

LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, LLC

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CONTRACT CHANGE ORDER FOR ADDITIONAL SERVICES

DATE: 31 January 2025 **REVISED:** _____

CHANGE ORDER NO: 5

CONTRACT: 20 May 2021 Contract for Consulting/Professional Services

PROJECT NO.: 330073704

PROJECT TITLE: Hollywood Beach Golf Course

ORDER BY: E. Alexandra Iglesias

COMPANY: City of Hollywood

STATEMENT OF WORK:

This change order has been prepared for the following scope of services for the City of Hollywood (the client) for environmental services that were requested by the Broward County Resilient Department Environmental Permitting Division (the Division) and required by Chapter 62-780, Florida Administrative Code (F.A.C.) for the Hollywood Beach Golf Course at 1600 Johnson Street, Hollywood, Florida (property or the site) to complete site rehabilitation. This proposal includes the following tasks, which were not defined at the time of our 15 June 2022 Proposal for Site Assessment.

SCOPE OF SERVICES:

- Preparing a Groundwater Monitoring Plan (GWMP);
- Installing monitoring wells to implement the GWMP;
- Quarterly groundwater monitoring for one year;
- Preparing a No Further Action (NFAC) Proposal, once groundwater monitoring is completed;
- Preparing a Remedial Action Plan Implementation Completion Report;
- Preparing an Engineering Control Plan (ECP);
- Certifying the engineering controls;
- Abandoning monitoring wells once NFAC has been approved;
- Assistance filing a Declaration of Restrictive Covenant (DRC);
- Additional Meetings; and,
- Assistance renewing the Broward County Environmental Assessment and Remediation (EAR) License.

The site is currently undergoing redevelopment, including construction of a new club house and cart barn on the southwest corner of the Site; regrading of the golf course; construction of new stormwater management lakes to alleviate area-wide flooding; installation of a modern irrigation system; and expansion of the existing lined irrigation pond on the southwestern portion of the Site. Based on previous assessments conducted by Langan, groundwater at the site contains arsenic at concentrations exceeding the Groundwater Cleanup Target Level (GCTL) per Chapter 62-777, F.A.C. of 10 micrograms per liter (µg/L) and soil contains arsenic and toxaphene exceeding the site-specific Alternative Soil Cleanup Target Level (ASCTL) of 157 and 72, milligrams per kilogram (mg/kg), respectively. We understand that most of the earthwork activities for the redevelopment have been completed.

SCOPE OF SERVICES

ATP. Sequence No. 5

Langan will complete field activities according to Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (rev. 2017, eff. April 2018). Langan will contract a licensed water well driller to provide Geoprobe drilling services and a National Environmental Laboratory Accreditation Program-certified laboratory to provide analytical services. Before drilling, Langan will initiate a public utility clearance through Sunshine State One-Call. Additionally, Langan will subcontract a private utility locate to mark out the locations before drilling. If available, we request that you provide us with drawings or other documentation of subsurface utilities. Langan and its subcontractors will not be responsible for damage to utilities not identified to us.

Task 1 – Groundwater Monitoring Plan

The Division requested a GWMP in their review letter dated 6 June 2023; however, in a letter dated 11 September 2023, the Division agreed to defer the GMWP until the later stages of site redevelopment.

The GWMP will propose quarterly groundwater monitoring for a minimum of one year to demonstrate arsenic in groundwater is not migrating off-site and is stable or shrinking to meet requirements of NFAC closure in accordance with Subsection 62-780.680(3), F.A.C. Langan will prepare a letter report and a figure including the monitoring wells to be used as part of the monitoring plan. The Division correspondence is provided in

Attachment 1.

Based on a well reconnaissance conducted by Langan during construction in October 2024, five monitoring wells, MW-P1, LMW-2, LMW-3, LMW-4, and LMW-6 remain intact. Monitoring well MW-C11 also remains, but the well pad and well casing have been damaged. Based on the reconnaissance, no wells are remaining on the eastern portion of the site, which has been redeveloped with several stormwater management lakes. Although a GWMP has not yet been approved by the Division, we anticipate that the groundwater monitoring plan will include a total of 14 wells including source area wells and perimeter wells as described below.

- Source area monitoring wells - Previous shallow well locations MW-SB1 and MW-M2, and deep well location LMW-D1, which had the highest concentrations of arsenic at 340, 160, and 17 micrograms per liter (µg/L), respectively.
- Perimeter monitoring wells - Previous shallow well locations LMW-1 on the northern site boundary in the upgradient direction, which did not previously exceed the GCTL; LMW-2, LMW-3, and LMW-4, on the western site boundary, which previously had concentrations ranging from 5.1 to 43 µg/L; and LMW-6 and LMW-7 on the southern site boundary in the downgradient direction, which did not previously exceed the GCTL.
- Perimeter monitoring wells - Five new monitoring wells including LMW-8 through LMW-10 on the eastern boundary of the site in the downgradient direction and LMW-11 and LMW-12, on the northern boundary of the site in the upgradient direction.

The specific monitoring wells required to be sampled will be based on the Division's review of our proposed GWMP. Maps showing the proposed monitoring wells and historical arsenic concentrations are provided in **Attachment 2.**

Task 2 – Monitoring Well Installation

As discussed above, we anticipate the GWMP will include a total of 14 monitoring wells; however, only four monitoring wells, LMW-2, LMW-3, LMW-4, and LMW-6, are remaining on-site. Therefore, to implement the GWMP, we anticipate we will need to re-install shallow wells MW-M2, MW-SB1, LMW-1, and LMW-7 and deep well LMW-D1 and install shallow wells LMW-8 through LMW-12 (a total of nine shallow wells and one deep well). We have included a contingency for four additional wells, if needed in Task 12.

We will subcontract a licensed water well driller to install the monitoring wells using hollow-stem auger and constructed of 10 feet of 1.5-inch diameter polyvinyl chloride (PVC), pre-packed well screen and up to five feet of 1.5-inch solid PVC riser to the surface, depending on the depth to water at each well. The deep monitoring well will be constructed as a double cased well with an outer casing installed to approximately 18 feet bls and constructed of four-inch diameter PVC and a one-inch diameter pre-packed monitoring well installed to a depth of 25 feet.

Investigative Derived Waste (IDW) Management

We will drum excess drill cuttings and development and purge water. Langan will subcontract a licensed waste hauler to remove the drums for off-site disposal. Disposal of up to 20 drums is included.

Monitoring Well Survey

Following well installation, a Langan Professional Land Surveyor will survey the top-of-casing measurements with respect to North American Vertical Datum of 1988 (NAVD88) for use to evaluate groundwater flow direction. Sampling of the wells is included in Task 3 below.

Task 3 – Quarterly Groundwater Monitoring

This task includes the following activities that we will conduct on a quarterly basis for four quarters, to obtain NFAC closure pursuant to the requirements of subparagraph 62-780.680(3)(c)2, F.A.C:

- Notifying the Division a minimum three days prior to sampling or any field activity;
- Coordinating sampling with the client and laboratory;
- Collecting groundwater samples and measuring water levels at each designated monitoring well; and
- Preparing a groundwater monitoring report, which will include groundwater sampling logs, analytical summary tables, and figures.

Prior to sampling, we will record depth-to-water and water quality parameters (dissolved oxygen, turbidity, conductivity, pH, and temperature) until values stabilize within FDEP-acceptable ranges, and then collect the groundwater sample. Groundwater samples will be placed in a cooler on ice and submitted to the laboratory under chain-of-custody protocols for analysis of arsenic by EPA Method 6020. We will place the purge and development water into 55-gallon steel drums for proper off-site disposal. We have included disposal of one drum per quarter. If additional drums are needed, they will be disposed at a rate of \$310 per drum (\$220 for disposal and \$90 for cost of drum).

This task includes one year of quarterly groundwater monitoring of 14 wells discussed above; however, If NFAC conditions are not met at the end of one year of quarterly groundwater monitoring (i.e., plume is not stable or is migrating off-site site), we will provide a change order for additional services. The estimated monitoring well locations are shown in **Attachment 2**.

Task 4 – Remedial Action Plan Implementation Report

Langan submitted a Remedial Action Plan (RAP) to the Division on 21 March 2024. The RAP provided a plan to cap soil with arsenic and toxaphene concentrations exceeding the ASCTL by excavating and relocating the soil to low-lying areas and capping the soil with a minimum of two feet of soil with concentrations of arsenic and toxaphene below the ASCTL from other areas of the site. The Division approved our RAP in a review letter dated 7 May 2024. The Division correspondence is provided in **Attachment 1**.

The Client's contractor QGS Development completed the soil relocation and capping from August through October 2024. Langan provided periodic oversight to document the soil relocation and capping. In accordance with Subsection 62-780.700(12), F.A.C., we will submit a Remedial Action Implementation Report documenting the relocation and capping of the impacted soil. The report will include photographic logs from the oversight, figures and GPS coordinates for the capped soil.

Task 5 – NFAC Proposal

Upon completion of quarterly groundwater monitoring (Task 3 above) and redevelopment, if the data indicates NFAC is achieved, Langan will submit a NFAC Proposal pursuant to subsection 62-780.680(4), F.A.C., for the Division's review and approval. The NFAC proposal will include historical summary tables and a map including all historical groundwater data in relation to the contaminants of concern and contain the documentation to support the opinion that the activities have achieved the cleanup objectives.

Task 6 – Engineering Control Plan (ECP)

In accordance with the FDEP Institutional Controls Procedures Guidance (ICPG), which is required to be followed when pursuing a NFAC closure pursuant to subsection 62-780.680(3), F.A.C., Langan will prepare an ECP for the Division's review to finalize the locations of impervious and pervious engineering controls that will prevent direct exposure to arsenic and toxaphene above the ASCTL. Additionally, an engineering control maintenance plan (ECMP) detailing the frequency of inspections to identify potential deterioration of engineering controls will also be prepared. The approved ECP will become part of a declaration of restrictive covenant (DRC).

Task 7 – Engineering Control Certification

In accordance with subparagraph 62-780.680(2)(b)1.c, F.A.C., Langan will prepare an Engineering Control Certification following Division approval of the RAP Implementation Report and submittal of the ECP. The certification will include a figure documenting the types and locations of engineering controls (i.e. a minimum of two feet of soil below the ASCTL).

Task 8 – Monitoring Well Abandonment

Langan will oversee a licensed water well driller abandon the 14 monitoring wells to be used during the NFAC groundwater monitoring in Task 3 and wells MW-P1 and MW-C11, which are remaining at the site, but we anticipate will not be used for the GWMP. The wells will be abandoned in accordance with subparagraph 62-532.500(5), F.A.C. We will remove the monitoring well pad and manhole and resurface if in pavement. Prior to abandonment, a licensed water well driller will obtain permits from the FDEP. Upon completion of the abandonment, we will prepare a Well Abandonment Report documenting the abandonment activities, including a figure showing the wells abandoned, photographs and well completion reports.

Task 9 – Declaration of Restrictive Covenant Assistance

Langan will assist the client's legal counsel, as needed, in the preparation of a Declaration of Restrictive Covenant. For budgeting purposes, we have assumed an allowance of 15 hours for a Project Level Professional.

Task 10 – Additional Meetings

We assume the project will require continued environmental coordination with the Division, the civil engineering consultant and contractors to complete the tasks outlined above. This coordination will be in the form of numerous conference calls, site visits, and correspondences with the client, the client's contractors, and the Division throughout the duration of the development, groundwater monitoring, and site closure processes. For budgeting purposes, we have assumed an allowance of 12 hours of meetings by a Project Level Professional.

Task 11 – EAR License Renewal Support

We will assist with annual renewal of the EAR License, which will be required through the end of groundwater monitoring and site closure. The annual fee of \$2,000 is responsibility of the client and is not included in this proposal.

Task 12 – Contingency Allowance

A general contingency allowance of \$16,500 has been provided to address the following additional tasks, if required by the Division based on review of the GWMP and Groundwater Monitoring Reports:

- Four additional shallow monitoring wells if requested by the Division (\$8,300);
- Groundwater sampling of up to four additional monitoring wells for four quarters, if required (\$4,200); and
- Requests for additional information from the Division regarding our quarterly monitoring reports (\$4,000).

The fees and services in this task are estimated and, if required, will be requested in writing and implemented upon issuance of an Authorization to Proceed.

FEES

We propose to complete the additional scope of services for the additional fees as follows:

Task	Description	Fees
001.0	Groundwater Monitoring Plan	\$ 4,000
002.0	Monitoring Well Installation	\$ 34,900
003.0	Quarterly Groundwater Monitoring	\$ 40,400
004.0	Remedial Action Plan Implementation Report	\$ 6,500
005.0	NFAC Proposal	\$ 3,500
006.0	Engineering Control Plan	\$ 3,500
007.0	Engineering Control Certification	\$ 5,000
008.0	Monitoring Well Abandonment	\$ 11,200
009.0	Declaration of Restrictive Covenant Assistance	\$ 3,500
010.0	Additional Meetings	\$ 3,000
011.0	EAR License Renewal Support	\$ 1,500
012.0	Contingency Allowance	\$ 16,500
	Total Change Amount:	\$133,500

For this scope of services, we have reduced our subcontractor markup to 10%. Additional fees will apply if actual conditions differ from those discussed herein. We will invoice monthly according to our approved Professional Continuing Services Agreement with the City of Hollywood. We will not exceed the budget without the client's authorization.

SCHEDULE

We will begin preparing the GWMP and Remedial Action Plan Implementation Report upon issuance of Authorization to Proceed and anticipate both reports will be completed within three to four weeks of authorization. Once the GWMP is approved by the Division, we will schedule the monitoring well installation and begin groundwater monitoring.

LIMITATIONS

Langan's services will be provided according to generally accepted environmental science, geosciences, and engineering practices at the time the services are performed. No expressed or implied representation or warranty is included or intended in our reports, except that our services will be performed within the limits prescribed by the client and with customary thoroughness and competence of our profession.

LANGAN is proceeding with the above described scope of services upon issuance of an Authorization to Proceed. If notified to stop work on these services, the client agrees to pay Langan for all work completed up to the stop-work notification.

Agreement Authorized By:



for Langan:

cc: Michael Spievack, P.E. / Langan

Attachment 1

Regulatory Correspondence



Resilient Environment Department

ENVIRONMENTAL PERMITTING DIVISION

1 North University Drive, Mailbox 201, Plantation, Florida 33324 • 954-519-1483 • FAX 954-519-1412

June 6, 2023

Ms. Alex Iglesias
City of Hollywood
2600 Hollywood Blvd
Hollywood, FL 33020

**RE: Environmental Review
Hollywood Beach Golf Course and Clubhouse
1650 Johnson Street, Hollywood, Florida**

Dear Ms. Iglesias:

The Broward County Environmental Permitting Division (Division) has reviewed the *Site Assessment Report* (SAR) dated February 23, 2023 (received February 23, 2023), as prepared by Langan Engineering and Environmental Services, Inc. (Langan) for the referenced facility. Please note the following comments:

- The Division has determined that the EAR License Application is complete and EAR License was fully executed and issued on May 16, 2023.
- The Division acknowledges that the proposed future use of the property is to remain as a golf course and that the use of Institutional Controls (IC) including a Declaration of Restrictive Covenant (DRC) to pursue a No Further Action with Conditions (NFAC) under 62-780.680 Florida Administration Code (F.A.C.) is proposed.
- The Division concurs with the proposed establishment of Alternative Soil Cleanup Target Levels (ASCTLs) as outlined in the SAR.
- Please note, Site Assessment is not considered complete until the groundwater plume is fully delineated. Therefore, the Division agrees with Langan's recommendation to conduct groundwater monitoring to characterize the extent of the groundwater impacts.
- The Division concurs with the proposal to submit a Soil Management Plan to detail soil handling and/or disposal protocols as part of the proposed golf course redevelopment project.

A Groundwater Monitoring Plan, prepared in accordance with the requirements of Chapter 62-780, FAC, is due to the Division by **September 8, 2023**. Section 27-356(d)(4)c of Broward County Code requires that written notifications (facsimile or email is adequate) be provided to the Division at least three working days prior to performing field activities at the site. Please be advised that Section 27-356(d)(4)b of Broward County Code requires that written extension requests (facsimile or email is adequate) be submitted to the Division at least 20 days prior to the established due dates. If you require additional information, please contact me at (954) 519-1439 or dsheehan@broward.org.

Sincerely,
ENVIRONMENTAL PERMITTING DIVISION

A handwritten signature in blue ink, appearing to read "D. J. Sheehan".

David J. Sheehan, P.E.
Licensed Engineer

cc: Steven Sherman, P.E., Langan
Michael Spievack, P.E., Langan
FDEP File



Resilient Environment Department

ENVIRONMENTAL PERMITTING DIVISION

1 North University Drive, Mailbox 201, Plantation, Florida 33324 • 954-519-1483 • FAX 954-519-1412

September 11, 2023

Ms. Alex Iglesias
City of Hollywood
2600 Hollywood Blvd
Hollywood, FL 33020

**RE: Groundwater Monitoring Report Due Date Extension Approval
Hollywood Beach Golf Course and Clubhouse
1650 Johnson Street, Hollywood, Florida**

Dear Ms. Iglesias:

The Broward County Environmental Permitting Division (Division) received an email on September 1, 2023 from Steven Sherman, P.E. of Langan Engineering and Environmental Services, Inc. (Langan) for the referenced facility. In the email, Mr. Sherman pointed out that the June 6, 2023 Review Letter from the Division established a due date of September 8, 2023 for a Groundwater Monitoring Plan (Plan). Mr. Sherman recommended that deferring the submittal of the Plan until the later stages of site redevelopment would allow monitoring to be conducted without the possibility of wells being lost or destroyed due to construction activities.

The Division concurs with this recommendation. Since a precise due date for the Plan cannot be established at this time due to uncertainties with the redevelopment schedule, the Division requests that the City of Hollywood (or Langan, on their behalf) provide updates of the status of redevelopment on a quarterly basis until such time that progress would make it possible to establish a due date for the Plan.

The first quarterly progress update is due to the Division by **Friday, December 8, 2023**. The update may be provided by email and shall include the status of the redevelopment work and a statement of when a Plan may be submitted if the progress is sufficient to allow such a determination to be made. If you require additional information, please contact me at (954) 519-1439 or dsheehan@broward.org.

Sincerely,
ENVIRONMENTAL PERMITTING DIVISION

A handwritten signature in blue ink, appearing to read "D. J. Sheehan", is written over a light blue horizontal line.

David J. Sheehan, P.E.
Licensed Engineer

cc: Steven Sherman, P.E., Langan
Michael Spievack, P.E., Langan
FDEP File



Resilient Environment Department

ENVIRONMENTAL PERMITTING DIVISION

1 North University Drive, Mailbox 201, Plantation, Florida 33324 • 954-519-1483 • FAX 954-519-1412

May 7, 2024

Ms. Alex Iglesias
City of Hollywood
2600 Hollywood Blvd
Hollywood, FL 33020

**RE: Remedial Action Plan Approval
Hollywood Beach Golf Course and Clubhouse
1650 Johnson Street, Hollywood, Florida**

Dear Ms. Iglesias:

The Broward County Environmental Permitting Division (Division) has reviewed the *Remedial Action Plan (RAP)* dated March 21, 2024 (received March 21, 2024) as prepared by Langan Engineering and Environmental Services, Inc. (Langan) for the referenced facility. Please note the following comments:

- The Division approves the RAP and concurs that the Soil Management Plan presented in the RAP represents a reasonable strategy to protect potential receptors from impacted soils at the facility.
- The Division concurs with the strategy of performing groundwater monitoring following development of the site to verify plume stability in support of the implementation of Institutional Controls (IC).
- The Division concurs with the strategy of relocating soils for placement under areas of clean fill and the establishment of an Engineering Control Maintenance Plan to prevent potential exposure to receptors.
- The Division concurs with the establishment of quarterly RAP status reports to update progress of the remedy implementation.
- The Division requests that quarterly updates of the progress of the development continue until the implementation of the RAP. The update may be provided by email and shall include the status of the redevelopment work and a statement of when RAP activities are anticipated to begin. The next quarterly progress update is due to the Division by **Friday, June 7, 2024**.

If you require additional information, please contact me at (954) 519-1439 or dsheehan@broward.org.

Sincerely,
ENVIRONMENTAL PERMITTING DIVISION

A handwritten signature in blue ink, appearing to read "D. J. Sheehan".

David J. Sheehan, P.E.
Licensed Engineer

cc: Steven Sherman, P.E., Langan
Michael Spievack, P.E., Langan
FDEP File

Attachment 2

Monitoring Well Locations



