Petty, Harold L.

From: Purkey, Ronald E.
Sent: Monday, December 12, 2005 3:41 PM
To: Petty, Harold L.; 'telkady@geosyntec.com'; GEOSYNTEC CONSULTANTS INC
Subject: RE: KIF - Gypsum Marketers Area Coordination Meeting

I have attached a desing review meeting expectations for the 10% meeting we discussed Friday. Thanks.

Ron Purkey

-----Original Message-----
From: Petty, Harold L.
Sent: Monday, December 12, 2005 3:17 PM
To: 'telkady@geosyntec.com'; GEOSYNTEC CONSULTANTS INC
Cc: Purkey, Ronald E.
Subject: FW: KIF - Gypsum Marketers Area Coordination Meeting

Neil and Tamer:

Attached is another of my go does from Friday's meeting. I have many more to go!

One was to send you the responsibility matrix of who is responsible for what on the gypsum marketing arena.

The Excel spreadsheet that is attached is that matrix.

Thanks,
Lynn

-----Original Message-----
From: Petty, Harold L.
Sent: Wednesday, November 02, 2005 2:54 PM
To: Rehberg, Robert L.; Campbell, Linda F.; Deskins, Earl L; Miller, Evelyn C.; Nathan, Larry B.; Baugh, James S.; Haber, Stanley M.; Bowers, Larry C; Robinson, Dave W; Lee, Timothy W.; Myers, Thomas J.; O'Brien, W. Ben; Smith, Daniel R.; Purkey, Ronald E.; John Glasscock
Cc: Latsch, Mitchell D.; Nuyt, Gary M.; Lundy, Dennis L.
Subject: KIF - Gypsum Marketers Area Coordination Meeting

To all:

With regard to the subject meeting held October 27 at KIF, attached are three files:

1. Decisions and Actions that came out of the meeting (Word File - serves as meeting notes)
2. A Copy of the Meeting Agenda (Word File)
3. A .pdf file of the drawing discussed (.pdf File)
4. The Gypsum Responsibility Matrix for KIF (Xcel File)

Thanks,
Lynn Petty

H. L. Petty, P.E.
1101 Market Street
LP 2 G
Chattanooga, TN 37402

423-751-6704
423-751-7094 (FAX)

EXPECTATIONS FOR JPT SUPPORT AND DESIGN REVIEW MEETINGS

GENERAL REQUIREMENTS FOR ALL MEETINGS

- Meeting notices with agenda and associated DCN information sent at least one week in advance to team members with copy of notice to discipline leads, Project Engineer, Engineering Design Manager, Components and System Engineering Manager, Plant Outage/Projects Manager, Plant Engineering Manager, Plant Operations Manager, Plant Maintenance Manager, and Plant Systems Engineer (names of key plant managers can be located on each plants web page).
- Meeting notice should go to those required to attend the meeting with a copy of notice to CS&E and EDS Mgr. Project Engineer conducts Joint Project Team Meetings for Phase 1 and Phase 2 kick-off. Responsible engineer conducts design review meetings with support from disciplines as required. Meetings should be coordinated and conducted such that they do not exceed 2 hrs. Detailed design drawing reviews are to be done prior to the meeting by each individual. Only critical points for review should be conducted along with receiving comments from the affected design review designees.
- Project Engineer (or Project Manager depending on size of project) Calls and conducts JPT meetings.
- Review of schedule items and critical milestones (compatible with ORI process)
- All scope increases discussed at a meeting shall be identified on the action item matrix and coordinated with the PE and JPT for resolution of inclusion or exclusion to the project design. Approval of scope changes shall be obtained prior to implemenatation.
- Meeting Facilitator (PE or RE) ensures meeting notes (decisions made) are completed, assigns action items for open items to individuals with their concurrence, and prepares/revises project Action Items List (distributes to team members and discipline managers within 5 working days) . Use attached templates for Meeting Notes and Action Item matrix..
- Attendance should include, but is not limited to, the Implementing Organization, System Engineering, Design Engineering, Operations, Maintenance, Plant Engineering, Construction Partner, Plant Outage/Projects, Project Engineers, Vendors, and others directly or indirectly involved with the modification.

Deleted: Should provide template for meeting notes and attendees listing. This is inconsistent from person to person.

JPT SCOPING MEETING (Prior to PJ development)

- PE conducts the meeting
- Develop/review the project scope (including demolition)
- Identify similar scope/projects performed at other TVA facilities (for reference to previous estimates, reported actuals, lessons learned, etc.)
- Identify Plant Sponsor, PE (or PM), Lead Discipline, Responsible System Engineers, Implementor, Estimator, and Scheduler
- Identify involvement required from other disciplines, systems, plant support and constructor.
- Identify known/anticipated power supply concerns - all BOP utilities; power, water, air, access, and effects on margin.
- Identify known environmental concerns
- Identify known constructability concerns
- Review scheduling milestones for each project phase (based on Projects Process)
- Identify Outage requirements (review planned outage and duration)
- Identify who will perform implementation
- Identify known LL material needs and procurement issues (IQTs, material delivery lead times, etc.)

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EXPECTATIONS FOR JPT SUPPORT AND DESIGN REVIEW MEETINGS

- Set the Project Milestone Schedule (based on the Projects Process) otherwise JPT/Plant Management buy in
- Review PJ for completeness (problem definition, 3 yr history of failures, scope, performance measurement, O&M impacts, payback, etc)
- Identify plant perfomance impacts
- Request development of the project cost estimate and spend plan (project cost estimating and spend plan development can begin once Engineering and Estimating have gathered sufficient information to develop a cost estimate)
- Initiate development of the project approval package (package development can be completed only after PDE development activities are complete)

PROJECT DEVELOPMENT ESTIMATE (PDE)

- PE conducts the meeting with input from the discipline Principal Engineers
- Determine scope of project, determine placeholder manhours required to perform phase 1, 2, & 3 work, and provide input for simplified phase schedule
- Identify and evaluate any vendor proposals that have been received related to the project
- Review RCA and determine scope of implementation.
- Develop project milestone schedule along with a detailed phase 1 schedule for performing the study
- Determine whether to use in-house or Partner rates for Engineering.
- TVA Estimating develops conceptual project cost estimate (+/-30%) with recommended Risk Management (contingency); conceptual project estimate to include submitted estimates for engineering.
- Make preliminary determination on which discipline/system engineering groups need to be involved in study/design
- Identify Lead Discipline and assign Principle Engineer as the Responsible Engineer
- Prepare Phase 1 FPEP package

NOTE: If the study, design, and implementation are in same fiscal year, approval of the EDS Manager is required.

PHASE 1 DELIVERABLES

- The Project Engineer is the facilitator of this meeting
- Review PJ and supporting information. Determine options to be looked at and make recommendation to JPT with supporting justifications.
- Identification of pre-outage scope required to support implementation schedule; specify in what FY the pre-outage scope is to be performed)
- Detailed engineering scope including impacts to power and control systems, structural support , flows, pressures, and setpoints and alarms. Impacts that reduce current plant operating margins should be identified.
- Conceptual implementation scope including startup and field engineering support and providing.
  Produce a Division of work (DOW) by discipline for large multi-discpline projects (E.G. SCRs, scrubbers, rail unloader, etc.).
- Identify Long-lead procurements including approximate delivery times from contract award and cost estimates.

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- Prepare a Long-lead Material Specification if there is insufficient time to do this in Phase 2. Extremely tight Phase 2 schedules may require that bids be solicited in Phase 1.
- Initiate NEPA Review by development of an Environmental Management Plan (EMP) and other environmental documentation as required following the EMP by Lead Engineer.
- Marked up drawings or sketches of the following as appropriate:
  General arrangement drawings (equipment location including elevations and column lines)
  P&ID (may not be available during Phase I depending on project), mass and energy balances, process flow diagrams, block diagrams
  Foundations, steel modifications, location of underground utilities, grading, drainage
  Equipment loading

- Drawing list (revised current drawings and proposed new drawings)
- List of DCN's required including scope of each
- Project schedule including detailed phase 2 engineering schedule and conceptual implementation schedule
- Perform preliminary electrical source studies to identify calculations affected and sources to be used. Indentify budget impact if electrical boards/breakers require upgrades/refurbishment.
- Design Basis
- Design Criteria: applicable codes and standards, design life, required redundancy, equipment ratings, max/min flow rates, pressure/temperature ratings, snow/wind/seismic loadings, temperatures for freeze protection, NEMA class, etc.
- System Descriptions: electromechanical description of system and controls philosophy, air/water requirements, operating philosophy, failure modes, etc.) NOTE: Some of this information may not be available until after contract award in phase 2 of the project.
- List of outstanding issues for final design
- Determine existing plant configuration through walk downs, surveys, underground locators, etc
- Identify potential PM and/or Operation procedures etc. affected or new ones needed
- Approved Project Planning Document

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JPT APPROVAL OF PHASE 1

- Project Engineer is the facilitator of this meeting
- Presentation of the Phase 1 Study; to be conducted at the Plant
- Reviews the preliminary engineering proposal for applicability, operability, cost, schedule, and labor resource needs; identify schedule/budget risks (LL material delivery, material escalation, etc).
- Resolves concerns and issues about proposed design with the implementing organization
- Issue Cost Estimate Request (CER) to implementer for development of a preliminary cost estimate for Ph 3 implementation costs.
- Perform walkdown of scope with implementer, Plant, and Engineering
- Upon receipt of preliminary implementation estimate from implementer, develop preliminary project cost estimate (+/- 20% for remaining project activities) (include

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escalation for future years as necessary) (including man hour requirements) with recommended Risk Management (contingency)
- Include options considered and Engineering recommendations.

PHASE 2 CONSIDERATIONS

NOTE: IF PHASE 1 HAS BEEN COMPLETED MORE THAN 6 MONTHS AGO, A REVIEW OF THE STUDY SHOULD BE DONE TO CONFIRM IF ANY IMPACTS TO IT ARE IDENTIFIED PRIOR TO PHASE 2 DESIGN STARTING.

PHASE II KICK-OFF MEETING

- The Project Engineer is the facilitator of this meeting.
- Identify team members
- Review Phase 1 study results.
- Review schedule
- Schedule 10% design review

10% MEETING

- The asigned discipline Responsible Engineer is the facilitator of this meeting

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The following items should be completed by the end of this meeting:

- DCN cover sheet approved through EDS or Engineering Manger
- Verify Scope of Project work is agreed by JPT members and freeze scope
- Marked up primary drawings (flows, sketches, schematics, single lines, does not include loop, connection, or P&IDs for electrical)
- Mark up of drawings showing proposed phyical location and clearances
- Environmental Checklist (CEC) drafted (if TVA Environmental Affairs has determined that the Environmental Management Plan is insufficient to address NEPA Review)
- Preliminary calculations with proposed sources for air, power, and water
- Purchase Requisitions or Material Specifications for long-lead or significant components identified.
- Perform constructability walkdown with Plant, Engineering, and Implementer.

The following should be discussed:

- Agreement on scope and conceptual approach, technical criteria for completion of task, and verification of assumptions made if any. Example: system requirements and sources for raw water, power, control air, service air, temperature limitations of equipment, cooling air, etc.)
- Review outage/pre-outage scope and schedule
- Identify if existing equipment will be abandoned in placed or demolitioned
- Need for staging or sequencing requirements based on input from Implementer(s) and Operations
- Review drawing markups and obtain input from team on proposed operational affects, alarms and setpoints, and physical equipment location acceptability
- Review proposed equipment to be provided and obtain input from team. Is it compatible with existing plant equipment or inventory.

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EXPECTATIONS FOR JPT SUPPORT AND DESIGN REVIEW MEETINGS

- Develop conceptual estimates and schedules for projects
- Identify materials for which plant, partner and engineering are responsible.

50% MEETING

- The Responsible Engineer is the facilitator of this meeting

The following should be completed by the end of this meeting:

- PRs for all long lead Engineering items issued and statused for expected delivery of vendor drawings, manuals, and final material
- Identify if factory acceptance testing is required and discuss potential attendees, location of testing, and type of testing to be performed.
- Draft material lists (engineered and non-engineered)
- Draft of protective logic changes or additions
- Draft of Engineering Drawing List with single line, schematics, flow diagrams prepared and checked and copies of P&IDs, marked up secondary drawings (electrical, civil, and mechanical physicals, conduit/cable, etc.) and vendor manuals (if available).
- Modification Criteria drafted and equipment startup testing requirements drafted
- Prepared calculations (including all assumptions identified), ready to check
- Provide design output information to the UNID Coordinator
- Perform constructability walkdown with Plant, Engineering, and Implementer (requirement by Masoud for ALL design review meetings)

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The following should be discussed:

- Confirmation of scope and conceptual approach of design
- Compatibility of Procurement and design schedules with ORI milestones
- Pre-outage scope
- Provide status of LL material procurement and delivery schedules
- Equipment spare parts, vendor manuals, effects on Power Stores inventory (are there surplus materials that can it be reduced or stored in central location for multiple plants?)
- Identify critical implementation and/or operations interfaces
- Operability, maintainability, and constructability of design (including equipment locations and clearances with other equipment)
- Identify post modification testing requirements of system and components including vendor and engineering support
- Identify change impact on HAZOP configurations (Only for SCR plants)
- If a factory acceptance test is required, identify those who will be attending, approximate dates, and location
- Discuss startup testing requirements and vendor support expectations.
- Discuss training requirements, attendees, and proposed dates for FAT and training.
- Request impact review sheets be looked at for impact to plant procedures and assign action items for completion by 100% design review
- Interpret engineering deliverables and project scope for the implementer, as required.

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- Review all new and open action items and identify those responsbile for resolution and date to be completed.

100% MEETING

- The Responsible Engineer is the facilitator of this meeting

The following should be completed by the end of this meeting:

- Consensus of constructability with implementing organization(s)
- Review total DCN package with work scope and testing requirements, and obtain signatures
- Modification Criteria (prepared and checked)
- All Drawings (prepared and checked) with drawing list completed
- Required design, operation, and maintenance information from Vendor Manuals identified and supplied (and issued if possible)
- Categorical Exclusion Checklist (CEC) completed and signed/closed. (if TVA Environmental Affairs has determined that the Environmental Management Plan is insufficient to address NEPA Review)
- Prepared and checked calculations issued with coversheets included in package
- All affected UNID components identified and documented in the package
- Final constructability walkdown to resolve any and all implementation issues
- Obtain Plant Managers signature on protective logic changes or additions
- Identify any special requirements contained in the DCN package including hanging of new arc flash labels on affected boards

The following should be discussed:

- Implementer review of all issued and planned PRs and Drawings
- Implementer materials list for non-engineered materials and consumables
- Pre-Outage/outage scope
- Post Modification test plans (Who will support and expectations).
- Verify long lead materials are on order and their due dates to be received on site support implemenation schedules.
- Schedule operational or maintenance training needed as a result of the project. Resolve issues with engineered equipment
- Provide input to the site procurement tracking spreadsheet; status of LL material procurement and delivery schedules.
- Agree upon expectations and schedule for Engineering support during implementation; to include loop checks, equipment and system checkout/testing/turnover, and support system startup/optimization/tuning.
- Review project schedule and verify phase 3 schedule is adequate.
- Review all new and open action items from action item matrix and identify those responsbile for resolution and date to be completed. Resposnible Engineer to follow up on open items
- Discuss requirements for Work Completion Statements

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EXPECTATIONS FOR JPT SUPPORT AND DESIGN REVIEW MEETINGS

PHASE 3 CONSIDERATIONS

- The Responsible Engineer is responsible for Phase 3
- Participate on Joint Project Teams
- Maintain site presence to ensure that project goals are satisfied
- Support the implementer with technical expertise as requested.
- Provide support for loop checks, equipment and system checkout, testing, and turnover; and support system startup, optimization, and tuning.
- Provide detailed instructions to implement required Post Modification Testing Support outage reviews
- Assist in coordination of startup activities.
- Support Outage Manager requests
- Finalize vendor/contract invoicing and deliverables (updated O&M manuals, training, etc)

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RETURN TO OPERATION (RTO)

- RE ensures that all RTO activities documented on impact reviews have been completed and signed off on the applicable Form B
- RE completes DCN Form F signifying completion of RTO prerequisites
- Ensures that Partner has completed all Work Completion Statements prior to return to operation or a Tempaorary Alteration Permit is in place
- New arc flash labels are installed (as applicable)

DCN CLOSURE

- RE ensures that all activities identified during the impact reviews, implementation, testing, start-up, and punch-list items are complete and documented on Forms B and F of the DCN package
- RE secures signatures form supervisors, Plant Manager or Engineering Design Manager on DCN Form A
- RE Transmits DCN package to ERU for closure, database update and storage

JPT COMPLETED PROJECT REVIEW (PROJECT CLOSURE)

- Project Engineer facilitates this activity
- JPT verifies all project activities are complete
- Performs a project evaluation to review and critique the project performance, including:
- Document field lessons learned and provide to the JPT
- Verify benefits claimed and achieved (by Plant)
- Evaluate project expendatures and schedule compliance

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EXPECTATIONS FOR JPT SUPPORT AND DESIGN REVIEW MEETINGS

Date:			
PROJECT NAME			
TYPE OF REVIEW		**PCN:**	

Location/Date/Time:

Purpose:

Attendees:

Responsible Engineer	
Plant System Engineer	
Maintenance	
Operations	
Partner	
Project Controls	
Estimating	
Components and Systems	
Outage Support	
Plant Program Administrator(Environmental)	

N/A any organizations which are not required.
* Signify those in attendance

Discussion:

Need to list items to be discussed or at least reference to what should be discussed at a given Design Review Meeting.

Action Items:

Prefer to add Action Item Matrix already in use. See Attached.

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Design Review
Action Item Matrix

REVISION DATE: 05/12/

AI #	Date Assigned	Date Due	Date Forecast	Date Complete	Action Item	Respo Pri		
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