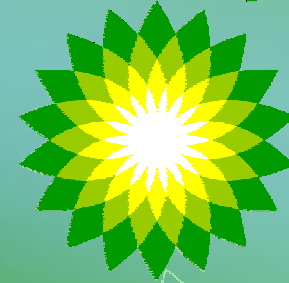


**NORTHWEST CONSTRUCTION
CONSUMER COUNCIL -
BP Cherry Point Refinery- Mitigating
Project Risk Through Contracting
Strategies**

May 24, 2005

Agenda

bp



- **General Cherry Point Contracting Strategy**
- **Project Goals and Corresponding Risks**
- **Engineering Contracting Strategies**
- **Procurement Contracting Strategies**
- **Construction Contracting Strategies**
- **Recent Case Experiences**
- **IPA's Thoughts**



Background

- In mid-late 2002, it was recognized that the next few years for Cherry Point were going to be extremely busy with a number of large turnaround events, large capital projects and a host of compliance projects.
- It was clearly time to set a contracting strategy for the future.



Who?

- **Strategy was prepared with the input from the Turnaround, Capital (Engineering), Maintenance and Commercial Groups based on anticipated upcoming volumes of work.**
- **Consulted with upcoming, known large projects as needed (ISOM/COGEN) and we continue to do so as large projects arise (ULSD/No. 2 Tail Gas)-it's a living document.**



What?

- **The strategy covers all disciplines including engineering, mechanical, electrical and specialty contractors with the main focus on mechanical and electrical contractors.**
- **Union and Non-union**



When?

- **The mechanical and electrical contractors were identified and set in place during the first half of 2003.**
- **Specialty contractors were identified (and continue to be identified) as scopes are developed and bid packages issued where appropriate.**



How?

- **Successful Contractors were identified through competitive bid process – bidders typically those with previous BP/ARCO experience, some new contractors who were prequalified prior to the bid process, and/or contractors who have “federal” deals with BP.**



Why?

- **Establish primary and secondary and union/non-union contracts to fully utilize local resources - particularly supervision - to ensure Cherry Point was well positioned for the 2003-2006 Turnaround/Capital work.**
- **Third and fourth tier contractors were also identified, but no contracts issued.**



Philosophy

- **Time & Material**
- **Hard Money/Lump Sum/Incentive Contracts that make sense, have some historical precedence that it has worked (incentives); fits other ongoing work, i.e. tanks**



Philosophy

- **Safety-Always the First Priority**
- **Fully utilize Contractors, Supervision**
- **Competitive pricing**
- **Union/Non-Union**
- **Partnering**
- **Utilize BP General Shop/I& E/Machine Shop**



Management

- **Monthly (more frequent as necessary) meetings are held with the original Team members to discuss upcoming projects, schedules and best contractor fit.**
- **Early 2006 we may be going through the sourcing process again, as we see what work is on the horizon.**



Project Goals And Corresponding Risks

- **Safety Is The Top Priority**
- **No Harm To Environment/Community**
- **Cost**
- **Schedule**
- **Quality**
- **Operability/Maintainability**





Engineering

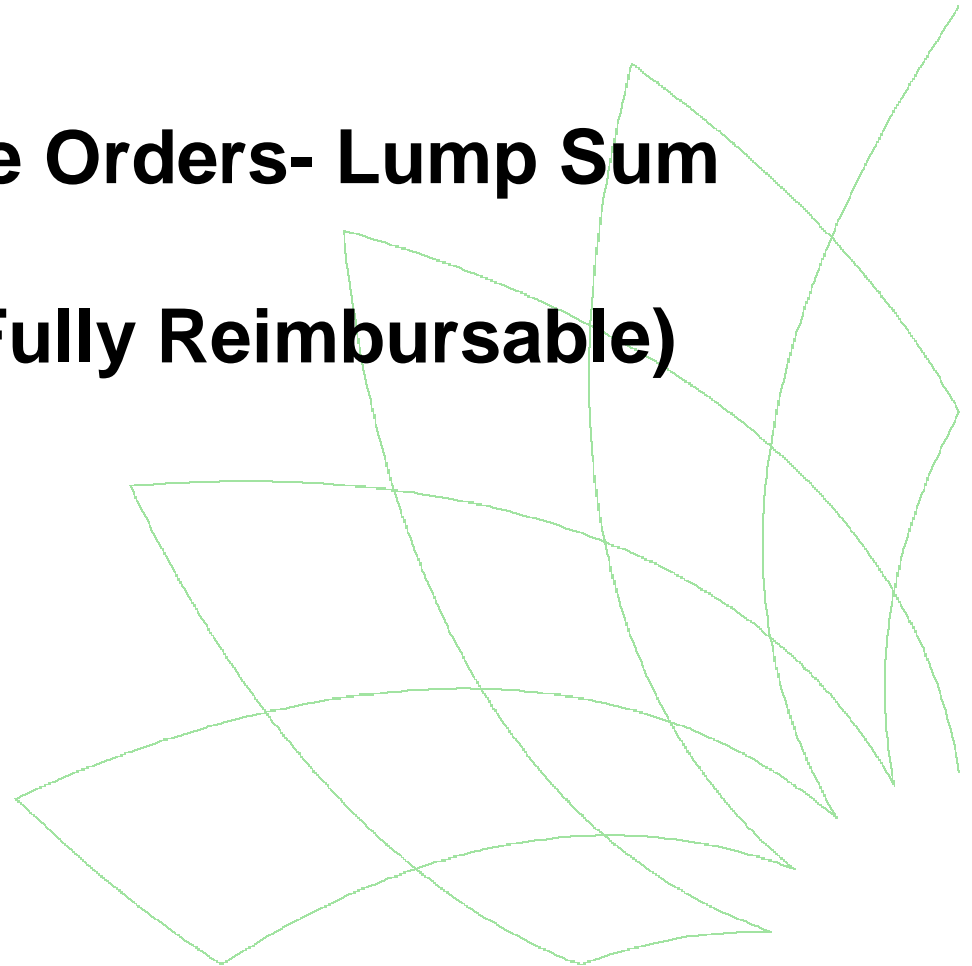
- **Reimbursable**

**(Very Difficult to Define Scope and Deliverables
Necessary for Lump-Sum Contracting)**



Procurement

- **Traditional Purchase Orders- Lump Sum
(One Alliance Is Fully Reimbursable)**



Construction

- **Reimbursable (T&M)**
- **Lump Sum Fixed Price**
- **Unit Rate**
- **Other**





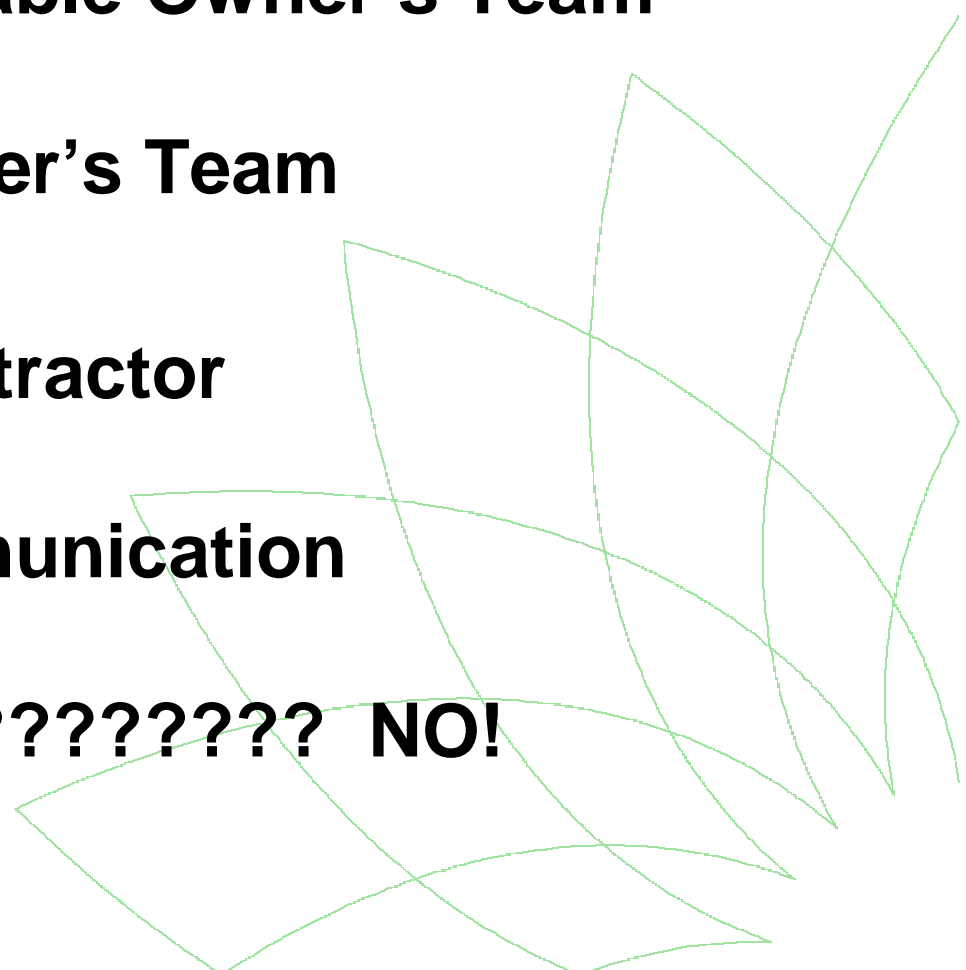
Construction- Reimbursable

- **We Know the Risks (Same Projects)-
Why Pay Someone to Manage Them For Us?**
- **We Know Our Contractors/They Know Us**
- **We Issue General Contracts- T&M Gets
Contractor On Board Earlier**
- **Drives Better Safety/Quality-
Contractor Not Focused On The \$'s**
- **Relationship Based**



Construction- Reimbursable

- **Requires Knowledgeable Owner's Team**
- **Requires Larger Owner's Team**
- **Requires Known Contractor**
- **Requires Trust/Communication**
- **Does It Cost More????????????? NO!**





Construction- Lump Sum Fixed Price

- **Well Defined Scope Required to Bid- Takes Time**
- **Delays Mobilization- May Not Get Constructability**
- **Contractors Bid to Norms- Above 50/50 Point**
- **If Tools, Info, Material Are Furnished On Time- T&M is Cheaper**
- **Not Relationship Based- It's Almost Always Adversarial**



Construction- Lump Sum Fixed Price

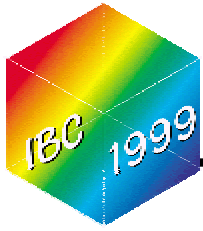
- **Consider For Unique Projects**
- **Consider For New or One-Off Contractor**
- **Consider For Discrete, Small Subcontracts**





Recent Case Studies

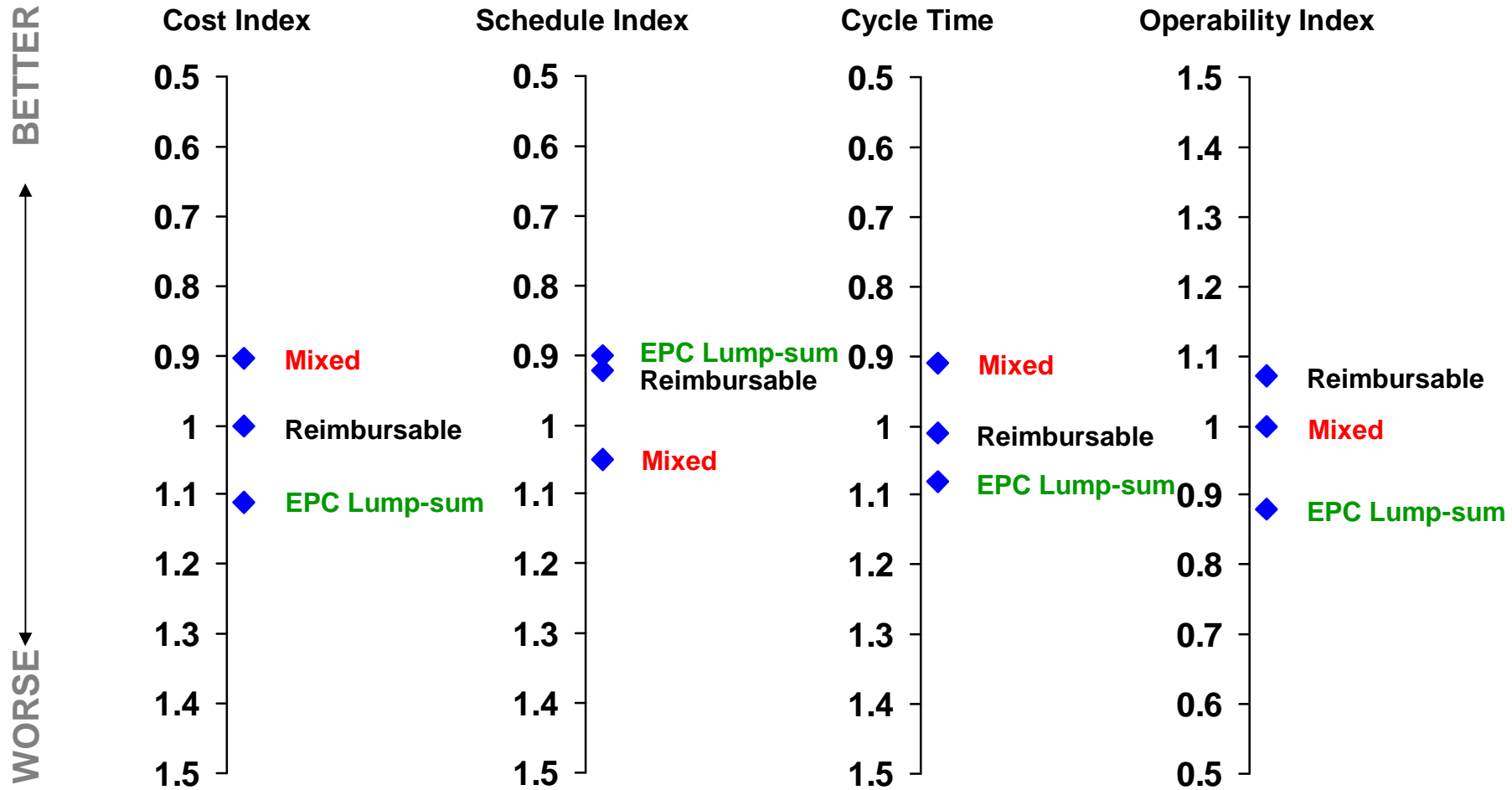
- **Dock Project- Lump Sum**
 - Things Went *Near Perfect*
 - Potential to Have Saved Millions Under T&M
 - Historical T&M Precedence Caused Issues
- **Clean Gasoline Project- T&M**
 - Craft Productivities Better Than Expected- If This Had Been LS, Would Have Cost More
 - Converted One LS Contract and Saved \$

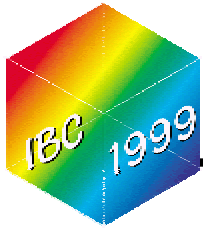


Contract Approaches Examined

- ***EPC Lump-sum***: Detailed engineering, procurement, and construction performed on a fixed-price basis by same firm or consortium
- ***Reimbursable***: Essentially all work performed on a cost-plus fee or cost-plus incentive fee basis
- ***Mixed***: Engineering and procurement performed on a reimbursable basis with predominantly fixed-price construction
- Results are controlled for definition; poorly defined EPC-lump sums have very large penalty

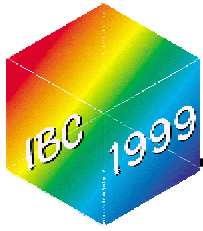
Contracting Strategy and Project Results





Why Are Lump-sum EPCs Usually More Expensive?

- **EPC lump-sums seek to transfer project cost risk from the owner to the contractor**
- **Theory is that because contractors are leading the execution, they should be better able to manage the execution risks, yielding an efficient result**
- **Problem is that contractors are not easily able to bear equity risks; a substantial loss on a project jeopardizes the firm's earnings or even survival**
- **Therefore, contractors will almost always bid on a higher than 50/50 basis (except when in financial trouble)**
- **The larger the project, the higher the risk premium**



Should We Always Avoid EPC-Lump-Sum?

- **Highly standardized (“package”) plants with competition can often be bid lump-sum with little penalty**
 - **Watch for unusual conditions, e.g., footprint constraints**
 - **Tie-ins and integration with existing plant might be contracted separately**
- **Sometimes EPC lump-sum is an effective technique to reduce unnecessary change. (But team integration and discipline are better!)**
- **During periods of rapidly increasing project work-load, lump-sum can help leverage owner resources**