



# Florida Department of Environmental Protection

## Petroleum Restoration Program

# Operation and Maintenance (O&M) Purchase Orders

March 30, 2017





# O&M Purchase Orders

## Start Early!

- Do not wait for submittal of the final deliverable (O&M Report) on the existing purchase order to start the next continuing O&M purchase order
- Do not wait for completion of the last monthly O&M visit
- Agency Term Contractor should have a continuing O&M purchase order in hand before conducting the last monthly O&M on the existing purchase order
- Ideally, the PO process should start during the beginning of the last quarter of O&M on the existing purchase order
- Reminder! The PRP accounting requires an open O&M purchase order for utility payments



# O&M Purchase Order Templates

## 1. PRP Scope of Work Guidance Documents

- a) PRP-SOW-Checklist\_06Feb17.xlsm
- b) SOW-Workbook-Guidance\_14Oct16.pdf
- c) PRP-Standard-Specs\_14Oct16.pdf

## 2. Attachment A - Scope of Work (SOW) Workbook

- a) Attachment\_A-subphase-ScopeOfWork-fac\_id.xlsm

## 3. Schedule of Pay Items (SPI) Workbooks

- a) Use Scope-of-Work-Buildup\_13Jun16.xlsm to create a draft SPI
- b) Switch to Attachment B – Schedule of Pay Items & Other Related Documents – FAC ID.xlsm (to be provided as an attachment in the PRPScopeOffer email)

## 4. Templates are available from the FDEP web page at

<http://www.floridadep.gov/waste/petroleum-restoration/content/templates-forms-tools-and-guidance>



# Attachment A SOW Workbook

- **Always use a new SOW workbook from the web page**
  - <http://www.floridadep.gov/waste/petroleum-restoration/content/templates-forms-tools-and-guidance>
- **Be consistent with the Facility Name and ID Number**
  - Always use full site name from STCM and not from a previous purchase order
- **Check special language requirements**
  - Separate Site Access Agreement between the Site Owner and the Agency Term Contractor – If applicable, enter in Task 1 Description
  - Enter the contingent funding language in the last task description



# Attachment A

## SOW Workbook Cont.

- Typical one year of O&M involves 3 quarterly O&M events followed by an annual event.
- System is expected to be shutdown one week before the annual groundwater sampling event
- Typical O&M Language –
  - “Conduct monthly Operation & Maintenance (O&M) & quarterly sampling per the attached tables. After completion of the quarterly O&M activities as outlined in Task 3, prepare and submit a Quarterly O&M Report”
  - “Perform monthly O&M visits with collection of system readings, system groundwater samples and system vapor samples per attached tables. System to be shutdown one week prior to annual sampling for the groundwater samples to be collected under static conditions. Prepare an Annual O&M Report. Report must be signed and sealed by a registered P.E.”



# Attachment A

## SOW Summary Tables

- Check the open purchase order for an existing O&M sampling strategy (refer to the original RAP for technical approach and rationale)
- Use the existing O&M sampling strategy as baseline and modify as necessary.
- In the absence of an existing O&M sampling strategy, create one based on the approved sampling strategy specified in the original RAP
- Discuss and finalize the new O&M sampling strategy with the assigned engineer



# Attachment A SOW Summary Tables

- Soil and Air Sampling Table:
  - Air Sampling for Total Petroleum Hydrocarbons
  - Air sampling frequency is weekly for the first month, monthly for the next two months, and quarterly thereafter

*Any blank fields are not applicable to the scope of work.*

| SOIL and AIR SAMPLING TABLE |                               |                           |                           |                                |   |   |   |   |   |
|-----------------------------|-------------------------------|---------------------------|---------------------------|--------------------------------|---|---|---|---|---|
| Task #                      | Soil /Air Sample Locations    | Frequency (if applicable) | Expedited Turnaround (TA) | Depth Interval (if applicable) |   |   |   | (9-68.) Air-Total Petroleum Hydrocarbons (TO-3) |   |
| 2                           | QUARTER 2 O&M                 |                           |                           |                                |   |   |   |   |   |
| 2                           | Carbon Influent               | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 2                           | Between Carbon                | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 2                           | Carbon Effluent               | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 3                           | QUARTER 3 O&M                 |                           |                           |                                |   |   |   |   |   |
| 3                           | Carbon Influent               | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 3                           | Between Carbon                | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 3                           | Carbon Effluent               | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 4                           | QUARTER 4 / YEAR 1 ANNUAL O&M |                           |                           |                                |   |   |   |   |   |
| 4                           | SVE Blower Effluent           | Quarterly                 |                           |                                |   |   |   | 1   |   |
| 5                           | QUARTER 5 / Y1Q1 O&M          |                           |                           |                                |   |   |   |   |   |
| 5                           | SVE Blower                    | Quarterly                 |                           |                                |   |   |   | 1   |   |
| Task 2 Subtotal             |                               |                           |                           |                                | 0 | 0 | 0 | 3   | 0 |
| Task 3 Subtotal             |                               |                           |                           |                                | 0 | 0 | 0 | 3   | 0 |
| Task 4 Subtotal             |                               |                           |                           |                                | 0 | 0 | 0 | 1   | 0 |
| Task 5 Subtotal             |                               |                           |                           |                                | 0 | 0 | 0 | 1   | 0 |
| GRAND TOTALS                |                               |                           |                           |                                | 0 | 0 | 0 | 8   | 0 |



# Attachment A

## SOW Summary Tables

- Water Sampling Table:
  - Quarterly & annual sampling of the milestone and/or designated wells
  - Pre & post-groundwater treatment system sampling – Sampling frequency of the system effluent stream - daily for the first three days, weekly for the next three weeks, monthly for the next two months, and quarterly for the next two years, and semi-annual thereafter
  - NPDES sampling of the groundwater treatment effluent if discharging into a storm sewer
  - IDW characterization for PCW disposal, if applicable
  - Temporary Point of Compliance (TPOC) sampling, if applicable
  - Potable well sampling, if applicable





# Attachment A SOW Summary Tables Cont.

- Typical Water Sampling Table
  - Do not specify wells to be gauged monthly for system performance here

Any blank fields are not applicable to the scope of work.

| WATER SAMPLING TABLE |  |                           |                           |                                    |                           |                     |              |                       |                                 |   |  |  |    |                                 |                                     |
|----------------------|--|---------------------------|---------------------------|------------------------------------|---------------------------|---------------------|--------------|-----------------------|---------------------------------|---|--|--|----|---------------------------------|-------------------------------------|
| Task #               | Well #(s) or Water Sample Location               | Frequency (if applicable) | Expedited Turnaround (TA) | Water Level/FP Gauging Only (8-7.) | # MWs Sampled (8-1./8-2.) | (9-27.) BTEX + MTBE | (9-30.) PAHs | (9-36.) TRPH (FL-PRO) | (9-41) Total Lead, as necessary |   | (9-32.) Priority Pollutant Volatile Organics | (9-34.) Priority Pollutant Extractable | pH | (9-41) Total Lead, as necessary | (9-62.) Freshwater - Acute Bioassay |
| 3                    | QUARTER 3 O&M Milestone                          | Quarterly                 |                           |                                    | 3                         | 3                   | 3            | 3                     |                                 |   |  |  |    |                                 |                                     |
| 3                    | TPOC Sampling                                    | Quarterly                 |                           |                                    | 2                         | 2                   | 2            | 2                     |                                 |   |  |  |    |                                 |                                     |
| 3                    | Designated Wells                                 | Quarterly                 |                           |                                    | 5                         | 5                   | 5            | 5                     |                                 |   |  |  |    |                                 |                                     |
| 3                    | GW System Eff                                    | Quarterly                 |                           |                                    |                           | 1                   | 1            | 1                     | 1                               |   |  |  |    |                                 |                                     |
| 3                    | NPDES Sampling                                   | Monthly                   |                           |                                    |                           |                     |              |                       |                                 | 3 | 3  | 3                                      | 3  |                                 |                                     |
| 3                    | Potable Well(s), if applicable                   |                           |                           |                                    |                           | 1                   | 1            | 1                     | 1                               |   |  |  |    |                                 |                                     |
| 3                    | PCW characterization for disposal, if applicable |                           |                           |                                    |                           |                     |              |                       |                                 |   |  |  |    |                                 |                                     |
| 4                    | QUARTER 4 OR YEAR 1 ANNUAL O&M                   |                           |                           |                                    |                           |                     |              |                       |                                 |   |  |  |    |                                 |                                     |
| 4                    | Milestone (Three Wells)                          | Quarterly                 |                           |                                    | 3                         | 3                   | 3            | 3                     |                                 |   |  |  |    |                                 |                                     |
| 4                    | TPOC Sampling (Two Wells)                        | Quarterly                 |                           |                                    | 2                         | 2                   | 2            | 2                     |                                 |   |  |  |    |                                 |                                     |
| 4                    | Designated Wells (Assuming Five Wells)           | Quarterly                 |                           |                                    | 5                         | 5                   | 5            | 5                     |                                 |   |  |  |    |                                 |                                     |
| 4                    | GW System Eff                                    | Quarterly                 |                           |                                    |                           | 1                   | 1            | 1                     | 1                               |   |  |  |    |                                 |                                     |
| 4                    | NPDES Sampling                                   | Monthly                   |                           |                                    |                           |                     |              |                       |                                 | 3 | 3  | 3                                      | 3  |                                 |                                     |
| 4                    | NPDES Sampling                                   | Annually                  |                           |                                    |                           |                     |              |                       |                                 |   |  |  |    |                                 | 1                                   |
| 4                    | Potable well, if applicable                      |                           |                           |                                    |                           | 1                   | 1            | 1                     | 1                               |   |  |  |    |                                 |                                     |
| 4                    | PCW characterization, as necessary               |                           |                           |                                    |                           | 1                   |              |                       |                                 |   |  |  |    |                                 |                                     |



# Attachment A

## SOW Summary Tables Cont.

- O&M (System) Parameters Table:
  - Depth to Water (DTW), Dissolved Oxygen (DO), Oxidation-Reduction Potential (ORP) and vacuum/pressure readings of monitoring wells to verify the system influence
  - Hour meter readings of all major system components
  - Groundwater recovery flow rate and total free product recovered, if applicable
  - Air sparging system air flow rate, temperature and pressure readings at the manifold and wellhead
  - SVE/MPX system air flow rate, vacuum readings at the manifold and wellhead, and OVA readings at the wellhead to optimize air flow rate and contaminant recovery
  - Observations such as air bubbling – discuss with assigned PE



# Attachment A

## SOW Summary Tables Cont.

- Typical O&M (System) Parameters Table:
  - Must include hour meter readings – Contractors are required to achieve 80% or better on all remedial system components to receive full compensation of pay items allotted under Section 17, Section 18 and Section 21 (monthly P.E. oversight of system O&M activities)
  - For payments of system runtime less than 80%, refer to the PMG- Runtime\_03June15.pdf guidance document

*Any blank fields are not applicable to this scope of work.*

| O&M (System) Parameters Table |   |                              |                            |                             |                     |      |     |                       |              |
|-------------------------------|---|------------------------------|----------------------------|-----------------------------|---------------------|------|-----|-----------------------|--------------|
| TASK #(s)                     | Location<br>(e.g., MW-X, Manifold, Influent,<br>Effluent, etc.) | Frequency<br>(if applicable) | Depth to<br>Water<br>(DTW) | Dissolved<br>Oxygen<br>(DO) | Pressure/<br>Vacuum | Flow | OVA | Hour Meter<br>Reading | Observations |
| 2 thru 5                      | Designated / Milestone Wells                                    | Monthly                      | X                          | X                           | X                   |      |     |                       | X            |
| 2 thru 5                      | AS System   | Monthly                      |                            |                             | X                   | X    |     | X                     |              |
| 2 thru 5                      | AS Manifold   | Monthly                      |                            |                             |                     | X    |     |                       |              |
| 2 thru 5                      | SVE System  | Monthly                      |                            |                             | X                   | X    |     | X                     | X            |
| 2 thru 5                      | SVE Manifold  | Monthly                      |                            |                             | X                   | X    |     |                       | X            |
| 2 thru 5                      | SVE well head   | Monthly                      |                            |                             | X                   | X    | X   |                       | X            |
| 2 & 3                         | Carbon Influent   | Monthly                      |                            |                             | X                   |      | X   |                       |              |
| 2 & 3                         | Between Carbon  | Monthly                      |                            |                             | X                   |      | X   |                       |              |
| 2 & 3                         | Carbon Effluent   | Monthly                      |                            |                             | X                   |      | X   |                       |              |
| 4 & 5                         | SVE Blower Effluent   | Monthly                      |                            |                             | X                   |      | X   |                       |              |



# Attachment A

# SOW Supporting Documents

- Figure
  - Must refer to the attached figure(s) in the description
  - Each figure must include a Facility ID number
- Agreements
  - Site Access Agreement
  - Cost Share Agreements including all amendments
  - Transition agreements
  - Conditional Closure Agreement and Contractor Recommendation form



# Attachment A

## SOW Supporting Documents

- Follow the naming conventions stated in the SOW Workbook Guidance Document

### SITE MANAGER SOW CHECKLIST

| Documents                |   | Example  |
|--------------------------|---|--|
| <input type="checkbox"/> | <p><b>Scope of Work (SOW)</b> (includes applicable tables): (.pdf)<br/>           Naming Convention: Attachment A - SubPhase Acronym- Scope of Work - Fac ID<br/> <i>[Should only contain applicable tables with HIDE ROWS engaged]</i></p> | Attachment A - NAM – Scope of Work - 658517818.pdf |
| <input type="checkbox"/> | <p><b>Figure(s) if necessary (ALL in one pdf):</b><br/>           (.pdf) Naming Convention: Figure# - Fac<br/> <i>[Each figure must include Fac ID]</i></p>   | Figure 1A - 658517818.pdf                          |
| <input type="checkbox"/> | <p><b>Site Access Agreement:</b> (.pdf)<br/>           Naming Convention: SSA - FacID</p>   | SAA - 658517818.pdf                                |
| <input type="checkbox"/> | <p><b>Cost Share Agreements (PCPP, SRFA, AC) and all Amendments, Transition Agreements (ALL in one pdf):</b> (.pdf)<br/>           Naming Convention: Type of Agreement - FacID</p>   | PCPP Agreement - 658517818.pdf                     |
| <input type="checkbox"/> | <p><b>Conditional Closure Agreement and Contractor Recommendation form (ALL in one pdf):</b> (.pdf)<br/>           Naming Convention: Conditional Closure - FacID</p>   | Conditional Closure - 658517818.pdf                |



# Schedule of Pay Items Workbook

- SPI pay items must match the activities and parameters outlined in the Attachment A - SOW workbook including tables
- Draft O&M SPI using the Scope-of-Work-Buildup\_13Jun16.xlsm workbook
- Verify draft SPI with assigned engineer or technical reviewer



# Typical O&M Pay Items

- Section 1 - Office Activities
  - Update existing Site Health & Safety Plan (no cost to the FDEP)
- Section 3 – Mobilization
  - Light Duty Vehicle – Allowed if mobilizing separately from the monthly O&M events and during the annual groundwater sampling
- Section 4 – Meals and Lodging
  - Per Diem
    - Not allowed for conducting monthly O&M
    - Allowed for conducting annual groundwater sampling if site is greater than 50 miles from the closest (sub)contractor office and requires overnight stay



# Typical O&M Pay Items Cont.

- Section 8 – Sample Collection and Field Testing
  - Monitoring Well Sampling – Must match the “# MWs Sampled (8-1./8-2.)” column for each task in the Water Sampling Table
  - Electronic Data Deliverables (EDD) – Allowable once per sampling event. Not required for collection of system groundwater or air samples
  - Water Level or Free Product Gauging
    - Must match Water Level/FP Gauging Only column for each task in the Water Sampling Table
    - Do not authorize for wells to be gauged & recorded monthly for system performance





# Typical O&M Pay Items Cont.

- Section 9 – Laboratory Analysis
  - Section 9.A. – Soil/Sediment Analysis (Refer to Soil and Air Sampling Table, if applicable)
  - Section 9.B. – Water Analysis (Refer to Water Sampling Table)
  - Section 9.C. – Air Analysis (Refer to Soil and Air Sampling Table, if applicable)
- Section 12 – Debris, Waste and Product Removal and Disposal
  - Transport and disposal of petroleum contact water using drums or at a permitted disposal facility or sewer system



# Typical O&M Pay Items Cont.

- Section 14 – In-Situ Injection
  - Groundwater Injection via permanent system and not by direct push
  - Materials to be injected (reimbursable line item)
- Section 16 – Remedial Action Packaged Work Scopes (includes system equipment)
  - For use with short term treatment or episodic system operation – Pay items are available in either daily or weekly basis. Use weekly rate if treatment duration is expected to last more than 4 days



# Typical O&M Pay Items Cont.

- Section 17 –Remediation System O&M Packaged Work Scopes (Excluding System Equipment)
  - For use to maintain FDEP owned equipment
  - Includes mobilization, per diem, labor, materials and equipment to conduct O&M, system trouble shooting, and minor system repairs
  - Includes system related sampling of water and air streams including all recovery/treatment and discharge points
  - Includes gauging and recording depth to water of select monitoring wells on the Amended ATC



# Typical O&M Pay Items Cont.

- Section 17 – Remediation System O&M Packaged Work Scopes (Excluding System Equipment)
  - Available in different sizes: small, medium, large or extra large

| <u>Treatment / Recovery Points</u> | <u>1 Technology</u> | <u>2 Technologies</u> | <u>3 Technologies</u> |
|------------------------------------|---------------------|-----------------------|-----------------------|
| < 10                               | Small               | Small                 | Small                 |
| 10 to 20                           | Medium              | Medium                | Medium                |
| 21 to 40                           | Large               | Large                 | Large                 |
| > 40                               | N/A                 | Extra Large           | Extra Large           |



# Typical O&M Pay Items Cont.

- Section 18 – Remedial Action System/Equipment Use (Equipment Only, Excluding O&M)
  - For use with remediation system leased or owned by the Agency Term Contractor
  - Do not authorize if remediation system is owned by the FDEP
  - If system is not available, use Section 22 with quotes



# Typical O&M Pay Items Cont.

- Section 18 – Remedial Action System/Equipment Use (Equipment Only, Excluding O&M)
  - System size requirements are based on a combination of minimum water flow capacity, minimum number of legs in manifold, minimum blower size, minimum air flow capacity and/or weight

## Groundwater Treatment System Requirements:

| System Size | Minimum Water Flow Capacity | Minimum Number of Legs of Manifold | Minimum Air Flow Capacity (SCFM) |
|-------------|-----------------------------|------------------------------------|----------------------------------|
| Small       | 75                          | 5                                  | 300                              |
| Medium      | 150                         | 10                                 | 750                              |
| Large       | 250                         | 20                                 | 1500                             |

## Air Sparging / Soil Vapor Extraction System Requirements

| System Size | Minimum Blower Size (HP) | Minimum Number of Legs of Manifold | Minimum Air Flow Capacity (SCFM) |
|-------------|--------------------------|------------------------------------|----------------------------------|
| Small       | 5                        | 5                                  | 50 / 100                         |
| Medium      | 10                       | 10                                 | 150 / 250                        |
| Large       | 20                       | 20                                 | 250 / 500                        |

## Carbon Off-Gas Treatment Add-On Requirements

| System Size | Pounds of Granular Activated Carbon |
|-------------|-------------------------------------|
| Small       | < 500                               |
| Medium      | 500 to 1000                         |
| Large       | > 1000 to 2000                      |



# Typical O&M Pay Items Cont.

- Section 19 – Reports
  - Use for reporting NPDES, quarterly and annual O&M activities and results. Quarterly O&M report does not have to be signed and sealed by a registered P.E. P.E. certification is only required if changes are proposed to the approved RAP. Annual O&M report must be signed and sealed by a registered P.E.
- Section 21 – Professional Engineering and Professional Geology Services
  - Use for providing project oversight of the remediation system and certification of the O&M reports



# Typical O&M Pay Items Cont.

- Section 22 – Miscellaneous Items (with quotes)
  - Propane
  - Sanitary Sewer Discharge (not handled by pay item 12-14)
  - Utility Payments for PCPP / PLRIP sites nearing cap
  - Spent carbon disposal and replacement - refer to the FDEP memo on How to handle add-on GAC dated November 14, 2014
  - Remediation system rental not listed in Section 18





# Creating SPI in STCM

- Enter draft SPI Line Items into STCM
- Refer to the PRP-SOW-Checklist\_06Feb17.xlsm
- Email SOW package to the Administrative Reviewer



# Common O&M Issues in MFMP

- Refer to the **RAC-OM-SR Tips for PRs\_14Mar17.docx** guidance document for tips to speed up purchase requisition processing in My Florida Market Place.
  1. Tasking additional costs for system related activities that are already covered in the O&M package section
  2. For reimbursable items, quotes are being submitted
    - a) Without complete specifications for rental equipment
    - b) Lack of description for services to be provided
    - c) Do not represent the same scope of work



- Questions?
- Thank you for your time and attention.