


<h1>Project Navigator</h1>				Guideline			
TITLE CONSTRUCTABILITY REVIEW				VALE # NAV-GP-0079		PAGE 1/4	
				DM # 620499		REV. 2	
EffectiveDate:	Apr 2/13	Revisit Date:	Apr 2/14	Prepared By:	PN Working Group 1	Approved By:	Trueman Hirschfeld

1.0 PURPOSE

This guideline is intended to outline the process of conducting a Constructability Review at FEL 3 and Execution Stages for Projects.

2.0 REFERENCE DOCUMENTATION

The following documents were used in the development of this document or are related to it. The most recent revision shall be used.

NAV-TP-0070	Project Navigator RACI Document
NAV-TP-0004	Project Charter and Execution Plan
NAV-TP-0079	Constructability Review Template
NAV-GP-xxxx	Scope of Work for Construction Services Guideline
NAV-GP-0072	Construction PHR Guideline
Link	VALE Project Delivery System
	Constructability Review Guideline Version 2.0 December 2, 2010


3.0 CONSTRUCTABILITY REVIEW

Constructability Reviews are not PHR's and they are not Engineering Design Reviews – they are done in conjunction with these other two activities.

Constructability Reviews are done to identify potential problems with design, or with construction methodology early enough in the project development to take corrective action. This methodology will be listed in the subsequent PHR / PHA.

- For FEL 3 this Constructability Review will be done prior to the FEL 3 PHR / PHA.
- For Detail Design this Constructability Review will be done prior to the Design PHR / PHA.
- For Construction this Constructability Review will be done prior to the Construction PHR / PHA.

Issues raised during the Constructability Review will be assigned to an individual / team for resolution prior to the PHR.

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3.1 ATTENDEES

The Project Manager or designate will review the following list of potential attendees and invite the appropriate personnel:

- Project Manager
- Study Manager
- Construction Manager
- Design Team Leader
- Plant Engineering Coordinator
- Project S / H / E Coordinator
- Plant S / H / E Coordinator
- Project Quality Coordinator
- Project Sponsor
- "Subject Matter Expert (SME)"
- Procurement Representative
- Operations Representative
- Maintenance Representative
- Contractor (Construction Stage Only)


Representatives from the group performing the work must review the related Constructability Reviews. Revise the Constructability Review documents as needed for changes in methodology.

4.0 PREPARATION FOR THE MEETING

Where applicable, the meeting chairperson will review relevant documentation noted on the Methodology template prior to the meeting.

Invitations to meetings should be issued at least one week before the meeting, with the following documents for review by participants, where applicable.

- a) Previous Constructability Reviews related to similar work
- b) The Engineering Package (FEL Study or Design Package) and / or Scope of Work and Contract Specific Requirement documents
- c) The sequence of construction tasks (Draft of Methodology tab)
- d) A description of the major equipment, materials, process and procedures to be used

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These items must also be reviewed with the Constructability Review team before assessing the issues. It is crucial that the participants understand the scope and the execution plan for the work being done. Photos, Plot-plan or General Arrangement drawings and P&ID's are useful aids.

5.0 USE OF THE TEMPLATE (NAV-TP-0079)

The Project Engineer will record and publish the meeting minutes and associated information, following the guidelines below.

5.1 METHODOLOGY TAB

The Overview of Scope should describe what the job entails and its boundaries. Include sufficient detail to assess the issues associated with the work. Expand on this at the meeting as needed.

Under Methodology, list the job steps in the sequence they will be done, including major equipment, tie-ins, and any unusual hazardous materials.

Attach all relevant documentation e.g. flowsheets, general arrangements, drawings, Scope of Work, and P&ID's relating to the work.

5.2 CONSTRUCTABILITY ISSUE CATEGORIES TAB

The Constructability Issues Checklist is used to prompt discussion and document major issues.

Add additional issues as needed.


5.3 CONSTRUCTABILITY MINUTES TAB

This tab is used to document the meeting discussions and to record the assignment of action items.

Enter the issue description and applicable category. List any recommendations required complete with associated action items. Ensure that the items listed are specific and completely describe the associated issue. (Do not use single word statements.)

All recommendations should be action statements.

In the Action By column, assign the person / role responsible (c/w the company name) for follow-up and mark the Status of the item as complete or incomplete. Action items

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may be assigned to Vale personnel or to the contractor / consultant; both parties are ultimately accountable for mitigation of the issues identified.

6.0 APPENDICES

Appendix A: Revision and Transition Notes

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(Revisions are listed in reverse chronological order with most recent revision at the top.)

Revision notes describe: what was changed, why it was changed, and the plan to implement the change, including whether changes are retroactive)

Revision Control Information

Rev #	Date	Nature of Change	Page inserted, replaced, revised or cancelled	Approved by document owner
1	Oct 22/12	Development	Drafted by Project Navigator Working Group	T. Hirschfeld
1A	Nov 5/12	Draft review	All	T. Hirschfeld
1B	Dec 18/12	Revisions	Updated section 3.0 and added PDS Constructability Guideline	T. Hirschfeld
2	Apr 2/13	Revisions	Updated verbiage in section 4.0 b)	T. Hirschfeld