall conform to the requirements of these Specifications.

101. SCOPE

These General Construction Specifications govern Work performed by the Company designated Contractor.

102. SAFETY

Contractor and all Subcontractors involved in the Work on behalf of the Contractor shall provide and maintain a safety plan that, at a minimum, adheres to the safety guidelines in The Peoples Gas Light and Coke Company Pipe Installation and Retirement Safety Guidelines. The Contractor and Subcontractor Safety Plans shall be part of the Operations Manual.

103. OPERATOR QUALIFICATIONS (“OQ”)

A written OQ plan shall be provided to the Company prior to commencement any Work. OQ Program shall be in accordance with the Contractor Operator Qualification Requirements, when performing work for PGL and NSG.

104. QUALITY ASSURANCE / QUALITY CONTROL PROGRAM

Quality is the responsibility of the Contractor. The Contractor shall establish and implement a documented QA/QC program to demonstrate conformance with all Contract requirements. The plan describes the methods and processes used to ensure control and quality for work done by the Contractor and any subcontractors, including management of nonconforming conditions.

1.The Contractor shall develop and implement an inspection and testing plan for Work on Natural Gas Facilities that verifies and documents that the Work is constructed in accordance with contract requirements.

2. The Company will also require participation in, and conformance to a QA/QC Program specifically aimed at the documentation of required IDOT and CDOT materials testing and acceptance for all backfilling operations and restoration work. This CDOT QA/QC Program will be binding upon all Contractors and Subcontractors. The CDOT QA/QC Program is separate from, but should be included in, the Contractor’s overall QA/QC Program.

105. REQUIRED SUBMITTALS

ANNUAL SUBMITTALS

The Contractor is required to submit various policies and procedures by several Contract Documents. In an effort to eliminate duplicate submittals, the Contractor is hereby required to submit the following documents on an annual basis, no later than January 15<sup>th</sup> of each year in which the Contractor is engaged in active work for the Company, or within 15 days of receipt of an NTP if the Contractor is not actively engaged in Company work at the beginning of a calendar year:

1. Operator Qualification (OQ) Plan
2. General Safety Program

3. Drug and Alcohol Program
4. Operations Manual
5. Inspection and Testing Plan

Upon receipt of these annual submittals, the Company will provide the Contractor written acceptance of same after review and resolution with the Contractor (if required). These submittals will not be required to be included in bid proposals, unless the Contractor has not been actively engaged in company work at the beginning of the year in which the proposal is submitted.

MONTHLY SUBMITTALS

On a monthly basis, in coordination with the scheduled Monthly Contractor Status Meetings, the Contractor shall submit their Monthly Report, which contains the information required in Schedule 2.1.5 REPORTS of the Master Natural Gas Facility Installation Contractor Agreement.

WEEKLY SUBMITTALS

On a weekly basis, on the days agreed to with the PMO, the Contractor is required to submit the following reports:

1. Schedule Updates for each active project
2. Progress Quantities for each active project
3. Restoration Status Updates
4. Contractor's Daily Recap for Main installation for each crew working during the week (Daily reports that are submitted weekly)
5. Contractor's Daily Recap for Service Installation for each crew working during the week (Daily reports that are submitted weekly)
6. Service Pipe Installation Tickets for each service installed the previous week (individual tickets grouped by project and phase, and submitted weekly)
7. Welder's and Fusilier's Logs for all welds and fuses performed during the previous week
8. Tracer Wire Inspection Reports for all mains and services installed in the previous week

All weekly submittals shall be in electronic pdf-format files, and shall be submitted either through e-mail to the document control mailbox, or, once established, shall be submitted in the current Company system's submittal module.

## SECTION 2 — STANDARDS, CODES, AND DRAWINGS

### 200. COMPANY POLICIES AND PROCEDURES

The following Company Policies and Procedures are made a part of this Specification. The Contractor shall follow all Company Policies and Procedures when performing the Work.

- The Peoples Gas Light and Coke Company Safety Guidelines
- Contractor Operator Qualification Requirements, When Performing Work for PGL and NSG
- Integrys Energy Group Drug and Alcohol Requirements for Vendors/Contractors (DOT 199)
- Welding Manual, Operating and Maintenance Plan, The Peoples Gas Light and Coke Company, Exhibit VIII
- Contractor Manual
- The Peoples Gas Light and Coke Company Gas Piping Installation and Retirement Environmental Plan
- Posting of No Parking Signs
- PGL Materials Procedure Quick Reference Manual (2013 Revision)
- Schedule 1 Basis – Contractor Schedule
- Contractor Reporting
- RFI Work Process
- Overall Company Change Management Process

Company will supply the Contractor the above Policies and Procedures and any future updates in paper or electronic form. The Contractor is responsible for reproducing the documents, distributing them to appropriate employees, and conducting training events to ensure compliance to updated or changed Policies and Procedures within ten (10) business days of notification by Company for any update.

The Contractor shall submit a Schedule Basis at the pre-Construction Meeting. The Contractor shall not start construction unless this Final Schedule Basis has been accepted by the Company and a Notice to Proceed has been issued by the Project Manager via Document Control.

The Contractor shall provide Company with documentation of training. Training documentation must contain names, subject and date of training.

A viewable copy, either in print form or electronic display, of all Attachments with applicable updates must be present at all times in all Foreman and Welder personnel vehicles.

201. CODES

Without limiting the application of Article 12 of the Master Natural Gas Facility Installation Contractor Agreement, the Contractor shall identify and abide by all state, federal and City of Chicago codes, laws, regulations, rules and ordinances (“Codes”) which relate to or have an impact on Work performed, including but not limited to:

- *Chicago Department of Transportation (CDOT) – Rules and Regulations for Construction in the Public Way*
- Work Permits
- Illinois Department of Transportation (IDOT) Utility Permits
- National Fuel Gas Code
- *Occupational Safety and Health Act of 1970*
- *“Standard Specifications for Road and Bridge Construction,” State of Illinois, Department of Transportation, Division of Highways*
- *Public Act 96-1416 Clean Construction and Demolition Debris Regulations*
- *United States Department of Transportation, Part 192 of Title 49 for gas pipelines (“DOT Part 192”)*
- *United States Department of Transportation, Parts 40 and 199 of Title 49 (drug and alcohol testing)*

In the event that portions of any of these Codes conflict with another Code, Federal Codes shall take precedence over all others, and the Chicago Department of Transportation “Rules and Regulations for Construction in the Public Way” take precedence over the Illinois Department of Transportation “Standard Specifications for Road and Bridge Construction”.

202. DRAWINGS

The Contractor shall reference any and all engineered Drawings identified in the Project’s Detailed Construction Specifications in performing the Work (“Drawings”). Any deviation from any drawing must have prior written approval by a Company representative in accord with the Change Management Procedures detailed in Schedule 2.4).

Drawings to Contractor

The Company will supply the Contractor one copy of each Issued For Construction (IFC) Drawing and any future Drawing updates in electronic form. Each Drawing, and any subsequent revisions to the Drawing, will be issued with a Document Control Stamp. Only documents that contain this stamp are to be used for Construction, and any requests for additional compensation due to revisions to the Drawings will only be considered if such requests are based on original and revised Drawings that contain these Document Control Stamps. The Contractor shall be responsible for distributing the updated Drawings to Contractor Personnel.

Contractor is responsible for making available to crew members the original Drawings and any subsequent Drawings in full-sized, color form.

203. SPECIFICATION REQUIREMENTS

All Work done by the Contractor shall be done in accordance with Codes and Drawings, and Company Policies and Procedures and any other Specifications. Although the Company may perform random audits at any unannounced time to verify the Contractor's compliance with the Specifications, the Contractor shall comply with these requirements when Company employees are not present. The Contractor is responsible for performing all Work in accordance with the Specifications regardless of whether a Company inspector or other representative is present on the jobsite. An up-to-date copy of the Operations Manual that includes any relevant Company Policies and Procedures in viewable form, either print or electronic, shall be in each crew Foreman's and Welder's vehicle at all times.

### SECTION 3 — REQUIREMENTS FOR GENERAL CONSTRUCTION

300. ARCHEOLOGICAL FINDS

In the event any items with potential archeological value are discovered, these relics or items shall not be touched, moved, or otherwise disturbed. All Work in the immediate area will cease and the Contractor shall notify the responsible Company representative.

The Contractor will report the find and exact location to the Company. The Contractor will not resume Work in the immediate area until notified to do so by the responsible Company representative.

301. AS-BUILT DRAWING REQUIREMENTS

The Contractor shall be responsible for redlining each main work drawing to reflect installed conditions (“As-built”). The As-built Drawings shall only be prepared by Contractor’s representatives who have completed the Company’s As-built formal training and have no other crew responsibility than obtaining the As-built information and preparing the As-built Drawings.

- I. The Contractor shall maintain the redline As-built Drawings on a daily basis for all Projects as Work proceeds and the As-built Drawings shall be made available for review with the Company inspector daily. The Contractor shall compile daily As-builts into a final set and, unless partial submittals are required as addressed below, submit them to the responsible Company representative within five (5) Business Days of the following events:
  - A. Once any portion of the gas main has been installed and gassed;
  - B. Upon Company request; or
  - C. Once Project Work has been halted by an RFI for at least five (5) Business Days.

Partial As-builts can be submitted for a Phase in order to comply with the requirements above. However partial Drawings shall be

- A. Clearly noted as a partial submittal
- B. Clearly indicating work areas that are complete and are submitted with up-to-date as built information
- C. Clearly numbered as to its numerical order in the sequence of the partials
- D. Identified as “FINAL” if the partial submittal is the last of the total.

- II. FORMAT AND PROCEDURE

As-built Drawings shall only be redlined on the latest revision of the Issued for Construction design Drawing and capture variances from the proposed design associated with pipe material, method of installation, fitting and appurtenance locations, size, offsets and/or elevation changes. As a minimum the following are to be added to As-built Drawings:

- A. Changes in materials originally called for in the Specifications.
- B. Changes such as for alignment, dimensions, lengths, sizes, and inverts of pipes, location of utilities, and physical facilities and features not originally shown; and vertical and horizontal clearances.
- C. Changes involving deletion of Work originally planned. Such Work is crossed out and marked “Deleted from Work” and basis (e.g., Change Order No x, dated mm/dd/yyyy).
- D. Information determined in the field, location of obstructions, valves, etc.
- E. Changes on cross-sections.
- F. Manufacturer Information of the pipe and fittings, including, but not limited to:
  - 1. Pipe Material

2. Pipe Manufacturer
3. Plant Code and Line/Lot Number
4. Manufacture date
- G. Depth, noting approximate location of transition down, resumption of horizontal alignment, approximate location of transition back to lesser depth and resumption of horizontal alignment and the depth.

In addition to the red-lined As-built Drawing, the As-built package being submitted must contain the following documents completely filled out:

- A. Gas Main Pressure Test Charts
- B. Valve Tickets
- C. Corrosion Test Station Tickets
- D. As-built Checklist

Each drawing submitted by the Contractor as part of the final set of As-built plans shall be identified as an "As-built" Drawing" and shall include the Contractor name and/or logo and the date of the drawing. The Contractor shall certify, by means of transmittal, that As-built Drawings are accurate when submitting to the Company. Final payment for any Phase will not be released until the approved As-built Drawings for that Phase have been received and accepted by the Company.

If Company rejects As-built submittals due to error or incompleteness, the Contractor shall re-submit the corrected As-built information within five (5) Business Days of the date of rejection.

In addition to the paper As-Built Drawings requirements stated above, the Contractor is required to provide GPS As-Built information on a CD or DVD in accordance with Section 318 GENERAL SURVEY COORDINATES.

302.

BACKFILL MATERIAL

At all Roadway locations, natural sand backfill materials meeting IDOT gradation FA-02 shall be used for pipe bedding and fill to a height of 6" above the top of the pipe. At all locations within two feet of a roadway, curb, or sidewalk, the Contractor shall refill the remainder of the trench with stone materials meeting IDOT gradation CA-13. The top portion of all roadway openings shall be filled with stone materials meeting IDOT gradation CA-06 in the area of the existing aggregate subgrade. The top portion of all openings in parkways or lawns shall be backfilled with topsoil to the depths indicated in the CDOT Standards.

For excavations not under roadways, sidewalks, or where the inner edge of the trench is two (2) feet or beyond of the proposed edge of pavement or sidewalk, the Contractor may re-use the native soils removed from the excavation as backfill, but only if the excavated material does not display visual or olfactory evidence of contamination.

All backfill shall be compacted to CDOT, IDOT and Company Specifications.

Flowable backfill will not be used for backfill for any trenches located in the Central Business District as defined by CDOT.

The Company has developed standard drawing details for trench backfill in various configurations and locations, and has finalized these details with CDOT, as they differ from those contained in the CDOT Rules and Regulations. All trench backfill shall be performed in accordance with these details.

303. COMMUNICATION MEETINGS

Contractor Relationship Manager or Contractor representative shall be available for all meetings as requested by Company including the following.

- I. Pre bid information meeting(s)
- II. Pre-construction meeting(s)
- III. Weekly Shop construction progress meeting(s)
- IV. Monthly Contractor status meetings; and
- V. Post construction meeting(s)

304. COMPANY COMPUTER APPLICATIONS

In performance of Work for the Company there may be instances where the Contractor will need to utilize Company Systems. The Contractor shall make available time to attend training prior to accessing Company software.

305. COMPANY FORMS AND TICKET WORK

Contractor is responsible for accurate and timely completion of all Company forms and ticket work, as specified.

The Contractor shall designate one (or more) representative(s) as needed and in relation to the volume of Work that is (are) not part of the construction crew makeup whose sole responsibility is (are) to complete Company forms. The Contractor Personnel assigned to this task shall be sufficient in number so as not to delay the submission of forms to the Company in a timely manner.

The(se) Contractor representative(s) shall be made available and attend mandatory Company training prior to completing Company forms. At no time shall the Contractor representative complete any Company form without prior Company training. Should this occur, an NCR will be issued to the Contractor and remedial action may be taken by the Company.

The listed forms capture productivity and invoice backup information and shall be completed as Work is performed and returned to the responsible Company representative the Business Day after being completed as stated below or in a Detailed Specification. All Company forms will be verified by means of a responsible Company representative's signature. Any Company form not containing a responsible Company representative's signature will not be accepted for any purpose. Payment shall not be made by the Company until all forms and ticket work have been received and are free from omissions and/or errors. Forms and tickets that Contractor may be required to complete and submit, include but are not limited to:

I. Gas Main and Service Pressure Test Charts

If the Company requires the Contractor to conduct a service pressure test, the results of these tests must be recorded on the paper Service Pipe Work Ticket completed by the Contractor. Contractors will be responsible for conducting all main pressure tests, and all completed original main pressure charts must be provided to the responsible Company representative prior to the main being gassed and no later than the Business Day following completion of a main pressure test. All main pressure test charts completed by the Contractor must be submitted and signed by the Shop Construction Manager or designee. A copy of the chart will be returned to the Contractor and the original will remain in the shop. The Contractor shall submit a copy of the chart with the As-builts for the main to which the chart pertains to Gas Engineering.

II. Trenchless Technologies Installation Card, Form 920.8.1

The Contractor is to follow the procedure in the “Use of Bore Camera Technology to Document Directional Drill Path” document found in the Contractor Manual for all work related to trenchless technology.

The installation card must be completed as documentation of the method used to verify that each individual sewer lateral crossing was completed without damaging the lateral. An individual card must be completed for each sewer lateral crossed. Contractor shall reference Integrys Section 920 Field Manual Damage Prevention Trenchless Technologies procedure.

For any of the approved trenchless technology methods, the pre-bore installation card must be provided to the inspector prior to directional boring any pipe. The Contractor shall provide any support/backup documentation required by the trenchless technologies procedure along with the bore installation card. For the exposed sewer method and camera method, post-boring the updated and completed bore installation card along with the documentation of camera work performed, sewer lateral condition and the name and, where possible, signature of the current resident must be submitted to the Company inspector. This card is reviewed and approved by the responsible Company representative.

Upon completion of utilizing the Bore Camera Method of the Trenchless Technologies for Installation, the Contractor is responsible for confirming that no damage has occurred to the other facilities by some additional means beyond cameraing as described in the most current Section 920.

III Contractor Daily Recap – New Mains

Contractor shall complete this form, in its entirety, on a daily basis to capture all gas main installations and Work related to installation. This form shall be used to report productivity and as backup to all Contractor invoices. The original shall be provided to the responsible Company representative the Business Day after an opening for a main installation has been backfilled.

IV Contractor Daily Recap – New Services

Contractor shall complete this form, in its entirety, on a daily basis to capture all gas service installations and Work related to installation. This form shall be used to report productivity and as backup to all Contractor invoices. The original shall be provided to the responsible Company representative the Business Day after an opening for a service installation has been backfilled.

V. Service Pipe Work Ticket, Form 32

In addition to the documentation of services installed that is performed by Company personnel, the Contractor shall complete this form, in its entirety, on a daily basis to capture all service As-built information for documentation of work completed. For stub installation, service tickets shall be submitted under cover of transmittal by the end of the Business Day following installation, whether the service pressure test is performed by the Company or the Contractor.

Within one (1) Business Day following the end of each calendar week, the Contractor shall scan and forward to Document Control a copy of all Service Tickets completed during the prior week. This information shall be included with the Contractor's Weekly Update Report.

V. Timber Shoring Plan

This form shall be completed when timber shoring is utilized as excavation protection for excavations equal to or deeper than ten (10) feet.. Prior to personnel entering any timber shored excavation this form shall be provided to and approved by the responsible Company representative in accordance with Company work order documents.

VI. Contractor Fusilier and Welder's Log

The Contractor shall submit this log weekly for the prior week and shall accompany the Contractor's Weekly Update Report. The Contractor shall complete this form accurately, indicating the location and Company-provided HR# of fusiliers and welders performing pipe joining activities.

VII. Tracer Wire Inspection Report

When plastic pipe is used for installation of mains or services the Contractor shall provide and install tracer wire in accord with the Company Policies and Procedures and shall provide verification of proper installation by submittal of this report to the Construction Manager.

306. COMPANY PERSONNEL AND RESPONSIBILITIES

This Work shall be directed on behalf of the Company by the Relationship Manager, Construction Manager or their designee, who shall appoint a Construction Inspector or responsible Company representative to be in charge of making certain that the Work is done in accordance with the Agreement and to represent the Company generally on all matters relating to the Work. The Company Construction Manager shall not have the authority, except for minor changes not requiring modifications to drawings or requiring additional approvals,, to alter or amend the Agreement Alterations or amendments to the agreement, as well as the addition or deletion of scope can only be authorized through the issuance of a Change Order through the Change Management procedures. The Company may appoint other assistants and representatives to assist in the inspection and testing of the Work.

307. CONSTRUCTION PROGRESS REPORTING

Construction progress shall be reported in accordance with the Contractor Reporting Requirements pursuant to Section 2.1.5 and Schedule 2.1.5 of the Agreement and Company's Policies and Procedures.

308. CONTRACTOR IDENTIFICATION

Contractor shall be responsible for providing its field Contractor Personnel with a laminated or plastic identification card which includes a photograph of the individual, the person's name and Contractor's logo or name. The photograph shall show the person from shoulders up. Contractor Personnel may not be wearing any clothing on their head and only prescription eyewear may be worn while being photographed.

An electronic sample of the Contractor's identification card shall be submitted to the Company for review with each Detailed Specification response.

309. CONTRACTOR PERSONNEL AND RESPONSIBILITIES

Contractor's Relationship Manager shall have charge of all of Contractor's' operations. Contractor's' Relationship Manager shall be furnished by the Contractor a copy of the Agreement including the Operations Manual and shall be authorized by Contractor to represent Contractor in all matters arising in connection with the Work. The person appointed as Contractor's Relationship Manager shall be a competent individual, who shall not perform manual labor and who shall devote his or her full time to the Work.

In addition to the Relationship Manager, the Contractor shall furnish the following personnel to assist the Relationship Manager in general execution of the contract requirements and in providing required submittals and other information to the Company in a timely manner:

1. Safety Representative(s), in the numbers required by, and having the duties outlined in the PGL Safety Guidelines.
2. Quality Representative, who shall manage the Contractor's overall QA/QC Program as well as the CDOT QA/QC Program, and shall have the authority to act in all quality matters for the Contractor. Qualifications for the position shall be demonstrated by a description of education, training, and previous quality assignments with related duties and responsibilities for a period sufficient to establish the appointee's quality experience. Those personnel responsible for assuring quality must be independent of those having direct responsibility for the work being performed.
3. Schedule Representative (Scheduler), who shall have the authority to act in all scheduling matters for the Contractor. The Schedule Representative shall be assigned for the duration of the agreement. Qualifications for the position shall be demonstrated by a description of scheduling proficiency, including education, training and previous scheduling assignments, with related duties and responsibilities, for a period sufficient to establish the appointee's scheduling experience.
4. Contract Administrator, who shall have the authority to act in all contractual matters, with regards to RFI's, FOA's and COR's for the Contractor. The Contract Administrator shall be responsible for the completeness, accuracy, and timely submission of the aforementioned documents. Qualifications for the position shall be demonstrated by a description of education, training, and previous similar assignments with related duties and responsibilities, for a period sufficient to establish the appointee's experience in contractual matters.
5. Company Paperwork Representatives, who shall complete required Company forms and other paperwork, required by the Contract. The Paperwork Representatives shall have successfully completed Company training classes and shall demonstrate proficiency in the completion of required Company paperwork.
6. Materials Coordinator, who shall be the sole contact with the Company Warehouse for ordering materials, coordinate deliveries to the Contractor, monitor storage of the Company-supplied materials and ensure segregation of materials between projects and phases, and shall be the point of contact for the PMO regarding auditing of material-handling operations and completion of reconciliation documentation. Qualifications for this position shall be demonstrated by a description of previous experience for a period sufficient to establish the appointee's suitability for the position.

The Contractor shall submit the names and resumes of all proposed personnel for these positions with their bid proposals, and the Company shall review and approve all personnel for the above-noted positions. Should the Company determine that the proposed personnel do not possess the required skills or experience, the Company will request that the contractor propose alternate personnel..

Contractor's Relationship Manager may designate a member of the Contractor crew as "Foreman". The Crew Foreman shall be at the jobsite at all times when Work is in progress. The Contractor's Foreman shall not simultaneously supervise more than one Project for Company, or simultaneously supervise one Project for Company and one or more Projects for other companies.

The Contractor's Crew Foreman shall supervise and conduct the Work of Contractor in compliance with the Agreement and any instructions of Company's Construction Inspector, or Company representative, and in coordination with all Other Work being done at the jobsite. Instructions given by Construction Inspector or Company representative to Contractor's Foreman shall be considered as having been given to Contractor. Contractor's Relationship Manager shall have full authority, as agent for Contractor, to agree on the basis of settlement of all damage Claims on behalf of Contractor.

Contractor shall be fully responsible for providing safety, shelter, food, water, sanitary facilities and transportation for Contractor's employees. The Contractor is also responsible for identifying and/or procuring an adequate lay-down/staging site. Company facilities will not be available for staging, material storage or equipment or vehicle parking unless agreed in advance in Purchase Order. The Contractor will furnish sufficient crews to perform the Work required by the Company within the scheduling parameters and established customer service levels.

Any non-conformance practices or installations by the Contractor whether a Company Construction Inspector is present or not may result in disqualification from performing any additional Work for the Company or other action as appropriate.

310. CONTRACTOR SCHEDULE

Contractor shall, in accordance with Company Policies and Procedures, and Schedule 2.1.5, produce and maintain a logic based schedule that reflects planned construction activity and is detailed by permit release date, service and main installation plan start and finish dates and Restoration start and finish dates. Contractor will incorporate and update PGL-performed activities within this schedule, including, but not limited to, work for Meters, Regulators, Service Transfers, Gassing of Mains and Retirement. To fulfill this requirement the Contractor shall employ or engage the services of a technically qualified and Primavera P6 proficient scheduler on each Project who shall coordinate with the Senior Scheduler on maintenance and delivery of updates.

311. CROSSING RAILROADS, HIGHWAYS, PIPELINES OR ROADS

Where railroad, highway or road crossings must be made, they are to be constructed in accordance with DOT Part 192 and 195 of Title 49, IDOT, CDOT and American Railway Engineering and Maintenance-of-Way Association (AREMA) rules and, if the crossing is in private railroad property and not in a public right-of-way, the specifications of the applicable railroad. Contractor shall not start any Work on any railroad, highway or road crossing, nor attempt to obtain or negotiate a right of entry, permit, license, comparable agreement or document for said Work without obtaining explicit written approval from Company. The Company shall notify Contractor when to proceed with the Work at the crossing, at which point the Company will, or direct the Contractor to, notify the proper highway or railroad official that Work will commence at the crossing at a specified time.

When it is necessary to move heavy equipment across railroads, Contractor shall satisfy itself that the procedure is safe from the standpoint of railroad traffic.

Except as provided for in the project Drawings or Detailed Specifications, at all locations where proposed gas mains cross existing railroad facilities, the Contractor shall include in

their bids all costs associated with excavation, shoring, well-point dewatering systems, backfilling and restoration of jacking and receiving pits, jacking and boring of casing pipes, installation of gas mains, including casing spacers, vents, filling of the annular space around the carrier pipe, assistance with all connections of proposed facilities to existing facilities as may be required, costs for railroad flaggers that may be required by the railroad being crossed, as well as any settlement surveying typically required to be performed by either the City of Chicago and/or the railroad being crossed. At a minimum, the settlement survey should include:

1. Establishing points in both horizontal and vertical planes on all utility structures within 30 feet of jacking and receiving pits and at a maximum spacing of 20 feet on a perimeter located 5 feet outside the walls of the excavation support system.
2. Weekly monitoring of all points established and transmitting of data to both the Company and the City of Chicago, until such time as construction and restoration is complete, and for one month after completion of the restoration. Weekly reports should indicate the original locations, the current locations, and the change in elevations and/or the position of each point.
3. Any non-typical or additional requirements that may be stipulated by the City of Chicago and/or the railroad being crossed as a requirement for obtaining permits or right-of-entry agreements will be paid for following the Change Order process..

A copy of all executed right-of-entry agreements that the Contractor obtains from any railroads being crossed shall be transmitted to the company within 5 business days of execution.

312. DAMAGES AND CLAIMS

The Contractor will use practical precautions to prevent and minimize damage to trees, shrubbery, lawns, drives, fences, buildings, roadways and other improvements, and will perform the Work in such manner to keep inconvenience to customers, property owners and the public at a minimum. When trees are not removed, the Contractor shall avoid damage to trees and roots. This may require air spading around and/or boring under trees to minimize damage and comply with state and local ordinances. Property disturbed by Contractor Work shall be restored to equal or exceed the original condition. The Contractor shall, at its own expense, promptly restore all property damaged.

All clean up or damage complaints received by the Company related to the Contractor's Work will be forwarded to the Contractor's Relationship Manager to investigate. Upon investigation, the Contractor must promptly notify the Company in writing of the outcome.

313. EQUIPMENT AND MATERIAL STAGING

It is the sole responsibility of the Contractor to acquire a facility nearby the Work location to store Contractor equipment if required and at the expense of the Contractor.

I. Storage Location

It is the responsibility of the Contractor to identify a location where material and equipment can be stored daily to limit congestion and parking constraints within the Work area. Company facilities shall not be utilized unless specified in a Purchase Order.

II. Outdoor Storage Ultra-Violet (sunlight) Protection of Coated Piping

Pipe coated with an extruded polyethylene coating system shall be protected from ultraviolet deterioration when stored or exposed above ground for periods of time

exceeding one year. Pipe coated with fusion bonded epoxy shall be protected from ultraviolet deterioration if stored above ground and outdoors for a period exceeding two years. Covering the stacked pipe with a tarp is an acceptable method of protection. Latex paint applied over fusion bonded epoxy coating is an acceptable protection method. The latex paint should be applied in a thin layer, 3 to 5 mils (thousandths of an inch) and must not conceal the area on the pipe where pipe grade and other information are indicated. When pipe is installed underground, the latex paint will not interfere with cathodic protection current flow or holiday detection, and generally does not have to be removed. The latex paint should be removed with a wire brush in areas where the paint extends beyond the factory coating.

314. EXTRA WORK

If the Contractor believes Work or material are required beyond the scope of what is addressed in a Purchase Order it must follow the RFI, FOA, and Change Management Procedures.

All FOA and Change Order Requests must contain references to the Document Control Stamp on the original and revised Drawings. Changes will only be considered when based on documents that have been issued through Document Control and contain the Document Control Stamp. Any changes which do not occur as a result of a revised Agreement document must be documented through alternative methods such as e-mails, meeting minutes, or other traceable means.

Any changes to the Agreement must contain a Schedule Impact Notice, outlining the effect the change will have on the overall project schedule, and each change must be incorporated into the weekly schedule updates.

Any Extra Work that is incorporated into the agreement through the Change Management Procedure that is being paid for on a Time and Material basis shall be subject to the following stipulations:

1. Wage and equipment rates billed shall be in accordance with the rates submitted with the bid proposal and that have been negotiated with and accepted by the Company.
2. Costs incurred shall be documented through the use of daily time sheets for each crew, and must be signed on a daily basis by a representative of the Company. Costs for materials incorporated into the work or subcontractors used must be documented with actual invoices from the suppliers and/or subcontractors, and must identify that the charges are for the project and phase for which they are being billed, and must contain quantities of materials used, hours spent, or other units of measures, the costs per unit or hour, and the locations at which work was performed.
3. The Contractor is permitted to add a maximum of 10% to all materials purchased and to all subcontractor invoices to cover administrative costs.
4. Payment will not be made for hours billed without daily timesheets or on daily timesheets that have not been signed by a representative of the Company.

315. FACILITY LOCATING AND MARKING

The Contractor shall be responsible for obtaining locates for all existing facilities through applicable One-Call System, City of Chicago DIGGER Office. The Contractor shall continue to be responsible for final verification that the route is a safe installation route before excavating.

I. Contractor Responsibilities

Assistance by the Company in this effort will not reduce or eliminate the Contractor's responsibilities. Locations of utilities and subsurface structures shown on plans and Drawings are established from data available to the Company and are believed by the Company to be reasonably accurate.

The Company believes that the information shown on the Drawing(s) is substantially correct, but makes no representations as to the correctness of such information and shall in no way be responsible for any consequences resulting from reliance upon said information by Contractor or others. As a part of the Work to be done hereunder, it shall be the duty and responsibility of Contractor to verify the location of all utility facilities shown on the Drawing(s) and, in addition, to check in advance of underground Work including boring, trenching and excavating for all underground structures and facilities. Contractor shall test hole all utilities parallel to and crossing any proposed or existing gas pipe. Contractor is also responsible for confirming, following installation Work that no sewer line was damaged or intersected while directionally drilling, boring or auguring.

The Contractor is required to investigate all locations where existing utilities are marked through the One-Call System, regardless of the number of marks placed. The Contractor is encouraged to work closely with the locating service and/or utility owners to resolve instances where questionable marks may have been placed. All costs, including excavation, resolution of marks, and restoration of openings required to verify utility locations is to be included in the Contractor's bid. In addition, the contractor shall include sufficient time in the project schedules for performing this work.

Contractor is expected to "pink line" all gas facility installations immediately after installation by means of pink locating paint. Pink lines should highlight the location and dimension of the installed gas facility. Contractor shall maintain the pink line until the gas facility is gassed, existing main is retired and all Company and/or Contractor Work have/has been completed. All damage to underground structures and facilities shall be the sole responsibility of Contractor.

## II. Service Installation, Training and Evaluation

Open cutting of services will only be allowed if permitted by a Project's Detailed Construction Specification or approval is given by the construction manager because trenchless technology is determined to be unfeasible. In all other circumstances, all service pipe installation is to be directionally bored and will follow the requirements found in the "Use of Bore Camera Technology to Document Directional Drill Path Procedure" document in the Contractor Manual.

Open cutting of services that have been approved to be installed by this method must be performed by hand or vacuum excavation methods only. The unit prices contained in the contract for open-cut services shall be paid only for services greater than 10 feet in length. Open-cut services less than 10 feet in length will be paid for at the unit price for drilled service.

### 316. FUSING EQUIPMENT CERTIFICATION

Contractor fusion equipment shall be inspected annually by Company approved Contractor Personnel certified in McElroy inspection procedures, preventive maintenance, troubleshooting techniques, and rebuilding process for the specific equipment being inspected. Upon successful annual inspection, a weatherproof sticker or tag shall be affixed by the inspector to each piece of equipment indicating the date of inspection and the initials of the inspector. Upon an unsuccessful inspection, the

approval sticker or tag shall be removed from the defective equipment and replaced with a defective tag stating why the equipment is defective and "DO NOT USE".

Contractor shall provide the following listed documentation to the Company on an annual basis, when new personnel are certified to inspect fusion equipment, and/or when newly inspected fusion equipment will be used by Contractor Personnel.

- I. Copies of the certificate documenting qualification for the Work of the Contractor Personnel performing the annual fusion equipment inspections.
- II. Identification number, type of equipment, date of annual inspection, and name of certified inspector for all fusion equipment (e.g., fusion machine, heater plate or facers) being used to perform Company Work.

Below is an example of the format to be used:

	<b>ID #</b>	<b>Type of Equipment</b>	<b>Date of Inspection</b>	<b>Inspected By</b>
<b>1</b>	1234	Unit #14	01/01/12	Joe Jackson
<b>2</b>	4321	Unit #14 Heating Plate	01/01/12	Joe Jackson
<b>3</b>	2341	Unit #14 Facer	01/01/12	Joe Jackson

The Company will provide a listing of certified inspector vendors upon request.

317. GAS MAIN AND SERVICE ABANDONMENT IN PLACE AND/OR REMOVAL

When existing piping is to be retired, the Company will be responsible for disconnecting the pipe from facilities remaining in service and purging the pipe. The Contractor shall provide support in exposing existing piping, as necessary, and coordinating with Company Personnel for retirement of the piping, either by abandoning the pipe in place or removing the pipe. The Contractor is responsible for restoring all openings, and if within CDOT and/or IDOT rights-of-way, in accordance with applicable CDOT or IDOT regulations. Methods that will be utilized are:

I. Abandonment in Place

At all locations, the Contractor will review the length of piping abandoned in place, excavate as necessary, sectionalize it as per Company Policies and Procedures, perform the required PCB tests, and then seal at both ends, as required, and backfill all holes and trenches in accord with applicable CDOT and IDOT requirements.

If the abandoned main has any valve basins or roadway boxes for valves, test leads, and siphons, the Contractor must remove the frame and covers and fill in. If an abandoned low pressure main has drip stand pipes, they must be cut off per Company Policies and Procedures and filled in. Contractor shall be responsible, for properly performing all temporary and final Restoration.

II. Removal

Whenever any main is removed from an excavation and disposed of, the Contractor along with a Company representative shall make an internal inspection of the main and test for the presence of PCBs in accordance with applicable Company Policies and Procedures.

318. GENERAL SURVEY COORDINATES

The Contractor shall be responsible for providing Global Positioning System (GPS) coordinates of all of the hard improvements performed, in addition to providing the As-Built Drawings outlined in Section 301 AS-BUILT DRAWING REQUIREMENTS.

- I. Geographic Coordinate System
    - A. NAD\_1983\_StatePlane\_Illinois\_East\_FIPS\_1201\_Feet
    - B. Projection: Transverse Mercator
    - C. False Easting: 984250.000000
    - D. False Northing: 0.000000
    - E. Central Meridian: -88.333333
    - F. Scale Factor: 0.999975
    - G. Latitude of Origin: 36.666667
    - H. Linear Unit: Foot US (0.304801)
    - I. Geographic Coordinate System: GCS\_North\_American\_1983
      - 1. Angular Unit: Degree (0.017453292519943295)
      - 2. Prime Meridian: Greenwich (0.000000000000000000)
      - 3. Datum: D\_North\_American\_1983
        - a. Spheroid: GRS\_1980
          - 1) Semimajor Axis: 6378137.000000000000000000
          - 2) Semiminor Axis: 6356752.314140356100000000
          - 3) Inverse Flattening: 298.257222101000020000
  - J. Equipment is to be provided by the Contractor and have sub centimeter accuracy.
  - K. Data is to be provided with a 3D satellite lock. If conditions are not providing 3D satellite lock and sub centimeter accuracy, then professional surveying needs to be done with Total Station.
  - L. All data shall be tied back to IL State Plane benchmark control points.
  - M. When collecting data with GPS unit, Z coordinate is elevation, not the depth of cover needed by PGL. Depth shall be collected manually.
  - N. Data shall be delivered to the Company in ESRI format (Personal Geodatabase 10.0).
  - O. Data shall be delivered to the Company on CD or DVD media as project phases are completed. E-mail will not be possible due to security restrictions.
  - P. The Contractor shall provide the make and model of the hardware he proposes to use to satisfy this requirement for Company approval.
- II. The improvements that shall be registered shall include but not be limited to the following:
  - A. Main Installation
    - 1. Tie-in point to existing supply header or supply main installed in previous Phase.
    - 2. Horizontal Offset points to include:
      - a. Point of divergence from original line-of-lay as called for on the plans
      - b. Point of resumption of alignment parallel to original line-of-lay
      - c. Point of divergence toward original line-of-lay.
      - d. Point of resumption of original line-of-lay
      - e. Note: Should the offset be compound (containing multiple angular fittings) the location of each angle point shall be noted.
    - 3. Vertical Depth Adjustments
      - a. Point and depth of cover of divergence from original depth of line-of-lay
      - b. Point and depth of cover of resumption of horizontal alignment to the original line-of-lay
      - c. Point and depth of cover of divergence back to original depth of line-of-lay
      - d. Point and depth of cover of resumption of original depth of line-of-lay

- e. Note: Should the offset be compound (containing many angular fittings) each angle point shall be noted as to its location and depth of cover.
- 4. Fittings
  - a. Connections
    - 1) Type
    - 2) Size
  - b. Valves
  - c. Connections
  - d. Reducers
  - e. Caps
- B. Services
  - 1. Location and depth of cover of all service taps on supply main
  - 2. Location and depth of all risers for connection to future meters
- C. Restoration
  - 1. Temporary
    - a. Limit(s) of concreted trench(es)
    - b. Location(s) and limit(s) of temporary sidewalk(s)
  - 2. Permanent
    - a. Corner Points/Limit(s) of New Asphaltic Surface(s)
      - 1). Quarter Point, Half Point and Full Width by Block, address range and square footage
      - 2). Long side Services
      - 3). Intersections
    - b. New Sidewalks and/or partial sections
      - 1) Address range
      - 2) Square footage.
    - c. New ADA Ramps
      - 1) Intersection
      - 2) Quadrant
      - 3) Quantity

Measurements shall be taken during construction and prior to the facilities being backfilled or otherwise made inaccessible. In addition all point coordinates shall be documented on the As-built Drawings.

319. HYDROSTATIC AND AIR TESTING OF GAS FACILITIES

All facilities must be pressure tested, in accordance with Company Policies and Procedures, before gassing. Contractor is responsible for pressure testing mains. A Company representative may observe the system components during the pressure test to ensure against leaks. Test documentation will be reviewed and approved by a responsible Company representative.

The Contractor is responsible for submitting a pressure chart for all main installed. This chart must be signed by the Contractor personnel that performed the test.

320. INSTALLATION IN OR AROUND STREET, ALLEY AND SIDEWALK

Where the pipeline is installed in a gravel roadway, in gravel topped parkways, or in the shoulder of the road containing gravel, Contractor shall evenly spread roadway stone over the backfilled trench.

When the gas facility is to be installed in any paved area, the pavement shall be initially full-depth saw-cut completely through then broken with pneumatic breakers.

Equipment outriggers are not to be put on carriage walks, driveways, curb walks and sidewalks unless necessary. If outriggers are to be placed on pavement the outrigger shall be properly planked.

Damage to any driveways, carriage walks, curb walks and sidewalks due to settlement or improper use of equipment shall be the sole responsibility of the Contractor to replace promptly at no additional cost to the Company.

All materials and equipment used in the construction and performance of the Work shall be so located as not to interfere with private property. Contractor shall not block the access to emergency, public or private improvements, such as fire and police alarm boxes, fire hydrants, utility manholes, mail boxes, bus stops.

Contractor shall place steel plates with Contractor's logo etched on both sides at all Roadway openings where a Contractor crew is not present.

All plates located in Roadways must be secured at the end of the working day with pins, and any side of a plate allowing vehicular approach or departure must be ramped with cold-patch material, in accordance with CDOT Regulations.

Contractor shall make safe all openings not in a Roadway by use of orange construction fencing around the opening perimeter securely staked to solid ground. Except that, at locations where fencing cannot be staked to the ground, orange cones shall be used in conjunction with yellow warning tape at the opening perimeter. In conjunction with fencing or cones, structurally sound wood boards must be placed on top of openings and secured in place by sand bags or other appropriate means.

321.

INSTALLATION REQUIREMENTS AND INSTALLATION METHODS

Company will specify the method of installation on the design plans. The Contractor must use the Company specified method. If a customer, a utility or a government agency requests a change in the specified installation method, the Contractor shall follow the Change Management Process before the Work using a different installation method is started. Contractor will not be paid for changes not approved and documented.

Gasmain shall have a minimum cover of thirty-six (36) inches. Proposed mains may require a greater depth of cover when adjustments are required to avoid existing utilities, or to tie into existing gas facilities. Existing gas facilities that are to be tied into should be expected to be at depths between 3 and 8 feet. The Contractor shall include in its bid all costs required to install proposed facilities to these depths at tie-in locations and in accordance with the tie-in notes shown on the Drawings.

When crossing existing utilities, the Contractor shall maintain horizontal and vertical clearance outside diameter (O.D.) to O.D. between the gas facility and other utilities as per Company Policies and Procedures unless directed otherwise by the Drawings IN ADDITION TO the CDOT requirement for minimum depth of cover. This may require excavation to depths exceeding 8 feet. The Contractor shall review the Contract Documents and include costs in their bids for complying with these requirements at locations where information presented would indicate that existing utilities and the required clearance would require excavation to depths exceeding 8 feet. Should the depth of the existing utility require excavations deeper than 10 feet, the Contractor shall contact the Company. In addition, the Drawings may contain notes that indicate special requirements by existing utility owners for backfilling or supporting of the existing utilities during installation of the proposed gas facilities. The Contractor shall include all costs for complying with these requirements in their bids. No additional compensation will be provided for additional depth of excavation, shoring, or other expenses incurred to install facilities under existing utilities where these existing utilities are shown on the plans.

Tie-in points as indicated on the Drawings are approximate, and may need to be modified based on the condition of the existing pipe, fittings located in the tie-in area, or other factors. The Contractor shall include in their bids costs for adjustment to the tie-in locations of up to 10 feet at each location, and assume that the type of restoration required for the new location is the same as the original location. Additional payment will only be made through the Change Order Process for adjustments in excess of 10 feet from the original location and/or if the type of restoration required is different than originally depicted.

Any offsets required to change the vertical or horizontal alignment of the proposed gas facilities to maintain the required clearances from utilities shown on the plans (or easily observable utilities not shown on the plans) shall be considered part of the bid price and no additional compensation will be provided.

The Contractor is reminded that methods of installation indicated in the plans often require work that is incidental to that method of installation, such as sidewalk replacement when heaving occurs during the back-reaming or drilling processes for directionally-drilled main. The Contractor shall include costs for these typically incidental costs in their bids and no additional compensation will be provided.

It is the Contractors responsibility to select methods of trench protection that are appropriate for the work indicated and the existing and proposed facilities expected at each location. No additional compensation will be provided if the Contractor must change the type of trench protection due to the chosen method of protection not being feasible for any location due to known obstructions or existing utilities being present. Additional compensation for alternate methods of trench protection will only be considered on a case-by-case basis if the facilities that exist at a particular location are not accurately depicted on the project Drawings.

322. MATERIAL FURNISHED BY COMPANY

The Company will provide certain materials to the Contractor to be used in performance of the Work

I. Materials Provided

The Company shall furnish all materials physically entering into and retained as part of the completed Work except such materials classified in Section 323 below that Contractor is required to furnish at Contractor's expense. Company furnished materials shall include, but not be limited to, the following: all pipe, casing, valves, valve basins, fittings, welding ells, flanges, couplings, tees, reducers, anodes and materials required for cathodic protection, tracer wire, pipe wrap, tape and primer, and plugs and caps necessary for the Work. In addition, the Company shall furnish all welding caps, pigs, small gauge piping, inspection ports, and indicators for testing. In no event shall the Company be liable for delays occasioned by failure to supply material required to be furnished by the Company when caused by conditions beyond its control.

II. Delivery Method, Limits and Responsibility for Delivery Site

Materials for all Project Work, unless specified in the Purchase Order, will either be site delivered, or delivered to a Contractor's facility located within 40 miles of the

Company's warehouse located at 1241 W. Division St in Chicago. For Other Work, the Contractor shall pick up the materials from the Company warehouse. Deliveries to Contractor and facilities or jobsites will be done at the Company's option and cost. Jobsite delivery must be coordinated between Company and Contractor. Contractor is responsible to establish a delivery site and provide equipment and personnel to off-load the material. Upon receipt, all materials shall be checked by Contractor as to quantity issued and condition received. The signature of Contractor's representative on any material request form issued by a Company's representative, freight company or warehouse personnel shall be conclusive evidence of delivery of such material to Contractor in good condition.

III. Contractor's Post-Delivery Responsibilities

Contractor shall be solely responsible for the materials after they have been received. The Contractor shall store, transport, and protect materials until installed. Any procedure for the Contractor's storing of materials shall include the following:

- A. The Contractor shall store all materials for each project or phase in a separate, segregated location, and materials shall not be used for any project or phase other than that which they were intended.
- B. The assumption that all plastic pipe and fittings with plastic pipe components have been stored outdoors and unprotected since the date of manufacture.
- C. Any plastic pipe and any fittings with plastic pipe components shall be stored in the Contractor's storage location in such a manner as to achieve and maintain, throughout the course of the Project, a rotation of using the older materials first, but never pipe that is older than two years from date of manufacture.
- D. Tracking of the date of manufacture of stored plastic pipe and fittings with plastic pipe components within the Project to facilitate the utilization of such material in any Phase within the Project prior to the two-year anniversary of the date of manufacture.
- E. The Contractor will create a phase-specific reconciliation spreadsheet, which shall show all materials delivered to the Contractor for each project or phase, and will provide the PMO with weekly updates to the spreadsheet indicating the materials used to date and comparing the final as-built quantities to the quantities delivered. The Contractor will return all unused materials to the Company warehouse and account for these returns or transfers in the reconciliation spreadsheet. The reconciliation spreadsheet will be provided by the PMO.

Under no circumstances shall material be installed after two (2) years of the date of manufacture. The Contractor shall be responsible for the removal and replacement of any plastic pipe and/or fittings with plastic pipe components installed on or after the two (2) year anniversary of the date of manufacture. Such removal and replacement shall be performed by the Contractor at no cost to the Company.

The Contractor shall only use materials issued for a Project for Work performed within that Project. Contractor personnel must exercise care to prevent damage during the handling, transportation and installation of the pipe, valves, fittings and other materials used in the construction. Any materials lost, stolen or damaged shall be chargeable to Contractor and the cost of such materials shall be deducted from the amount due Contractor hereunder. The Company's warehouse shall be notified of any excess or out-dated materials, and arrangements will be made by the Company to have the Contractor return those excess and out-dated materials to the Company warehouse, to be properly recorded. The Company should be

notified of a need for additional Company-furnished material that may be required to complete the Work. Arrangements will be made to have that material picked up by the Contractor or delivered to the Contractor's job-site or facility. The Contractor shall inspect all materials including each section of pipe and gas system component before installation to ensure its operational integrity, serviceability and that the installation is within two (2) years of the date of manufacture. Where practical, Contractor shall manually operate components with working parts before installation (e.g., close and open valves). The Contractor shall perform a visual inspection of each length of pipe or tubing and each valve, fitting, regulator, meter or other component used in the construction of a gas system to ensure that any plastic pipe components will be installed within two (2) years from the date of manufacture and has not sustained any visually determinable damage that could impair its serviceability. It is the responsibility of the Contractor's employees involved in performing the Work to notify the Construction Inspector or Company representative of any defective, damaged or out of date material on site.

IV. Installation Use and Return Requirements

The Contractor shall install materials received for the designated Project. Contractor shall not use materials received on a different Project, unless the material has been properly transferred. If the material has not been properly transferred Contractor shall return all unused material to Company inventory at the end of the Project (See PGL Materials Procedure Quick Reference Manual).

V. Materials Coordinator

The Contractor shall designate one person to correspond to Company warehouse personnel. Orders for material will only be accepted from the Contractor's designated individual (Materials Coordinator).

VI. Materials Reconciliation

The Contractor shall maintain records of all materials delivered to the Contractor by the Company before and during the course of each Project. In addition, the Contractor shall maintain records of all materials the Contractor returned to the Company at the conclusion of each Project. Materials may not be used on different Phases of the same Project or on another Project unless the appropriate transfer documents have been completed and submitted to the Company's warehouse. All submittals of documents to the Company's warehouse for transfers or returns shall be copied to the PMO.

At the conclusion of the Project and as part of the Project Closeout process, the Contractor shall submit a complete set of all delivery, transfer and returned materials documents along with a summary reconciliation of all materials installed versus those received. Differences of more than ten percent (10%) for each size and type of material must be explained.

When the Contractor desires to close out a Phase of a Project, the Contractor shall obtain the signature of the Company Warehouse Manager for the reconciliation of materials for that Phase. Should the Contractor transfer material between Phases of a Project, the Contractor shall obtain the signature of the Company Warehouse Manager on the reconciliation of material for the entire Project prior to submittal for final payment.

323. MATERIAL, TOOLS AND EQUIPMENT FURNISHED BY CONTRACTOR

Contractor shall furnish, at its expense, all machinery, equipment, tools; all incidental and/or expendable supplies and materials such as: forming and shoring materials; nails; ties; timber; skids; sheeting; trench jacks; welding rods and fuel; welding/fusing, cleaning, priming and coating equipment; holiday detectors; approved supports used in protecting coated pipe; pumps, piping, strainers and filters; high pressure hoses and gauges and pressure recorders necessary to complete the piping requirements for any hydrostatic or air test; pressure test charts for measuring air test; sand sacks for padding rocky trench; concrete; asphalt; sod; black dirt; marking paint; dowels; drain and sewer tile; sand, stone screening and temporary patch (asphalt); as well as other such materials and supplies that will not become part of the natural gas facilities, and incidental tools and equipment necessary to complete the Work.

324. MOBILIZATION, DEMOBILIZATION AND STANDBY

One mobilization/demobilization is required and payable for each Project and is part of the Work.

I. Mobilization

Mobilization shall include, but is not limited to, furnishing labor, equipment and materials and performing all operations necessary to move personnel, equipment, supplies and incidental items to Work Sites, and to perform all preparation to allow the Work to be performed and excludes weather related issues.

II Demobilization

Demobilization shall include but is not limited to, furnishing, labor, equipment and materials and performing all operations necessary to remove personnel, equipment, supplies, incidental items, surplus materials and waste materials from Work Sites and otherwise cleaning up the Work Sites to equal or exceed the original condition.

III. Restrictions

Contractor must obtain Company authorization through the Change Management Procedures in advance for any additional mobilization or any demobilization which will only be considered when Contractor must remove all equipment and labor from a Work-Site.

IV. Company's Prerogative

Company will notify the Contractor if there is a need to mobilize or demobilize due to no fault of the Contractor. The Contractor shall follow the Change Management Procedure in filing for additional charges as a result of the Company's action.

325. NON-CONFORMANCE

Instances of non-conformance shall be documented, including the scope of the non-conformance and its resolution. Should an authorized Company representative observe an unsafe work condition, faulty Work or non-confirming Work, a responsible Company representative will issue a Non-Conformance Record (NCR) in the current Company system.

Unauthorized work or changes will be recognized as non-conforming and documented accordingly.

The Contractor shall be responsible for promptly addressing nonconforming items as soon as identified by the Company. Non-conformance of practices or installations, including any reworked, shall be identified and documented in the current Company system as directed as an NCR.

I. Review and Dispositions

The review and the proposed disposition of nonconforming work shall be defined and documented by Contractor. The Contractor Quality Representative will be responsible for performing evaluations to determine compliance and disposition. Dispositions shall be as follows:

- A. Use-as-is ("UAI")
- B. Repair
- C. Rework
- D. Reject/Replace

When proposed by the Contractor, repair and Use-as-Is dispositions shall have a design justification provided by the Contractor for such disposition. Repair and Use-as-Is disposition requires written Company approval.

II. Recurrence Prevention

To prevent recurrence, the Contractor shall investigate the cause of the nonconformance and take appropriate action to prevent recurrence. The identification, cause, and corrective action planned and taken shall be documented and posted in the current company system by the Contractor. Corrective action taken with respect to nonconforming Work shall be proactive so as to eliminate potential future problems.

III. Punitive Action and/or Disqualification for Cause

Any non-conformance practices or Work by the Contractor whether a Company Construction inspector is present or not may result in disqualification from performing any additional Work for the Company or other action as appropriate.

The Company has the right to discontinue any Work and/or withhold payments until the non-conformance resolution is satisfactory. Excessive NCRs will be evaluated by Company Quality Control (QC); which, at any time, may require the Contractor to temporarily cease all Work definitely and attend training conducted by the Contractor or Company.

326. PERMITS AND LAND RIGHT DOCUMENTS

The Company will and the Contractor shall have responsibilities with regard to permits and land rights documents

I. COMPANY'S RESPONSIBILITY

The Company shall provide all construction permits and land rights necessary for the Work except those listed in Section II below.

II. CONTRACTOR'S RESPONSIBILITY

The Contractor is responsible for compliance with all conditions of any relevant permits and land right documents. A copy of all required permits must be kept on the jobsite in paper form. The Contractor is responsible for obtaining any:

- A. Required roadway obstruction permits from the City of Chicago and making required notification to the City of Chicago of daily roadway obstructions;
- B. Chicago Department of Forestry permits, if tree removal is necessary
- C. Railroad permits but not Railroad Licenses; and
- D. Environmental permits including but not limited to those required for disposal of hydro test water and ground water.

326A. PHOTOGRAPHIC AND VIDEO DOCUMENTATION

Contractor shall take and submit to Company Document Control digital video of pre-construction conditions along the lines-of-lay of each Phase of the Project. The videos shall be of sufficient number and detail to show conditions of all elements in the public rights-of-way (streets, intersections and alleys) as well as the condition of all of the elements of the front and side yards of all structures fronting on the street or rear yard backing onto an alley(s) [only if the proposed line(s)-of-lay is (are) located in the alley(s)].

Upon completion of construction and Restoration, the Contractor shall take and label post-construction videos which shall replicate exactly in order and orientation, all of the pre-construction photos and any other post-construction conditions resulting from changes in the line(s)-of-lay.

The Contractor is to utilize the naming convention per the "Paperwork, Video and Photo Process Flow and Storage" document provided by the Company to provide all photo and video documentation for each Project. All photos and videos shall be labeled to identify the date of taping, Project number, Phase number, street name, address range or if in an alley, the alley's relationship to bracketing parallel streets and cross streets. All photos shall be placed in an electronic folder which identifies the Project, Project number and Phase number and shall be taken and submitted to Document Control not more than five (5) days or less than two (2) days prior to the start of construction or completion of Restoration, respectively.

If in the course of construction the lines-of-lay change to such an extent that the "before" videos do not cover the pre-construction conditions of the new route, the Contractor shall take new videos to sufficiently cover the new route prior to the initiation of construction on the new route.

All sewer mains and laterals that could potentially be in conflict with the new main or service shall be inspected by the use of a video camera prior to the new mains being gassed. The sewer pipes shall be videotaped from the nearest manhole to the extents that the proposed gas mains could potentially be in conflict with the sewers, and all sewer laterals in the "potential conflict" area shall be videotaped to a point five (5) feet past the expected point of conflict with the new gas main. In addition to the labeling requirements applicable to all videos expressed above, the video shall also contain the street name and address of each lateral as well as the street name and address range for sewer mains. Information in addition to these minimum requirements is encouraged. In the event any sewer mains or laterals are damaged, whether through cross-boring or other means, photographs must be taken before and after any repairs and submitted to the Construction Inspector following the repairs by the end of the Business Day.

As part of this video inspection, the Contractor shall conduct a preliminary investigation to inspect the condition of the sewer mains and laterals and ensure that the sewer laterals and mains are not blocked in a way that prohibits video inspection after installation of the proposed gas mains but before such mains are gassed. If prior to or during the video

inspection the condition of the existing sewer mains or laterals prevent the use of cameras, the Contractor shall contact the Construction Inspector for direction in writing on whether the sewers will be cleaned to allow videotaping or the proposed mains should be installed by the open-cut method. Should laterals be found to be impassable, the conflict location between the proposed gas main and the sewer lateral shall be located and potholed to verify no cross-bore situation exists. Photographs of the pothole shall be provided to document the situation at these locations.

Where gas mains are indicated to be installed by the directional-drill method on the Drawings, all sewer mains and laterals in the area of the new mains shall be visually checked to ensure that no cross-bores have occurred. This verification shall take place through the use of videotaping equipment inside the sewer mains and laterals, or by exposing all sewer mains and laterals at the point of intersection with the new main and providing photographs of the intersections, .

The Contractor shall include in its bid all costs for the preliminary investigation to determine the ability to videotape the sewers after the installation of the gas main and the cleaning of the sewers to allow the videotaping.

The Contractor shall provide bore camera video if a service is bored in lieu of open cut, pre and post construction photos if damage occurred to another facility during installation of the service or main by boring, a post camera video of the sewer laterals for main and service installation Work as well as pre and post construction videos. The Contractor shall retain all such documentation for a period of 2 years after release of final payment for the project, and shall provide copies of any requested documentation to the Company within 5 days of said request within that 2-year period. In addition, the company shall have the right to audit these records for quality and/or completeness for the same 2-year time period.

327. PRESSURE RECORDERS

Contractor shall provide an adequate amount of pressure recorders and charts to Contractor crews as to allow for pressure testing and recording of all services and mains per the Specifications.

I. Calibration

Pressure recorders must be calibrated by a certified technician at suitable intervals to verify and demonstrate conformance to calibration requirements, but not less than once annually. Upon successful annual inspection, a weatherproof sticker or tag shall be affixed by the inspector to each piece of equipment indicating the date of inspection and the initials of the inspector. Upon an unsuccessful inspection, the approval sticker or tag shall be removed from the defective equipment and replaced with a defective tag stating why the equipment is defective and "DO NOT USE".

Documentation of a successful calibration shall be kept with the recorder. A record listing of calibration to include recorder serial number and date of calibration shall be provided to the Company upon request.

The Company shall be notified within two (2) Business Days when pressure recorders are found to be out of calibration. An NCR shall be filed to record this condition and to document the follow-up actions required and their completion.

II. Minimum Specifications

Pressure recorders shall meet the following specifications:

- A. Heat treated, cold worked, stainless steel helical pressure element

- B. Accurate to plus or minus one half chart graduation
- C. Wall or portable mounted
- D. Eight inch chart diameter or larger
- E. One, two or three pens
- F. Multiple speed battery operated chart drive
- G. 24 hour and 7 day rotation
- H. Start from zero (0) PSI
- I. Increments of ten (10) PSI or less
- J. Chart time duration greater than duration of actual required pressure test be no more than six (6) days for gas main and no more than one (1) per hour for service pipes.

328. [INTENTIONALLY OMITTED]

329. PROPERTIES PROTECTION

The Contractor shall provide proper protection and support for all properties or structures in public rights-of-way, or in private properties where Work is being performed or in adjacent property. This shall include, but not be limited to: utility poles; all gas pipes; water pipes; conduits; sewers, drains, or other subsurface structures as well as landscaping, fencing and walks in either public or private property. Replacement and/or cleaning of any damaged public or private property is the responsibility of the Contractor at no additional charge to the Company.

The Contractor shall take precautions against the possible interruption of any public or private utility service. The cost of replacing pavement and utilities because of failure to brace the trench properly shall be borne by Contractor.

330. RAILROAD AND TIES

When installing steel main under CTA elevated electric rail structures, Contractor shall install two (2) #8 wires from the pipe into a roadway box at the base of the support column on both sides of the right-of-way, bury one (1) 32# anode at both locations, and bring the anode wire into the roadway box.

When installing steel main under CTA or IC ground level electric rails, Contractor is to install two (2) #8 wires from the pipe into a roadway box at the curb on both sides of the right-of-way, bury one (1) 32# anode at both locations, and bring the anode wire into the roadway box.

When a segment of underground level rails is encountered, the Contractor shall remove the rails, ties, and the tie supports as required by CDOT Regulations and shall bond the rails as detailed in the Company Work orders. The Contractor shall include all costs associated with removing the rails and other items and bonding the rails in their bids. Additional compensation will only be considered if the rails are not indicated on the project plans, but are encountered during the installation of proposed gas facilities.

331. RELOCATION OF FACILITIES

During the progress of the Work, it may be necessary or desirable to remove and relocate certain charted or uncharted facilities and other structures where the proposed location of the Work conflicts with the location of such facilities and structures. The owner thereof and/or the Company shall determine the method and procedure of removal, relocation, repair, replacement, and payment to the Contractor.

Prior to the initiation of any relocation work the Contractor shall receive approval of the Company through the Change Management Procedure.

331A. REPORTING PLATFORM

The Contractor shall use a reporting platform determined by the Company as a data and information tracking tool for field operations documents separately for the Contractor and each Subcontractor performing Work. It is a combination of web-based software, enabling records management anywhere with Internet access, and various reporting spreadsheets that will be outlined at the pre-construction meeting. The URL will be provided by the Company for the platform. Access will be controlled via username and password, available to each Contractor. A Work instruction document will be posted in Sharepoint with setup instructions. The platform will include, but not be limited to:

- I. Identify hours per month Contractor and Subcontractor spent in safety training specifically related to the Contractor's Projects
- II. Identify hours per month Contractor and Subcontractor spent in technical training specifically related to the Company's projects
- III. Total number of FTEs involved on Company Projects
- IV. Modules, for RFIs, FOAs and NCRs, each of which have explanations, workflows, and step-by-step instructions for data input.
- V. Each Work process is broken down based on role and responsibility.
- VI. Customer complaints and/or any issue which requires tracking, resolution or visibility shall be logged in the platform.
- VII. Training will be provided as required by the Company.

332. REQUEST FOR INFORMATION (RFI)

An RFI may be initiated by the Company or Contractor requesting information about an event or issue. RFI's are generated in the current Company system.

I. Minor Modifications ( $\leq 2$  feet)

If the RFI is related to a line-of-lay change less than two (2) feet from that shown on the Drawings, or to minor questions that do not require input from a Subject Matter Expert (SME), the construction engineer may respond to the RFI and Work may proceed.

II. Major Modifications ( $> 2$  feet)

If the RFI is related to a line-of-lay change greater than two (2) feet from that shown on the Drawings or to questions that require the input of a SME, the construction engineer will identify and forward the RFI via the current Company system to the appropriate SME. With regard to changes in the line-of-lay of this magnitude, the Contractor shall initiate the RFI at the earliest opportunity since the Company has to obtain City approval before any modifications can be implemented.

The SME will respond to the RFI via the current Company system

- A. If the change requires review by an outside agency, this will be noted in the response. The status of the RFI will be marked as "Pending – Waiting Documents". The question has been answered, but Work may not proceed until Drawings are modified, approved and the Construction Work Package (CWP) reissued.
- B. Work may proceed only when the Contractor has received the approved drawing revisions via a Construction Work Package (CWP) from Document Control.

Once the revised CWP has been received, the construction engineer will attach the documents to the RFI in the current Company system; close the RFI; and notify the Contractor via the current Company system that Work may proceed.

The Contractor may review the status of RFI's (RFI Log) related to their Work via the current Company system.

The Change Management Diagram will be included in the Contractor Manual on Sharepoint

333. RESTORATION – PAVING AND LANDSCAPING

Restoration Work consists of furnishing all required materials, equipment and labor to perform hard and soft surface Restoration. Contractor is responsible for restoring all asphalt, concrete and landscaping in the public right-of-way and private property where Work occurred. All Restoration Work must be acceptable to the Company, CDOT, and IDOT, as applicable. Restoration shall be performed on a block by block basis and shall begin within seven (7) days of completing the last service on the block or as directed by the Company. Restoration shall be completed with fourteen (14) days of the start of Restoration on a particular block. Failure to complete the Restoration in the time specified will result in delays in progress payments as specified in the Detailed Construction Specifications.

I. Final Restoration

All Restoration inside City public ways shall be performed in accordance with IDOT and CDOT rules. Contractor must ensure that all openings are properly compacted prior to Restoration. Restoration on private property must restore the property to, at minimum, its previous condition.

All openings made during the period of winter shut-downs for asphalt plants will require temporary restoration in the form of base to grade concrete. Immediately upon shutdown of the asphalt plants, the Contractor will prepare a list of all locations at which final restoration has not taken place, and will transmit this list to the PMO. The Contractor shall then make all necessary arrangements to complete final Restoration on all openings made during this shutdown period and included on this list in accordance with CDOT requirements. Any portions of a Project that have been formally incorporated into a Restoration Agreement with the City of Chicago where portions of the once-required resurfacing will be performed by the City may be exempted from this requirement.

The Contractor must submit sufficient backup data to substantiate that proper materials were used and that the installed products meet the requirements of both CDOT and IDOT specifications for the Work performed.

II. Temporary Street Restoration

Concrete street base shall be immediately poured after backfilling an opening, unless Contractor obtained prior approval from Company to not immediately pour the base after backfilling. If concrete base cannot be immediately poured, a steel plate shall be placed over a backfilled opening until a base can be poured, in accordance with CDOT Regulations.

III. Temporary Walkway Restoration

A temporary layer of stone screening material shall be placed at all concrete walkway locations immediately after backfilling if final Restoration cannot be

completed the same day. Screening shall be spread to encompass areas where concrete was removed to a depth of two (2) inches.

If the Contractor elects to use temporary concrete patch in lieu of screening, it shall be done at no additional cost to the Company. Any temporary concrete Restoration must be stamped to show the repair is temporary. Any openings that are not immediately restored with temporary backfill and restoration shall be protected with steel plates in accordance with CDOT Regulations.

#### IV. Parkway and Landscape Restoration

When the route of the pipeline passes through yards, parkways, parks, forest preserves or other areas where grass, sod or shrubbery may be damaged by the Work, Contractor shall renew or replace all grass, sod or shrubbery damaged, whether or not such damage is located upon the right-of-way unless the Detailed Specification provides otherwise. All grass areas so damaged shall be renewed with a good grade of nursery sod instead of seed.

Situations may exist where undisturbed grass adjoining construction openings will need to be replaced by Contractor to maintain customer satisfaction. If so, the Contractor shall remove the existing grass and place new sod. If more than fifty (50) percent of the parkway is disturbed, per lot address, then the Contractor shall remove all existing grass and sod the entire parkway.

In areas where the location is vacant and/or the sod will not be maintained, the Company may permit the use of seeding, fertilizer and erosion control blanket that meets CDOT and/or IDOT specifications, as applicable, in lieu of sod, but only on a case by case basis. This must be approved in writing by the responsible Company representative prior to being performed. Black dirt is required for such renewal and Contractor shall furnish and install 6" of black dirt as required to assure 6" of black dirt at all locations prior to placing sod. The new sod and shrubbery shall be watered by the Contractor initially upon installation and three additional times, every other work day following installation, whether or not they are located in a City right of way. All landscaping shall be restored to a condition that equals or exceeds the original condition.

Any openings in the parkways that are not immediately backfilled and temporarily restored shall be protected by covering and fencing around the openings, in accordance with CDOT Regulations.

#### V. Restoration After Company Work

There will be locations within the scope of the Project where the Company will perform Work related to gas service cut-off, service installation and main retirement. The Contractor will be required to provide the necessary manpower and equipment to excavate cutoff locations as directed by the Company, provide temporary excavation protection until Company personnel perform the cut-off, and perform all final restoration work at these locations. The Contractor shall re-use the existing sod wherever possible at these locations. Costs associated with gas service cut-offs will be paid for at the unit price(s) provided in the Contract for this work. The cost of Restoration of all other openings shall be reflected in the lump sum. Contractor shall ensure that all openings are properly compacted prior to final Restoration. Contractor assumes liability of all restored openings after Restoration is performed.

334. SERVICE INSTALLATIONS AND TRANSFERS

Contractor shall start the installation of gas services, in a Phase, no later than three (3) weeks after the start of main installation and must have the service installations completed within two (2) weeks after all of the main in a Phase has been gassed.

At the Company's option, the Contractor may be requested to install a curb valve as an additional shutoff for particular service locations. No additional compensation will be provided for the installation of this valve above the normal unit price for services.

It is anticipated that all gas services will be renewed. However, due to unknown field conditions, it may be advantageous for the Company to utilize the existing service pipe and transfer it to the new gas main, or insert a new pipe into the existing service pipe. If the existing service will be transferred to the new main or used for inserting a new pipe, the Contractor will be responsible for excavating the opening and installing the service tees for all service pipes that will be transferred and not renewed. A Company representative will identify the services that will be transferred. Once the service tee has been installed and tested by the Contractor, Company crews will complete the transfer of the existing service pipe onto the new main. Once the Company crew completes the transfer the Contractor will be responsible for Restoration. The Contractor is required to complete a Service Installation ticket for all service transfers performed, and will be paid for this work at the Contract unit price for a drilled service.

335. SITE FAMILIARIZATION

The Contractor shall visit each Project Work Site prior to submitting its bid for review and become familiar with existing facilities, utilities, and other factors which may affect the overall cost of performing the Work or the Contractor's ability to complete the Project within the scheduled time period. Any effect on the cost of the Work based upon the site familiarization shall be reflected in the Contractor's bid price.

All Changes required in the proposed lines-of-lay due to observable conflicts shall be brought to the Company's attention during the pre-bid process in order to allow for timely analysis and corrective action, if necessary. Failure by the Contractor to do so may be reason to deny an approval of a Change Order once the bid is accepted and Work has commenced.

336. SPOIL REMOVAL, DISPOSAL OF DEBRIS AND SITE CLEANLINESS

All spoils generated by the Work shall be disposed of by the Contractor in accordance with the latest version of the Peoples Gas Light and Coke Company Gas Piping Installation and Retirement Environmental Plan. The Contractor shall include costs in their bids for disposal of all environmental classifications of soil encountered, as defined by the Illinois EPA, with the exception of soils classified as Hazardous Waste. The Contractor shall perform all test required for soil classification, prepare all manifests, shall be deemed the generator of the waste, and shall dispose of all soils at facilities licensed to accept the various types of wastes encountered. Should soils classified as Hazardous Waste be encountered, the Company shall be contacted for directions of how to proceed, and additional costs associated with disposal of these materials will be negotiated.

The Contractor shall be responsible for leaving the streets, roads, alleys, rights-of-way and adjoining property of the Work Site in a clean and orderly condition satisfactory to the Company and the City of Chicago. When performing Work in City streets, Contractor shall be careful to keep the streets free of dirt and dust. For Work in streets, sweeper shall be utilized and the streets shall be washed down on a regular basis and upon completion of all Work on a block. Contractor shall keep all sewers and catch basins free of any spoil, debris or other material or waste during construction.

It is of utmost importance that each Work Site be maintained in a clean and orderly fashion to avoid safety hazards and complaints from the residents. The entire Work Site shall be cleared of debris, sidewalks swept, and openings, material and equipment secured at the end of each work day.

337. TELECOMMUNICATIONS

It is the Contractor's responsibility to ensure that each crew has a means of communication readily available. Suggested forms of communications are cellular phones or radio systems. The Contractor and Company shall each assign a primary point of contact for each specified site or region. The name, direct contact phone number, and email address of each contact person shall be provided to each party.

338. TRAFFIC CONTROL

The Contractor shall provide and maintain all passageways, guard fences, barricades, lights, and other facilities necessary or required by DOT, Illinois Department of Transportation (IDOT) and Chicago Department of Transportation (CDOT) rules and Chicago ordinances. Contractor shall conduct its Work so as to cause minimum interference with public travel. Contractor shall minimize interference with roadways, drives (public or private), crosswalks or approaches to any buildings as much as practicable.

If the Company determines that any above requirement in this Section is left in an unsafe or inadequate manner, the Company will notify the Contractor. If the Contractor does not timely rectify the problem, the Company will arrange for immediate correction at Contractor's expense.

339. TRAINING AND QUALIFICATION

Any Contractors and their crew members that are to perform Work shall be trained and qualified.

- I. Training and qualification requirements may include, but are not limited to:
  - A. Operator qualification tested in conjunction with Contractor Operator Qualification Requirements When Performing Work for PGL/NSG.
  - B. Company welding and/or fusion qualifications.
  - C. Company Work expectations. Some of this training may be conducted electronically using DVD or online media technology.
  - D. Training events to ensure compliance to updated or changed Company Policies and Procedures or other Specifications or other documentation contained in the Operations Manual within ten (10) business days of notification by Company for any update.
  - E. Company System training prior to accessing any Company System
  - F. Form and ticket work
  - G. As-built Drawings
  - H. Gas meter locations
  - I. PCM or other current Company systems
  - J. RFI
- II. Commitment and Documentation
  - A. The Contractor should expect a minimum of 20 hours of training per Contractor Personnel per year.
  - B. The Contractor shall provide Company with documentation of training. Training documentation must contain
    1. Attendee names
    2. Subject matter of training
    3. Date of training.

340. TREES

The cost to remove and replace trees, when approved by the Company, shall be at the expense of the Contractor and be part of its bid.

- I. Prior to any and all tree removal Contractor is responsible for contacting the Chicago Department of Forestry and obtaining any permits for tree removal. Contractor shall replace removed tree(s).
- II. Contractor shall adhere to City of Chicago Department of Forestry standards when excavating or trenching around any trees located in the vicinity of Work.
- III. Preemptive Protection

Where Contractor's equipment might damage trees or shrubbery, a competent Landscape Contractor shall be employed by Contractor to trim, prune and do any necessary Work, prior to the start of Work, to protect the trees and shrubbery from damage. Any trees or shrubbery damaged beyond repair shall be replaced by Contractor at its expense.

341. TRENCHLESS TECHNOLOGIES

All trenchless pipe installation shall comply with Integrys Section 920 Field Manual Damage Prevention Trenchless Technologies procedure, and as outlined below..

1. SERVICE INSTALLATIONS

In all instances where trenchless technologies are utilized in the construction of installation of services, the Contractor shall follow the procedure in the "Use of Bore Camera Technology to Document Directional Drill Path" document found in the Contractor Manual for all work relating to Trenchless Technology.

The cost for the providing the document(s) and conducting the procedure(s) below shall be included in the bid for total cost for services for each Phase of each Project.

I. Photographic/Video Records

The photos taken for these purposes shall become part of the camera file identified in Section 326A above. All photo submissions shall have the premise address in the vicinity of the photo area clearly documented. In addition, all photos shall be digitally stamped with date and time of photograph.

All video submissions shall be segmented by sewer lateral address with each segment containing a digital stamp of the sewer lateral address and the sewer lateral address displayed during the entire video footage.

II. Lateral Protection

At the Pre-Construction Meeting, the Contractor shall identify its primary method for sewer lateral protection and a secondary method when the primary method may not be effective for a particular premise. In the event the secondary method is not effective the Contractor shall again meet with the Construction inspector to jointly identify a workable method.

III. Marking of Installation Path

Contractor shall white line the complete trenchless path marking sewer depths at ten (10) feet intervals prior to installation. When buried underground utilities are exposed, the Contractor shall paint the utility with white paint to ensure it is visible to installation crews. In addition to any mandatory method outlined in the Integrys Section 920 Field Manual Damage Prevention Trenchless Technologies procedure the Contractor may utilize a listening device to continuously monitor sewers to ensure maximum protection.

- IV Company shall investigate all occurrences where cross-bores have been discovered. The Contractor responsible for the Work where the cross-bore occurred shall at no additional cost to the Company:
- A. Investigate the subject installation to find the root cause as to why the cross-bore occurred and provide the Company with a report of the findings of the investigation within fourteen (14) days of the notification by the Company of the cross-bore.
  - B. Repair and replace the cross-bore and restore the area(s) disturbed by the Work involved.

Investigate mains and services previously installed by the Foreman and crew responsible for the installation of the initially discovered cross-bore and other Foremen and crews as necessary. The limit as to the amount of previously installed mains and services to be investigated shall be determined by the Company up to the total amount of Work performed by the Contractor to date.

2. MAIN INSTALLATION

Where gas mains are indicated in the project Drawings to be installed by the directional drill method, the following work shall be included in the lump sum bid price for installation of these mains:

1. The Contractor shall visit the site during the bidding period and ascertain if there are any properties or areas present that typically prevent access to sewer lateral verification, such as vacant properties, boarded-up buildings, industrial or school building which historically have no history of what existed prior to these buildings, or other conditions which may prevent verification of laterals. All such factors shall be incorporated into the lump sum bids.
2. The Contractor shall perform the investigation of existing utilities required by the Integrys Section 920 Field Manual Damage Prevention Trenchless Technologies to determine the work required to install the mains by directional-drill methods. If the verification of required clearances cannot be obtained through the available methods outlined in Section 920, the Contractor shall request permission to change the method of installation for the mains in the affected area to hand or vacuum excavation methods. Any requests for changes in methods of installation must be accompanied by evidence that required investigation work has been completed and properly documented.
3. The Contractor shall inspect any sewer mains that may contain laterals that could potentially be intersected by the proposed gas mains PRIOR TO DRILLING OPERATIONS. Camera technology shall be used to inspect and record the pre-construction condition of the sewers and obtain the locations of any laterals that enter the sewer main. This work may be used to assist in the Section 920 verification of clearances.
4. The Contractor should note any areas of the sewers that are blocked with debris and may require cleaning, or that have collapsed or have other damage that will prevent verification that no sewer laterals were damaged through the installation of the main. Cleaning of sewers to allow video inspection to occur will not be paid for separately, but should be included in the Contractor's bid. Should the sewers be collapsed or otherwise

compromised to the extent that cleaning will not render the inspection feasible, the Contractor shall request permission to change the method of installation for the mains in the affected area to hand or vacuum excavation methods. Any requests for changes in methods of installation must be accompanied by evidence that required investigation work has been completed and properly documented.

5. Permission to change the method of installation to hand or vacuum excavation will be granted only in the following situations:
  - a. The condition of the sewer main (except where cleaning will remedy the situation) prevents access to the sewer laterals
  - b. Existing underground utilities do not provide sufficient clearance, and allowable reductions in the clearances will not permit drilling operations to commence
  - c. All combinations of methods allowed under Section 920 for verifying that the main can be drilled have been unsuccessful

In all areas where the Contractor is granted permission to change the method of installation to hand or vacuum excavation, The Change Order process will be followed to credit the length of main that was to have been originally installed by the directional-drill method and add the negotiated costs for the revised method of installation.

342. UTILITY SERVICE INTERRUPTION

Interruption of utility services to customers should be avoided. However, if an interruption is unavoidable it shall only take place after the utility affected has approved the interruption time and procedure. The Contractor shall notify the Company for instruction on whether the Company or the Contractor will be responsible for notifying all utility customers affected by the interruption of service. This notification shall be done a reasonable time prior to the interruption and length of interruption shall be minimized.

**ICC Docket No. 14-0496**  
**Joint Applicants' Response to**  
**Illinois Attorney General's Second Set of Data Requests AG 2.01-2.13**  
**Dated: September 8, 2014**

**REQUEST NO. AG 2.05:**

Referring to JA Exhibit 2.0, at 12:264-265, do the Joint Applicants have any estimates of the future savings that can potentially be achieved? If so, please provide such estimates.

**RESPONSE:**

The Joint Applicants do not have estimates of specific dollar amounts of future savings that can potentially be achieved, but as explained on page 34, lines 712-715 of Mr. John Reed's testimony (Joint Applicants Ex. 3.0) and in the Joint Applicants response to Staff data request DGK 1.02, if the transaction is approved as proposed, it is likely to generate net savings in the range of three to five percent of non-fuel O&M of the combined company after a five to ten year ramp up period relative to what non-fuel O&M for the individual companies would have been absent the transaction. Please also see the Joint Applicants responses to Staff data requests DGK 1.01 and DGK 1.03 concerning the ability to quantify savings from the merger.