EHS-Phos Program Mobile Cranes Appendix F
Concentrates Critical Lift Plan Form

Now that you've determined you don't have a standard lift, you must determine if the lift meets any of the requirements that would make it an engineered lift.

Engineered Lift Plan Criteria

- ☐ The item being lifted is unique, vital to a system, facility, or project operation, and if damaged would be considered irreplaceable or unrepairable and result in a business impact of greater than $1MM.
- ☐ Loss of control of the item being lifted would likely result in a catastrophic release of a *hazardous material / substance* that would likely result in the declaration of a "Facility Emergency."
- ☐ The gross load is 90% or more of a mobile crane's configured load chart rating.
- ☐ When the ground pressure exerted exceeds the soil bearing capacity (SBC). (If unknown, assume 2,000 PSF SBC.) (Use worksheet at the end of this form.)
- ☐ When management determines it is required.

If any of the criteria above is met, refer to the Program.
If an **Engineered Lift Plan** is not required, **CONTINUE USING THIS FORM**.

Critical Lift Plan Form

General Information

Scheduled Lift Date:	Scheduled Lift Time:
Facility:	
Area:	
Job Description:	
Lift Height:	

Personnel

Crane Operator:	Qualifications:
Lift Supervisor:	Qualifications:
Rigger:	Qualifications:
Hoisted Personnel (Permit required. See Mobile Crane Program - Appendix B**)**	

Crane

Manufacturer:		Model:	
Mobile Crane Capacity (lbs):	Over Rear	Over Front:	Over Side:
Route of Crane Travel:			
Tower Crane Capacity (lbs.):		Maximum Radius (ft):	
Boom Length:		Jib Length:	
Load Block	Parts of Line:	Size:	Weight:
Auxiliary Block:	Parts of Line:	Size:	Weight:
Single Part Line Capacity vs Hoist Rope Diameter:		Auxiliary Rope Diameter:	
Maximum Rated Capacity for Lift Radius and Boom Angle (lbs.):			
Gross Load weight for Lift Radius and Boom Angle (lbs.):			
Lift Rated Capacity Percentage:			

Load

Load Weight (lbs.):	Source of Load Weight:
Load Weight Confirmation:	
Total Rigging Weight (lbs.):	
Gross Load Weight (load + rigging in lbs.):	
Note: Attach a diagram of the intended path of the load as required.	

Rigging

Sling(s)	Number:	Diameter:
	Length:	Capacity (lbs.):
Shackle(s)	Number:	Size:
	Type:	Capacity (lbs.):
Note: Attach a rigging plan or diagram that details intended lift points, sling angles, and sling connections.		

Site Conditions

Ground Conditions:	
Outrigger Position:	Mat Size:
Degree of Level:	Level Confirmation:
Maximum Allowable Wind speed in mph (per crane manufacturer):	
Site Wind speed Range (mph):	
Method of Wind speed Confirmation:	
Site Weather Conditions:	
Proximity to Other Operations (not involved the critical lift. Example – Railroad Tracks):	
Proximity to Energized Power lines:	
Obstacles or Obstructions to Lift or Swing:	
Proximity to Other Hazards (describe):	

Communication/Signaling (check all that apply)

□ Standard Hand Signals
□ Voice
□ Radio
□ Hard Wired
□ Other: _____

Inspections

Crane	Daily Inspection Date:	Competent Person:
	Annual Inspection Date:	Competent Person:
Rigging	Date:	Competent Person:
Attachment Points (Lugs)	Date:	Competent Person:
Personnel Platforms	Date:	Competent Person:

Approvals (Sign and Print Name)

Project Manager/Engineer OR Superintendent:	Date:
Crane Operator:	Date:

Completion/Cancellation

Completion:	Date:	Time:
Comments:		
Cancellation	Date:	Time:
Reason for Cancellation:		

Outrigger Load Calculation Worksheet

Step 1: Enter the weight of the crane (lbs.)

Step 2: Enter the gross weight of the load (lbs.- including all rigging)

Step 3: Calculate combined weight of crane and gross load (lbs.)

Step 4: Calculate the area (ft^2) of one outrigger pad, by multiplying length x width (for square or rectangular pads) or by using $Area = \pi r^2$ (for round pads, *r* = radius)

Step 5: Divide the combined weight (step 3) by the area of one outrigger pad (step 4) to determine the load exerted in pounds per square foot (PSF)

STEP 3 ÷ **STEP 4** =

If the load exerted on one outrigger pad exceeds the soil bearing capacity (SBC) (assume 2,000 PSF SBC, if unknown) refer to the Mobile Cranes Program requirements for an Engineered Lift Plan. An assessment may be performed to determine the actual SBC in lieu of using the 2,000 PSF assumption.