

SECCRA Community Landfill

INSTALL WELLS and PIPING 2023

SECCRA Community Landfill

219 Street Rd

West Grove, PA 19390

ADDENDUM No. 1

November 1, 2023

- A. Addendum No. 1** is issued as part of the Contract Document, to inform and/or specify changes, which take precedence over information contained in the original Contract Documents. Unless otherwise specifically noted or specified hereinafter, or shown on drawings or schedules accompanying this Addendum, all work required by this Addendum shall conform to the applicable provisions of the Contract Documents. **It shall be the responsibility of the Respondent to include in their proposal any cost implications of this Addendum. All Respondents are to indicate on the form of proposal submitted by them, acknowledgement of receipt and compliance with the contents of this Addendum No. 1.**
- B.** Any provision in any of the Contract Documents, which may be in conflict or be inconsistent with the contents of this Addendum, shall be void to the extent of such conflict or inconsistency.
- C.** The following clarifications/answers are provided in response to questions provided by potential bidders:
- C.1.** The Owner will provide for survey needs, with 3 business day notice.
 - C.2.** The Owner is providing nothing (manpower, equipment or materials), with the exception of survey, pipe bedding and purchase of pipe and fittings if elected by the OWNER.
 - C.3.** Included in this Addendum is a list of contractors that attended the, Install Wells and Piping 2023, mandatory prebid meeting.
 - C.4.** The Contractor is to include all E&S work to restore the disturbed areas in Item 1200.
 - C.5.** The Contractor may use electro-fusion couplings to tie into existing pipes over/not including 8". Couplings are at the Contractors expense.
 - C.6.** The Contractor may not begin before January 15, 2024 but must complete the project before June 15, 2024. The Contractor must give sufficient notice to Owner to allow time to purchase material if needed.
 - C.7.** All knockouts will be air pump type Detail 8/2, also a 2" air line will now run to all knockouts. Connection of 2" air lines and condensate outlet piping shall be considered incidental to the item.
- D.** Remove and replace the following:
- D.1.** Remove Section 6.1 (21 pages) dated October 2023, replace with Section 6.1 (21 pages) dated 11/1/23
 - D.2.** Remove Section 9.9 (4 pages) undated, replace with Section 9.9 (4 pages) dated 11/1/23.

END ADDENDUM NO. 1

SIGN-IN SHEET * PLEASE WRITE CLEARLY

Project: Install Wells and Piping 2023

Meeting Date: 10/24/23

Facilitator: Alan Roman, Roman Consulting, Inc.

(610) 587-9240 romanconsultinginc@gmail.com

Name	Title	Company	Phone	Fax	E-Mail
DYLAN REAGAN	PM	BERG CONSTRUCTION	(610) 913-0576		drex@bergconst.com
DON MACNESTRA	COO	BERG CONSTRUCTION	(610) 913-0576		dane@bergconst.com
CHRIS WAGNER	PM	ALCO	215-370-1511		chrisw@alcoincusa.com

TECHNICAL SPECIFICATIONS

<u>DIVISION</u>	<u>PART TITLE</u>
01000	GENERAL REQUIREMENTS
02000	SUMMARY OF THE WORK
03000	PROJECT COORDINATION <ol style="list-style-type: none">1. General2. Execution
04000	DEFINITIONS AND STANDARDS
05000	SUBMITTALS
06000	LANDFILL GAS EXTRACTION SYSTEM <ol style="list-style-type: none">1. General2. Materials3. Execution

DIVISION 01000

GENERAL REQUIREMENTS

1.1 CONSTRUCTION DOCUMENTS

The construction documents include all applicable drawings and specifications within these Contract Documents. The intent of these documents is to have the CONTRACTOR include in his price all items to completely finish the work. Any aspects of the Work which are not clearly defined by these specifications shall be governed by the rules of the best prevailing practice in the area of the Work for that class of Work as determined by the ENGINEER.

1.2 WELL LOCATIONS AND PIPELINE ALIGNMENT

1.2.1 The approximate locations of the required LFG extraction wells, header pipe, lateral pipes, and associated appurtenances are indicated on the Drawings. The exact locations of the LFG extraction wells and alignment of the header and lateral pipes will be staked or otherwise marked in the field by the OWNER'S surveyor. All other surveys related to this project including "as-built" surveys shall be performed by a professional land surveyor licensed in the Commonwealth of Pennsylvania at the expense of the OWNER. Any discrepancies between the staked locations and the locations or alignments indicated on the drawings are to be brought to the attention of the OWNER AND/OR CONSTRUCTION MANAGER prior to proceeding with construction. The CONTRACTOR must give the OWNER at least 3 business days notice for survey needs.

1.2.2 Pipeline alignment may be offset from the designated location by the CONTRACTOR to avoid surface or subsurface obstructions or impractical working conditions, provided, however, that approval is first obtained from the OWNER AND/OR CONSTRUCTION MANAGER.

1.3 REFERENCES

Bid Form

1.4 MEASUREMENT AND PAYMENT

A. GENERAL CONDITIONS

1. Pay Item 1100 - Bonds:

This item is priced at a lump sum and is to cover the CONTRACTOR'S expense of completely bonding the Work as described within the Contract Documents.

2. Pay Item 1200 – Mobilization/Demobilization:

Priced at a lump sum and is to cover the cost to mobilize and demobilize to/from the site all support equipment(s) and construction crew(s) to completely accomplish the Work as described within the Contract Documents. All erosion and sedimentation control is to be included in this item.

3. Pay Item 1300 – Contingency Allowance

The Contractor is to include a stipulated sum/price for use upon the Owner's instruction Funds will be drawn from this item only by Change Order with proper authorizations. At closeout of Contract, funds remaining in this Item will be credited to the Owner by Change Oder.

B. Pipe Trenches

4. Pay Item Series 2000 – Excavation & Backfill of Piping Trenches:

Excavation & Backfill of Piping Trenches is priced per lineal foot for the associated trench depths/widths and includes benching (if necessary), trenching, loading and hauling of all excavated refuse to an area designated by the OWNER AND/OR CONSTRUCTION MANAGER during landfill operating hours, supply, installation and compaction of pipe bedding material above and below piping, supply and install pipeline warning tape, backfilling and compaction of trench as detailed in the Contract Documents. The CONTRACTOR shall provide the soil backfill materials from an on-site borrow area designated by the OWNER AND/OR CONSTRUCTION MANAGER. Any cost, which may be incurred to prepare backfill soils to meet or exceed existing conditions, will be the responsibility of the CONTRACTOR. The OWNER will provide the pipe bedding material. The CONTRACTOR shall haul all materials to and from the working area unless otherwise specified.

The specific requirements for bedding material and soil backfill material are outlined in Division 06000 LANDFILL GAS EXTRACTION SYSTEM, PART 2-MATERIALS.

Backfilling of the trench under this item shall be as described in Division 06000 LANDFILL GAS EXTRACTION SYSTEM, PART 3 – EXECUTION.

Piping and fittings are paid in accordance with Pay Item Series 2100.

C. PIPING

5. Pay Item Series 2100 – Piping:

2", 4", 8", 12", and 18" SDR-17 Solid HDPE Lateral Piping is priced per lineal foot and includes, supply, fusing and installation of all laterals, subheaders, headers, air lines, and recirculation line piping identified in the construction drawings.

Supply and installation of pipe fittings are paid in accordance with Pay Items 2110 through 2136. Unit price for fittings will include all materials and labor necessary to install the fittings per the plans, including all adapters, back-up rings, neoprene gaskets, blind flanges, stainless steel nuts, bolts, washers, etc.

If the OWNER supplies the pipe and fitting, it will ONLY be pipe and fittings (including backup rings), OWNER will NOT supply other items like gaskets, bolt kits, etc...

Excavation & Backfilling of the trench involved with 2" SDR-17 Solid HDPE Lateral Piping is paid in accordance with Pay Item 2100 – Excavation & Backfilling of HDPE Lateral Piping Trenches.

D. Valves

6. Pay Item Series 2200 – Valves:

4", 8", 12", and 18" Isolation Valve Boxes are priced individually per unit and includes, supply and installation of all valve boxes identified in the construction drawings, including the valve, sampling ports, gear and gear extension, hardware, 24" valve housing, sand, bentonite, and other appurtenances to complete installation per the drawings. This item will include all materials necessary to complete the connection of valve to the header.

E. EXTRACTION WELLS

7. Pay Item 3100 – Well Drilling and Completion:

The vertical LFG extraction well drilling and completion is priced **per lineal feet of drilling depth** and includes all labor and materials (i.e. 4" HDPE well pipe, perforated/slotted and solid pipe and minimum 4 feet stickup), fittings (e.g. 4" End Cap), well stone, bentonite plugs, soil backfill, etc.) needed to completely drill and install the landfill gas extraction well as shown on the Contract Drawings. Well control valve, connection of the well to the lateral/header pipe and other appurtenances are addressed by Pay Item 3200. The CONTRACTOR shall provide the soil backfill materials from an on-site borrow area designated by the OWNER AND/OR CONSTRUCTION MANAGER. Any cost, which may be incurred to prepare backfill soils to meet or exceed existing conditions, will be the responsibility of the CONTRACTOR. The CONTRACTOR shall haul all materials to and from the working area unless otherwise specified.

8. Pay Item 3200 – Wellhead Installation:

This pay item shall include Installation of 2" Wellhead supplied by the CONTRACTOR. The price includes all labor and materials needed to completely install the landfill gas extraction well wellhead as shown on Contract Drawings, including tee, blind flange, valve, orifice plate, sample ports, well cover, etc..

F. CONDENSATE KNOCKOUT

9. Pay Item 4100 – Condensate Knockout:

The price for condensate knockout includes all labor and materials needed to completely install the condensate knockout as shown on the Contract Drawings. Backfill materials will be supplied per the Contract Documents. Hooking up and testing of pump is considered incidental to the item.

G. CONTINGENT PAY ITEMS

The following pay items are for contingent work that may be performed, if needed, at the discretion of OWNER AND/OR CONSTRUCTION MANAGER based on changes in field conditions or to facilitate construction but are not part of the base construction contract.

10. Pay Item 9100 - Electrofusion Coupling:

Unit price for Electrofusion coupling includes materials and labor for complete installation of that fitting. Use of Electrofusion couplings shall require prior approval

from the OWNER AND/OR CONSTRUCTION MANAGER. Electrofusion couplings used without owner's approval will be at no cost to the OWNER.

1.5 PIPES, CABLES, AND UNDERGROUND STRUCTURES

It shall be the CONTRACTOR's responsibility to ascertain the location of all pipes, cables and underground structures in the area of the contractor's operation, and to employ the necessary precautions to avoid them during trenching, digging, and drilling.

If it is established that the location of a trench, excavation, or wellbore is such as to cause interference with an underground facility or structure, the CONTRACTOR shall so advise the OWNER AND/OR CONSTRUCTION MANAGER. At his discretion, the OWNER AND/OR CONSTRUCTION MANAGER may designate a new location or authorize omission.

1.6 PROTECTION OF WORK, PERSONS AND PROPERTY

The CONTRACTOR shall provide and maintain any barricades, lights or other safety devices necessitated by hazardous conditions, required by local authority, or deemed necessary by the OWNER AND/OR CONSTRUCTION MANAGER representative.

1.7 PERMITS

All permits and licenses, relative to CONTRACTOR's equipment and work shall be obtained by CONTRACTOR at his expense including all costs for detailed Engineering, engineering stamps, drawings, testing, certifications, or other items necessary to secure said licenses and permits. This excludes environmental permits (e.g., NPDES Discharge Permit or Air Pollution Permit) and site specific permits (e.g. local).

1.8 WATER ENCOUNTERED IN WORK

CONTRACTOR shall notify OWNER if any water is encountered during drilling or excavation activities. No water shall be discharged to surface ditches. Excessive amounts of water (enough to significantly hamper normal construction operations, in the sole opinion of the OWNER) encountered during excavation activities is to be handled as directed by the OWNER AND/OR CONSTRUCTION MANAGER. This does not apply to surface conditions or surface waters that are allowed to enter open excavations.

1.9 AUTHORIZED REPRESENTATIVE OF THE OWNER

"Authorized Representative of the OWNER" shall mean the following individual, who has the authority to execute a Change Order on behalf of the OWNER:

John Robbins, Chairman of the Board of Directors
c/o Scott Mengle, General Manager
219 Street Road,
West Grove, PA 19390
Phone: (610) 869-2452
Fax: (610) 869-8064

1.10 ENGINEER

ENGINEER shall mean the following individual, whom shall be the technical representative of the OWNER:

Patrick Wozinski, P.E.
BAI Group
366 Walker Drive; Suite 300
State College, PA 16801
E-Mail: pwozinski@baigroupllc.com
Phone: (814) 238-2060

1.11 CONSTRUCTION MANAGER

CONSTRUCTION MANAGER shall mean the following individual, whom shall be representative of the OWNER:

Alan Roman
Roman Consulting, Inc.
P.O. Box 106
Oley, PA 19547
E-Mail: roman543@aol.com
Phone: (610) 587-9240

1.12 GENERAL SAFETY CONSIDERATIONS

- A.** Workers shall be advised of the presence of methane or hydrogen sulfide gas emanating from the natural decomposition of refuse buried at or near the job site and take precautions to ensure the safety of workers and the public.
- B.** The CONTRACTOR shall designate one of its onsite crew members who is trained in the use of gas detection monitoring equipment and safety equipment as a Safety Monitor. He shall be present onsite at all times with appropriate instruments to test for oxygen deficiency and the presence of methane or hydrogen sulfide gas. An Emmet CGS-10 Gas Detector, or similar unit, shall be available for this purpose. The Safety Monitor shall periodically test the excavation areas, utility vault, structure, etc., for safe working conditions and be responsible for the appropriate safety equipment being available at the site.
- C.** Workers shall not be allowed to work alone at any time in an excavation. Work parties of at least two shall be mandatory, with one worker outside of possible gas effects. Access to the open trench shall be via ladders spaced no further than 25 feet apart. Trenches shall be benched to prevent possible caving in on workers.
- D.** No arc welding or torches shall be permitted in trenches, enclosed areas, or over refuse filled areas unless performed over ground mats or in areas of the site approved by the Safety Monitor and Construction Manager.
- E.** Workmen shall not be permitted to enter excavations where there is an oxygen deficiency (oxygen levels below 19.5% by volume) or a combustible mixture of methane (methane levels between 5 and 15% by volume) without taking precautionary measures.

- F. All trenches shall be covered or completed at the end of each work day.
- G. All boreholes shall be completed at the end of each work day. Any borehole not completed by the end of the day shall be covered with a safety grate and plywood, and mounded with soil. The borehole will also be cordoned off with warning tape.
- H. As construction progresses, all valves, pipe and other conduit openings shall be closed as soon as installed to prevent the migration of gases through the pipeline system and to prevent extraneous matter from entering the system.
- I. Smoking shall be prohibited in or near open excavations and in the vicinity of pipe-laying activities. Smoking is prohibited anywhere onsite except in designated areas.
- J. Fire extinguishers shall be available and rated at least A, B and C and are at least 10-pound size.
- K. Landfill gas (LFG) is comprised of approximately equal portions of carbon dioxide (CO₂) and methane (CH₄) with other trace constituents. It is a product formed by the anaerobic decomposition of refuse. Methane gas is the primary component of natural gas, and is combustible when the methane concentration in air is between 5 and 15 percent by volume. The 5 percent level is called the lower explosive limit (LEL). Below 5 percent, there is insufficient methane for combustion. Above 15 percent, called the upper explosive limit (UEL), there is insufficient oxygen for combustion. However, it is important to note that a concentration of methane above 15 percent is considered at least as dangerous as a concentration between 5 and 15 percent, because as the methane dilutes with air, it will pass through the explosive range. When gas concentrations are low, it is common to express methane concentration as a percentage of the LEL. For example, 100 percent LEL is 5 percent methane in air, and 50 percent LEL is 2.5 percent methane in air. Because the decomposition of buried refuse typically produces methane at concentrations ranging from 40 to 55 percent, methane will always pass through the combustible range as it vents to the atmosphere and dilutes with air. Methane is lighter than air, and will rise in the absence of typical barriers. LFG, being a mixture of methane and carbon dioxide, may be heavier than or lighter than air depending on the specific mixture. LFG may escape from the refuse, both vertically through the landfill cover, and laterally through surrounding soils. LFG moves in response to the pressure buildup within the landfill and through diffusion in the absence of a pressure differential. Diffusive movement nearly always produces explosive range concentrations of methane.

CONTRACTOR shall cease construction activities or operations when any concentration of methane at or above 10% LEL is present.

1.13 PRECAUTIONS WHEN WORKING ON REFUSE LANDFILLS

- A. Workers shall be cautioned regarding the potential unstable soil and refuse material and the strong possibility of caving during drilling and excavating operations. All workers entering open excavations shall be secured with a safety belt, harness, or short rope to enhance rescue operations in case of accidents.

- B.** Workers in the excavation area shall have access to acid vapor masks for temporary protection in the event hydrogen sulfide (H₂S) gas is present and triggers the H₂S alarm on the gas detector. Vacate the area immediately when H₂S is detected.
- C.** Construction equipment shall be equipped with vertical exhaust and spark arrests.
- D.** Motors utilized in refuse excavation areas shall be explosion-proof.
- E.** Start-up and shutdown of equipment shall not be done in areas of exposed refuse.
- F.** Soil shall be stockpiled adjacent to operations in areas of exposed refuse for firefighting purposes. The most effective way to extinguish landfill fires is to smother the fire with soil (which eliminates available combustion oxygen).
- G.** All refuse excavated during construction activities shall be disposed of at the working face of the landfill during landfill normal operating hours. Any waste exhumed outside of normal landfill operations shall be covered as soon as possible after exposure with at least a 6-inch layer of earth or deposited into approved containers. In no event shall the refuse remain exposed overnight. Waste will then be hauled to the working face the next day of operations.
- H.** Inhalation of landfill gases shall be avoided as much as possible. Such gases (or oxygen deficient air) may cause nausea and dizziness, which could lead to accidents.
- I.** Workers shall avoid contact with exposed refuse where possible. Irritants or hazardous materials may be present.
- J.** Workers shall not leave open wells or excavations unattended. Open boreholes and excavations must be covered to prevent accidental entry. Wells must be barricaded, flagged, and protected sufficiently to prevent entry of dirt and run off water.
- K.** The CONTRACTOR shall provide such equipment and medical facilities as are necessary to supply basic first aid to anyone who may be injured in connection with the Work. In an event immediate removal and/or hospitalization of site personnel is required the CONTRACTOR shall contact 911.
- L.** The OWNER AND/OR CONSTRUCTION MANAGER may stop the Work if in his sole judgment safety laws, or safe work practices are not being observed; provided, however, that none of the foregoing shall relieve the CONTRACTOR from being fully responsible and liable for meeting all safety laws and safe work practices in connection with the Work nor should the failure of such persons to stop the Work be construed to mean that all safety laws and safe work practices are being met. Notwithstanding the above, the CONTRACTOR is solely responsible for the compliance with safety laws and maintaining safe work practices.

END OF DIVISION 01000

DIVISION 02000

SUMMARY OF THE WORK

1.1 IDENTIFICATION

The work under this contract shall be performed at the SECCRA Community Landfill located at 219 Street Road, West Grove, PA 19390.

1.2 CONTRACT DOCUMENTS

Requirements of the work are contained in the contract documents, and include cross-references herein to published information, which is not necessarily bound therewith.

Included in the general contract are: well drilling and installation, trenching and backfilling of pipelines, pipeline construction, general construction, plumbing, and all other labor operations and work required to complete the facilities and construction according to the intent of the Contract Documents, Contract Drawings and CONTRACTOR's bid.

The work consists of furnishing all labor, supervision, materials, and services necessary to complete the project as indicated on the Drawings and in the Bid Document, and materials as specified. The work includes labor and material to provide and install the complete landfill gas management system as described in the Contract Documents including, but not limited to:

- Drilling and installing of up to twenty-six (26) vertical landfill gas extraction wells and associated appurtenances as specified in the construction drawings and technical specifications;
- Furnishing and installing lateral and header piping, backfill and fittings to tie the extraction wells to the header as specified in the construction drawings and technical specifications;
- Restore disturbed areas to as near original condition as possible or better;
- This is a unit cost project; the quantities of work may change due to field conditions & cost. Estimates made by contractor in preparation of his bid do not constitute minimum quantities for payment. SECCRA will only pay for the actual work completed or materials installed.

END OF DIVISION 02000

DIVISION 03000

PROJECT COORDINATION

PART 1- GENERAL

1.01 ADMINISTRATION AND SUPERVISION

The CONTRACTOR shall coordinate the various elements of the work and entities engaged to perform the work; and coordinate the work with existing facilities/conditions, and with Work by separate contractors (if any) and by OWNER AND/OR CONSTRUCTION MANAGER.

1.02 SURVEY/RECORDING

All surveying must be performed by a professional land surveyor registered in the Commonwealth of Pennsylvania. Working from established survey benchmarks at or near project site, the SURVEYOR shall establish and maintain dependable markers for alignment and levels of the work. Calculate dimensions and measure for layout of work; do not scale the drawings. The SURVEYOR shall maintain surveyor's log of layout work and other survey work as specified, record deviations (if any) from drawing information on existing conditions, and review with OWNER AND/OR CONSTRUCTION MANAGER at time of discovery.

PART 2- EXECUTION

2.01 INSTALLER INSPECTIONS

The Installer of each major unit of work shall inspect actual field conditions prior to beginning of work; inspect each product immediately before installation; do not install damaged or defective products, materials or equipment.

2.02 INSTALLATION, GENERAL

- A.** Comply with manufacturer's instructions and recommendations when manufacturer's instructions for installation and/or operation are more detailed or stringent than the requirements contained directly in these contract documents.
- B.** Timing: Install work during time and under conditions which will ensure best possible results, coordinated with required inspection and testing.
- C.** Anchor work securely in place, properly located by measured line and level, organized for best possible uniformity, visual effect, operational efficiency, durability, and similar benefit to OWNER's use. Isolate incompatible materials from contact sufficiently to prevent deterioration.
- D.** Mount individual units of work at industry-recognized mounting heights, if not otherwise indicated; refer uncertainties to OWNER AND/OR CONSTRUCTION MANAGER before proceeding.

END OF DIVISION 03000

DIVISION 04000

DEFINITIONS AND STANDARDS

1.1 DESCRIPTION

Except as specifically defined otherwise, the following definitions supplement definitions of the Contract, General Conditions, Supplementary Conditions and other general contract documents, and apply generally to the work.

1.2 DEFINITIONS

A. General Requirements

The provisions of Division-01000 General Requirements apply to the entire work of the Contract.

B. Indicated

Shown on drawings by notes, graphics or schedules, or written into other portions of contract documents. Terms such as "shown", "noted", "scheduled" and "specified" have same meaning as "indicated", and are used to assist the reader in locating particular information.

C. Directed, Requested, Approved, Accepted, etc.

These terms imply "by the OWNER, CONSTRUCTION MANAGER AND/OR ENGINEER", unless otherwise indicated.

D. Approved by OWNER AND/OR ENGINEER

In no case releases CONTRACTOR from responsibility to fulfill requirements of contract documents.

E. Project Site

Space available to CONTRACTOR at location of project, either exclusively or to be shared with separate contractors, for performance of the work.

F. Furnish

Supply and deliver to project site, ready for uploading, unpacking, assembly, installation, and similar subsequent requirements.

G. Install

Operations at project site, including unloading, unpacking, assembly, erection, placing, hauling, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar requirements.

H. Provide

Install, complete and ready for intended use.

I. Installer

Entity (firm or person) engaged to install work, by CONTRACTOR, subcontractor or sub-subcontractor. Installers are required to be skilled experts in work they are engaged to install.

J. Overlapping/Conflicting Requirements

Most stringent (generally) requirement written directly into the contract documents is intended and will be enforced, unless specifically detailed language written into the contract documents clearly indicates that a less stringent requirement is acceptable. Refer uncertainties to the OWNER AND/OR CONSTRUCTION MANAGER for a decision before proceeding.

Where optional requirements are specified in a parallel manner, option is intended to be CONTRACTOR's unless otherwise indicated.

K. Minimum Requirements

Indicated requirements are for a specific minimum acceptable level of quality/quantity, as recognized in the industry. Actual work must comply (within specified tolerances), or may exceed minimums within reasonable limits. Refer uncertainties to OWNER AND/OR CONSTRUCTION MANAGER before proceeding.

L. Abbreviations, Plural Words

Abbreviations, where not defined in contract documents, will be interpreted to mean the normal construction industry terminology, determined by recognized grammatical rules, by the OWNER AND/OR CONSTRUCTION MANAGER. Plural words will be interpreted as singular and singular words will be interpreted as plural where applicable for context of contract documents.

M. Testing Laboratory

An independent entity engaged for the project to provide inspections, tests, interpretations, reports and similar services.

1.3 STANDARDS AND REGULATIONS

A. Industry Standards

Applicable standards of construction industry have same force and effect on performance of the work as if copied directly into contract documents or bound and published therewith. Standards referenced in contract documents or in governing regulations have precedence over non-referenced standards, insofar as different standards may contain overlapping or conflicting requirements. Comply with standards in effect as of date of contract documents, unless otherwise indicated.

B. Abbreviations

Where abbreviations or acronyms are used in contract documents, they mean the well recognized name of entity in building construction industry; refer uncertainties to OWNER AND/OR CONSTRUCTION MANAGER before proceeding, or consult "Encyclopedia of Associations" by Gale Research Co.

END OF DIVISION 04000

DIVISION 05000

SUBMITTALS

PART 1- GENERAL

One digital copy of all submittals shall be sent directly to the OWNER AND/OR CONSTRUCTION MANAGER. It is the responsibility of this firm to complete the review and comment of the project correspondence. One (1) digital copy of the submittal will be returned within one (1) week to the contractor with appropriate comments. Comments will indicate if the submittal has been approved or denied and under what conditions. CONTRACTOR shall maintain one complete set of submittals at the job site at all times.

1.1 PROJECT SCHEDULES

Progress Schedule: Five (5) days before the date established for "commencement of the work", submit a comprehensive and detailed progress schedule indicating a time bar for each significant category of work to be performed. Arrange schedule to indicate required sequencing. A revised progress schedule is only required if it differs from schedule submitted with contractor's bid.

1.2 PRODUCT DATA AND SAMPLES

A. General

Coordinate submittals with the progress schedule and actual work progress. Allow 1 week for review. Provide additional copies as required by governing authorities.

B. Product Data

Mark each copy to indicate the actual product to be provided; show selections from among options in the manufacturer's printed product data. Submit to OWNER AND/OR CONSTRUCTION MANAGER; submittal is for information and record purposes only. Maintain one additional copy at the project site for reference purposes.

Do not proceed with the installation of manufactured products until a copy of related product data is in the installer's possession at the project site.

C. Miscellaneous Submittals: Provide copies of miscellaneous submittals as follows:

1. Warranties

Submit three (3) executed copies, and additional copies as required for maintenance manual to the OWNER.

2. Maintenance Manuals

Submit three (3) bound copies to the OWNER.

3. Health and Safety Plan

Submit two (2) copies to the OWNER.

1.3 SURVEYOR'S LOGBOOK

Prior to construction, CONTRACTOR shall develop a stationing sequence for the proposed construction project. CONTRACTOR and/or contractor's surveyor should then generate the following table:

Station	Northing	Easting	Existing Elevation (ft)	Depth of Cut (ft)	Header/Lateral Pipe			Comments
					Invert (ft)	Diameter (in)	Slope (%)	

This information must be submitted to the OWNER AND CONSTRUCTION MANAGER for review and approval. All staking shall be at maximum 50 lf spacing. However, all tie-ins, laterals, and sumps must be properly labeled and staked. This information will be referenced during project invoicing and as-built documentation.

1.4 RECORD DRAWINGS / WELL LOGS

Upon project completion, the CONTRACTOR shall submit to the ENGINEER two (2) sets of review record documentation. Initial submittal shall be completed within thirty (30) days.

The ENGINEER will complete drawing review within fourteen (14) days. At that time one (1) set of drawings will be returned to the CONTRACTOR. The CONTRACTOR will incorporate the necessary alterations and submit five (5) sets of the drawings to the ENGINEER. The CONTRACTOR shall also submit electronic copies of the drawing on a compact disc in AutoCAD format. The final drawings must be signed and sealed by a registered Professional Engineer in the Commonwealth of Pennsylvania. The final documentation will be sent to the OWNER for distribution. Drawings are to be based upon the survey data obtained by a land surveyor. All field notes and raw data obtained by the surveyor and other parties used in the generation of the record drawings are also to be submitted in a neat and orderly manner.

At a minimum, the following information should be included in the drawings. If the following minimum amount of information is not provided, the OWNER may use any and all retainage to secure the services of an independent surveyor to produce the required information. This will include excavation of pipe and/or other items if necessary to obtain the data. No retention money will be released prior to submission of final record drawings.

A. Main Collection Piping

- Northings, eastings, and elevations at each well where the well pipe penetrates the intermediate cover surface;
- Northings, eastings, and elevations of the invert of all underground lateral and header pipes to completely describe the location of the pipe. On straight pipe, the maximum spacing between survey points is to be 50 feet;
- Elevation of the natural ground surface at each location surveyed along the pipe;
- Northings, eastings, and elevations of the top of pipe at each point where the pipeline changes direction or slope. This is in addition to the locations described above to locate the pipeline;
- Northings, eastings, and elevations of the invert of all underground fittings (tees, reducers, valves, blind flanges, flanged connections, road crossings, etc.);
- Size of all underground pipes; and,

- A detailed plan and profile drawing for all underground pipes is to be generated from the surveyed data. Stationing is to be accurate and is to match between the plan and profile views. Profiles should accurately indicate invert of pipe and natural ground surface elevations as well as the locations of all pipe fittings (tees, reducers, valves, blind flanges, flanged connections, road crossings, etc.). Plan views should accurately indicate the location and alignment of all underground pipes as well as the locations of all pipe fittings (tees, reducers, valves, flanged connections, road crossings, etc.). In addition, the plan view shall also note station of extraction well laterals and other associated tie-ins.

B. Miscellaneous

Northings, eastings, and elevations of all other items installed by the CONTRACTOR under this contract.

C. Drawing Format

Associated with the above referenced information the following must also be included:

- Cover sheet which identifies the location and titles of each sheet;
- Overall plan view of the constructed system. This view must include information sufficient to reference the associated profiles and construction details;
- Scale should be 1:100; and,
- All surveying must be performed by a professional land surveyor licensed in the Commonwealth of Pennsylvania and must use the appropriate state plane coordinate system.

END OF DIVISION 05000

DIVISION 06000

LANDFILL GAS EXTRACTION SYSTEM

PART 1 - GENERAL

1.1 SCOPE OF WORK

This section shall cover the labor and equipment required for the performance of the work required of the CONTRACTOR to accomplish the work items contained in this contract including but not limited to:

- A.** Mobilize crew, supplies, and support equipment necessary to adequately perform the Work. The OWNER will furnish no equipment, personnel, supplies, or materials unless otherwise negotiated or stipulated in the Contract Documents.
- B.** It will be the responsibility of the CONTRACTOR to provide adequate access, including benches and roads for all work items (including, but not limited to, the drilling rig(s) and other support equipment) required to accomplish all of the Work. After construction activities have been completed, the CONTRACTOR will remove all roads and benches it has provided. It will be the responsibility of the CONTRACTOR to restore all areas it has disturbed to original or better conditions.
- C.** Complete drilling operations to the depths specified in the plans. Drill cuttings shall be hauled to the active working face of the landfill for disposal, as directed by the CONSTRUCTION MANAGER. Install extraction well according to construction drawing details, including perforated and solid piping, aggregate backfill, bentonite and soil plugs, etc.
- D.** Install all valves and fittings for the extraction wells as shown on the Contract Drawings.
- E.** Grade soil around the well to prevent water ponding and restore disturbed areas, with topsoil, to original or better conditions and reseed. This work is considered incidental to the work. No extra payment will be made by the OWNER. Cost shall be placed in Item 1200.
- F.** Load and transport waste cuttings and other construction waste or debris from the pipeline areas to the working face of the landfill during regular landfill operating hours. Absolutely no exhumed trash will be left at the well site overnight. If waste is taken to the landfill after operating hours the CONTRACTOR must cover the waste with at least 6 inches of soil,
- G.** To the best of the Owner's knowledge, the SECCRA Community Landfill has not accepted any asbestos waste. Since the site is a municipal solid waste landfill the presence of asbestos in the waste cannot be ruled out. Therefore, there exists the possibility of encountering asbestos when the wells are drilled or pipe is trenched. If asbestos is encountered, proper safety precautions must be adopted by the CONTRACTOR to protect the safety of construction personnel, landfill personnel, and the general public. Additionally, the CONTRACTOR must take whatever precautions are necessary under federal, state, and local safety codes when potentially handling

asbestos or asbestos contaminated material. This includes, but is not limited to, 29 CFR 1910.1001.

- H.** Provide and install below ground lateral and header pipe, fittings, and bedding according to the drawings and meeting the requirements of Parts 2 and 3 of this Division. Laterals and headers shall be installed on approved pipe bedding and shall be installed to the alignment, grades, and elevations shown in the Contract Drawings. Attach lateral to the existing main collection header with fused connections. CONTRACTOR to furnish all additional pipe, fittings, and pipe bedding material, unless otherwise specified.
- I.** All bid prices shall include normal delay time in the quoted unit prices to cover any equipment failures, bad weather, and other variables which are natural, normal, and beyond the control of the OWNER. Typical weather conditions during a specified construction period will be referenced per historical data per the United States Weather Service.
- J.** The CONTRACTOR shall furnish all labor and materials required to complete the project as shown in the Drawings.
- K.** All work will be conducted safely. The CONTRACTOR will utilize non-sparking equipment, flame and spark arrests, O.V.A. or Methane Level Meters as required, and will not permit open flames or smoking at the construction site or near any completed wells. The CONTRACTOR will also immediately employ any and all safety measures deemed reasonable and appropriate by Project Management Personnel.
- L.** Demobilize field crews and equipment from the site.
- M.** Provide detailed reproducible "Record Drawings" and well logs and boring reports.

1.2 JOB CONDITIONS

Prior to all Work, CONTRACTOR shall become thoroughly familiar with the site, the site conditions, and all portions of the Work falling within this Document. CONTRACTOR shall contact utility owners and request location and staking of utilities prior to construction commencement.

PART 2- MATERIALS

CONTRACTOR shall submit manufacturer's literature and specifications to the OWNER AND/OR CONSTRUCTION MANAGER per Division 5000 for approval for each product proposed for use in this project. Meeting the specifications on the drawings and in this Document does not relieve the CONTRACTOR of this responsibility. OWNER shall have the right to reject any material supplied by the CONTRACTOR prior to said approval. All products must conform to the following minimum criteria prior to submittal. All products shall be of a new and good quality. CONTRACTOR shall be required to unload, inventory, and be responsible for all items supplied by the OWNER.

A. HDPE Pipe

All pipe and fittings shall be high density polyethylene pipe (HDPE), SDR-17 except as noted on the Contract Drawings, having the properties listed in the table below unless

noted in the Contract Drawings as otherwise. Pipe and Fittings shall be manufactured from first quality PE 4710 high density, high molecular weight polyethylene, with a cell classification of PE 445574C. All pipe shall have the properties listed in the table below unless noted in the Contract Drawings as otherwise. HDPE pipe shall be manufactured by DRISCOPIPE or approved equivalent.

<u>Property</u>	<u>Test Method</u>	<u>Unit</u>	<u>Value</u>
Density	ASTM D-1505	gm/cm ³	>0.945
Melt Index	ASTM- D-1238	gm/10 min	<0.15
Flexural Modulus	ASTM D-790	psi	110,000-160,000
Tensile Strength	ASTM D-638	psi	3200
Hydrostatic Design Basis	ASTM D-2837	psi	≥1,600
Carbon Black	ASTM-D-3350	%	>2

B. HDPE Flange Adapters

All flange adapters shall be molded and meet ASTM F-2880 requirements. All flange adapters must have a minimum pressure rating equal to that of the HDPE pipe. Absolutely no extrusion welded fittings will be acceptable.

C. Electrofusion Coupling

HDPE only.

D. Back-Up Rings

All rings are to be 150# manufactured using grade 80-55-06 ductile iron and meeting ASA Drilling and ASTM A-536 requirements.

E. Gaskets

Neoprene only.

F. Blind Flanges

PVC with a minimum 150 psi pressure rating.

G. Butterfly Valves

Asahi Type 75 Butterfly valve, gear operated, PVC body, nitrile or vitron seats and seals as specified by the OWNER AND/OR CONSTRUCTION MANAGER. The valves shall be equipped with a two (2) piece 316 stainless steel stem and housing provided by the valve manufacturer as needed to meet the site specifications.

H. Sample Ports

Polypropylene Quick-Disconnect Tube Coupling Socket, 1/8 Coupling with, with Valve.

I. Bentonite

Only granular bentonite shall be used for well isolation layers.

J. Bolts

All bolts, nuts, and washers (except anchor bolts) are to be stainless steel and sprayed with Anti-Seize lubricant and are to be of appropriate lengths and diameters.

K. On-Site Soil Backfill

The soil backfill material shall be free of clods or other foreign material. The CONTRACTOR shall provide the soil backfill materials from an on-site borrow area designated by the OWNER AND/OR CONSTRUCTION MANAGER. Any cost, which may be incurred to prepare backfill soils to meet or exceed existing conditions, will be the responsibility of the CONTRACTOR. The CONTRACTOR shall haul all materials to and from the working area unless otherwise specified.

L. Granular Bedding/Backfill Material

A clean, granular screened bedding material free from other foreign materials shall be used (sand, screening or approved equal). The approved bedding does not have to be washed, but must be free of clods and/or stick together. CONTRACTOR shall submit a sample for approval. Supplied by the OWNER, from a stockpile onsite.

M. Gravel Pack

Gravel pack shall be clean, non-carbonate, 1" to 3" round or crushed stone or approved equivalent. The gravel pack shall be free from dirt, clay balls, roots, excessive fines, and organic material. CONTRACTOR shall submit a sample for approval. SUPPLIED by the CONTRACTOR.

PART 3- EXECUTION

The following section describes the manner in which all gas extraction wellheads are to be completed and the underground pipe is to be installed. Any deviation from the following activities as defined or as described elsewhere in the Contract Documents or the Drawings will be the basis for removal of defective work and/or non-payment at the discretion of the OWNER's representative.

A. Well Construction:

- a. CONTRACTOR shall provide benching for equipment (if necessary) and maintenance of same, and is responsible for installation of materials as detailed in the Scope of Work Section.
- b. Extreme care shall be taken to secure the work area during boring operation when the bore hole is exposed. Methods to secure the work area shall be thoroughly described and followed in the CONTRACTOR'S HASP. Workers shall not leave open wells or excavations unattended. Open boreholes and excavations must be covered to prevent accidental entry. Wells must be barricaded, flagged and sufficiently protected to prevent entry of dirt and runoff water.

- c. Prior to boring, the CONTRACTOR shall confirm with the Owner's Engineer the 'Boring Depth' for the well to be drilled. The Contractor shall take extreme care to ensure that the depth of the boring does not exceed the prescribed depth.
 - d. During borehole drilling, the CONTRACTOR will haul drill cutting waste to the working face for disposal. All waste will be disposed of at the working face during normal landfill operating hours. Waste hauled to the working face outside of operating hours must be covered by the CONTRACTOR with 6" of soil cover.
 - e. THE CONTRACTOR will insert pipe into the borehole and suspend while backfilling and completion of the well is completed. During pipe installation and backfilling, CONTRACTOR shall place a grate over the top of the borehole.
 - f. A ring of geomembrane, geocomposite, or similar will be installed over the gravel pack in the borehole prior to placement of a bentonite seal.
 - g. Bentonite used in the completion of the borehole will be hydrated in the well. CONTRACTOR shall hydrate the bentonite in a skid steer or excavator bucket and dump hydrated bentonite into the well.
- B. Well Completion:** Backfill material surrounding the finished well is to be compacted and graded as shown on the Drawings to divert stormwater away from the completed well. The CONTRACTOR will then install the wellhead which is located at the valve station in accordance with the Contract Drawings.
- C. All underground pipe shall be placed and backfilled in the following manner:**
- 1. After trenching, the final pipe grade will be established by placing a 4-6" minimum layer of approved pipe bedding in the trench if required. Pipe bedding shall be compacted to a minimum as directed by the Construction Manager.
 - 2. After the pipe has been placed in the trench, and after all surveying (a open pipe placed on top of the pipe may be used to facilitate surveying and recording has been done, approved backfill shall be placed and compacted around the pipe to level of approximately 24" above the top of the pipe (for trenches deeper than 24"). Lifts on each side of the pipe shall be placed and compacted in a way to prevent movement or grade changes in the pipe. Backfill shall be placed in 6" lifts and compacted with a minimum of four passes of a vibrating plate.
 - 3. The remainder of the trench shall be backfilled using an on-site soil that is free of clods and other foreign material. This material shall be placed in lifts not to exceed 6" in loose lifts. Each lift shall be compacted with a vibratory plate compactor or approved equal to consolidate material in place such that it will not damage, cause movement, or change the grade of the pipe.
- D. All laterals are to be attached to headers with fused connections.**

- E.** All trenches deeper than 4' MUST have a ladder accessible into and out of the open trench every 25 feet or according to minimum OSHA required. (This will be strictly enforced)
- F.** Upon completion and placement of the header pipe (or sections thereof), the system shall be pressure tested. The pipe should be pressure tested at 10 psi for one (1) hour above ground installed and backfilled then pressure tested again at 10 psi for four (4) hours, with no more than a 2.5 psi decrease. During the above ground testing, every mechanical joint will be inspected while under pressure, and any joint that shows any leakage shall be repaired and then retested. It is critical that the pipe segment be at a constant temperature during the testing period. If pipeline is exposed or temperature cannot be maintained, the testing gauge pressure must be corrected for temperature changes.

Pressure testing gauge shall have minimum increments of 0.2 psi. A representative of the Construction Manager must witness all pressure testing of pipeline segments.

To facilitate the installed system final pressure test, all open pipe ends will be temporarily capped or fitted with a blind flange assembly.

WARNING: Do not proceed with pressure tests above ground unless Contractor has taken appropriate safety precautions to restrain pipe assembly and protect employees.

All testing shall be reported in writing to the Construction Manager and shall include the following information:

- Date and time;
- Person performing test;
- Name of witness;
- Pipe location, segment, or stations and
- Starting/Ending pressure and comments.

If test fails, all pipe and fused joint leaks shall be repaired by cutting out the leaking area and refusing the pipe. After all leaks are repaired, a retest shall be performed per project specifications.

- G.** Excavations shall not be left open overnight.
- H.** All CONTRACTORs shall conform to the Department of Labor and Industry Adopted Permanent Rules relating to Occupational Safety and Health Standards including but not limited to Parts 5205.1000 through 5207.09300.

END OF DIVISION 06000

1. BID FORM

For:

SOUTHEASTERN CHESTER COUNTY REFUSE AUTHORITY
219 Street Road
West Grove, PA 19390

Attention: Mr. Scott Mengle

Gentlemen:

In conformity with the specifications as prepared by Southeastern Chester County Refuse Authority, 219 Street Road, West Grove, Pennsylvania 19390 and after an examination of these Bid Documents, the undersigned submits this bid.

It is hereby certified that the undersigned is (are) the only person(s) interested in this bid as principal or officer, and that this proposal is made without collusion with any person, firm or corporation. The undersigned further guarantees that, if awarded a contract, the bidder will furnish and deliver all materials and perform all labor, tools, tests, and services required to execute, in an expeditious, substantial and workmanlike manner, the requirements of and in accordance with the specifications, to the complete satisfaction and acceptance of SECCRA.

It is understood that SECCRA reserves the right to reject any or all bids, or parts thereof, or items therein and to waive technicalities. It is further understood that competency and responsibility of bidders will receive consideration before the award of the contract.

Bidder submits this bid with the understanding that the materials and/or services will be delivered on or before the date stated in this proposal and that the time for the delivery of the materials and/or services shall be considered as of the essence of this contract. It is further understood, however, that any extension of time, regardless of cause, beyond the agreed date, must be requested by letter from the supplier and any extension must be granted by letter from SECCRA prior to same becoming effective.

The Bidder agrees not to assign this bid or any rights or interests thereunder without the written consent of SECCRA.

The undersigned acknowledges receipt of the following addenda, and the cost, if any, of such revisions has been included in the bid sum:

ADDENDUM NO. _____ DATED _____

ADDENDUM NO. _____ DATED _____

BID FORM (continued)

The undersigned Bidder proposes and agrees, if this Bid is accepted, to perform and furnish all the Work as specified in the Bidding Documents within the Contract Times indicated in this Bid and in accordance with all other terms and conditions of the Bidding Documents for the prices written below:

PAY ITEM	BID ITEM	UNITS	QUANTITY	UNIT COST	TOTAL COST	Deduction if material is provided
1000	General Conditions					
1100	Bonds	LS	N/A			N/A
1200	Mobilization / Demobilization	LS	N/A			N/A
1300	Contingency	LS	N/A	25,000.00	25,000.00	N/A
General Conditions Subtotal:						
2000	Piping Trenches					
	12" Trench Excavation & Backfilling Within Waste Footprint (2" and 4" Laterals and Recirc Line)	LF	3,500			N/A
	12" Trench Excavation & Backfilling Outside Waste Footprint (2" Air Line)	LF	150			N/A
	18" Trench Excavation & Backfilling Within Waste Footprint (8" Subheader)	LF	1,700			N/A
	24" Trench Excavation & Backfilling Within Waste Footprint (12" Header; may include airline)	LF	2,600			N/A
	24" Trench Excavation & Backfilling Outside Waste Footprint (12" Header)	LF	40			N/A
	30" Trench Excavation & Backfilling Within Waste Footprint (18" Header)	LF	300			N/A
	36" Trench Excavation & Backfilling Within Waste Footprint (18" Header + 4" Recirc Line + 2" Air Line)	LF	300			N/A
	30' Road Crossing Encasement & Installation	EA	2			N/A
2100	Lateral & Header Piping					
	2" SDR – 17 HDPE Lateral Pipe	LF	1,900			
	2" SDR – 17 HDPE Gas Airline Pipe	LF	2,150			
	4" SDR – 17 HDPE Lateral Pipe	LF	1,200			
	4" SDR – 17 HDPE Recirculation Pipe	LF	900			
	8" SDR – 17 HDPE Subheader Pipe	LF	1,700			
	12" SDR – 17 HDPE Header Pipe	LF	2,700			
	18" SDR – 17 HDPE Header Pipe	LF	600			
	12" Flange Connection (Existing Header to New Header)	EA	3			
	HDPE Fittings					
	2" HDPE Elbow	EA	1			
	2" HDPE Elbow (air line)	EA	2			
	4" HDPE Elbow	EA	2			
	4" HDPE Elbow (Recirculation line)	EA	3			

PAY ITEM	BID ITEM	UNITS	QUANTITY	UNIT COST	TOTAL COST	Deduction if material is provided
	12" HDPE Elbow	EA	4			
	2"x 2"x 2" Tee (airline)	EA	1			
	2"x 4"x 4" Tee	EA	9			
	4"x 4"x 4" Tee	EA	2			
	2"x 8"x 8" Tee or Saddle Branch	EA	14			
	2"x 12"x 12" Tee or Saddle Branch	EA	11			
	2"x 18"x 18" Saddle Branch	EA	1			
	4"x 8"x 8" Tee	EA	1			
	4"x 12"x 12" Tee or Saddle Branch	EA	1			
	4" x 18" Saddle Branch	EA	6			
	8" x 12" x 12" Tee	EA	2			
	8" x 18" x 18" Tee	EA	1			
	12" x 12" x 12" Tee	EA	1			
	2" x 4" Reducer	EA	3			
	12" x 18" Reducer	EA	2			
	4" Blind Flange	EA	2			
	8" Blind Flange	EA	2			
	12" Blind Flange	EA	1			
	18" Blind Flange	EA	1			
	4" Endcap	EA	1			
	6" Endcap	EA	1			
	8" Endcap	EA	2			
	12" Endcap	EA	2			
	Valves					
	4" Isolation Valve Box*	EA	1			N/A
	8" Isolation Valve Box*	EA	2			N/A
	12" Isolation Valve Box*	EA	7			N/A
	18" Isolation Valve Box*	EA	2			N/A
	<i>*Isolation valve boxes shall include the specified valve, sampling ports, gear and gear extension, hardware, 24" HDPE valve housing, sand, bentonite, and other appurtenances to complete installation in accordance with Detail 7 of the contract drawings</i>					
HDPE Piping Subtotal:						
3000	Extraction Wells					
3100	Well Drilling and Completion	LF	1,900			N/A
3200	Wellhead Installation (includes tee, blind flange, valve, orifice plate, sample ports, well cover, etc.)	EA	26			N/A
Extraction Wells Subtotal:						
4000	Condensate Knockout					
4100	Type 2 Condensate Knockout	EA	4			N/A
TOTAL ESTIMATED PROJECT COST						
						N/A

Contingent Bid Items

Item No.	Description	Unit Price	
8000	Demobilization/Remobilization	\$	LS
9100-A	2" HDPE Electrofusion Coupling	\$	EA
9100-B	4" HDPE Electrofusion Coupling	\$	EA
9100-C	8" HDPE Electrofusion Coupling	\$	EA
9100-D	12" HDPE Electrofusion Coupling	\$	EA
9100-E	18" HDPE Electrofusion Coupling	\$	EA

Note: Bid quantities are estimates for bidding purposes and may not be representative of the work to be completed. CONTRACTOR shall complete their own estimates for completion of the work, including the supply and installation of materials.

In the event that a change order entails Work or Materials specified elsewhere, such work shall be completed at the cost of work as determined in accordance with paragraphs 11.4 and 11.5 of the General Conditions.

Firm Name _____

Contact Person _____

Address _____

Telephone _____

Authorized Signature(s) _____

