Shell & Hargrove On-Site EP Venture for Capital Project Delivery

ECC Forum Presentation
Contracting Insights – A Win-Win Partnership for Sustaining Capital Investments

Presenters
Eugene Rayneri – Shell – Team Lead Project Design & PEET
Ezell Shelton – Shell – Capital Projects Manager
Hien Nguyen – Hargrove – VP Refining & Petrochemicals
Joe Vidal – Hargrove – PEET Team Lead
Balanced for Success
Shell & Hargrove On-Site EP Venture for Capital Project Delivery

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Winning Strategy to Replicate Results

- Single relationship
- Fully integrated team
- Dedicated management support
- Proximity / satellite office
- Commitment to transparency
- Shared accountability
- Consistent long-term resources
7 Year Relationship Committed to Success with Guaranteed Pipeline

Base Project Execution Strategy
- $80MM - $100MM annual TIC commitment
- $190MM annual TIC currently
- 60,000 hrs ($4-$5MM) annual engineering & design

MOC Execution (Small Plant Changes)
- Non-capital small plant changes
- $400M annual budget
- Streamlined process
- Separate / dedicated resources
Choosing Our Partner Hargrove

- Applied strategic vetting process
- Several EPs/EPCMs were evaluated
- Thorough review of overall company management structure, home office capabilities and support services, and the individual teammates
- Shell Norco leadership trusted Hargrove
Solid Improvements in Both Cost and Schedule

Performance Analysis by IPA

Cost
Performance
Pr < 0.04
Schedule
Performance
Pr < 0.08
Stabilized Predictability Over Time for Cost and Schedule

Performance Analysis by IPA

Cost Predictability
\[ Pr < 0.06 \]

Schedule Predictability
\[ Pr > 0.2 \]
$10MM TIC project max
- Time & Materials (T&M) basis
- Allowing for discovery / changes
- Low to mid complexity
- Lots of piping, mechanical projects
- Structured FEL process

Maximizing Value

- Collaborative processes
- Transparency
- Common goals

• Collaborative processes
• Transparency
• Common goals

• Minimized rework/recycle
• Innovation
• Replication

• Minimized rework/recycle
• Innovation
• Replication

• Maximized utilization
• Minimized resource constraints
• Base portfolio size for overhead burden

QUALITY

ALIGNMENT

PLANNING / PREDICTABILITY
**Leadership Commitment to Transparency & Shared Goals**

- **Weekly Steering Team Meeting** – Tactical
- **Bi-monthly / Quarterly Strategy Meetings**
- **BPR / KPIs**
  - Quarterly – Norco / PEET
  - Semi-Annual – Regional

### KPI Table

<table>
<thead>
<tr>
<th>Category</th>
<th>KPI Title</th>
<th>Floor</th>
<th>Target</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSSE</td>
<td>Personal Safety: TRCF, LSR Violations, First Aid Rate, Near Misses</td>
<td>&gt;0</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>First Aid Rate</td>
<td>&gt;0</td>
<td>0</td>
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<td></td>
<td>LSR Violations</td>
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<td></td>
<td>Near Misses</td>
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<tr>
<td>COST</td>
<td>Engineering Cost pre-Execute</td>
<td>Average of (Original budget) / (Final Cost)</td>
<td>&lt; 90% or &gt; 110%</td>
<td>90% - 95% or 105% - 110%</td>
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<tr>
<td></td>
<td>EPCm - % Projects within ± 10% SELECT/DEFINE budget (not TIC)</td>
<td>(number of projects within +/-10% budget) / (Total Number of Projects)</td>
<td>&lt; 80%</td>
<td>80% - 90%</td>
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<td></td>
<td>Engineering Costs (Execute phase only)</td>
<td>Average of (Final Execute Engineering Costs) / (Latest TIC or Final TIC)</td>
<td>&gt; 15%</td>
<td>12% - 15%</td>
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<tr>
<td></td>
<td>&quot;All-in&quot; Engineering Contractor Avg Cost per hour</td>
<td>Weighted average of (Engineering Cost/Engineering Hours) for Home Office, On Site and HVE.</td>
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<td>Note: Engineering costs are to include all of design, project management and project services but should not include procurement or inspection services.</td>
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<td>Track for awareness (contract target exists, will revise upon further discussions)</td>
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<td></td>
<td>Value of (LEAN) Improvements</td>
<td>(Sum of project savings) / (Sum of TIC of projects)</td>
<td>&lt; 15%</td>
<td>15% - 20%</td>
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<td>Note: savings amount should only be those amounts agreed upon by the Shell C&amp;P representative for the site</td>
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<td>% of Drawing Packages On Time at IFA</td>
<td># of IFA dwg packages w/in acceptable range of baseline) / (Total # of packages in 12 month period)</td>
<td>&lt; 60%</td>
<td>60% - 80%</td>
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<td>Note: the acceptable range of actual IFA dates is 4 wks before IFA baseline up to 1 wk after IFA baseline</td>
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<tr>
<td>Schedule</td>
<td>Cost of Re-work due to design errors or incorrect/incomplete IFC drawings</td>
<td>Average of (Project rework cost/Final or LE TIC).</td>
<td>&gt; 3%</td>
<td>3% - 0%</td>
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<td></td>
<td># of rework items due to design errors and omissions after IFC</td>
<td>Sum of the number of change orders related to design or engineering errors and omissions within the data period (12 months after final IFC).</td>
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<td>Quality/ FEL</td>
<td>Cost of Changes After End of Select Phase (Individual)</td>
<td>Sum of Individual Major Changes</td>
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<td>Percent of projects with changes after End-Select (PAR3) (Portfolio)</td>
<td>(No of Projects with Major Late Changes) / (Total No of Active Projects)</td>
<td>&gt; 20%</td>
<td>10% - 20%</td>
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</table>
Balancing our Plans / Actions for Continuous Improvement

- Avoiding scope misalignment with clarity and documentation
- Alleviating schedule challenges with true resource loading, better tracking and clear project priorities
- Improved project portfolio management
- T&M predictability through alignment and transparency in proposal development
- Maximize resource utilization with flexibility to shift as demand changes
Key Take Aways

- Maintaining our culture is important
- Replication is key
- Implemented full-time document control specialist
- Implemented procurement support specialist
- This type of long-term work is not for everybody
- COVID pandemic has lowered our baseload work
Balanced for Success