ILLINOIS POWER COMPANY

IP

U-0249
L30-81(06-19)-L
500 SOUTH 27TH STREET, DECATUR, ILLINOIS 62525

June 22, 1981

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Reference: Your letter, dated December 22, 1980, regarding the subject of "Control of Heavy Loads"

Clinton Power Station Units 1 and 2
Docket Nos. 50-461 and 50-462

Illinois Power has completed the first phase of the "Control of Heavy Loads" study. Based on our study results we conclude that the Clinton Power Station will be able to fully comply with NUREG 0612. This position is supported by the attached documentation.

IP's response is divided according to the categories contained in Section 2.1 of Enclosure 3, "General Requirements for Overhead Handling Systems", of the above reference letter. As such, the request from each section is restated and IP's response provided thereafter.

Sincerely,

G. E. Wuller
Supervisor-Licensing
Nuclear Station Engineering

SWS/mf

Attachments:

cc: C. I. Grimes, NRC Clinton Project Manager
H. H. Livermore, NRC Resident Inspector

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SEND DRAWINGS to:
PM

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a high design margin. This crane, however, is not required to be single failure proof at Clinton, due to the layout of the fuel building and the manner in which loads must be handled. The fuel cask can only be transported from the loading bay, through the cask washdown area to the cask storage pool. The crane upper limit switches are adjusted to prevent the cask bottom from clearing the upper walls of the pools, thereby preventing the cask from being carried over the fuel building floor. A cask drop analysis has been completed for Clinton. If dropped, the cask will not cause loss of water inventory from the spent fuel pool. The fuel building crane also is equipped with permanent mechanical stops, which prevent crane travel over the spent fuel pool.

The fuel handling platform in the fuel building does operate over the spent fuel pool, and was designed by General Electric to be single failure proof.

The polar crane in the containment building services the refueling floor. It is built to the requirements of NUREG 0554, complete with redundant hook and load block on the main hoist. Being redundant, the polar crane is not limited to specific load handling paths.

The refueling platform is on the refueling floor of the containment building and is used primarily to handle fuel in the reactor and the fuel storage pool. It was designed by General Electric to be single failure proof.

The auxiliary platform is used on the refueling floor of the containment building to do in-core inspection and reactor servicing and can travel under the refueling platform. The platform is included in this study for inventory purposes only, since it is limited by a load cell interlock to lift only 500 pounds, less than the weight of a fuel bundle.

Section 2.1-2 Request and Answer

(R) "Justify the exclusion of any overhead handling system from section 2.1-1 by verifying that there is sufficient physical separation from (between) any load-impact point and any safety related component to permit a determination by inspection that no heavy load drop can result in damage to any system or component required for plant shutdown or decay heat removal."

(A) Table 1 contains all cranes deleted from the Matrix due

to separation. Using this Table there is sufficient information to locate the Crane or hoist on the equipment removal drawings so that visual confirmation of safe separation can be made.

Section 2.1-3 Request and Answers

(R "With respect to the design and operation of heavy-load-handling systems in the reactor building and those load-handling systems identified in 2.1-1, above provide your evaluation concerning compliance with the guidelines of NUREG 0612, section 5.1.1. The following specific information should be included in your reply."

> "a. Drawings or sketches sufficient to clearly identify the location of safe load paths spent fuel, and safety-related equipment."

(A) This request appears to take into consideration early BWR and PWR designs, but not the BWR 6, Mark III design. Since portions of the Mark III plant, other than the containment, auxiliary, and fuel buildings, do not contain many cranes of probable impact on safe shutdown systems, and since sections 2.2 and 2.3 of enclosure 3 deal with specific requirements for sections of the plant, the general requirements of section 2.1 will be adhered to for all portions of the plant.

Drawings are provided in order to comply with this request. There are two sets of drawings. One is designated "General Arrangements" (M01-1100 series) and is intended to provide the reviewer with useful information regarding the layout of the Clinton plant. The "Equipment Removal" drawings (M01-1400 series) are used to show the location of each load handling device in the plant. The load handling devices are color coded red for easy location. All plant equipment is located on each set of drawings and each drawing includes a table for identification of equipment code numbers.

The drawings included are:

M01-1105	M01-1403	M01-1427
MC1-1106	M01-1405	M01-1429
M01-1107	M01-1406	M01-1431
M01-1108	M01-1409	M01-1432
M01-1109	M01-1410	M01-1434
M01-1110	M01-1412	M01-1435
M01-1111	M01-1413	M01-1436
M01-1112	M01-1416	M01-1445
M01-1113	M01-1417	M01-1455
M01-1114	M01-1419	
M01-1115	M01-1420	
M01-1116	M01-1423	
M01-1117	M01-1424	
M01-1402	M01-1426	

Section 2.1-3 Request and Answer (continued)

(R) "b. A discussion of measures taken to ensure that load-handling operations remain with safe load paths, including procedures, if any, for deviation from these paths."

(A) Procedures for handling equipment at Clinton have not yet been written. The Plant Staff is responsible for implementation of safe load handling procedures. The requirements of NUREG 0612 have been discussed with them. It is their intention to write procedures which fully meet the requirements of NUREG 0612.

With regard to spent fuel and the reactor, no specific procedures for safe load paths are required, since the cranes used over or near these items are single-failure proof.

(R) "c. A tabulation of heavy loads to be handled by each crane, which includes the load identification, load weight, its designated lifting device, and verification that the handling of such load is governed by a written procedure containing, as a minimum, the information identified in NUREG 0612, Section 5.1.1 (2)."

(A) The "Load/Impact Area Matrix" attached provides the requested information. The matrix includes all Clinton cranes other than those deleted in Section 2.1-2. The matrix is designed in the format of the NRC supplied and recommended matrix with minor clarifications.

The columns "Safety Related Equipment" and "Hazard Elimination Category" are explained on the back of the matrix. For the purpose of this study, not all safety related components are applicable. This study was developed to discuss the hazards of heavy load drops on or near safe shutdown equipment, the reactor, and spent fuel. The term "Safety-related" includes more equipment than is necessary for the safe shutdown of the plant. Hence, The "Safety-related Equipment" column of the matrix will concern itself with those components necessary to permit safe shutdown of the reactor and maintain it in a safe shutdown condition, as well as spent fuel storage facilities and the reactor.

Notes have been added to the bottom of some matrices in order to further clarify why a handling device will not pose a danger or to describe the worst type of handling incident.

As previously indicated, procedures for handling of loads have not yet been written, but they will follow the guidelines of NUREG 0612.

(R) "d. Verification that lifting devices identified Section 2.1-3-c, above, comply with the requirement of ANSI N14.6 - 1978, or ANSI B30.9 - 1971, as appropriate. For lifting devices where these standards, as supplemented by NUREG 0612, section 5.1.1 (4) or 5.1.1 (5) are not met, described any proposed alternatives and demonstrate their equivalency in terms of load-handling reliability."

(A) The shipping cask has not been selected for the Clinton Power Station. The lifting device or slings will be evaluated for compliance with ANSI N14.6 or ANSI B30.9.

(R) "e. Verification that ANSI B30.2 - 1976, Chapter 2-2 has been invoked with respect to crane inspection, testing and maintenance. Where any exception is taken to this standard, sufficient information should be provided to demonstrate the equivalency of proposed alternatives."

(A) Again, procedures have not been written for crane inspection, testing and maintenance at Clinton. The requirements of ANSI B30.2 - 1976 will be incorporated into the procedures as they are written.

(R) "f. Verification that crane design complies with the guidelines of CMAA Specification 70 and Chapter 2-1 of ANSI B30.2 - 1976, including the demonstration of equivalency of actual design requirements for instances where specific compliance with these standards is not provided."

(A) Crane contract reviews and contracts with Clinton crane manufacturers verified that the requirements of CMAA 70 and ANSI B30.2 - 1976 were imposed during the design and manufacture of the Clinton lifting devices. No exception is taken to these requirements.

(R) "g. Exceptions, if any taken to ANSI B30.2 - 1976 with respect to operator training, qualification, and conduct."

(A) No exceptions taken.

TABLE 1

Cranes Which Are Adequately Separated
From Safe Shutdown Systems and Spent Fuel Pools

Crane	Drawing	Building	Reason for Exclusion
(1) RPV Auxiliary Platform F15-E005	M01-1434	Containment	See Note 1
(2) CRD Cart Jib Crane Beam 34	M01-1412	Containment	See Note 2
(3) Drywell Equipment Hatch Beam 37	M01-1412	Containment	Note 2
(4) Miscellaneous Equipment Jib Crane Beam 94	M01-1429	Control	Note 2
(5) Screenhouse Traveling Bridge Crane OHC05G	M01-1116	Screenhouse	Note 2
(6) Screenhouse Traveling Crane OHC19G	M01-1116	Screenhouse	Note 2
(7) Motor Generator Sets Trolley Beams 84 and 85	M01-1431	Fuel	Note 2
(8) Condensate Booster Pump Trolley Beams 1 and 2	M01-1402	Turbine	Note 2
(9) Condensate Pump Trolley Beams 3, 4 and 5	M01-1402	Turbine	Note 2
(10) CRD Room Bridge Crane Beam 43	M01-1412	Fuel	Note 3
(11) Flush Tank Mono Rail Beam 45	M01-1412	Fuel	Note 3
(12) Feed Water Flow Device Trolley Beams 72 and 73	M01-1419	Auxiliary	Note 2
(13) Condenser Pump Trolley Beams 8a, 8b and 8c	M01-1402	Turbine	Note 2
(14) Glycol Cooler Beam 14	M01-1409	Turbine	Note 2
(15) Condenser Water Box Trolley Beams 16, 17, 18, 19 and 20	M01-1409	Turbine	Note 2

TABLE 1 (Continued)

Cranes Which Are Adequately Separated
From Safe Shutdown Systems and Spent Fuel Pools

Crane	Drawing	Building	Reason for Exclusion
(16) Motor Driven Reactor Pump Trolley Beam 58	M01-1416	Turbine	Note 2
(17) Turbine Bldg: Crane 1HCO2G	M01-1423	Turbine	Note 2
(18) Turbine Shield Wall Gantry Crane Beam 71	M01-1423	Turbine	Note 2
(19) Off Gas Air Dryers Trolley Beams 75, 76 and 77	M01-1424	Turbine	Note 2
(20) Reboiler Tubes Trolley Beams 6 and 7	M01-1403	Radwaste	Note 2
(21) Off Gas Refrigeration Units Trolley Beams 11 and 12	M01-1403	Radwaste	Note 2
(22) HVAC Equip. Beams 89 and 90	M01-1435	Radwaste	Note 2
(23) Machine Shop Cranes Beams 21 and 22	M01-1410	Radwaste	Note 2
(24) Machine Shop Cranes Beam 23	M01-1410	Radwaste	Note 2
(25) Demineralizer Filters Trolley Beam 24	M01-1410	Radwaste	Note 2
(26) Machine Shop Crane Beam 25	M01-1410	Radwaste	Note 2
(27) Radwaste Bridge Crane Beam 26	M01-1410	Radwaste	Note 2
(28) Chemical Waste Recirculation Pump Trolley Beams 27 and 28	M01-1410	Radwaste	Note 2
(29) Floor Drain Recirculation Pump Trolley Beams 29, 30, 31 and 32	M01-1410	Radwaste	Note 2

TABLE 1 (Continued)

Cranes Which Are Adequately Separated
From Safe Shutdown Systems and Spent Fuel Pools

Crane	Drawing	Building	Reason for Exclusion
(30) Decontamination Room Equipment Mono Rail Beam 95	M01-1410	Radwaste	Note 2
(31) Service Air Unit Trolley Beam 61	M01-1417	Radwaste	Note 2
(32) Miscellaneous Equipment Trolley Beams 74 and 88	M01-1420 M01-1432	Control &	Note 2
(33) Low Pressure Heaters Beams 59 and 60	M01-1416	Turbine	Note 2

Reasons for Exclusions

Note 1: Hoist is "Load Celled" to lift 500 lbs. or less.

Note 2: No safe shutdown equipment or spent fuel below or nearby handling area.

Note 3: Handles fuel bundle weight or less.

SWS/lt

LOAD/IMPACT AREA MATRIX

CRANE: Polar Crane 1HC01G

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: AC-AE 105 - 121			Column Rows: AC-AE 110 - 114		
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Drywell Head 93 Tons *	828' 3"	P	d	803' 3"	0	d
RPV Head 91 Tons*	828' 3"	P	d	803' 3"	0	d

NOTES 1 & 2 - See Reverse Side

* Includes hook, load block & lifting device

LOAD/IMPACT AREA MATRIX

CRANE: Polar Crane 1HC01G

LOCATION / IMPACT AREA / LOADS	BUILDING: Containment					
	Column Rows: AC-AF 110 - 121			Column Rows: AC-AE 110 - 114		
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
RPV Head Insulation 5 Tons *	828' 3"	P	d	803' 3"	0	d
Steam Dryer 39 Tons **	828' 3"	P	d	803' 3"	0	d

NOTES 1 & 2 - See Reverse Side

* Includes load block

** Includes load block and intermediate

LOAD/IMPACT AREA MATRIX

CRANE: Polar Crane 1HC01G

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: AE-AB 110 - 116			Column Rows: AE-AC 110 - 114		
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Steam Separator 51 Tons *	828' 3"	P	d	803' 3"	0	d
Fuel Pool Gate 5.4 Tons **				803' 3"	P	d

NOTES 1 & 2 - See Reverse Side
* Includes load block and strongback
** Includes load block

LOAD/IMPACT AREA MATRIX

CRANE: Polar Crane 1HC01G

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: AE-AC 109.5 - 116			Column Rows: AE-AB 106.5 - 116		
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Auxiliary Platform 11.5 Tons *	803' 3"	0	d	828' 3"	P	d
Steam Separator/ Dryer Strongback 14,000 lbs. *				828' 3"	P	d

NOTES 1 & 2 - See Reverse Side

* Includes load block

LOAD/IMPACT AREA MATRIX

CRANE: Lifting Device-RPV head and Drywell head Carousel strongback

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Used with polar crane to remove heads during refueling					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
RPV Head 63 Tons	803'3"	o	d			
Drywell Head 65 Tons	803'3"	o	d			

NOTES 1 & 2 - See Reverse Side

LOAD/IMPACT AREA MATRIX

CRANE: Lifting Device-Steam Separator and Steam Dryer Strongback

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Used with polar crane to remove separator and dryer during refueling					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Steam Separator 44 Tons	803'3"	o	d			
Steam Dryer 32 Tons	803'3"	o	d			

NOTES 1 & 2 - See Reverse Side

LOAD/IMPACT AREA MATRIX

CRANE: Polar Crane 1HC01G

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: AH-Z 104 - 122					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Load Block (with hook) 3 Tons	828'3"	o	d			

NOTES 1 & 2 - See Reverse Side

LOAD/IMPACT AREA MATRIX

CRANE: Refueling Platform F11-E014

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: AE-AC 110 - 114					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Fuel 625 lbs. *	803' 3"	0	d			

NOTES 1 & 2 - See Reverse Side

* Platform has capability to lift, 1,000 lbs.

LOAD/IMPACT AREA MATRIX

CRANE: Recirculation Pump/Motor Removal Monorail 1B33-E300

LOCATION	BUILDING: Containment (Drywell)					
IMPACT AREA / LOADS	Column Rows: AF-AB 107 - 117					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Recirc Pump Motor 51,000 lbs.	737' 0"	0	C *			

NOTES 1 & 2 - See Reverse Side

* Monorail only used during plant shutdown

LOAD/IMPACT AREA MATRIX

CRANE: MSIV Monorail 1B21-E300

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: AB-AE 109 - 116					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
MSIV 11,700 lbs.	767' 9"	0	C *			

NOTES 1 & 2 - See Reverse Side

* Monorail used only during plant shutdown

LOAD/IMPACT AREA MATRIX

CRANE: Containment Equipment Hatch-Hoist Beam 35

LOCATION	BUILDING: Containment					
IMPACT AREA / LOADS	Column Rows: All-AF 105 - 112					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Equipment Hatch 18,500 Lbs.	712' 0"	0	C *			

NOTES 1 & 2 - See Reverse Side

* Equipment Hatch only opened during plant shutdown

LOAD/IMPACT AREA MATRIX

CRANE: Fuel Building Crane 1HC07G

LOCATION	BUILDING: Fuel					
IMPACT AREA / LOADS	Column Rows: AH-AM 102 - 114					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Fuel Cask 50-75 Tons (not selected)	712' 0"	P	a, e **			
Pool Gates 7 Tons *	712' 0"	P	a **			

NOTES 1 & 2 - See Reverse Side

* Includes Load Block

** e-case drop analysis has been done and there was no detrimental effect on spent fuel pool

LOAD/IMPACT AREA MATRIX

CRANE: Fuel Handling Platform 1F11-E017

LOCATION	BUILDING: Fuel					
IMPACT AREA / LOADS	Column Rows: AH-AM 102 - 114					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Fuel 625 lbs. *	755' 0"	0	d			

NOTES 1 & 2 - See Reverse Side

* Platform has capability to lift 1,000 lbs.

LOAD/IMPACT AREA MATRIX

CRANE: Fuel Transfer Tube Shield Plate Jib Crane JJ

LOCATION	BUILDING: Fuel					
IMPACT AREA / LOADS	Column Rows: AK-AH 112.1 - 114					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Shield Plate 6 Tons	755'0"	P				

NOTES 1 & 2 - See Reverse Side

LOAD/IMPACT AREA MATRIX

CRANE: Spent Fuel Pool Jib Crane

LOCATION	BUILDING: Fuel					
IMPACT AREA / LOADS	Column Rows: AH-AL 121 - 124					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Fuel 625 lbs. *	755' 0"	0	e			

NOTES 1 & 2 - See Reverse Side

* [illegible] 1,000 lb

LOAD/IMPACT ARE. MATRIX

CRANE: HPCS Pump Removal Beam 69

LOCATION	BUILDING: Fuel					
IMPACT AREA / LOADS	Column Row: AE-AH 2 - 105					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
HPCS pump motor 14,500 ibs. *	707' 6"	0	b			

NOTES 1 & 2 - See Reverse Side

LOAD/IMPACT AREA MATRIX

CRANE: Fuel Pool Waste Filters and Filter Demineralizer Beam 33

LOCATION	BUILDING: Radwaste					
IMPACT AREA / LOADS	Column Rows: P-H.9 122 - 124					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
Shield Plugs 4.5 Tons	737'- 0"	o	c *			

NOTES 1 & 2 - See Reverse Side

*c-Each filter is isolated if access is required. Therefore a load drop would not affect pool

LOAD/IMPACT AREA MATRIX

CRANE: RHR Pump Removal Beams 38, 39, 40

LOCATION	BUILDING: Auxilary					
IMPACT AREA / LOADS	Column Rows: Beam 38 V-Z 102 -105 Beam 39 V-Z 105 - 107 Beam 40 V-Z 117 - 121					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
RHR Pump Motor 5,400 lbs. *	712' 0"	0	b			

NOTES 1 & 2 - See Reverse Side

* Worse Senario: Bringing in a new motor before decommisioning system.

LOAD/IMPACT AREA MATRIX

CRANE: RCIC Pump Removal Beam 41 & 13

LOCATION	BUILDING: Auxilary					
IMPACT AREA / LOADS	Column Rows: S-U 112 - 117					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
RCIC Pump Motor 5,275 lbs. *	712' 0"	0	b			

NOTES 1 & 2 - See Reverse Side

* Worse Senario: Bringing in a new motor before decommisioning system

LOAD/IMPACT AREA MATRIX

CRANE: LPCS Pump Removal Beam 42

LOCATION	BUILDING: Auxilary					
IMPACT AREA / LOADS	Column Rows: V-Z, 121 - 124					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
LPCS Pump Motor 7,600 lbs. *	712' 0"	0	b			

NOTES 1 & 2 - See Reverse Side

* Worse Senario: Bringing in a new motor before decommisioning system.

LOAD/IMPACT AREA MATRIX

CRANE: MSIV Steam Tunnel Bridge Crane Beams 86 & 87

LOCATION	BUILDING: Auxilary					
IMPACT AREA / LOADS	Column Row U-F 110 - 114					
	ELEVATION	SAFETY-RELATED EQUIPMENT[1]	HAZARD ELIMINATION CATEGORY[2]	ELEVATION	SAFETY-RELATED EQUIPMENT	HAZARD ELIMINATION CATEGORY
MSIV 11,700 lbs.	755' 0"	0	C *			

NOTES 1 & 2 - See Reverse Side

* Bridge only used during plant shutdown