

**STATEMENT OF WORK**  
**Pennsylvania Department of Conservation and Natural Resources**  
**Bureau of Geological Survey**  
**Paleozoic and Mesozoic Palynology and Biostratigraphy Services**

**I. SCOPE OF WORK**

The Pennsylvania Department of Conservation and Natural Resources (PA DCNR), Bureau of Geologic Survey (BGS), hereafter designated “the Department,” requires a Contractor to conduct palynological and biostratigraphic analysis for Paleozoic and Mesozoic strata in order to determine specific ages for these materials throughout the Commonwealth of Pennsylvania.

Any questions regarding the technical specifications of this Contract should be directed to Chris Oest at 717-702-2053 or [coest@pa.gov](mailto:coest@pa.gov). Email communication is preferred for questions related to technical specifications. Any questions concerning the contracting or bidding procedures should be directed to Michelle Pritts at 717-772-0299 or [mpritts@pa.gov](mailto:mpritts@pa.gov).

**II. CONTRACTOR QUALIFICATIONS**

- A.** The Contractor must be able to demonstrate a record of work conducting palynological analysis for Paleozoic and Mesozoic aged strata. Evidence of such qualifications shall include publications in peer-reviewed journals or documentation of previous contract work in the form of a curriculum vitae or similar summary of work history.
- B.** Pursuant to Executive Order 2021-06, Worker Protection and Investment (October 21, 2021), the Commonwealth is responsible for ensuring that every Pennsylvania worker has a safe and healthy work environment, and the protections afforded them through labor laws. To that end, contractors and grantees of the Commonwealth must certify compliance with all applicable Pennsylvania state labor and workforce safety laws. Such certification shall be made through the Worker Protection and investment Certification Form (BOP-2201) and submitted with the bid, proposal or quote. Failure to submit a completed Worker Protection and Investment Certification Form may render your submission as non-responsive.

**III. CONTRACT TASKS**

The Department shall submit whole rock samples to the Contractor. Materials will include hand samples outcrops, well cuttings, or core. Included with each sample shall be a unique sample ID, sample location, the name of the lithostratigraphic unit from which the sample was collected, and the currently accepted age of the material based on previously published mapping or stratigraphic correlation charts. A summary of this information shall be provided to the Contractor by the Department via email upon sample submission. The Department anticipates submitting up to 45 samples annually. Samples may be submitted in up to five batches (i.e. requiring up to five separate reports).

Rock samples will be prepared and analyzed for palynomorphs by the Contractor. Palynomorphs shall be

identified and a list of taxa, including their abundance, shall be provided to the Department (see Section IV – Contract Deliverables). Included with this list shall be the biostratigraphic range of identified taxa reported as first and last appearance datums (FADs and LADs, respectively).

Thermal and burial history of samples shall be provided from palynomorph color and inferred vitrinite reflectance (%Ro) values. Contractor shall utilize published data from peer-reviewed sources to estimate geothermal gradients relevant to sample locations in order to provide an approximate maximum burial depth for each sample.

The awarded Contractor shall receive work orders concurrently with sample submission. Samples shall be delivered via United States Postal Service or other commercial carriers to the Contractor's location. Results of analysis shall be communicated to the Department electronically via email. Prepared microscope slides of microfossils and any remaining sample material shall be returned to the Department at its request (see Section VI – Sample Returns) at the Department's cost.

The Contractor agrees to furnish all necessary labor, material and equipment to perform all the work required herein in an expeditious, substantial, professional, and workman-like manner at its own facility. Details of contract tasks are outlined below.

#### **A. Sample preparation**

Samples may be submitted to the Contractor by the Department as trimmed rock samples, bagged, partially disaggregated rocks chips from outcrop samples or well cuttings, or segments of intact rock core. Contractor will be responsible for complete sample preparation including, but not limited to, crushing and pulverizing bulk material, acid digestion of carbonate and silicate cement and framework grains, separation of palynomorphs from rock material residuum, and mounting palynomorphs on microscope slides for analysis. Sample preparation shall follow standard methods established in peer-reviewed publications and these references shall be cited and included in the report of analysis (see Section IV – Contract Deliverables).

#### **B. Analysis of palynomorphs**

Contractor shall analyze prepared samples via microscope to identify taxa present within the samples. Samples will range in age from Paleozoic (late Silurian through Permian) to Mesozoic and Contractor must have a documented record of identifying palynomorphs that span this period of geologic time (see Section II). Palynomorphs include (but are not limited to) the following:

1. Miospores (including pollen and spores)
2. Algal cysts
3. Dinoflagellates
4. Acritarchs
5. Fungal spores
6. Chitinozoans

Additionally, when encountered, palynodebris (lignin, waxes, kerogen, or other organic debris) shall be noted and included in interpretations of possible depositional environments for samples (see Section IV – Contract Deliverables). Palynodebris includes the following:

1. Leaf cuticles
2. Wood or charcoal fragments
3. Other unspecific organic matter

When encountered and possible, the Contractor shall note the presence of other microfossils present within the sample, including, but not limited to, typical invertebrates fossils, foraminifera, and conodonts. The condition (intact, abraded, disarticulated, etc.) of these materials shall also be documented. Biostratigraphic ranges need not be reported for microfossils other than palynomorphs.

### **C. Reports**

A summary report for each batch of samples submitted to the Contractor by the Department shall be prepared to summarize the Contractor's findings. In this report, the Contractor shall summarize the following for each sample:

1. Narrative of sample preparation methods, including citations to published literature, as appropriate.
2. Notes on deviations from published sample preparation methods and rationale for such deviations.
3. Type and abundance of palynomorphs, palynodebris, and other materials identified (see Section III B).
4. The biostratigraphic range of each palynomorph, reported as first and last appearance datums (FADs and LADs, respectively).
5. The geologic age of the sample in as specific terms as the palynomorphs present within a sample allow for.  
Reported geologic ages shall include the period, epoch, and age. Additionally, the paly ozone(s), as established in peer-reviewed literature, inferred from the palynomorph assemblage within a sample, must be communicated within the report of results. Palynozones must include a source citation when provided by the Contractor.
6. Photomicrographs of palynomorphs, palynodebris, and other identified materials.
7. Thermal history and approximate burial depths based on estimated vitrinite reflectance (%Ro) values.
8. Interpretation of possible depositional environments based on palynoflora, other identified materials, and sample lithology. If possible, provide palynofacies and kerogen typing to further support interpretation of depositional environments.

These contract tasks are the sole billable items associated with this Statement of Work. Cost for sample preparation and analysis shall be a flat rate charged per sample. Cost to prepare the final report shall be a flat rate charged per report, with one report submitted by the Contractor to the Department for each batch of samples submitted.

### **IV. POTENTIAL OF ADDITIONAL LINE ITEM(S)**

Upon mutual agreement of the Department and the Contractor, items that are consistent with the overall scope of work of the Contract may be added, at a unit price mutually agreed to, upon receipt of a valid written quotation from the Contractor.

The Contract will then be amended to include the additional item(s).

## **V. ISSUANCE OF PURCHASE ORDERS**

The Department will issue Purchase Orders against this contract. These orders constitute the Contractor's authority to deliver the services as described in the Purchase Order. All Purchase Orders received by the Contractor up to and including the expiration date of the contract are acceptable and must be performed in accordance with the order and the contract. Each Purchase Order will be deemed to incorporate the terms and conditions set forth in this contract.

## **VI. CONTRACT TERM & ESCALATION CLAUSE**

The contract will commence upon execution and terminate on June 30, 2027.

Further, the parties may agree to renew this contract up to four (4) additional annual terms, with the final termination date of June 30, 2031, upon the same terms and conditions set forth in the contract. The Department, based on past contractor performance, may negotiate an increase in the unit price(s) by a rate not to exceed 3%.

The Department will reach out to the Contractor no later than February 28<sup>th</sup> prior to the termination date to begin renewal discussions. Once the renewal terms are mutually decided, the Contractor will provide notification of the intent to renew, including the requested price increase if desired, to the Department no later than March 31<sup>st</sup> prior to the termination date.

## **VII. INSURANCE**

The Contractor is required to have in place during the term of the Contract and any renewals or extensions thereof, the following types of insurance, issued by companies acceptable to the Commonwealth and authorized to conduct such business under the laws of the Commonwealth of Pennsylvania:

**A.** Workmen's Compensation Insurance for all of the Contractor's employees and those of any subcontractor, engaged in work at the site of the project as required by law.

**B.** Public Liability and Property Damage Insurance to protect the Commonwealth, the Contractor and any and all subcontractors from claims for damages for personal injury (including bodily injury), sickness or disease, accidental death and damage to property including the loss of use resulting from any property damage. Which may arise from the activities performed under the Contract, or the failure to perform under the Contract, whether such performance or non-performance be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either. The minimum amounts of coverage shall be \$250,000 per person and \$1,000,000 per occurrence for bodily injury, including death, and \$250,000 per person and \$1,000,000 per occurrence for property damage. Such policies shall be occurrence rather than claims-made policies and shall not contain any endorsements or any other form designated to limit and restrict any action by the Commonwealth, as an additional insured, against the

insurance coverage in regard to work performed for the Commonwealth.

Prior to commencement of the work under the Contract and at each insurance renewal date during the term of the Contract, the Contractor shall provide the Commonwealth with current certificates of insurance. These certificates or policies shall name the Commonwealth as an additional insured and shall contain a provision that the coverage's afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth.

The Commonwealth shall be under no obligation to obtain such certificates from the Contractor(s). Failure by the Commonwealth to obtain the certificates shall not be deemed a waiver of the Contractor's obligation to obtain and furnish certificates. The Commonwealth shall have the right to inspect the original insurance policies.

#### **VIII. SAMPLE RETURNS**

Prepared microscope slides must be returned to the Department in a timely fashion. Similarly, if any sample material remains following sample preparation (i.e. before acid digestion), this material shall also be returned to the Department. The awarded vendor will return the samples by the most economical shipping service and invoice the Department separately for this service. The actual shipping charge for the return of samples will be invoiced separately from the analysis services performed and will not be part of this contract.

Samples are to be sent to:

Chris Oest  
DCNR - PA Geological Survey  
3240 Schoolhouse Road  
Middletown, PA 17057

#### **IX. PAYMENT TERMS**

Payment will be made to the Contractor for actual services performed upon satisfactory completion of analysis, and delivery of results.

This contract will be paid by Automated Clearing House (ACH), commonly referred to as direct deposit. Contractor should review Section V.25 CONTRACT-016.2 Automated Clearing House (ACH) Payments of the Commonwealth's Terms and Conditions for complete details and contractor's responsibilities.

#### **X. INVOICES**

Invoice format will be in accordance with the IFB – Invitation for Bid.

All invoices for this contract MUST either be:

A. Emailed to the following for a Paperless Email Invoice Option: [69180@pa.gov](mailto:69180@pa.gov).

For information on the Commonwealth's E-Invoicing Program, visit:  
<http://www.budget.pa.gov/Programs/Pages/E-Invoicing.aspx>.

**B.** Or mailed to the following address:

Commonwealth of Pennsylvania – PO Invoice  
PO Box 69180  
Harrisburg, PA 17106

All invoices MUST have the purchase order number as well as your SAP Vendor Number on the invoice. The name and address listed on the purchase order must also be listed on each invoice. Failure to provide this information may result in a delay in payment.

Please Note: Vendors are reminded to NOT include employer identification numbers, Social Security Numbers, bank account information, or other personally identifiable information on their invoices. That explicitly stated on an invoice.

#### **XI. CONTRACTOR REFERENCES**

After the bid opening and prior to awarding the contract, the Department has the right to request three (3) references (name, mailing address, email address, and telephone number) who have had palynological and biostratigraphic analysis performed using the same methods described in the Contract Requirements Section during the previous two (2) years as proof of qualifications to perform the work involved in the Contract.

References are an optional tool available to the DCNR to help determine bidder capabilities. If any of the references are requested and the bidder cannot supply the necessary documentation and proof of compliance, the DCNR reserves the right to reject the bidder. The decision to both request references or reject bidders based on inadequate reference will be made solely at the discretion of the Department.

#### **XII. BID AWARD**

Bidder must complete and return the following with their bid response:

- A.** The electronic Invitation for Bid to be found at [www.pasupplierportal.state.pa.us](http://www.pasupplierportal.state.pa.us).
- B.** A properly executed Worker Protection and Investment Certification Form.

Bids will be awarded based on lowest total sum.

The contract quantities herein are estimated only and may increase or decrease depending on the needs of the Department.

The unit price will include all labor, materials, equipment, tools, insurance, and all items necessary to complete contract tasks.

Note: The Department will only accept out to two (2) decimal points when entering your "Unit Price" figures in the bid.

### **XIII. RECEIPT AND OPENING OF BIDS**

Bids must be submitted via the PA Supplier Portal, to be found at [www.pasupplierportal.state.pa.us](http://www.pasupplierportal.state.pa.us). Faxed, emailed, and mailed bids will not be accepted.

No responsibility will be attached to any employee of the Department for the premature opening of, or the failure to open, a bid not properly addressed and identified, or for any reason whatsoever.

### **XIV. BID RESULTS**

Bidder can obtain bid results by accessing [www.emarketplace.state.pa.us/bidtabs.aspx](http://www.emarketplace.state.pa.us/bidtabs.aspx). The bids will be posted as soon as practicable following the bid opening. The results are the apparent bidders, and all bids are under review until final award of the contract.