November 13, 2018

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I. Specific Reports in ATC Contract

19-1. <u>Soil Source Removal Report:</u> [Per Report]. This pay item is to provide written documentation (including photo documentation) and backup information following a soil source removal. The report should include a description and maps of the area and depth of excavation, including OVA readings and soil analytical samples analyzed. Backup documentation includes weigh tickets and disposal manifests. A registered P.G. <u>or</u> registered P.E. certification (SPI 21-13) is required <u>only if</u> the report includes recommendation for no further action (NFA).

History of the site	Soil sampling and excavation maps showing locations of
Summary description of activities completed	all soil samples with depths, soil contaminant
Summary description of activities completed	distributions and areas excavated
Copy of executed site access agreement(s)	Depth of excavation(s)
copy of executed she decess agreement(s)	Free product plume map
Storage system closure form	Disposal facility documentation, weigh tickets, manifest or receipt documentation, and if applicable distance
Copies of demolition/excavation permits	justification and recycling credits for
Compaction test results	ADaPT zip file including the lab EDD, error log, field
Volume/weight documentation, transport load tickets, supplier load documentation and distance documentation	EDD and merged database file
Dewatering system details	Photographic documentation of activities
Soil OVA screening and analytical data with depths	If well replacement and assessment performed, all
Soil OVA screening calibration logs (per guidance)	applicable assessment components
Water sampling log (per guidance)	All other applicable information required by listed
Sample chain of custody form	guidance and rule.
Laboratory analytical report(s)	Description of deviation from the task requirements
Updated tables of water level, free product thickness, soil	
OVA screening data, and soil analytical data, including	Recommendations for next scope of work needed to
qualifiers, qualifier codes, and bold results that exceed	move the site towards closure
applicable target cleanup level	
Site maps with dated title block, facility ID, site name,	Registered Professional Geologist or registered
address, north arrow, bar scale & legend of symbols used	Professional Engineer review, evaluation, and
Area/vicinity map	certification (per guidance) - Only of NFA recommended

19-2. <u>Site Characterization Screening Report:</u> [Per Report]. This pay item is used as a one-time final deliverable for Screening when field work has been performed and includes a completed Site Characterization Screening Worksheet. A registered P.G. <u>or</u> qualified registered P.E. certification (SPI 21-14) is required to attest to the field work portion of the report only and <u>if</u> the report includes recommendation for no further action (NFA). Recommended for removal.

Summary description of activities completed	Tables of water level, free product thickness, soil OVA
Site Recon/Field Measurement Visit area survey table,	screening data, and soil/water analytical data for current
location map, area map, photo documentation and field	task only, including qualifiers, qualifier codes, and bold
notes	results that exceed applicable target cleanup level

Copies of Soil Boring/Well permits	Photographic documentation of activities
Boring logs (per guidance)	Area/Vicinity map
Well construction and development logs (per guidance)	GW elevation contour map
Well completion report (per guidance)	Site Characterization Screening Worksheet
Water sampling log (per guidance)	Free Product, Soil & GW Contaminant distribution
Soil OVA screening and calibration logs (per guidance)	(plume) maps with iso-contours with dashed lines to denote likely concentration/thickness contours and dotted
Soil OVA screening and analytical data with depths	lines to denote estimated concentration/ thickness
Sample chain of custody form	contours.
Laboratory analytical report(s)	Waste disposal manifests
Copy of executed site access agreement(s) Field notes (per guidance)	All other applicable information required by listed guidance and rule.
ADaPT zip file including the lab EDD, error log, field	Description of deviation from the task requirements
EDD and merged database file	Recommendations for next scope of work needed to move
Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used	the site towards closure
	Registered Professional Geologist or qualified Registered Professional Engineer review, evaluation, and certification (per guidance) – Only of NFA recommended

19-3. <u>General Site Assessment Report:</u> [Per Report]. This report is designed for the use as a comprehensive and final site assessment deliverable documenting all site assessment activities completed up to the point of site assessment phase approval. This pay item most commonly includes but is not limited to a Template Site Assessment Report. The level of effort should determine whether this report or a Supplemental Site Assessment Report should be used. The report must be signed and sealed by a registered P.G. or qualified registered P.E. (SPI 21-15).

Template TSAR Site Assessment Report (per guidance)	Area/Vicinity map
Summary description of activities completed	Water supply well survey/map
Site Recon/Field Measurement Visit area survey table,	USGS topographic map
location map, area map, photo documentation and field notes	GW elevation contour map
Receptor Survey and Exposure Pathway Identification	Lithologic cross sections
survey worksheet, DOH map and supply well data	Copy of executed site access agreement(s)
Copies of Soil Boring/Well permits	Free Product, Soil & GW Contaminant distribution
Boring logs (per guidance)	(plume) maps with iso-contours with dashed lines to
Well construction and development logs (per guidance)	denote likely concentration/thickness contours and dotted lines to denote estimated concentration/ thickness
Well completion report (per guidance)	contours.
Soil OVA screening and calibration logs (per guidance)	All other applicable information required by listed
Soil OVA screening and analytical data with depths	guidance and rule.
Water sampling log (per guidance)	Waste disposal manifests
Sample chain of custody form	waste disposal mannesis
Laboratory analytical report(s)	Site Characterization Screening Worksheet
ADaPT zip file including the lab EDD, error log, field	Field notes (per guidance)
EDD and merged database file	Professional Land Survey (PLS) (per guidance)
Updated tables of cumulative water level, free product	Photographic documentation of activities
thickness, and soil/water analytical data for historic and	Description of deviation from the task requirements
current testing, including qualifiers, qualifier codes, and	Recommendations for next scope of work needed to
bold results that exceed applicable target cleanup level	move the site towards closure

Site maps with dated title block, facility ID, site name and	Registered Professional Geologist or qualified Registered
address, north arrow, bar scale and legend of all symbols	Professional Engineer review, evaluation, and
used	certification (per guidance)

19-4. <u>Supplemental Site Assessment Report:</u> [Per Report]. This report is designed for reporting limited site assessment work. This pay item can be used if the level of effort for work conducted during the site assessment phase does not warrant the preparation of a Comprehensive Site Assessment Report or for documenting limited supplemental site assessment activities conducted after approval of the site assessment phase. This pay item is also designed for reporting Low-Scored Site Initiative assessment work. The report must be signed and sealed by a registered P.G. or qualified registered P.E. (SPI 21-16).</u>

Summary description of activities completed	Area/Vicinity map
Site Recon/Field Measurement Visit area survey table,	Water supply well survey/map
location map, area map, photo documentation and field notes	USGS topographic map
Copies of Soil Boring/Well permits	GW elevation contour map
Boring logs (per guidance)	Lithologic cross sections
Well construction and development logs (per guidance)	Free Product, Soil & GW Contaminant distribution
Well completion report (per guidance)	(plume) maps with iso-contours with dashed lines to denote likely concentration/thickness contours and dotted
Soil OVA screening and analytical data with depths	lines to denote estimated concentration/ thickness
Soil OVA screening and calibration logs (per guidance)	contours.
Water sampling log (per guidance)	Site Characterization Screening Worksheet
Sample chain of custody form	Waste disposal manifests
Laboratory analytical report(s)	All other applicable information required by listed
AD-DT -in file including the lab EDD source lag field	guidance and rule.
ADaPT zip file including the lab EDD, error log, field	Professional Land Survey (PLS) (per guidance)
EDD and merged database file	Field notes (per guidance)
Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols	Photographic documentation of activities
	Copy of executed site access agreement(s)
used	Description of deviation from the task requirements
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	Recommendations for next scope of work needed to
	move the site towards closure
	Registered Professional Geologist or qualified Registered
	Professional Engineer review, evaluation, and
	certification (per guidance)

19-5. <u>Receptor and Exposure Pathway Report:</u> [Per Report]. This pay item is to report the data collected in the Receptor Survey and Exposure Pathway Identification pay item in section 2-2., including photographic documentation using the July 1, 2013 DEP Draft Receptor Survey and Exposure Pathway Identification Form and required attachments. The report must be signed and sealed by a registered P.G. <u>or</u> registered P.E. (SPI 21-17 if stand-alone report).

Summary description of activities completed	Registered Professional Geologist or Registered
Receptor Survey and Exposure Pathway Identification survey worksheet, DOH map and supply well data	Professional Engineer review, evaluation, and certification (per guidance) – If stand-alone report

19-6. <u>Level 2 Natural Attenuation Monitoring Plan:</u> [Per Plan]. This pay item is used if concentrations are greater than the Natural Attenuation Default Concentrations referenced in Chapter 62-777, F.A.C. for the Petroleum Products Contaminants of Concern as listed in Table A of Chapter 62-780, F.A.C., and to provide technical justification for selection of NAM. Refer to the Department's Remedial Action Guideline BPSS-11 (5/8/98) for more details.

NOTE: Natural Attenuation Monitoring Plans are <u>not</u> required if concentrations of all chemicals of concern are at or below the Natural Attenuation Default Concentrations referenced in Chapter 62-777, F.A.C. The plan must be signed and sealed by a registered P.E. (SPI 21-18).

Recap of SAR information and conclusions pertinent to	Proposed NAM or PARM sampling points, sampling
RAP preparation	frequency, parameters to be sampled, and action levels.
Current sampling results (≤ 9 months) of site soil and GW	Updated tables, figures and maps of
contamination concentrations and free product thickness	assessment/monitoring data
Discussion and demonstration of the suitability of the site	All other applicable information required by listed
for NAM (per rule and guidance)	guidance and rule.
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and	Recommendations for next scope of work needed to move the site towards closure
current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-7. <u>Natural Attenuation or Post RA Monitoring Report, Quarterly or Non-Annual:</u> [Per Report]. This pay item would typically contain information necessary to evaluate the progress of post remediation monitoring or natural attenuation (NA) monitoring for one sampling event. Should provide discussions of results if concentrations have increased to "action" levels or higher. Registered P.E. <u>or</u> P.G. certification (SPI 21-19) is <u>not</u> required <u>unless</u> a recommendation for "No Further Action" or a recommendation to modify the approved monitoring plan is included.

Recap of SAR information and conclusions pertinent to RAP preparation	Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used
Approved NAM or PARM sampling points, sampling frequency, parameters sampled, and action levels.	All other applicable information required by listed guidance and rule.
Summary description of activities completed and discussion of monitoring data results	Copy of executed site access agreement(s)
Water sampling log (per guidance)	Field notes (per guidance)
Sample chain of custody form	Waste disposal manifests
Laboratory analytical report(s)	Description of deviation from the task requirements
ADaPT zip file including the lab EDD, error log, field EDD and merged database file	Recommendations for next scope of work needed to move the site towards closure
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	Registered Professional Geologist or Registered Professional Engineer review, evaluation, and certification (per guidance) – Only of NFA or modification of the approved monitoring plan recommended

19-8. <u>Natural Attenuation Monitoring Report, Annual:</u> [Per Report]. This pay item provides a more substantial degree of evaluation of the progress of a natural attenuation or post remediation monitoring plan that the quarterly report, including conclusions and recommendations of

whether to continue monitoring, validate and re-calibrate any models that may have been used, or re-establish new milestone objectives if necessary. The report must include a conclusions and recommendations section and be signed and sealed by a registered P.G. <u>or</u> registered P.E. (SPI 21-20).

Recap of SAR information and conclusions pertinent to RAP preparation	Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used
Approved NAM or PARM sampling points, sampling	Copy of executed site access agreement(s)
frequency, parameters sampled, and action levels.	Field notes (per guidance)
Summary description of activities completed and discussion of monitoring data results	Waste disposal manifests
Water sampling log (per guidance)	All other applicable information required by listed
Sample chain of custody form	guidance and rule.
Laboratory analytical report(s)	Description of deviation from the task requirements
ADaPT zip file including the lab EDD, error log, field EDD and merged database file	Recommendations for next scope of work needed to move the site towards closure
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	Registered Professional Geologist or Registered Professional Engineer review, evaluation, and certification (per guidance)

19-9. <u>**Pilot Test Plan:**</u> [Per Plan]. This pay item is used for pilot testing prior to implementation of the test. All specific goals must be detailed in the pilot test plan including a description of the proposed test, identification of test and measurement points, measurement protocols and expected/minimum duration of tests. The report must describe the proper implementation of the test and the collection of sufficient data to evaluate the feasibility of the proposed technology as well as to effectively design the final system. The plan must be signed and sealed by a registered P.E. (SPI 21-21).

Recap of SAR information and conclusions pertinent to Pilot Test preparation	Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used
Details of specific pilot test goals, description of proposed PT, identification of PT and measurement points, measurement protocols, expected duration of PT, description of proper PT implementation, data collection goals sufficient to evaluate feasibility of technology	All other applicable information required by listed guidance and rule. Recommendations for next scope of work needed to move the site towards closure
	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-10. <u>**Pilot Test Report:**</u> [Per Report]. This pay item is used to report the results and analysis of pilot testing activities in accordance with Preapproval Program guidance and procedures. All of the specific activities performed during the pilot test must be addressed, including a description of the actual test, identification of test and measurement points, measurement protocols and actual duration of the test. The report must demonstrate the proper implementation of the test and collection of data, as well as evaluation of the feasibility of the tested technology to the effective design of the final system. The report must be signed and sealed by a registered P.E. (SPI 21-22).

Results and analysis of PT activities, description of PT, identification of PT and measurement points, measurement protocols, test duration, demonstration of proper PT implementation and data collection, evaluation of tested technology to the effective design of final	System parameter readings (pressure, vacuum, flow rates and totals, telemetry system operation records and % run time calculationsIf well installation performed, all applicable assessment components
System. Updated tables of cumulative water level, free product thickness, soil/water/vapor analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level.	Waste disposal manifests
	All other applicable information required by listed guidance and rule.
	Copy of executed access agreement
Soil OVA screening and analytical data with depths	Copies of permits
Soil OVA correspond and calibration loss (nor opidance)	Photographic documentation of activities
Soil OVA screening and calibration logs (per guidance)	Field notes (per guidance)
Water sampling log (per guidance)	Materials documentation and invoice
	Description of deviation from the task requirements
Sample chain of custody form	Recommendations for next scope of work needed to move
Laboratory analytical report(s)	the site towards closure
ADaPT zip file including the lab EDD, error log, field EDD and merged database file	Registered Professional Engineer review, evaluation, and certification (per guidance)

19-11. <u>Level 1 Remedial Action Plan:</u> [Per Plan]. This pay item is used when design of a remediation system is needed to clean up the soil and/or groundwater. The report is used when there is a limited area of relatively low levels of contamination and an evaluation of remedial alternatives is not necessary. The report shall include all appropriate tables, figures, maps and design drawings. The report must be signed and sealed by a registered P.E. (SPI 21-23).

Recap of SAR information and conclusions pertinent to Pilot Test or RAP preparation	Detailed design of proposed groundwater and/or soil remediation systems
Current sampling results (\leq 9 months) of site soil (with depths) and GW contamination concentrations and free product thickness	All applicable information and data listed in the RAP Checklist (per guidance)
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and	All other applicable information required by listed guidance and rule.
current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	Recommendations for next scope of work needed to move the site towards closure
Updated tables, figures and maps of assessment/monitoring data	All applicable information and data listed in the RAP Checklist (per guidance)
Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-12. <u>Level 2 Remedial Action Plan:</u> [Per Plan]. This pay item is used when design of a remediation system is needed to clean up the soil and/or groundwater. The report is used when there is a moderate to large area of contamination and a thorough evaluation of remedial alternatives is necessary. The report includes all appropriate tables, figures, maps and design drawings. The report must be signed and sealed by a registered P.E. (SPI 21-24).

Recap of SAR information and conclusions pertinent to Pilot Test or RAP preparationCurrent sampling results (≤ 9 months) of site soil (with depths) and GW contamination concentrations and free product thickness	Conceptual design of proposed groundwater and/or soil remediation systems and comparison of at least three remediation alternatives detailed design of one based on cost-effectiveness
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	All applicable information and data listed in the RAP Checklist (per guidance) All other applicable information required by listed guidance and rule. Description of deviation from the task requirements
Updated tables, figures and maps of assessment/monitoring data	Recommendations for next scope of work needed to move the site towards closure
Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-13. Level 1 Limited Scope Remedial Action Plan or RAP Modification Plan: [Per Plan]. This pay item is used for short term remediation of either a single event or multiple episodic events with portable remediation equipment which does not involve an on-site treatment process for recovered water or air emissions. The use of the report is generally limited to short-term or episodic biosparging with mobile equipment or short-term groundwater recovery which meets the requirements for interim source removal of Rule 62-780.300(2) where the site could achieve NFA or qualify for Remediation by Natural Attenuation; or modifications that involve mainly minor system changes such as addition of a recovery well/sparging well to an existing system with that technology, or adding a treatment process to an existing system which involves one or two items. The report includes updated maps and design drawings. The report must be signed and sealed by a registered P.E. (SPI 21-25).

Recap of SAR information and conclusions pertinent to Pilot Test or RAP preparation Current sampling results (≤ 9 months) of site soil (with depths) and GW contamination concentrations and free product thickness	Conceptual design of proposed groundwater and/or soil remediation systems and comparison of at least three remediation alternatives detailed design of one based on cost-effectiveness
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	All applicable information and data listed in the RAP Checklist (per guidance) All other applicable information required by listed guidance and rule. Description of deviation from the task requirements
Updated tables, figures and maps of assessment/monitoring data	Recommendations for next scope of work needed to move the site towards closure
Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-14. Level 2 Limited Scope Remedial Action Plan or RAP Modification Plan: [Per Plan]. This pay item is used for a soil source removal or greater than 200 cubic yards without dewatering design or geotechnical design. The report is also used for modifications such as a limited pumping event which includes on-site treatment and disposal of recovered water or short term intermittent episodic remediation with mobile sparging/SVE system or multi-phase extraction equipment. The report includes updated maps and design drawings. The report must be signed and sealed by a registered P.E. (SPI 21-26).

Recap of SAR information and conclusions pertinent to Pilot Test or RAP preparation	Conceptual design of proposed soil source removal w/ detailed design of excavation areas, slopes, backfill, compaction, storage system and/or canopy removal/ replacement, and resurfacing, as applicable
Current sampling results (≤ 9 months) of site soil (with depths) and GW contamination concentrations and free product thickness	Detailed design of proposed groundwater and/or soil remediation systems
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	All applicable information and data listed in the RAP Checklist (per guidance) All other applicable information required by listed guidance and rule.
Updated tables, figures and maps of assessment/monitoring data	Description of deviation from the task requirements
Site maps with dated title block, facility ID, site name and address, north arrow, bar scale and legend of all symbols used	Recommendations for next scope of work needed to move the site towards closure Registered Professional Engineer review, evaluation, and certification (per guidance).

9-15. <u>Level 3 Limited Scope Remedial Action Plan or RAP Modification Plan:</u> [Per Plan]. This pay item is used for a soil source removal of greater than 200 cubic yards with dewatering design or geotechnical design, and for large diameter auger soil source removal design. This template is also used for bioremediation or chemical oxidation RAPs. The report must compare the conceptual designs and costs of at least three bioremediation or chemical oxidation vendors and recommend detail design of one based on cost-effectiveness. The report includes all appropriate tables, figures, maps and design drawings. Although the specific design details may be recommended by a vendor, the preapproval contractor's P.E. must certify that the design is their own responsibility and the implementation of the design will provide a reasonable assurance of performing complete site rehabilitation in accordance with 62-780, F.A.C. The report must be signed and sealed by a registered P.E. (SPI 21-27).

Recap of SAR information and conclusions pertinent to Pilot Test or RAP preparationCurrent sampling results (≤ 9 months) of site soil (with depths) and GW contamination concentrations and free product thickness	Conceptual design of proposed bioremediation or chemical oxidation injections and/or systems and comparison of at least three product vendors with detailed design of one based on cost-effectiveness
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and	All applicable information and data listed in the RAP Checklist (per guidance)
current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	All other applicable information required by listed guidance and rule.
Updated tables, figures and maps of	Field notes (per guidance)
assessment/monitoring data	Copy of executed site access agreement(s)
Site maps with dated title block, facility ID, site name and	Description of deviation from the task requirements
address, north arrow, bar scale and legend of all symbols	Recommendations for next scope of work needed to move
used	the site towards closure
Conceptual design of proposed soil source removal w/ detailed design of excavation areas, slopes, dewatering system, shoring, backfill, compaction, other geotechnical considerations, LDA design, storage system and/or canopy removal/replacement, and resurfacing, as applicable	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-16. Level 4 Limited Scope Remedial Action Plan or RAP Modification Plan: [Per Plan]. This pay item is used for major modification to an existing remediation system or addition of a different cleanup technology to a site with an active remediation system (i.e. add in-situ sparging to a site with multi-phase extraction). The report includes all appropriate tables, figures, maps and design drawings. The report is also used for soil source removal of greater than 200 cubic yards where justification is required for funding of storage system removal and/or replacement, resurfacing, canopy removal and replacement, or other facility restoration expenses in which costs will exceed \$10,000 or if dewatering and geotechnical design are included. The report must be signed and sealed by a registered P.E. (SPI 21-28).

Recap of SAR information and conclusions pertinent to Pilot Test or RAP preparation	Conceptual design of proposed soil source removal w/ detailed design of excavation areas, slopes, dewatering
Current sampling results (≤ 9 months) of site soil (with depths) and GW contamination concentrations and free product thickness	system, shoring, backfill, compaction, other geotechnical considerations, LDA design, storage system and/or canopy removal/replacement, and resurfacing, as applicable
Updated tables of cumulative water level, free product thickness, and soil/water analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level	Conceptual design of proposed bioremediation or chemical oxidation injections and/or systems and comparison of at least three product vendors with detailed design of one based on cost-effectiveness
Updated tables, figures and maps of assessment/monitoring data	Description of deviation from the task requirements
Detailed design of proposed groundwater and/or soil remediation systems	All other applicable information required by listed guidance and rule.
Design drawings	Recommendations for next scope of work needed to move the site towards closure
All applicable information and data listed in the RAP Checklist (per guidance)	Registered Professional Engineer review, evaluation, and certification (per guidance).

19-17. <u>Construction Drawings and Specs Report:</u> [Per Report]. This pay item is used when it is necessary to create the detailed scaled drawings of the intended remediation system. The specifications of all equipment and materials to be constructed shall be provided. These drawings must be prepared prior to the preparation of as- built drawings. The construction drawings should be of sufficient detail as to materials and methods of construction to serve as project construction drawings. Typical construction drawings will include: cover page, site vicinity map, remedial system compound layout, recovery well, multi-phase well, air sparing well or soil vapor extraction well details (if needed), piping cross-section, piping and instrumentation diagram (P&ID), electrical controls diagram and equipment pad layout. Symbols on all drawings shall reflect usage established by the American National Standards Institute (ANSI) standards or generally accepted professional standards, abbreviations shall reflect common usage, and graphic scales (or dimensions) will be provided on drawings (except P&ID) to allow for measured scaling. The level of detail of these drawings can be modified based on communications with the DEP. Registered P.E. certification is required. (SPI 21-35).

All other applicable information required by listed	Registered Professional Engineer review, evaluation, and
guidance and rule.	certification (per guidance).

19-18. <u>As-Built Drawings (P.E. sealed red lined modifications):</u> [Per Drawings]. This pay item is used for red-lined construction drawings when not included in the remedial action start up report. Construction drawings must be prepared prior to the preparation of as-built drawings. Per

subsection 62-780.700(12), F.A.C., these drawings must include all construction and equipment design specifications and must identify "any operational parameters different from those in the approved Remedial Action Plan." These drawings should include the site name, DEP facility ID number, address and show the types of equipment used. These drawings must be accompanied by an itemized summary of any substantial equipment changes with pertinent technical data (size, capacity, type equipment, electrical requirements, etc.). Although there are no minimum requirements for dimension details, a scale must be provided and all details should be dimensionally consistent (e.g., all lengths identified). When possible, manufacturer data sheets and performance curves should be included. A summary providing reasons for departure from the criteria described in the approved RAP shall be included. "Red-Lined" construction drawings will be considered to be sufficient provided any changes from the original conceptual design to installation are easily discerned and accurately indicated. If completely recreated figures are submitted as as-builts, the general criteria should be identical to those required for construction drawings. Change in equipment specifications, location, or other details must be accurately and completely depicted in a way that will be readily understandable. The as-built drawings must be sealed by a registered P.E. (SPI 21-29).

All other applicable information required by listed	Registered Professional Engineer review, evaluation, and
guidance and rule.	certification (per guidance).

19-19. <u>Remedial Action Startup Report:</u> [Per Report]. This pay item is typically used for reporting the initial startup of a remediation system. Any information regarding equipment specifications or operation parameters differing from the RAP should be included in the RA Startup Report. This could include equipment changes, modifications to construction drawings (as-builts), and changes in mode of operation (e.g., pulsed operation rather than continuous). An explanation of all troubleshooting methods used to optimize the system startup should be included. This report usually includes a detailing of all system operational parameters and any problems encountered during startup and photo documentation. Registered P.E. certification (SPI 21-6.a thru 21-6.d) is not required unless there is a recommendation for a system modification or significant change in the course of action.

Summary description of activities completedUpdated tables of cumulative water level, free productthickness, soil/water/vapor analytical data for historicand current testing, including qualifiers, qualifier codes,and bold results that exceed applicable target cleanuplevel.Water and air sampling logs (per guidance)Sample chain of custody formLaboratory analytical report(s)	Startup and O&M reports should include text, graphs, a milestone worksheet and the PRP RA Summary Report with its various worksheets; site summary, site performance summary, treatment well details, process summary, maintenance summary, GWR performance, AS performance, SVE performance, MPX performance, GW elevation (with and without FP), GWR analytical, MW analytical, SVE analytical, VVE-MPX well data, AS well data, GW RW data, and system influent
Copies of permits ADaPT zip file including the lab EDD, error log, field EDD and merged database file	monitoring parameters. (per guidance) Field notes (per guidance) Photographic documentation of activities
Materials documentation and invoice.	Waste disposal manifests
If recovery/treatment well installation, all applicable assessment components	All other applicable information required by listed guidance and rule.
Record (As-Built) Drawings showing changes from the approved RAP design by "red-line", update site plan and	Description of deviation from the task requirements

engineering flow diagram, listing of each major piece of mechanical equipment. (per guidance)	Recommendations for next scope of work needed to move the site towards closure
Record (As-Built) Drawings showing changes from the approved RAP design by "red-line", update site plan and engineering flow diagram, listing of each major piece of mechanical equipment. (per guidance) System parameter readings (pressure, vacuum, flow rates and totals, telemetry system operation records and % run time calculations	Registered Professional Engineer review, evaluation, and certification (per guidance) If there is a recommendation for a system modification or significant change in the course of action

19-20. <u>Letter/NPDES Report:</u> [Per Report]. This pay item is typically one to two pages with no tables or graphs. Used when a minimum response is needed such as to acknowledge completed field work where just observations were made. When used for the NPDES report, this pay item is only authorized once per quarter. However, pursuant to paragraph (4) of the Generic Permit for Discharges from Petroleum Contaminated Sites, "Monitoring results obtained for each calendar month shall be summarized and reported on a Discharge Monitoring Report (DMR) form (DEP form 62-620.910(10)) once each month." Contractors are required to utilize the DEP Wastewater Program eDMR electronic reporting system. Therefore, the quarterly report needs to include pdf copies of three monthly eDMR forms. Registered P.E. certification is <u>not</u> required.

Summary description of activities completed	Letter reports do not require tables and graphs
If borings or wells installed and/or sampling, screening and analysis, all applicable assessment components	Letter reports do not require professional certification

19-21. <u>Operation and Maintenance Report, Quarterly or Non-Annual:</u> [Per Report]. This pay item contains all information needed to evaluate the progress of the approved site remediation activities and includes telemetry monitoring data. This report must include a conclusions and recommendations section and all applicable O&M report tables. Registered P.E. certification (SPI 21-31) is not required, unless there are significant proposed changes to the approved RAP.

Summary description of activities completed	O&M reports should include the PRP Milestone Workbook with designated milestone wells, baseline
Updated tables of cumulative water level, free product thickness, soil/water/vapor analytical data for historic	concentrations, defined cleanup target level and individual well data. (per guidance)
and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup	Materials documentation and invoice.
level.	Field notes (per guidance)
Water and air sampling logs (per guidance)	Copy of executed access agreement
Sample chain of custody form	Photographic documentation of activities
Laboratory analytical report(s)	Waste disposal manifests
ADaPT zip file including the lab EDD, error log, field EDD and merged database file	All other applicable information required by listed guidance and rule.
System parameter readings (pressure, vacuum, flow rates and totals, telemetry system operation records and % run time calculations	Description of deviation from the task requirements
	Recommendations for next scope of work needed to move the site towards closure

Startup and O&M reports should include text, graphs, a milestone worksheet and the PRP RA Summary Report with its various worksheets; site summary, site performance summary, treatment well details, process summary, maintenance summary, GWR performance, AS performance, SVE performance, MPX performance, GW elevation (with and without FP), GWR analytical, MW analytical, SVE analytical, VVE-MPX well data, AS well data, GW RW data, and system influent monitoring parameters. (per guidance)	Registered Professional Engineer review, evaluation, and certification (per guidance) - If significant changes to approved RAP
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19-22. <u>Operation and Maintenance Annual Report:</u> [Per Report]. This pay item requires a more substantial degree of evaluation than quarterly reports, including summary, conclusions, discussion and recommendations of how the system may be modified or optimized to more cost-effectively and efficiently continue site remediation. The report must evaluate progress relative to cleanup milestone concentration objectives, establish new milestones if necessary and include telemetry monitoring. The report must include a conclusions and recommendations section and all applicable O&M reporting tables. The report must be signed and sealed by a registered P.E. (SPI 21-32).

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Summary description of activities completed	
Updated tables of cumulative water level, free product	O&M reports should include the PRP Milestone
thickness, soil/water/vapor analytical data for historic and current testing, including qualifiers, qualifier codes,	Workbook with designated milestone wells, baseline concentrations, defined cleanup target level and
and bold results that exceed applicable target cleanup	individual well data. (per guidance)
level.	u 8 /
Water and air sampling logs (per guidance)	Materials documentation and invoice.
Sample chain of custody form	Field notes (per guidance)
Laboratory analytical report(s)	· · · · ·
ADaPT zip file including the lab EDD, error log, field	Copy of executed access agreement
EDD and merged database file	Photographic documentation of activities
System parameter readings (pressure, vacuum, flow rates and totals, telemetry system operation records and % run time calculations	Waste disposal manifests
	All other applicable information required by listed guidance and rule.
Startup and O&M reports should include text, graphs, a	-
milestone worksheet and the PRP RA Summary Report	Description of deviation from the task requirements
with its various worksheets; site summary, site	Recommendations for next scope of work needed to
performance summary, treatment well details, process	move the site towards closure
summary, maintenance summary, GWR performance,	
AS performance, SVE performance, MPX performance,	
GW elevation (with and without FP), GWR analytical,	Registered Professional Engineer review, evaluation, and
MW analytical, SVE analytical, VVE-MPX well data,	certification (per guidance)
AS well data, GW RW data, and system influent	
monitoring parameters. (per guidance)	

19-23. <u>Remedial Action General Report:</u> [Per Report]. This pay item is typically used for sites where the entire remediation strategy implemented is bioremediation or chemical oxidation, including chemical enhancement (i.e., ORC injection) with no mechanical equipment design. This report may also be used for any type of short term limited scope remediation events. This report also may be used to report the results of episodic remediation events or supplemental site assessment after SAR approval. The level of effort should determine whether this pay item or the Remedial

Action Interim Report should be used. This report must be signed and sealed by a registered P.G. <u>or</u> registered P.E. (SPI-21-33).

Summary description of activities completed	Copy of executed access agreement
Updated tables of cumulative water level, free product thickness, soil/water/vapor analytical data for historic and current testing, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level. Soil OVA screening and calibration logs (per guidance) Soil OVA screening and analytical data with depth Water and air sampling tables (per guidance) Sample chain of custody form	Text, graphs, a milestone worksheet and the PRP RA Summary Report with its various worksheets; site summary, site performance summary, treatment well details, process summary, maintenance summary, GWR performance, AS performance, SVE performance, MPX performance, GW elevation (with and without FP), GWR analytical, MW analytical, SVE analytical, VVE-MPX well data, AS well data, GW RW data, and system influent monitoring parameters. (per guidance)
Laboratory analytical report(s)	Field notes (per guidance)
ADaPT zip file including the lab EDD, error log, field EDD and merged database file	Copies of permits Waste disposal manifests
System parameter readings (pressure, vacuum, flow rates and totals, telemetry system operation records and % run time calculations	All other applicable information required by listed guidance and rule.
If recovery/treatment well or assessment well installation and/or sampling and analysis, all applicable well install and assessment components	Description of deviation from the task requirements
	Recommendations for next scope of work needed to move the site towards closure
Materials documentation and invoice	Registered Professional Geologist or Registered
Photographic documentation of activities	Professional Engineer review, evaluation, and certification (per guidance)

19-24. <u>Remedial Action Interim Report:</u> [Per Report]. This pay item can be used in several different post-SAR situations where there is a need for evaluation and discussion of activities and data pertaining to interim events that occur after SAR approval but are not addressed in other specific RAP or RA reports, including but not limited to well installation (monitoring or remediation), soil screening and verification sampling and associated updates of maps and tables. The report should provide documentation, including testing and analytical results, evaluation and discussion of completed work and activities. This report may be tasked in additional to and concurrent with a RAP, RAP Mod, RA Startup or other RA report if significant supplemental assessment activities are to be performed. This report should be used to report analytical results obtained during the remedial action phase following chemical injection or injection of products utilized to increase biological activity. This report also may be used to report the results of episodic remediation events. The level of effort should determine whether this pay item or the General Remedial Action Report should be used. Registered P.E. or P.G. certification (SPI 21-34) is <u>not</u> required unless there is a recommendation for a system modification or significant change in the course of action.

Summary description of activities completed	Materials documentation and invoice
	Copies of permits
Updated tables of cumulative water level, free product	Photographic documentation of activities
thickness, soil/water/vapor analytical data for historic and current testing, including qualifiers, qualifier codes,	Field notes (per guidance)
and bold results that exceed applicable target cleanup level.	Copy of executed access agreement

Soil OVA screening and calibration logs (per guidance)	Waste disposal manifests
Soil OVA screening and analytical data with depths	All other applicable information required by listed guidance and rule.
Water and air sampling logs (per guidance)	
Sample chain of custody form	8
Laboratory analytical report(s)	Description of deviation from the task requirements
ADaPT zip file including the lab EDD, error log, field EDD and merged database file	Recommendations for next scope of work needed to move the site towards closure
System parameter readings (pressure, vacuum, flow rates and totals, telemetry system operation records and % run time calculations	
If recovery/treatment well or assessment well installation and/or sampling and analysis, all applicable well install and assessment components	Registered Professional Geologist or Registered
Text, graphs, a milestone worksheet and the PRP RA Summary Report with its various worksheets; site summary, site performance summary, treatment well details, process summary, maintenance summary, GWR performance, AS performance, SVE performance, MPX performance, GW elevation (with and without FP), GWR analytical, MW analytical, SVE analytical, VVE-MPX well data, AS well data, GW RW data, and system influent monitoring parameters. (per guidance)	Professional Engineer review, evaluation, and certification (per guidance) - If recommendation for a system modification or significant change in the course of action.

19-25. <u>Free Product Recovery Report:</u> [Per Report]. This pay item documents the effectiveness of FPR efforts from hand bailing, absorbent socks, passive skimmers, and other non-engineered recovery methods. Registered P.E. or PG. certification is not required.

Summary description of activities completed	ADaPT zip file including the lab EDD, error log, field EDD and merged database file
Updated tables of water level, free product thickness	If well installation and assessment performed, all applicable assessment components
Volume/weight documentation, transport load tickets, supplier load documentation and distance documentation	Field notes (per guidance)
	Copy of executed site access agreement(s)
Disposal facility documentation, weigh tickets, manifest or receipt documentation, and if applicable distance justification and recycling credits	Photographic documentation of activities
	All other applicable information required by listed guidance and rule.
Site maps with dated title block, facility ID, site name,	Description of deviation from the task requirements
address, north arrow, bar scale & legend of symbols used	Decommondations for next soons of work needed to
Area/vicinity map	Recommendations for next scope of work needed to move the site towards closure
Free product plume map	
Sample chain of custody form	Free Product Recovery reports do not require
Laboratory analytical report(s)	professional certification

19-26. <u>Well Abandonment/Site Restoration Report:</u> [Per Report]. This is a minimal report to document well (and vault) abandonment and/or site restoration activities when well abandonment and/or site restoration was the only task performed and requires photo documentation. Registered P.E. or P.G. certification is not required.

Summary description of activities completed	Field notes (per guidance)
Well abandonment form	Well Abandonment/Site Restoration reports do not
Photographic documentation of activities	require professional certification

19-27. <u>Interim Assessment Report:</u> [Per Report]. This is a minimal report to document site assessment activities when additional work may be required and where there is a need for evaluation and discussion of activities and data. The report should provide documentation, including testing and analytical results, evaluation and discussion of completed work and activities. This report may be tasked in additional to and concurrent with a SA or SSA report if significant supplemental assessment activities are to be performed. The report should include tables and figures documenting the new assessment data and recommendations for additional assessment work, if required. Registered P.E. or P.G. certification is not required.</u>

Summary description of activities completed Copies of Soil Boring/Well permits	Free Product, Soil & GW Contaminant distribution (plume) maps with iso-contours with dashed lines to denote likely concentration/thickness contours and dotted
Boring logs (per guidance)	lines to denote estimated concentration/ thickness
Well construction and development logs (per guidance)	contours.
Well completion report (per guidance)	All other applicable information required by listed
Soil OVA screening and calibration logs (per guidance)	guidance and rule.
Soil OVA screening and analytical data with depths	Site Characterization Screening Worksheet
Water sampling log (per guidance)	Professional Land Survey (PLS) (per guidance)
Sample chain of custody form	Field notes (per guidance)
Laboratory analytical report(s)	IDW waste disposal manifests
ADaPT zip file including the lab EDD, error log, field	Photographic documentation of activities
EDD and merged database file	Copy of executed site access agreement(s)
Site maps with dated title block, facility ID, site name and	Description of deviation from the task requirements
address, north arrow, bar scale and legend of all symbols used	Recommendations for next scope of work needed to move the site towards closure
Tables of water level, free product thickness, soil OVA screening data, and soil/water analytical data for current task only, including qualifiers, qualifier codes, and bold results that exceed applicable target cleanup level Area/Vicinity map	Interim Assessment reports do not require professional certification

II. Rule and Guidance Documents Related to Reports

- Chapter 62-780, F.A.C., Rules 62-780.400 (Professional Certification), 62-780.525 (Interim Source Removal), 62-780.600 (Site Assessment), 62-780.690 (Natural Attenuation Monitoring), 62-780.700 (Active Remediation), 62-780.750 (post Active Remediation Monitoring) @ https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-780

- PRP Standard Specification Details (10/14/16) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/prp-standard-specification-details</u>

- DWM Automated Data Processing Tool (ADaPT) web page with user guide and related resources @ https://floridadep.gov/waste/waste/content/adapt

- PRP Field Notes Guidance (8/17/17) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/prp-field-notes-guidance</u>

- PCS-006-Design, Installation, and Placement of monitoring Wells (w/Boring Log & Well Construction and Development Log) (5/2/05) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/sop-pcs-006-design-installation-and-placement-monitoring-wells</u>

- BPSS-5: Record (As-Built) Drawings (6/4/98) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/bpss-5-record-drawings</u>

- Receptor Survey & Exposure Pathway Identification Form and Required Attachments (2/5/18) @ <u>https://floridadep.gov/waste/petroleum-restoration/forms/receptor-survey-exposure-pathway-identification-form</u>

- Guidance on Site Assessment and Assessment Report Preparation for Petroleum Preapproval Sites (10/29/98) @ <u>https://floridadep.gov/waste/petroleum-restoration/content/guidance-site-assessment-report-preparation</u>

- Templated Site Assessment Report (TSAR) (12/14/15) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/template-site-assessment-report-tsar</u>

- Historical Site Summary (3/17/17) @ <u>https://floridadep.gov/waste/petroleum-restoration/forms/historical-site-summary</u>

- Groundwater Sampling Log and Guidance (3/1/14) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/groundwater-sampling-log</u> and <u>https://floridadep.gov/waste/petroleum-restoration/documents/groundwater-sampling-log-guidance</u>

- Chain of Custody Record and Instructions (4/17/05) @ <u>https://floridadep.gov/waste/petroleum-restoration/forms/chain-custody-form-62-7709002</u> and <u>https://floridadep.gov/waste/petroleum-restoration/documents/chain-custody-instructions</u>

- PRP Professional Land Survey (PLS) Guidance (5/11/18) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/professional-land-survey-pls-guidance</u>

- BPSS-9 PE Certification Requirements (5/1/98) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/bpss-9-pe-certification-requirements</u>

- PRP RA Summary Report (7/18/08) @ https://floridadep.gov/waste/petroleumrestoration/documents/prp-ra-summary-report-071808

- PRP Site Manager Standard Operating Procedures (SOP) @ <u>https://floridadep.gov/waste/petroleum-restoration/content/prp-site-manager-standard-operating-procedures-sop</u>

- BPSS 11 Natural Attenuation Evaluation Procedures (5/8/98) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/bpss-11-natural-attenuation-evaluation-procedures</u>

- RAP Checklist (2/3/04) @ https://floridadep.gov/waste/petroleum-restoration/documents/rap-checklist

- PRP RA Summary Report (07/18/08) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/prp-ra-summary-report-071808</u>

- PRP Remediation Checklists (RAP/System Startup/O&M) (4/17/17 @ https://floridadep.gov/waste/petroleum-restoration/documents/prp-remediation-checklists

- PRP Cleanup Milestone Workbook (04/15/11) @ <u>https://floridadep.gov/waste/petroleum-restoration/documents/petroleum-restoration-program-cleanup-milestone-workbook</u>