ATTACHMENT B – SCOPE, SCHEDULE, AND FEE

CITY OF LEWISVILLE
C.R. FEASTER WTP – PLANT PROCESS STUDY
PHASE 2 – BENCH AND PILOT- SCALE TESTING

OVERVIEW:

The City of Lewisville (City) owns and operates the 20.49 million gallon per day (mgd) C.R. Feaster Water Treatment Plant (CRFWTP). The existing treatment process is conventional with rapid mix, flocculation, sedimentation, and filtration. The City applies copper ions for zebra mussel mitigation and powdered activated carbon (PAC) for taste and odor control at its raw water intake / pump stations. The plant applies chlorine and ammonia to form chloramines for primary disinfection through the treatment process.

While PAC has provided taste and odor removal benefit, additional treatment is necessary to address seasonal spikes in concentrations of geosmin and methylisoborneol (MIB), taste and odor causing compounds in the City's source water, Lewisville Lake. The lake experiences seasonal algal blooms that cause increases in geosmin and MIB. During significant geosmin and MIB spikes in the source water, the existing treatment process is not capable of removing these compounds below the taste and odor threshold (approximately 8 ng/L), and the City receives customer complaints.

The City previously conducted a preliminary engineering evaluation for ozone implementation at the CRFWTP (by HDR Engineering, Inc.). The project included initial bench-scale tests, confirming ozone's ability to oxidize higher concentrations of geosmin and MIB for removal. The City then confirmed its plan to incorporate ozone facilities at the plant as part of the Comprehensive Water System Master Plan (or CWSMP, also by HDR Engineering, Inc.).

With implementation of ozone, it is recommended that the plant transition to biofiltration (i.e., relocating disinfectant application downstream of the filters to promote biological activity in the filters) for additional treatment benefits. Downstream of ozone, a more powerful disinfectant and oxidant, biofiltration stabilizes the finished water prior to pumping to the distribution system. Biofiltration, in tandem with ozone, also provides additional taste and odor removal and a multi-barrier treatment process for other contaminants of emerging concern (CECs). Example CECs include PFAS (would potentially require an additional treatment strategy to augment ozone and biofiltration), cyanotoxins from harmful algae blooms (HABs), and nitrosamines, all parameters of interest to validate and identify strategies for treatment if required in the future. PFAS regulations are now in place and the U.S. Environmental Protection Agency (USEPA) is developing a Microbial / Disinfection By-Product Rule (M/DBPR). The M/DBPR will likely include more stringent requirements for disinfection by-product precursor removal and maintaining higher disinfectant residuals in distribution systems (among other potential requirements).

Considering the planned process changes and potential future regulations, HDR Engineering, Inc. (HDR) recommended (per the CWSMP) that the City conduct the CRFWTP Plant Process Study (Project), focused on bench- and pilot-scale testing. Without process pilot testing, future facility designs may be overly conservative, and the process transition (including changing chemical application points and doses) could result in unintended consequences without prior investigation.

The objectives of the study / testing are to:

- Validate planned process changes with the addition of ozone and future conversion to biofiltration
- Examines process changes to ascertain challenges and avoid unintended consequences with process conversion
- Evaluate additional process optimization opportunities and treatment options for PFAS
- Collect data to right-size planned chemical facilities and confirm process loading rates (including the potential to operate with biofilters at a higher loading rate and construct fewer filters to achieve future plant capacity needs)

To improve aesthetic water quality and target the above objectives, the City selected HDR Engineering, Inc. (ENGINEER) to conduct the CRFWTP Plant Process Study (Project). ENGINEER will deliver the project in two phases. The first phase (now complete) included confirmation of target water quality parameters and development of the bench-scale / pilot-scale testing plan. The second phase (delineated herein) includes execution of the "C.R. Feaster Water Treatment Plant Process Study – Bench- and Pilot-Scale Test Plan" submitted under Task 300 as part of the Phase 1 services. Phase 2 focuses on execution and analysis of bench and pilot-scale testing results and developing recommendations for proposed improvements. This second phase is estimated to be completed within sixteen (16) months of notice to proceed with the assumption that the pilot will collect data for twelve (12) months.

PROJECT REQUIREMENTS:

The Scope of Work for this project provides engineering services as described in the following sections:

- Task 100 – Project Administration (Included in this scope)
- Task 200 – Confirm Target Water Quality Parameters (Completed – Not included in this scope)
- Task 300 – Develop Testing Plan (Completed – Not included in this scope)
- Task 400 – Pilot Testing Equipment Procurement, Mobilization (Set-up), and De-mobilization (Included in this scope)
- Task 500 – Pilot Start-up (Included in this scope)
- Task 600 – Bench and Pilot-Scale Testing (Included in this scope)
- Task 700 – Process Study Report (Included in this scope)

The following tasks delineate the scope of basic services.

I. Task 100 – Project Administration

Task 101 – Project Management and Invoicing

ENGINEER will complete the following activities / develop the following items as part of project planning and set-up activities:

- Set-up (i.e., project budget / financials and work plan)
- Invoicing and activity report templates
- Update Project Management and Quality Plan (PMP / QMP) with baseline schedule
- Health & Safety Plan (H&SP) (for HDR's staff only)
- Communication tools for ENGINEER's internal use (i.e., meeting / workshop scheduling and tracking, decision log, change log, and action item tracking)

The PMP/QMP will outline the project goals and objectives, scope of work, baseline schedule, support tools, communications protocols, and quality review plan. The quality review plan will incorporate the approach for pointedly engaging technical advisors and specialty expertise in the early phases of the study.

Project Workshop #1 (Project Kick-off Meeting) will be held with the City to confirm key elements of the PMP/QMP, project scope objectives, and the baseline schedule. The discussion will include pilot mobilization logistics and coordination.

Throughout project execution, ENGINEER will conduct monitoring and control activities to track project progress and develop monthly invoices with project activity reports for submittal to the City. Activity reports will document activities completed during the previous period, planned activities for the following month, key decisions made, needed decisions, and decision-related / critical path action items. For this task, up to sixteen (16) months is assumed for project management and administration.

Deliverables:

- **Workshop #1 – Phase 2 Kick-off Meeting**
- Meeting agenda and summary (.pdf format)
- Monthly Invoices with Activity Report (including updated project schedule)

Task 102 – Technical Advisory / Quality Control Reviews

ENGINEER will conduct monthly meetings (up to twelve (12)) with its Technical Advisory Group (TAG) to provide operational and water quality updates and discuss the path forward during pilot testing to confirm pilot objectives are met. TAG members include senior technical leads within HDR that will provide feedback on operation of the pilot and interpretation of data results. TAG members bring expertise on advanced water treatment operations. ENGINEER's TAG will participate in an internal review discussion regarding key findings and provide quality assurance / quality control input.

II. Task 200 – Confirm Target Water Quality Parameters

(Completed in Phase 1 – Not Included in this scope)

III. Task 300 – Develop Testing Plan (Bench-Scale and Pilot-Scale)

(Completed in Phase 1 – Not Included in this scope)

IV. Task 400 – Pilot Testing Equipment Procurement, Mobilization (Set-up), and De-mobilization

The "C.R. Feaster Water Treatment Plant Process Study – Bench- and Pilot-Scale Test Plan" defines the test plan for bench- and pilot-scale testing (as reviewed and confirmed with the City in Phase 1), including the equipment procurement, pilot mobilization, start-up, and de-mobilization, experimental approach, testing matrix, roles and responsibilities, and timeline. The pilot-scale ozone, flocculation/sedimentation, and filter skids as well as the pilot system enclosure will be provided by Intuitech Inc. (Salt Lake City, Utah) for a total duration of 53 weeks.

Task 401 – Equipment Procurement / Test Plan Refinement

ENGINEER will coordinate procurement of the pilot equipment. This task includes:

- Coordinating pilot skid requirements per the test plan as well as logistics for shipment, receipt, and set-up on site at the CRFWTP.
- Reviewing vendor submittals to confirm suitability and compliance with the requirements and authorize equipment to move to fabrication.
- Developing drawings for connection of influent and effluent lines and waste stream discharge lines for coordination with the City (note – the City will be responsible for connecting to the pilot).
- Developing a site layout with proposed piping connections between pilot skids and details for appurtenances like break tanks, overflow piping, etc.
- Coordinating with the City regarding power supply (note - the City will be responsible for providing power and connecting to the pilot enclosure).

Task 402 - Pilot Mobilization and De-mobilization

ENGINEER will assist the City with coordination of pilot set-up (mobilization) and de-mobilization upon completing the testing program. This task includes:

- Developing schedule for delivery, start-up, and operation of full pilot system.
- Supporting installation of the equipment and connection of necessary ancillary equipment, piping, and electrical service (physical installation by the City).
- Preparing a startup and testing plan to verify that installation is acceptable and pilot skid system is operational as intended.
- Decommissioning pilot equipment and preparing the enclosure for shipping back to Intuitech.

V. Task 500 – Pilot Start-up

Task 501 – Pilot Start-up

ENGINEER will conduct pilot equipment start-up. Two (2) project engineers will be on-site for start-up activities as well as one (1) engineer from Intuitech. Pilot start-up will take up to three (3) days.

VI. Task 600 – Bench and Pilot-Scale Testing

The "C.R. Feaster Water Treatment Plant Process Study – Bench- and Pilot-Scale Test Plan" defines the test plan for bench- and pilot-scale testing. The bench-scale testing plan includes the experimental approach and testing matrix. Bench-scale validation includes coagulant jar testing, PAC jar testing, manganese oxidant testing, and rapid small scale column testing (RSSCT). Bench-scale testing will focus on refining the following treatment processes and associated test conditions:

- Coagulation/Flocculation/Sedimentation – Coagulant and polymer dosing for optimizing total organic carbon (TOC) and turbidity removal
- Powdered Activated Carbon (PAC) – Contact time and concentration for PFAS removal
- Manganese Oxidation – Dose and contact time for potassium permanganate ($KMnO_4$) and chlorine dioxide (ClO2) for manganese oxidation
- Granular Activated Carbon (GAC) - Test media for post filtration GAC adsorption for PFAS removal

The pilot testing plan calls for operating the pilot for twelve (12) months to test a full range of operational and process design conditions. HDR will provide operational support for the pilot. The tasks for bench- and pilot-scale testing are outlined below:

Task 601 – Bench-Scale Jar Testing

ENGINEER will focus jar testing on refining the following treatment processes and associated test conditions:

- **Coagulation/Flocculation/Sedimentation** – Coagulants and polymers are added to raw water to assist with formation of floc that settle particulates and remove TOC, which can contain DBP precursors. Once floc is formed, they are removed via gravity settling during sedimentation.
    - The jar testing will evaluate up to three (3) coagulants, two (2) polymers, six (6) coagulant doses, and five (polymer). The coagulants that will be tested are ferric sulfate (current coagulant), aluminum sulfate (alum), and aluminum chlorohydrate (ACH). POLYDAMAC and an alternative coagulant will be tested. The operating condition for jar testing (stages, mixing, and settling time) will mimic the plant's current process. Optimum dosing for different jar tests will be determined based on the greatest TOC removal and diminishing returns for turbidity removal.
- **Powdered Activated Carbon (PAC)** – PAC is currently applied to the raw water to remove MIB and geosmin. When ozone and biofiltration are implemented at CRFWTP, these two treatment technologies will provide significant treatment barriers for geosmin and MIB so PAC may no longer be needed to address T&O issues. The existing PAC system could be repurposed to provide a treatment barrier for removing PFAS. Testing different PAC alternatives for PFAS removal will provide useful data if the CRFWTP needs PFAS treatment in the future.
    - The testing will evaluate three (3) types of PAC, three (3) PAC doses, and two (2) contact times. Each test will be run at ambient pH with PFAS spikes. Other water quality parameters will also be measured, including UV254 and TOC.

Jar testing will be conducted at the CRFWTP or City owned laboratory with the City owned jar testing apparatus, laboratory equipment (pH probe, turbidimeter, alkalinity kit, pipettes, and glassware), and chemicals (ferric sulfate, lime, and PAC) currently used for treatment at the CRFWTP. The testing will be performed by up to two (2) project engineers.

Task 602 – Bench-Scale Manganese Oxidation Testing

Strong oxidants like ozone, ClO_2, and $KMnO_4$ can oxidize dissolved manganese to form particulate manganese that can be removed via sedimentation and filtration. This process is simulated in batch experiments where the oxidation of manganese can be evaluated based on different oxidant doses and contact time. ENGINEER will spike manganese at two (2) concentrations and three (3) concentrations of each oxidant will be tested on raw (both oxidants) and settled water (only ClO_2).

This task includes the manganese oxidation experiments defined in above. ENGINEER will conduct these experiments at the City owned laboratory with the City owned laboratory equipment (pH probe, pipettes, glassware, fume hood, jar tester). The testing will be performed by up to two (2) project engineers.

Task 603 – Rapid Small Scale Column Testing (RSSCT)

ENGINEER will conduct RSSCT to assess the performance of the various GAC types as a post filtration polishing step for PFAS removal. Bench-scale testing will evaluate three (3) GAC types for filtered water at ambient temperature. The RSSCT will run for approximately 30,000 bed volumes. Each test will be run at ambient pH with PFAS dosing to the barrels during RSSCT. PFAS removal will be developed from analytical results. Other water quality parameters will also be measured including pH, temperature, UV254, and TOC. The removal of these parameters will be correlated to GAC treatment efficacy. ENGINEER will conduct RSSCT at its Water Quality Lab in Vienna, VA. Tests will be conducted by a lab technician. Shipping, consumables, and external lab costs are included in this Task. .

Task 604 – Bench-Scale Testing Summary

ENGINEER will review bench-scale test results and prepare a PowerPoint summary that includes key findings, outcomes, and recommendations, including considerations for pilot-scale testing. ENGINEER will conduct Project Workshop #2 – Bench-Scale Test Results Review Workshop with the City.

ENGINEER will then detail results of the bench-scale testing in a technical memorandum (TM) and submit it to the City for review. Bench-scale testing results from jar testing will be used to inform pilot operation (i.e., pilot chemical dosing and operation). Key findings will be reviewed with ENGINEER's TAG.

Deliverables:

- **Workshop #2 – Bench-Scale Data Review Workshop**
- Meeting agenda and summary (.pdf format)
- **Bench-Scale Validation Results TM**

Task 605 – Pilot Operational Support

ENGINEER will staff the pilot for twelve (12) months of pilot-scale testing at CRFWTP to test a range of operational and process design conditions. Pilot operational support tasks are anticipated to require 0.6 Full time employees [FTEs] to complete. Pilot operation will include, but is not limited to, the following items:

- Consistent staffing and support of pilot
- Big-picture data review and gap identification
- Contract lab coordination
- Test Plan development, modification, and execution to meet testing objectives
- Coordination with Technical Advisory Group
- Pilot coordination with City staff
- Responsible for overall communication plan/execution
- Responsible for overall quality assurance/quality control plan development/execution
- Responsible for risk registry and risk mitigation plan/execution
- Remote monitoring and intervention, as needed
- Lead biweekly pilot coordination and data review calls and development of monthly data summary reports
- Water quality sampling from all pilot skids
- Alarm and troubleshooting response
- Chemical tank makeup, refill, and monitoring
- Sensor and instrument calibration
- Analyzer and waste line cleaning, research room cleaning
- Operational adjustments and equipment maintenance
- On-site water quality analysis and reagent makeup, where applicable
- Media replacement, as needed

Task 606 – Site Visits During Pilot Operation

ENGINEER's project team will conduct up to twelve (12) site visits to support pilot operations and sampling efforts. Site visits assume one (1) or two (2) project engineers will be on site for one (1) day to track pilot operation.

Task 607 – Pilot Progress Reporting, Data Management, and Interim Progress Meetings

ENGINEER will lead biweekly, internal group meetings with the day-to-day pilot team to check pilot operation, water quality sampling, and data collection. Multiple systems will be generating pilot data (both hydraulic and water quality data) during piloting, including the pilot skid SCADA systems and data historian. The project team will use the data historian and BI dashboards to review real-time data collection which will periodically be exported to a Microsoft Excel based database for figure/table development.

Brief Data Summary Reports will be generated monthly for distribution to the ENGINEER's TAG and the City that will contribute to the final Pilot-Scale Testing Summary and the Process Study Report (see Task 700). Data summary reports and progress will be presented in bi-monthly, virtual Workshops held with the project team and City to review piloting progress and discuss adjustments to the pilot-scale testing plan as needed.

Deliverables:

- **Monthly Data Summary Reports**
- **Bi-Monthly Pilot Progress Review Workshop #3 through #9**
- Bi- Monthly Meeting summaries (.pdf format)

Task 608 – Pilot-Scale Testing Summary

ENGINEER will document the piloting effort, summarizing the twelve (12) months of operation. This task includes a summary of pilot operation, results, findings, findings, and conclusions that will drive recommendations presented in the Process Study Report (see Task 700). ENGINEER will conduct Project Workshop #3 – Pilot-Scale Test Results Review Workshop with the City to review the summary. ENGINEER will then submit the summary TM to the City for review.

Deliverables:

- **Workshop #3 - Pilot-Scale Test Results Review Workshop**
- **Pilot-Scale Testing Summary TM**
- Agenda and meeting summary (.pdf format)

VII. Task 700 – Process Study Report

ENGINEER will document testing results in the Process Study Report.

Task 701 – Draft Report

ENGINEER will refine previous TMs to create chapters that will comprise the Process Study Report. The planned outline will be similar to the following:

- Executive Summary
- Chapter 1 – Introduction / Study Objectives
- Chapter 2 – Study Approach
- Chapter 3 – Target Water Quality Parameters
- Chapter 4 – Bench- and Pilot-Scale Testing Plan
- Chapter 5 – Bench-Scale Testing Summary
- Chapter 6 – Pilot-Scale Testing Summary
- Chapter 7 – Conclusions and Recommendations
- Chapter 8 – Next Steps for Implementation

Recommendations will focus on CRFWTP process design criteria refinement for ozone and biofiltration, as well as future chemical feed and storage system needs. ENGINEER will develop schematic representation of treatment process outcomes and update the previous CWSMP site layout concept

with planning level cost implications. This report will provide information to engage the Texas Commission on Environmental Quality (TCEQ) regarding future planned improvements and establish next steps to gain approval for implementation. ENGINEER will conduct Project Workshop #4 – Draft Process Study Report Review with the City to receive comments.

Deliverables:

- **Draft Process Study Report**
- **Workshop #4 – Draft Process Study Report Review Workshop**
- Agenda and meeting summary (.pdf format)

Task 702 – Final Report

ENGINEER will address City review comments for the draft report and submit the final Process Study Report. ENGINEER will then conduct a project closeout meeting with the City PM.

Deliverables:

- **Final Process Study Report**
- **Project Closeout Meeting**

ADDITIONAL SERVICES (NOT INCLUDED IN THIS SCOPE OF WORK)

Additional services not included in this scope of work include:

- Pilot-related construction / sitework preparation / utility connection activities to receive and mobilize the pilot equipment
- Pilot testing of other technologies beyond those stated in the Phase 1 test plan and noted herein (i.e., ozone, flocculation/sedimentation, biofiltration, and related chemical addition)
- Extended / additional bench- and/or pilot-scale testing beyond the stated schedule and assumed 12-month pilot equipment rental period

These services and others not designated herein can be provided as an additional service upon separate, written authorization by the City.

PROJECT SCHEDULE:

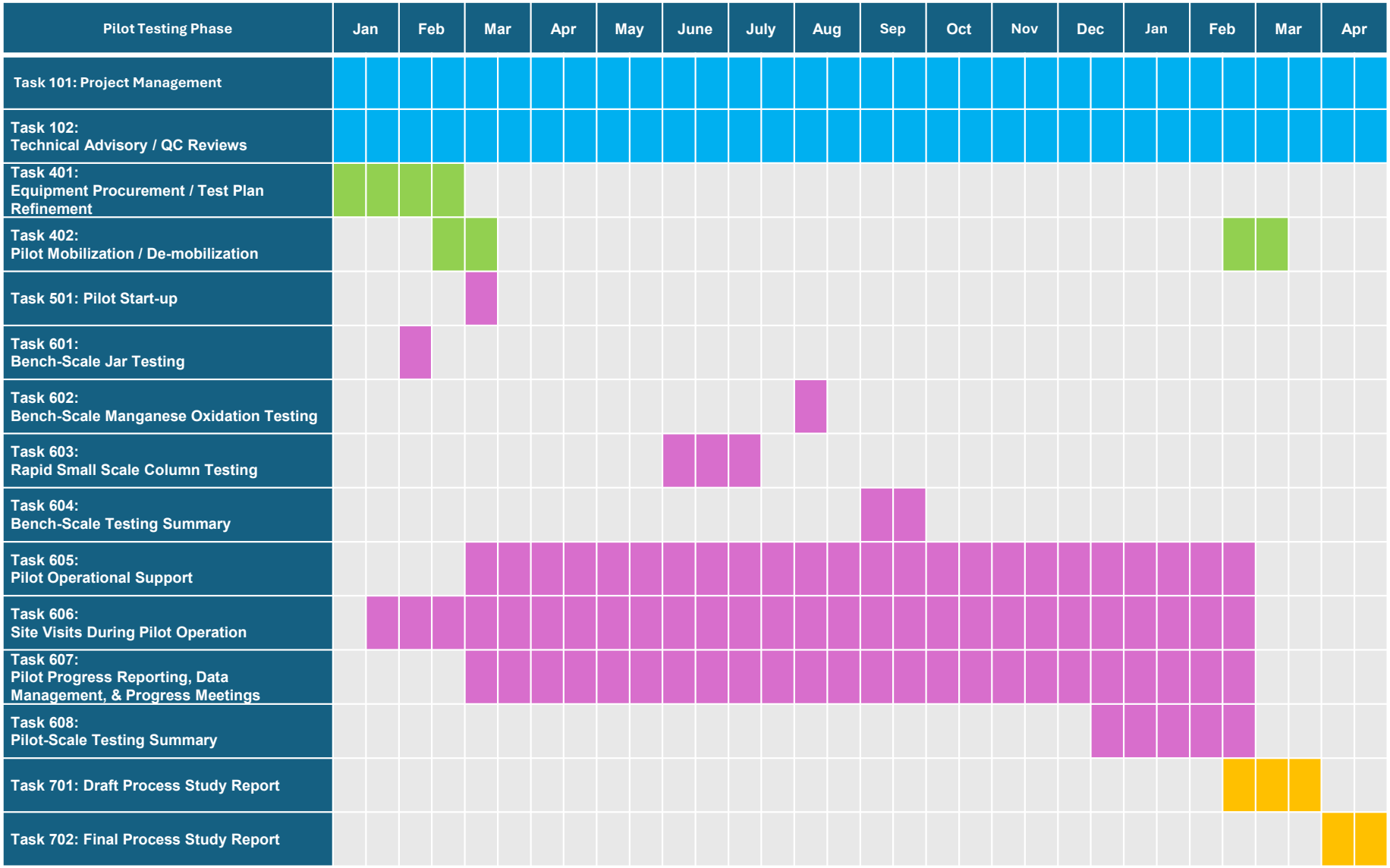
Refer to the schedule in this Attachment B. ENGINEER will complete Phase 2 of the study within sixteen (16) months of notice to proceed (NTP).

PROJECT FEE:

Refer to the detailed fee breakdown on the following page of this Attachment B.

ATTACHMENT B

PROJECT SCHEDULE



Attachment B
City of Lewisville - CRFWTP Plant Process Study - Phase 2 Bench- and Pilot-Scale Testing
PROJECT FEE

Project Duration (Months)	**16**
Pilot Duration (months)	**12**

Task Description	HDR Labor: Principal	Project Manager	Admin Support	Pilot Engineer 1	Pilot Engineer 2	Process Engineer 1	Process Engineer 2	EIT Support	TA / QC	Lab Technician	Lab Technician EIT	Monthly Billing	Total Hours	Labor Cost	Expenses	HDR Total	Pilot Rental and Analytical Costs	GRAND TOTAL
	Hoffman	*Bailey*	*Rayshell*	*Hand*	*Dieffenthaller*	*Brofuehrer*	*DeRespino*	*Kedia*	*Lauderdale / Alito / Black*	*Vaidya*	*TBD*	*Saucedo*						
Task 100 Project Administration																		
101 Project Management and Invoicing	10	84	16						16			64	190	$ 39,869	$ 440	$ 40,309	$ -	$ 40,309
Workshop #1 - Phase 2 Kickoff Meeting	2	8		2	4	4							20	$ 4,458	$ 110	$ 4,568	$ -	$ 4,568
102 Technical Advisory / Quality Control Reviews	12	12		48	12	12		48	12				156	$ 33,318	$ 370	$ 33,688	$ -	$ 33,688
Task 1 Subtotal	**24**	**104**	**16**	**50**	**16**	**16**	**-**	**48**	**28**	**-**	**-**	**64**	**366**	**$ 77,645**	**$ 920**	**$ 78,565**	**$ -**	**$ 78,565**
Task 400 Pilot Testing Equipment Procurement, Mobilization (Set-up), and De-mobilization																		
401 Equipment Procurement / Test Plan Refinement	2	8	2	12		32			2				58	$ 11,850	$ 130	$ 11,980	$ -	$ 11,980
402 Pilot Mobilization and De-mobilization	2	24	2	32	30				2				92	$ 19,487	$ 210	$ 19,697	$ -	$ 19,697
Task 4 Subtotal	**4**	**32**	**4**	**44**	**30**	**32**	**-**	**-**	**4**	**-**	**-**	**-**	**150**	**31,337**	**340**	**31,677**	**$ -**	**$ 31,677**
Task 500 Pilot Start-up																		
501 Pilot Start-up	2	8		40	30				8				88	$ 19,093	$ 1,540	$ 20,633	$ -	$ 20,633
Task 5 Subtotal	**2**	**8**	**-**	**40**	**30**	**-**	**-**	**-**	**8**	**-**	**-**	**-**	**88**	**19,093**	**1,540**	**20,633**	**$ -**	**$ 20,633**
Task 600 Bench- and Pilot-Scale Testing																		
601 Bench-Scale Jar Testing	1	1		2	40		40	4	2				90	$ 14,206	$ 2,780	$ 16,986	$ 9,334	$ 26,320
602 Bench-Scale Manganese Oxidation Testing	1	1		2	20		20	4	4				52	$ 8,914	$ 2,160	$ 11,074	$ -	$ 11,074
603 Rapid Small Scale Column Testing (RSSCT)	1	2		2	8			4	4	80	120		221	$ 36,290	$ 7,550	$ 43,840	$ 10,538	$ 54,378
604 Bench-Scale Testing Summary	3	8		8		20	24	24	4				91	$ 16,587	$ 180	$ 16,767	$ -	$ 16,767
Workshop #2 - Bench- Scale Test Results Review Workshop	4	6	2	2	12	8	8	6					48	$ 9,030	$ 160	$ 9,190	$ -	$ 9,190
605 Pilot Operational Support		12	2	30	1,224			100					1,368	$ 200,112	$ 13,200	$ 213,312	$ 587,015	$ 800,327
606 Site Visits During Pilot Operation	12	36		96									144	$ 36,257	$ 4,370	$ 40,627	$ -	$ 40,627
607 Pilot Progress Reporting, Data Management, and Interim Progress Meetings	24	50		64	76	50	32	40	12				348	$ 70,460	$ 780	$ 71,240	$ -	$ 71,240
608 Pilot-Scale Testing Summary	8	16	2	24	24	24	12	36					146	$ 27,339	$ 300	$ 27,639	$ -	$ 27,639
Workshop #3 - Pilot-Scale Test Results Review Workshop	4	6		6	6	2		12					36	$ 7,347	$ 540	$ 7,887	$ -	$ 7,887
Task 6 Subtotal	**58**	**138**	**6**	**236**	**1,410**	**104**	**136**	**230**	**26**	**80**	**120**	**-**	**2,544**	**426,542**	**32,020**	**458,562**	**$ 606,887**	**$ 1,065,449**
Task 700 Process Study Report																		
701 Draft Report	3	12	2	40	24	24		40	8				153	$ 29,379	$ 320	$ 29,699	$ -	$ 29,699
Workshop #4 - Draft Process Study Report Review Workshop	3	8	2	12	10	10		24	4				73	$ 14,026	$ 150	$ 14,176	$ -	$ 14,176
702 Final Report	4	12	2	24	12	12		24	4				94	$ 18,846	$ 660	$ 19,506	$ -	$ 19,506
Project Closeout Meeting	2	4		2	2	2			2				14	$ 3,529	$ 490	$ 4,019	$ -	$ 4,019
Task 7 Subtotal	**12**	**36**	**6**	**78**	**48**	**48**	**-**	**88**	**18**	**-**	**-**	**-**	**334**	**65,780**	**$ 1,620**	**$ 67,400**	**$ -**	**$ 67,400**
TOTAL	**100**	**318**	**32**	**448**	**1,534**	**200**	**136**	**366**	**84**	**80**	**120**	**64**	**3,482**	**620,397**	**36,440**	**656,837**	**$ 606,887**	**$ 1,263,724**