This guide describes suggested non-mandatory approaches for meeting requirements. Guides are not requirements documents and are not construed as requirements in any audit or appraisal for compliance with the parent policy.

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1.0 PURPOSE AND SCOPE

The purpose of this procedure is to establish a consistent and uniform approach to the execution of Work Package Planning and the development of Construction Work Packages (CWP’s), and their associated Field Installation Work Package Plans (FIWP’s). This procedure applies to all EPC construction projects executed by WRPS.

This procedure shall be implemented on any EPC project where, WRPS, acting as the Project Manager, elects to employ WRPS Construction as the Constructor to construct the facility. If the Project elects to contract with an outside entity to act as the Constructor, that entity shall be certified to ASME NQA-1 2008, with the 2009 Addenda and perform as Constructor to its own processes and procedures. In that case, this procedure shall be used (in conjunction with other WRPS EPC procedures) to benchmark the Constructor’s procedures. The results of that benchmarking shall be the basis for requiring the Constructor to modify its procedures, as necessary, to provide reasonable assurance that its work products will be of equivalent quality, with sufficient planning to carry out the work safely, efficiently, on schedule, and meeting any other characteristic deemed by the Project to be essential. Furthermore, where WRPS has contracted with an outside entity to act as Constructor, WRPS will provide Construction Management oversight services. Section 4.3 of this procedure, coupled with the Construction Management guide (TFC-EPC-CM-D-13) define this service as it applies to this procedure.

Based on the Construction Industry Institute (CII) Research approximately 33% of craft time is spent on productive work (tool time), but 67% of their time is spent waiting/idle, traveling, looking for or gathering tools and materials. Waiting/idle time represents 44% of a typical craftsman’s day. Lean Construction is a way to set up field operations to minimize waste of materials, time, and effort in order to generate the maximum possible amount of value for the customer.

A work face planning process that identifies scopes, anticipated releases and required deliverables for each Construction Package will help inform the Construction Management Team (CMT) members of the need dates for the elements for which they are personally responsible. Furthermore, the construction schedule may have dependencies on deliverables from Integrated Project Team (IPT) members outside the PM/CMT, as well as from TOC maintenance and operations teams. These are often the most critical dependencies, which if not managed properly, can cause significant delay and inefficiency in the construction effort.

2.0 IMPLEMENTATION

This procedure is released as a Draft for Low Activity Waste Pretreatment System (LAWPS) Project (T5L01) use only.

Formal issued date to be determined.

3.0 RESPONSIBILITIES

Responsibilities are contained within Section 4. Individual tasks may be delegated to qualified personnel.
3.1 Issue Authorization and Maintenance for Use

The EPC Execution Construction Manager is responsible for the maintenance of this procedure and will review the procedure annually to determine any necessary updates. Should an individual employee have a suggestion for improvement or modification to this procedure, he or she may mark-up a copy of the procedure and send it to the EPC Execution Construction Manager for review. The EPC Execution Construction Manager or delegate will review the recommended changes and respond back to the employee on plans to address the suggestions. Changes to the procedure will be distributed to other WRPS Functional Leads and other affected EPC Managers for their concurrence as deemed necessary. When the reviews are complete, the EPC Execution Construction Manager will consolidate and recommend changes to this procedure to the EPC Project Execution Manager who has the authority to issue revisions to this procedure.

4.0 PROCEDURE

4.1 Process Work Flow Chart

See Table of Figure Section, Figure 1 – Process Work Flow Chart.

4.2 Process Work Flow – WRPS as PM/ Constructor

<table>
<thead>
<tr>
<th>Action by</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>1. Assign Construction resources to develop their section of the PEP per TFC-EPC-PM-D-03.</td>
</tr>
<tr>
<td>Construction Manager</td>
<td>2. Assign discipline Superintendents and Field Engineers to develop their discipline Construction Plan (CP).</td>
</tr>
<tr>
<td>Discipline Superintendent / Field Engineer</td>
<td>3. Provide detailed construction input, sequence and logic to the Project Controls Manager to finalize the construction schedule.</td>
</tr>
<tr>
<td></td>
<td>4. Gather field task specific data, the Field installation Work Package Plan (FIWP), needed by the craft inclusive of material quantity, equipment, permits, etc. for work to be performed uninterrupted over the defined work period.</td>
</tr>
<tr>
<td>Project Controls Manager / Quality Manager / Materials Manager / Document Control</td>
<td>5. Provide discipline specific, detailed FIWP information to the responsible Field Engineer to complete assembly of the FIWP.</td>
</tr>
<tr>
<td>Discipline Superintendent / Field Engineer</td>
<td>6. Review and issue package for internal use.</td>
</tr>
<tr>
<td>Materials Manager</td>
<td>7. Stage materials needed to complete each FIWP ahead of the start of construction.</td>
</tr>
<tr>
<td>Field Engineer</td>
<td>8. Issue FIWP to the craft Foreman or General Foreman as required to support material staging and the start of construction.</td>
</tr>
</tbody>
</table>
### 4.3 Process Work Flow – WRPS as PM/CMT

The following instructions relate to the process work flow defined in Section 4.1.

<table>
<thead>
<tr>
<th>CMT</th>
<th>Responsibility Constructor’s Personnel</th>
<th>Action</th>
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</thead>
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<tr>
<td>CM reviews Constructor’s PEP against WRPS PEP</td>
<td>Project Manager</td>
<td>1. Assign Construction resources to develop their section of the PEP per TFC-EPC-PM-D-03.</td>
</tr>
<tr>
<td>CM reviews Constructor’s PEP against WRPS PEP</td>
<td>Construction Manager</td>
<td>2. Assign discipline Superintendents and Field Engineers to develop their discipline Construction Plan (CP).</td>
</tr>
<tr>
<td>Confirm WRPS/other deliverables are identified and can be provided on time to support Constructor’s schedule</td>
<td>Discipline Superintendent / Field Engineer</td>
<td>3. Provide detailed construction input, sequence and logic to the Project Controls Manager to finalize the construction schedule.</td>
</tr>
<tr>
<td>Confirm WRPS/other deliverables are identified and can be provided on time to support Constructor’s schedule</td>
<td>Discipline Superintendent / Field Engineer</td>
<td>4. Gather field task specific data, the FIWP, needed by the craft inclusive of material quantity, equipment, permits, etc. for work to be performed uninterrupted over the defined work period.</td>
</tr>
<tr>
<td>Provide oversight</td>
<td>Project Controls Manager / Quality Manager / Materials Manager / Document Control</td>
<td>5. Provide discipline specific, detailed Field Installation Work Package Plan information to the responsible Field Engineer to complete assembly of the FIWP.</td>
</tr>
<tr>
<td>CMT will review FIWP content and sequencing for feasibility/quality. Document Control / Construction clerk verifies FIWP has latest issues. QA perform occasional audits of FIWP’s.</td>
<td>Discipline Superintendent / Field Engineer</td>
<td>6. Review and issue package for internal use.</td>
</tr>
<tr>
<td>Oversight</td>
<td>Materials Manager</td>
<td>7. Stage materials needed to complete each FIWP ahead of the start of construction.</td>
</tr>
<tr>
<td>Oversight</td>
<td>Field Engineer</td>
<td>8. Issue FIWP to the craft Foreman or General Foreman as required to support material staging and the start of construction.</td>
</tr>
</tbody>
</table>
4.3.1 Construction Work Plan (CWP)

The Construction Work Plan will divide the works into a series of Construction Plans (CP’s). These CP definitions will inform Project Controls on how to align relevant portions of the overall construction Scope of Work with engineering deliverables, and material and equipment procurements. This information will be used by Project Controls to initiate construction schedule logic development.

The Construction Manager and Engineering Manager will review and agree upon the scope boundaries, sequences and content of each CP.

Under the PM/CMT model… The PM/CMT will provide input into the scope, boundaries, sequences, and content of each CP with the Constructor’s PM/CMT.

As part of the CP identification process, the Construction Manager will develop a CP Release Plan that will specify the planned Issued for Construction (IFC) date for each CP.

After mobilization of each Discipline Superintendent / Field Engineer pair, they will initiate Work Package Planning with the preparation and assembly of information needed to complete their assigned CP’s and release the document IFC as scheduled. Each CP will advance the planning effort and start to outline the agreed Lean Construction process flow paths for craft, design information, equipment, materials, predecessor activities, safe external conditions, and safe space. Each CWP must also include detailed construction logic of individual tasks that must come together as planned.

Under the PM/CMT model - The EPC Constructor, and the CP scope, will require inputs from other organizations (WRPS, DOE), which the PM/CMT team will then be responsible to “deliver” as promised. Therefore, it is necessary for WRPS CMT team to review the proposed CP scopes and their planned release dates to insure ability to meet schedule dates for any WRPS deliverables required to support field work under the relevant CP’s. These deliverables might include long lead procurements made by WRPS, permits, funding, services provided by others, etc.

4.3.2 Field Installation Work Package Plan

The size and type of project impact the optimum extent of work package planning utilization. The project team is responsible for implementing this work package planning procedure and detailing their approach in the Project Execution Plan (PEP).

The Constructor will identify the work packages within the Construction Execution portion of the PEP.

The FIWP development process shall be administered and completed by the Field Engineer who is responsible to take the detailed construction sequence provided in the CP and complete all necessary investigations to assure work is ready to proceed in the field. There are two distinct parts of this Work Package Planning effort; 1) Identification and clearing of FIWP constraints, and 2) FIWP development.

FIWPs are smaller, more specific and detailed, and more controllable fragments of a CP with logical starting and ending points. The size and extent of work included in an FIWP may vary but shall generally allow completion in a relatively short or moderate time span. For example, the
erection of structural steel for a building may be comprised of a single FIWP for a small structure, or might entail several FIWP’s for larger structures.

1. FIWP Constraint Elimination - As discussed earlier, with 67% of a craftsman’s time spent on non-tool-time activities, and a majority of this time spent waiting or idle, the elimination of idle-time constraints will have a significant, positive impact on craft productivity. Early FIWP constraints to be investigated and resolved by the Field Engineer include:

- FIWP Material availability; material takeoff, material status, materials missing and expedited, material withdrawal tickets completed, and materials pre-staged for release to the field when called.

- FIWP Deviation notices; Non-conformance reports not closed that need to be expedited.

- FIWP Vendor data; vendor technical documents, instructions or requirements needed.

- FIWP Consumables; consumable available or requisitioned and expedited.

- FIWP Special Safety and Environmental Requirements: Confined space, heat stress, cold weather, identified and planned with proper forms and instructions.

- FIWP Special Quality Control Requirements: Information for engineering and quality control inspections, tests, and verifications which become project records upon completion of the scope identified and planned with proper forms and instructions.

- FIWP Construction equipment; identified and integrated into the equipment schedule.

- FIWP Critical lift plans; identified, developed and approved.

- FIWP Predecessor activities; identified and tracked to assure completion to allow successor start, and safe external and safe space conditions.

Under the PM/CMT model… The CMT works with the EPC Constructor’s Field Engineers to ensure all constraints are identified, including constraints outside the Constructor’s control (WRPS). Ensure a timely notification protocol is put in place for these deliverables so that supporting work effort by “others” can be planned, efficient, and in time to support the Constructor.

2. FIWP Development - FIWP contents may vary depending on the type of task and the discipline of work being executed. In general FIWP packages shall include a brief scope of work, the latest design drawings, work permit (i.e., confined space, cutting & burning, etc.) and/or Lockout/Tagout (LOTO) requirements if required, specific material status and warehouse issue tickets for the task, task cost codes and fragnet schedules, and any other special instruction, plan or qualification list.
Once a FIWP has been cleared for execution, meaning all constraints have been removed, the assigned field crew commences work execution.

Under the PM/CMT model…The CMT works with the EPC Constructor’s Field Engineers to ensure WRPS constraints are removed in a timely manner. Ensure a timely notification protocol is put in place for these deliverables so that supporting work effort by “others” can be planned, efficient, and in time to support the contractor. Where required, act as expediter for removal of WRPS constraints.

3. Typically, an independent “working” three or four week rolling schedule is established, with more detailed steps (level 4 or 5 scheduling) than are broken down in the project schedule (level 3). The field engineer with superintendent input generates the schedule for his assigned FIWP’s. It is highly recommended to involve foremen in this discussion, so that they share ownership of the schedule, and they know the schedule. The General Superintendent and Lead Field Engineer and project controls Scheduler ensure the detailed plan is supporting the Project schedule. The 4 week rolling schedule includes all the active FIWP’s and is issued to the field teams each week. This communicates planned activities for the entire project to all of the Superintendents and Field Engineers. A weekly joint meeting is held by the General Superintendent where progress is discussed, and changes in plan agreed. The rolling schedule is then issued for the following week.

4. The Superintendent will review the 4 week schedule comprised of multiple FIWP efforts to ensure there is no interference between work efforts. Interface issues are addressed with the team. The General Superintendent may re-sequence a portion of the work to eliminate issues if required. Once the process is up and running, this discussion occurs during the weekly meeting above.

5. The Construction Manager/General Superintendent /Project Manager ensure the rolling schedule is supporting the project schedule.

Under the PM/CMT model…The work product in the 4 week schedule will not be a formal submittal – but the CMT team should review the schedule to pro-actively ensure constraints outside the direct control of the Constructor are being addressed.

4.4 Roles and Responsibilities-CMT team under the PM/Constructor model

4.4.1 Superintendent

- Evaluates work activities and locations to determine special conditions such as permitting, confined space, heat stress, hydrostatic and pneumatic testing, specialized equipment or tool needs, specialized storage, handling, rigging or cleanliness requirements, Foreign Material Exclusion (FME) zones and load path restrictions.

- Ensures all work constraints are identified, addressed and eliminated; that all necessary resources are available prior to scheduling or initiating work on the FIWP.

- Confirms all support resources to include scaffolding, construction equipment, tools and rigging are available for each FIWP prior to release of the FIWP to the field.
4.4.2 Field Engineer

- Develops Field Installation Work Package Plans by gathering all related documents that facilitate work per the schedule, construction execution plan and contract.

- If needed, includes forms, checklists and process control documents

- Coordinates with the safety representative to identify specific training or special safety requirements.

- Coordinates with the QA/QC representative to identify specific Inspection and Test Plan (ITP) requirements.

4.4.3 Materials Coordinator

- Responsible to coordinate the allocation and delivery of materials to meet the needs of all FIWPs.

- Produce a list of material shortages, if any, and coordinate obtaining the materials in a timely fashion to meet the needs of the FIWP.

- Pre-stage FIWP materials to allow complete, timely delivery to the work package.

4.4.4 General Foremen

- Ensures Foremen have all necessary personnel with appropriate skill sets for execution of the FIWP.

4.4.5 Foremen

- Responsible for the direct supervision of their assigned craft to assure that the crew maintains a satisfactory level of safety, quality and production and is responsible to report any labor, schedule or material discrepancies for each FIWP to the General Foreman.

4.4.6 Document Control

- Responsible for updating and distribution of all FIWP documents required for development, monitoring and auditing.

4.4.7 Project Controls

- Identifies and supplies budgets, estimates, cost codes, rates and work-hour information.

- Provides construction activity start dates, completion dates and the activity durations of the work based on the project schedule.

4.4.8 Construction Manager

- Provides constructability input during the CWP planning phase and is responsible for directing the execution of the work through Construction Superintendents.
• Ensures the overall implementation and compliance to this procedure is achieved.

• Reviews CWPs to ensure compatibility to the construction execution plan.

4.4.9 Lead Field Engineer

• Oversees the preparation and coordination of engineering deliverables to support CWP and FIWP development. (e.g. specifications, drawings, material lists, etc.).

• Provides technical direction to Field Engineers and has input to the FIWP development process.

4.4.10 Quality Control Representative

• Provides input on FIWP task specific installation test, inspection and acceptance criteria. Assures hold points are clearly defined, identified and established. Assures inspection activities are properly implemented and documented.

4.4.11 Health, Safety & Environment Representative

• Provides input on FIWP task specific construction safety requirements.

4.5 Roles and Responsibilities CMT team under the PM/CMT model

Under the PM/CMT model, the CMT team will work closely with their counterparts on the Constructor’s team. The objectives for the CMT team will be to validate the Constructor’s plan. This will begin with review and comment of the Constructor’s PEP execution plan and project preplanning. As the project unfolds the CMT will engage at the detailed weekly planning level to ensure the project is built to the quality requirements, safely, and in an efficient manner. The CMT will also be proactive in ensuring the WRPS deliverables are available in time to support Constructor’s planned schedule activities.

4.5.1 Superintendent

• Observes Constructor’s performance – evaluates quality of planning effort, inputs into the CP breakdown. Provides oversight and challenges to Constructor’s workface planning. Ensures the sequencing of the FIWP’s is feasible.

• Provides oversight of the warehousing operations. Address any concerns with the Constructor’s General Superintendent or Construction Manager.

• Interfaces with Constructor’s General Foreman as required, through the Constructor’s Superintendent.

4.5.2 Lead Field Engineer on small, and Field Engineer on large projects

• Provides oversight of Constructor’s planning. Ensures scope of FIWP’s are complete and the sequencing of work is appropriate.

• Expedites deliverables, support, permissioning to support Constructor
• Ensures Integrated Project Team member inputs at hold-points are coordinated and efficient. Interfaces with the Constructor’s Lead Field Engineer.

4.5.3 Document Control

• Coordinates with Constructor’s Document Control lead to ensure the Constructor has the latest issued documents.

4.5.4 Project Controls

• Confirms 4 week working schedule is supporting the project schedule.

• Analyzes Constructor’s cost and schedule performance.

• Advises CMT on new FIWP starts, upcoming challenges with resource level changes, etc.

• Provides metrics on schedule performance and trending. Advises Constructor Management Team of any performance concerns.

4.5.5 Construction Manager

• Ensures Constructor Management Team is proactively engaged with Constructor’s team in the planning effort.

• Ensures Constructor’s Management Team is proactive in ensuring external constraints are addressed in time to support construction.

• Engages with Constructor’s Project Manager/Construction Manager where rolling schedules are not supporting the project schedule.

4.5.6 Lead Field Engineer

• Ensures WRPS deliverables are supporting Constructor’s schedule.

• Provides oversight of the planning process from CP identification to FIWP breakout and development.

4.5.7 Health, Safety & Environment Representative

• Work with the Constructor’s safety rep to ensure the Constructor’s safety processes are supported during the planning process.

4.5.8 Quality Assurance Representative

• Provide oversight of contractor’s QC and QA programs. Performs surveillances/audits to include readiness reviews.

• Proactive in supporting timely WRPS performance requirements at witness or hold points.
5.0 DEFINITIONS

5.1 Work Package

The specific location or area of a project where direct construction work activities are performed.

5.2 Work Package Planning

Work Package Planning is the process of planning work tasks to ensure more efficient and productive execution of construction activities. Work Package Planning is a component of Lean Construction. It functions as a tool for craft supervision to better prepare and execute assigned field tasks.

5.3 Work Package Planning Team

Primarily the discipline Superintendent and Field Engineer supported by other project personnel from functional groups like engineering, project controls, procurement, materials management, equipment, and quality control.

5.4 Construction Plan (CP)

A package of engineering, procurement, vendor, project controls and/or construction deliverables used to describe the means, methods and execution approach for constructing a major division of work (i.e., above ground pipe, concrete, etc.).

5.5 Field Installation Work Package Plan (FIWP)

A package of task specific information which may include design and vendor drawings, material status reports, quality forms, schedules, cost codes, vendor installation procedures, and other constraint information, that describes a discrete and concise portion of construction work that can be effectively executed by a general or lead foreman and crews in a single rotation. A rotation is defined as the span of time (usually one to four weeks) a crew will need to perform direct work in a single area in a logical, systematic manner in accordance with project requirements. The FIWP contains all information inclusive of material quantity, equipment, permits, etc. for work to be performed uninterrupted over the defined work period.

5.6 Lean Construction and Work Package Planning

Lean Construction is focused on improving effectiveness and efficiency in seven project execution flow paths. These are:

1. craft flow;
2. design information flow;
3. equipment flow;
4. materials flow;
5. predecessor activities;
6. safe external conditions;
7. safe space

These paths must come together as planned, at the work package for construction to advance and ultimately combat non-productive time. A proper Lean Construction System would include the
logistics to “make work ready” or ensure that all constraints are eliminated; pre-requisites are complete; and inter-dependencies are available prior to the commencement of work. Work Package Planning is an integral part of the way construction conducts its business. It is a major contributor to cost-effectiveness in the execution of projects.

Craft waiting/idle time should be held to a minimum when tools, equipment, materials, and design documents have all been identified and vetted to assure problems have been resolved prior to the work being assigned to the field. This procedure is applicable to all EPC projects executed by WRPS. The project team is responsible for implementing this work package planning PEP and detailing their approach to this Lean Construction principal in the project PXP.

Work Package Planning should not be confused with the requirements of TFC-EPC-CM-D-04, EPC Site Layout Guide. Although the location of roads, parking areas, office trailers, emergency vehicle access, storage space, warehousing, break trailers, and the like will all have an effect on worker productivity. Work Package Planning is the process of organizing the seven flow path components of a construction task (craft; design information; equipment; materials; predecessor activities; safe external conditions; and safe space) and giving visibility to all constraints that could cause waste or hold up the work prior to the start of that construction task. In more layman terms, Work Package Planning is “getting the right things to the right place at the right time” to eliminate waste and lost time.

Work Package Planning benefits include:

- Optimized construction productivity
- Improved schedule predictability
- Reduced loss of inventory materials
- Reduced non-productive time
- Reduced rework
- Reduced total installed cost

5.7 Project Management/Constructor Team (PM/Constructor)

The Owner (WRPS) Project Management Team in place during the Project Execution – Procurement, Construction and Cold Commissioning Phase – (CD-4) that Constructs, provides verification the work effort meets project requirements, and ensures the Client is receiving value for money from both cost and schedule perspectives.

5.8 Project Management & Construction Management Team (PM/CMT)

The Owner (WRPS) Project Management team in place during the Project Execution – Procurement, Construction and Cold Commissioning Phase – (CD-4) that provides construction management oversight services for the EPC Project construction works when the Constructor is not WRPS. The PM/CMT provides oversight of the Constructor’s work effort, verification the work effort meets project requirements, and ensures the Client is receiving value for money from both cost and schedule perspectives. Where CMT is referred to in this procedure, it refers to the full Project Management/Construction Management Team (PM/CMT).
6.0 RECORDS

Copies of all work package planning documents inclusive but not limited to Work Package Execution Plan, FIWPs and all associated documents are retained in the project files for the duration of the project. After project completion, all documents shall be processed in accordance with the procedure for Record Filing, Maintenance, Retrieval, and Retention in accordance with TFC-BSM-IRM_DC-C-02, Record Management.

7.0 SOURCES

7.1 Requirements

1. Tank Operations Contract, Contract Number DE-AC27-08RV14800
2. TFC-EPC-PLN-01, EPC Project Execution Management Plan

7.2 References

1. TFC-EPC-PM-D-03, EPC Project Execution Planning Guide
2. TFC-PLN-47, Project Control System Description
3. TFC-BSM-IRM_DC-C-01, Document Control
4. TFC-EPC-CM-D-04, EPC Site Layout Guide
5. TFC-ESHQ-Q_INSP-C-01, Control of Inspections
6. TFC-BSM-IRM_DC-C-02, Record Management
7. TFC-EPC-CM-D-14, EPC Maintenance of Permanent Install Plant Equipment and Material Guide
8. TFC-EPC-CM-D-16, EPC Receiving and Issuing Equipment or Material Guide
Figure 1. Process Work Flow Chart.

- **Input**
  - Project Award / Notice to Proceed

- **PM assigns individual team members with the task of developing their section of the PEP**

- **FE and SUP develop a CP for their functional section of the PEP**

- **PM assigns individual team members with the task of developing their section of the PEP**

- **FE and SUP provide detailed functional input to PCM outlining schedule and work plans**

- **DC provides FIWP design and vendor data**

- **QC provides FIWP inspection and test data**

- **MM provides FIWP material status data**

- **Attachment A**
  - FIWP Template

- **Attachment B**
  - EZ - FIWP

- **CMT members interface with counterparts to ensure: WRPS deliverables support Constructor’s schedule; Constructor is adhering to quality processes and procedures**

**NOTE:** All deliverables are considered to be a record and are processed in accordance with the Constructor’s document control system. Prior to cold commissioning all documents will be entered into the WRPS document control system in accordance with TFC-BSM-IRM_DC-C-02, Record Filing, Maintenance, Retrieval, and Retention.

**LEGENDS:**

- **WRPS SELF PERFORMING WORK: PM/CONSTRUCTOR**
  - WRPS CONSTRUCTOR TEAM ACTIVITIES
  - NOT APPLICABLE

- **WRPS CMT OVERSEEING EPC CONSTRUCTOR: PM/CMT**
  - EPC CONSTRUCTOR ACTIVITIES
  - WRPS PM/CMT ENGAGEMENT WITH EPC CONSTRUCTOR

- **PM** = Project Manager
- **FE** = Field Engineer
- **PCM** = Project Controls Manager
- **SUP** = Superintendent
- **CP** = Construction Plan
- **DC** = Document Control
- **QC** = Quality Control
- **MM** = Materials Management
- **FIWP** = Field Installation Workface Plan
Attachment 1 – Field Installation Work Package Plan (FIWP)

Project Name:

FIWP

Work to be performed:

Prepared by: __________________________ Date: __________________________

Issued by: __________________________ Date: __________________________

Released by: __________________________ Date: __________________________

Approved by: __________________________ Date: __________________________

ES&H __________________________ Date: __________________________

Quality __________________________ Date: __________________________

Superintendent __________________________ Date: __________________________

Document Control __________________________ Date: __________________________

Assigned to: __________________________ Date: __________________________

Completed by: __________________________ Date: __________________________

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Attachment 2 - Field Installation Work Package Plan (EZ)

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**Sequence**

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<td>B.</td>
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<td>C.</td>
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<td>E.</td>
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<td>F.</td>
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**Cost and Schedule**

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<th>Cost Codes:</th>
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**Constraints**

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<th>Vendor Documents:</th>
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<table>
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<tr>
<th>Materials</th>
<th>YES</th>
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<th>N/A</th>
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<tbody>
<tr>
<td>Tools</td>
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<tr>
<td>Equipment</td>
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<tr>
<td>Scaffold</td>
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<td>Predecessor</td>
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**Schedule Start Date**

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<th>Special HSE Needs:</th>
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**Schedule Finish Date**

**Quality Test & Inspection Requirements**

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<th>Special Tools and Supplies:</th>
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**Material Description**

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**Design Documents**

<table>
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