Weekly Status Report

Assessment of Embedment Plates

Status as of March 8, 1987

Commonwealth Edison Company
Dresden Station - Units 2 and 3
Quad Cities Station - Units 1 and 2

March 12, 1987

I. Introduction

This is the first of a series of weekly reports which address the effort to resolve the issue regarding the embedment plates which were constructed with 18 in. strap anchor spacing. The purpose of tnis report is to update the Nuclear Regulatory Commission, Region III regarding the status for this effort. This first week report provides a brief background of the issue and a plan of action for its resolution. Also included are attachments which will be updated on a weekly basis and provide statistics regarding the number of hangers which are affected and information regarding these hangers. A milestone schedule providing start and completion dates for the major items of work is also included.

II. Background

On February 11, 1987, Commonwealth Edison Company (CECo) notified Sargent & Lundy (S&L) that the embedment plate which supports pipe hanger M-1150D-62 at Dresden Unit 2 had been found to be deformed. Pipe hanger M-1150D-62 consists of a rear-end bracket connected to a rigid strut that supports a 12 inch diameter core spray line. Commonwealth Edison Company asked S&L to investigate this plate and to provide a repair.

In the course of the investigation, S&L found that the strap anchor spacing shown on shop drawings for this embedment plate did not conform to the strap anchor spacing shown on the design drawing. The design drawing required a strap anchor spacing of 9 inches on center staggered, while the shop drawing showed a strap anchor spacing of 18 inches on center staggered (See sketch). A larger strap anchor spacing means that the embedment plate would have a lower load carrying capacity than originally intended.

The repair for the embedment plate supporting hanger M-1150D-62 was issued on February 20, 1987 and has been completed in the field. The cause of the deformation of this plate is being investigated.

III. Immediate Action

To resolve the discrepancy between design drawings and shop drawings, CECo has implemented two actions in parallel.

1) Perform ultrasonic inspection on some existing embedment plates at Dresden and Quad Cities Stations. The purpose of the inspection is to verify the strap anchor spacing. A mockup of an embedment plate with

strap anchors was constructed and used to calibrate the ultrasonic test equipment. Using this UT equipment, two plates at Dresden have been ultrasonically examined and the strap spacing matches the shop drawing. A number of additional in-place embedment plates are being ultrasonically examined at both Dresden and Quad Cities Stations.

In addition, CECo had reported that there was a loose embedment plate with no hangers attached at Quad Cities. This plate has been examined and the strap spacing matches that shown on shop drawing. No further action on this plate is required.

2) The second action performed in parallel to verifying the strap anchor spacing is to collect large bore pipe hanger drawings showing attachments to embedment plates and perform an engineering assessment as described below.

IV. Data Collection and Engineering Assessment

Assuming that the UT examination will confirm 18" strap anchor spacing, a program of data collection and an engineering assessment of the embedment plates using the shop drawing configuration has been initiated. This assessment is described below.

1) Large bore pipe ($\geq$4" in diameter) hanger drawings showing attachment to embedment plates in the Reactor Buildings and portions of the Turbine Buildings at Dresden and Quad Cities were collected. These pipe hangers along with the embedment plate locations have been plotted on plan drawings for future use. The location of the embedment plate seams were also plotted. The data collected so far includes hanger drawings which are in S&L's possession. Other AEs are being contacted in order to confirm that S&L has all applicable hanger drawings.

Support drawings for conduit, cable tray, HVAC and small bore piping were not collected. Loading from these supports is relatively light compared to that from large bore supports.

2) Generic embedment plate allowable loads have been developed. Originally conservative hand calculations were used to develop the embedment plate allowable loads. For this assessment a refined analysis using a finite element computer program has determined the OBE, SSE and upper limit allowable loads. The allowable loads are dependent on attachment size and attachment location relative to edges of the plate and strap anchors. The allowable loads were

based on a conservative (worst) location of the hanger attachment and a conservative (small) size of the hanger attachment. Based on the computer program, load deflection curves were developed for both the interior and exterior regions of the embedment plates. These load deflection curves were used to develop the above mentioned allowable loads.

3) Using the embedment plate allowable loads discussed in Item IV-2, the pipe hangers were sorted into two categories as follows:

   a) Pipe hangers whose loads were within the allowable loads for the embedment plate and require no further action, and

   b) Pipe hangers whose loads were outside the allowable loads for the embedment plate. This second category was broken down further into the following:

      i) Pipe hanger loads which are greater than the embedment plate upper limit.

      (ii) Pipe hanger loads which are less than the embedment plate upper limit but greater than the embedment plate FSAR limits.

4) Based on the sort of hangers discussed in Item IV-3, a walkdown of pipe hangers whose loads exceed the embedment plates upper limit will be performed immediately and is in process at Dresden. A second walkdown of pipe hangers whose loads exceed the embedment plate FSAR limit will be performed at a later date. Each walkdown and resulting assessment will consist of the following phases:

   a) Perform a walkdown to confirm the visible as-built information such as attachment size and attachment location relative to the edges of embedment plates which could vary due to installation tolerances. In addition, the presence of other attachments in the vicinity of the attachment being walked down will be documented and this data will be included in further analysis.

   b) Based on the information collected during the walkdown, a review will be performed to determine if further field investigation is necessary or if the loading on the embedment plate is acceptable.

c) If the hanger load still exceeds the embedment plate allowables, the strap anchor spacing and plate orientation will be determined by using ultrasonic testing.

d) Using the strap anchor locations another analysis will be performed. During this analysis it may be possible to take advantage of the relative location of the strap anchors with respect to the location of the hanger load, i.e., if a load is located directly over or close to a strap anchor, sufficient embedment plate capacity probably exists. Those hanger loads which exceed the allowable loads derived from this second analysis will require further action.

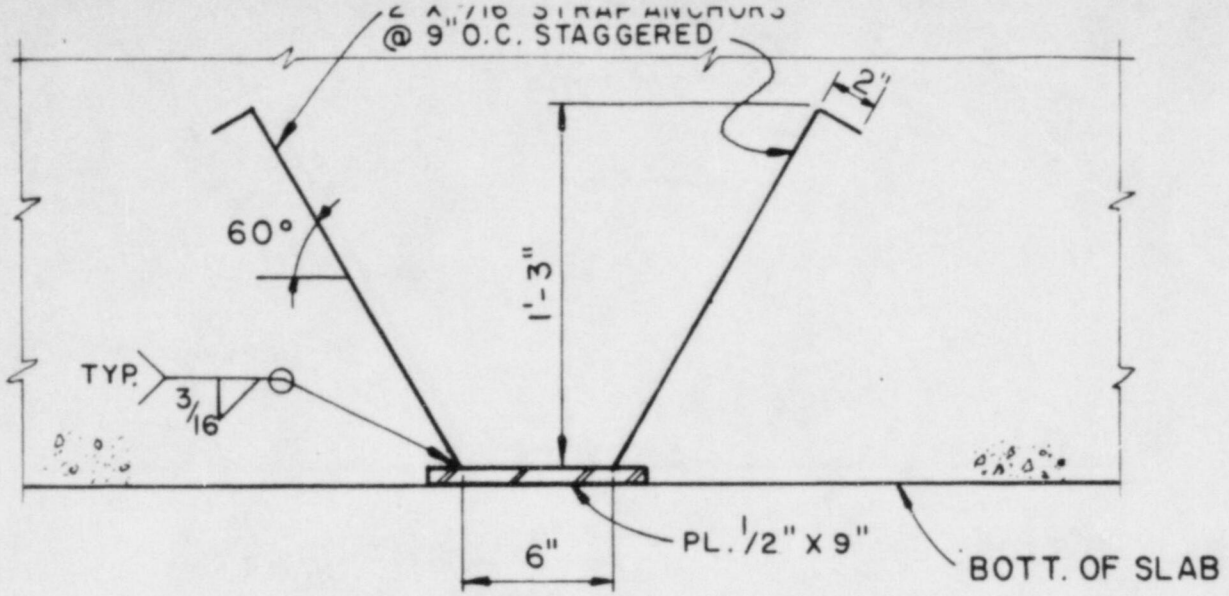
V. Attachments

The following attachments are included for your information:

1. Milestone bar chart - Dresden and Quad Cities

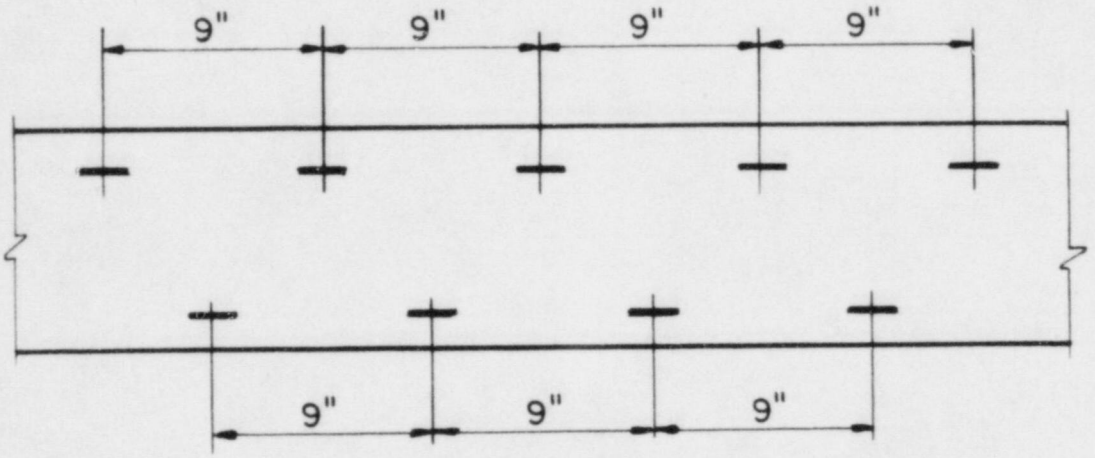
2. Summary Status - 2A Dresden
   2B Quad Cities

3. Number of embedded plates - 3A Dresden
   3B Quad Cities

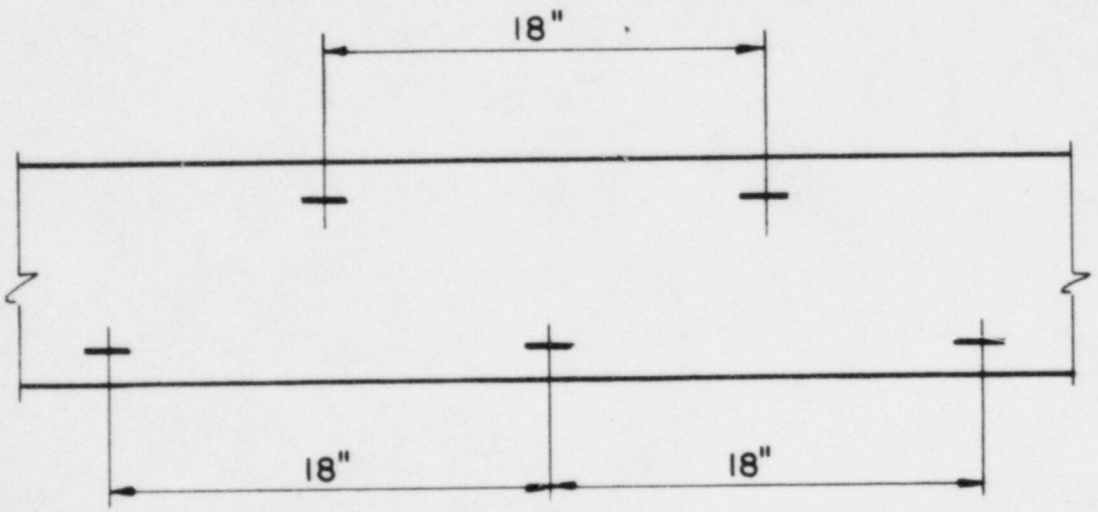


DETAIL K

PER S & L DESIGN DWG. (B-260)



PLAN VIEW - 9" ON CENTER STAGGERED STRAP SPACING



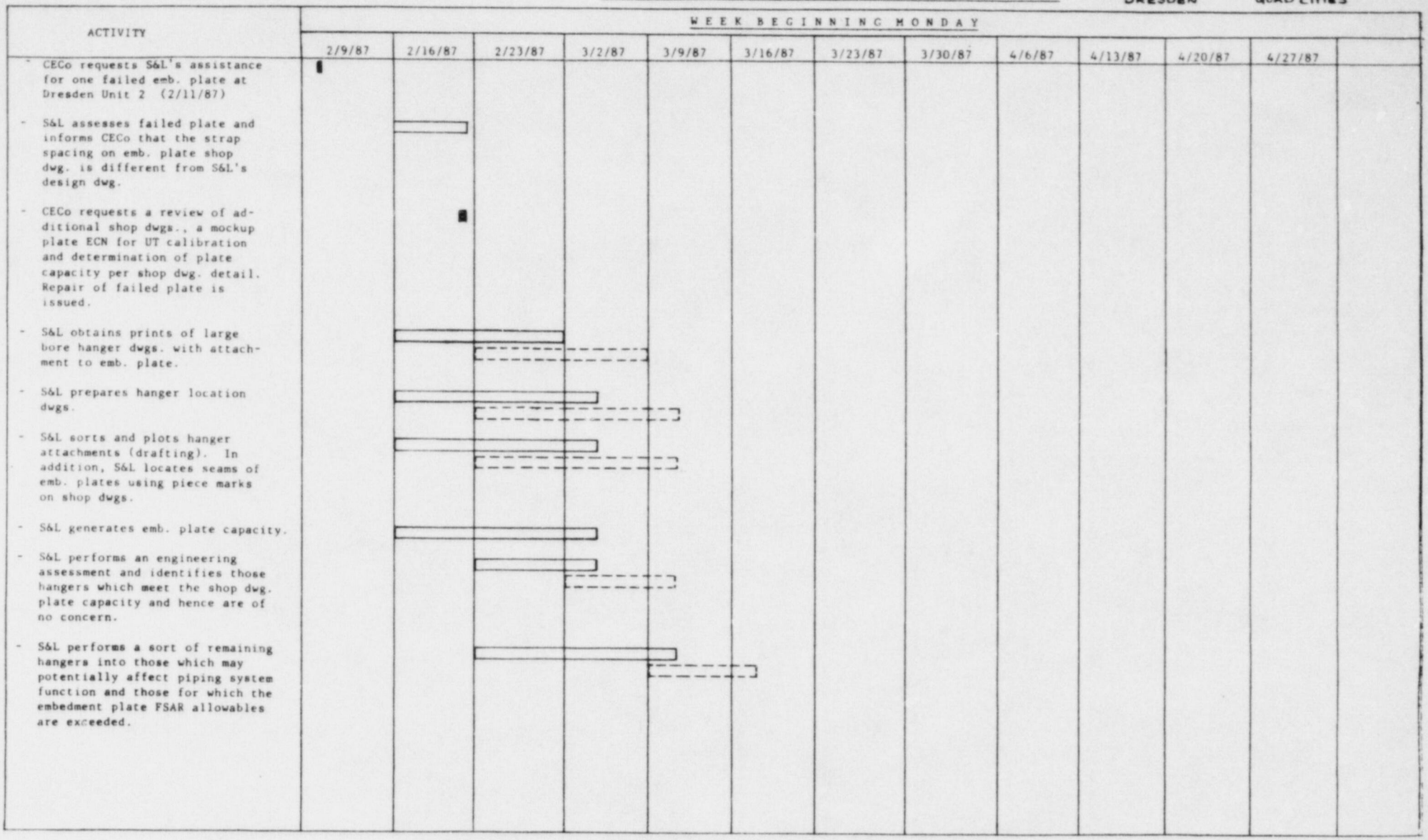
DETAIL PER SHOP DWG. - 18" ON CENTER STAGGERED STRAP SPACING

Attachment 1

Dresden 263 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

DRESDEN — QUAD CITIES



Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

ACTIVITY	WEEK BEGINNING MONDAY											
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- S&L/CECo performs a walkdown for those hangers which may potentially affect piping system analysis and determine attachment location relative to edges of emb. plate and strap. If necessary, CECo performs UT for strap location.					□ → CONTINUING							
- S&L utilizes walkdown data to perform a sort of these hangers to identify those hangers which still may potentially affect piping system analysis.						[ ] → CONTINUING						
- S&L/CECo perform a walkdown for those hangers which may potentially cause embedment plate FSAR allowables to be exceeded.												
- Assess these hangers based on walkdown data and issue repairs as necessary.												

Atttachment 2A

Status Summary

Dresden

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	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR	
Large bore hangers collected for follow-up work	2230	1060	1170	750	1480	1460	770	-	-	
Result of first sort using generic 2½" x 2½" attachment size allowable limits (number of hangers requiring follow-up work)	440	230	210	170	270	380	60	250	190	
Results of second sort using generic larger attachment size allowable limits where applicable (number of hangers requiring follow-up work)	288	182	106	108	180	288	0	154	134	See Note 1
Result of walkdown and evaluation for hangers with loads > allowable upper limits (number of hangers requiring follow-up work)										
- Phase i - Visual data obtained from floor										
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The table above describes the results of large bore hanger drawing collection, plotting and sorting. Numerical values represent number of hangers and are approximate numbers.

Note 1: The second sort reduced the hangers requiring follow-up work to 288 from 440. During the week beginning March 9, 1987, it was decided that non-safety related large bore hangers over safety-related equipment in Turbine Building should also be assessed. The changes in the hanger numbers presented on this line due to this will be included in the next weekly report.

Attachment 2B

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Quad Cities

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	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR
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Number of Embedded Plates

Dresden

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Attachment #3B

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Weekly Status Report

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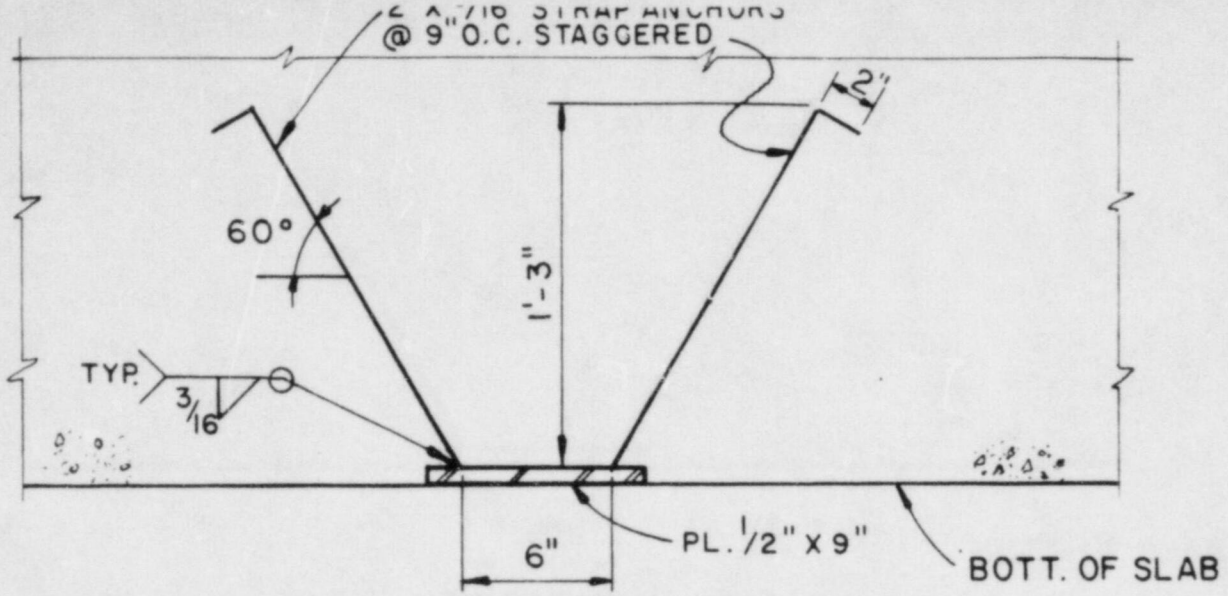

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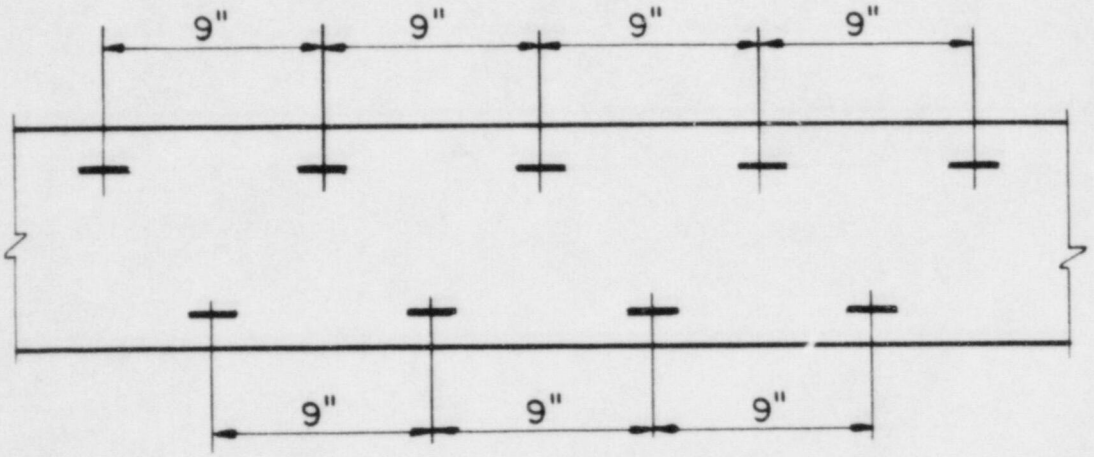

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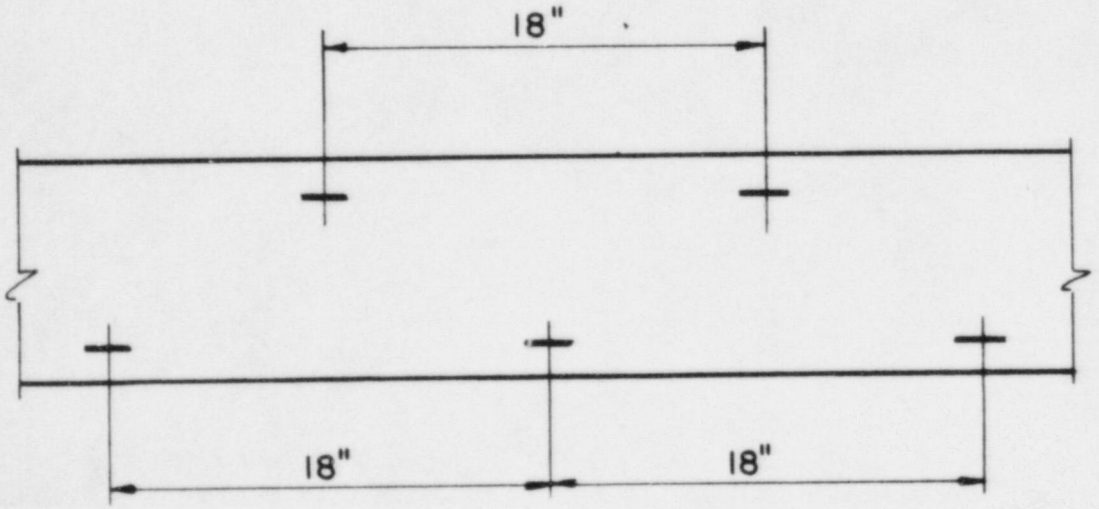

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Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

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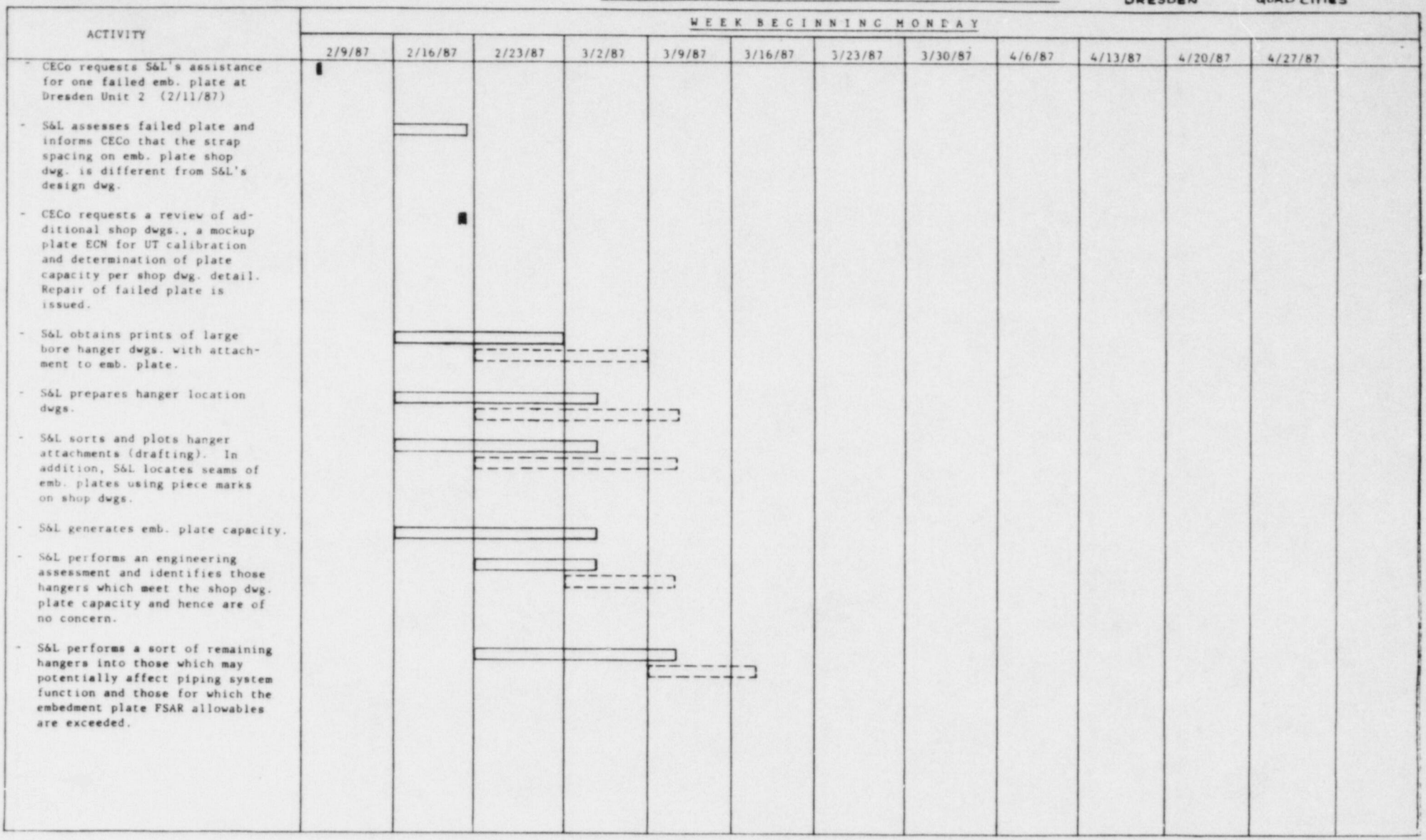

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      i) Pipe hanger loads which are greater than the embedment plate upper limit.

      (ii) Pipe hanger loads which are less than the embedment plate upper limit but greater than the embedment plate FSAR limits.

4) Based on the sort of hangers discussed in Item IV-3, a walkdown of pipe hangers whose loads exceed the embedment plates upper limit will be performed immediately and is in process at Dresden. A second walkdown of pipe hangers whose loads exceed the embedment plate FSAR limit will be performed at a later date. Each walkdown and resulting assessment will consist of the following phases:

      a) Perform a walkdown to confirm the visible as-built information such as attachment size and attachment location relative to the edges of embedment plates which could vary due to installation tolerances. In addition, the presence of other attachments in the vicinity of the attachment being walked down will be documented and this data will be included in further analysis.

      b) Based on the information collected during the walkdown, a review will be performed to determine if further field investigation is necessary or if the loading on the embedment plate is acceptable.

c) If the hanger load still exceeds the embedment plate allowables, the strap anchor spacing and plate orientation will be determined by using ultrasonic testing.

d) Using the strap anchor locations another analysis will be performed. During this analysis it may be possible to take advantage of the relative location of the strap anchors with respect to the location of the hanger load, i.e., if a load is located directly over or close to a strap anchor, sufficient embedment plate capacity probably exists. Those hanger loads which exceed the allowable loads derived from this second analysis will require further action.

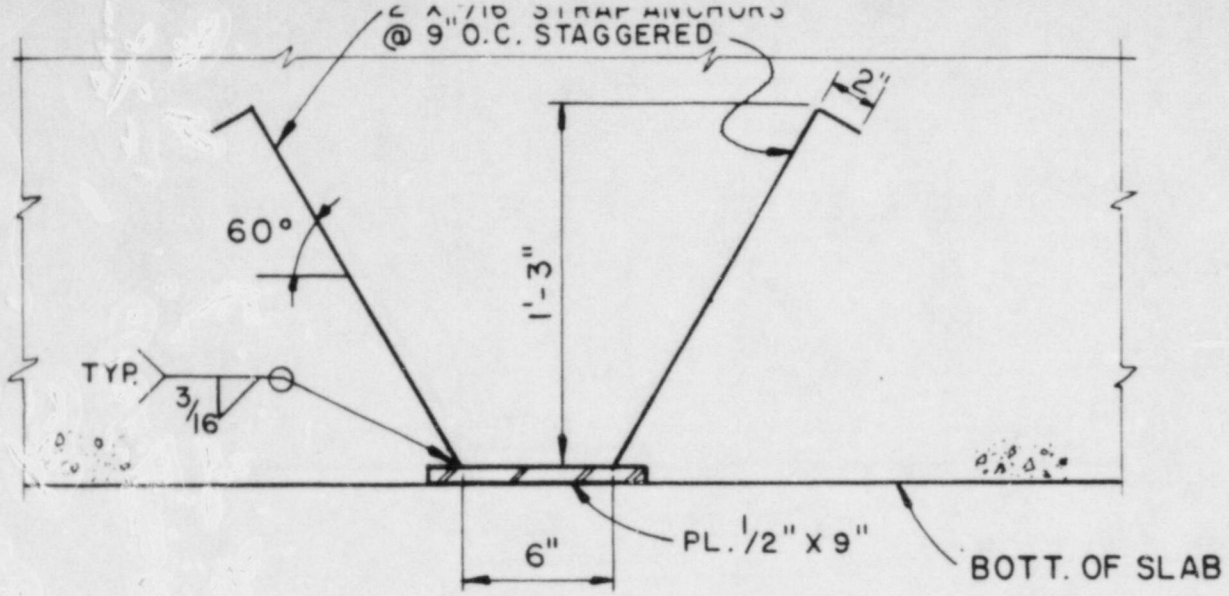
V. Attachments

The following attachments are included for your information:

1. Milestone bar chart - Dresden and Quad Cities

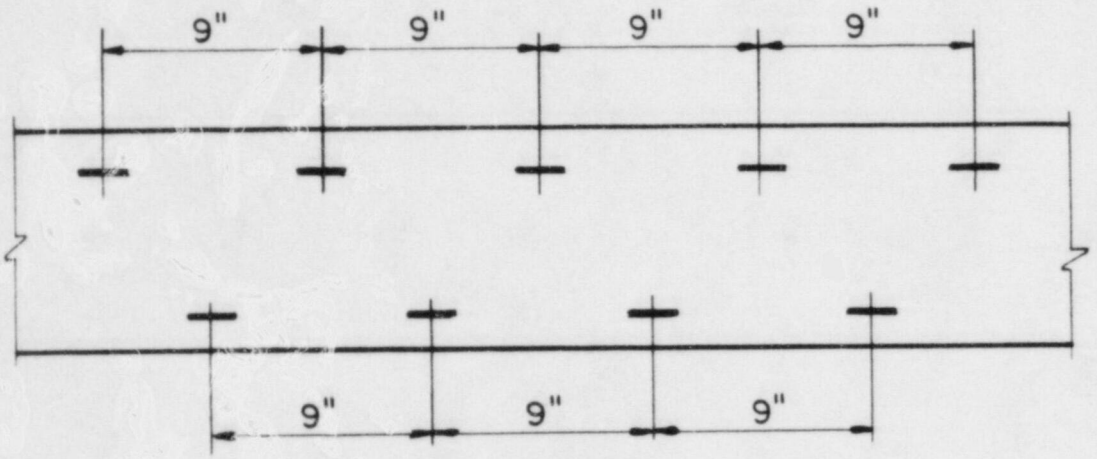
2. Summary Status - 2A Dresden
   2B Quad Cities

3. Number of embedded plates - 3A Dresden
   3B Quad Cities

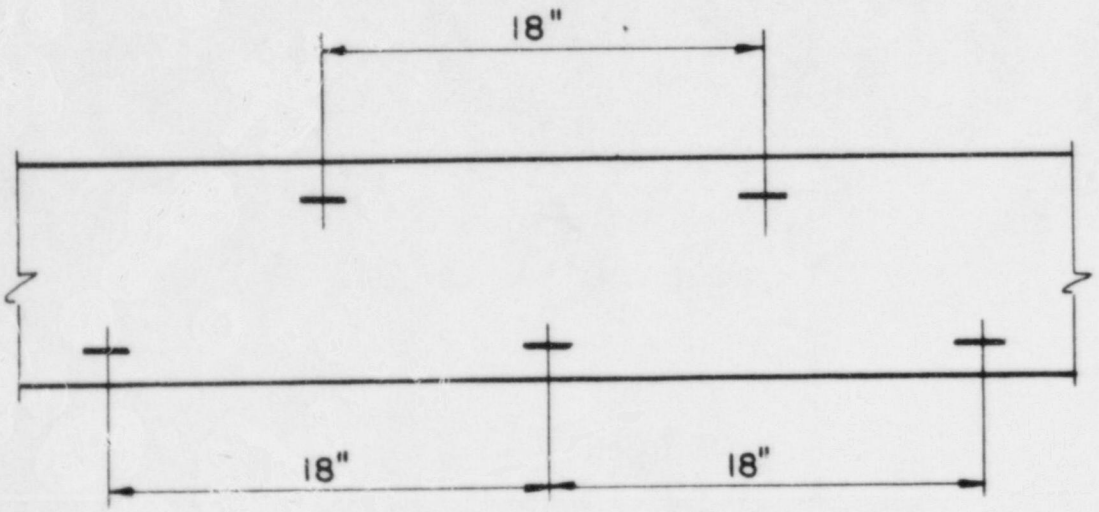


DETAIL K

PER S & L DESIGN DWG. (B-260)



PLAN VIEW - 9" ON CENTER STAGGERED STRAP SPACING



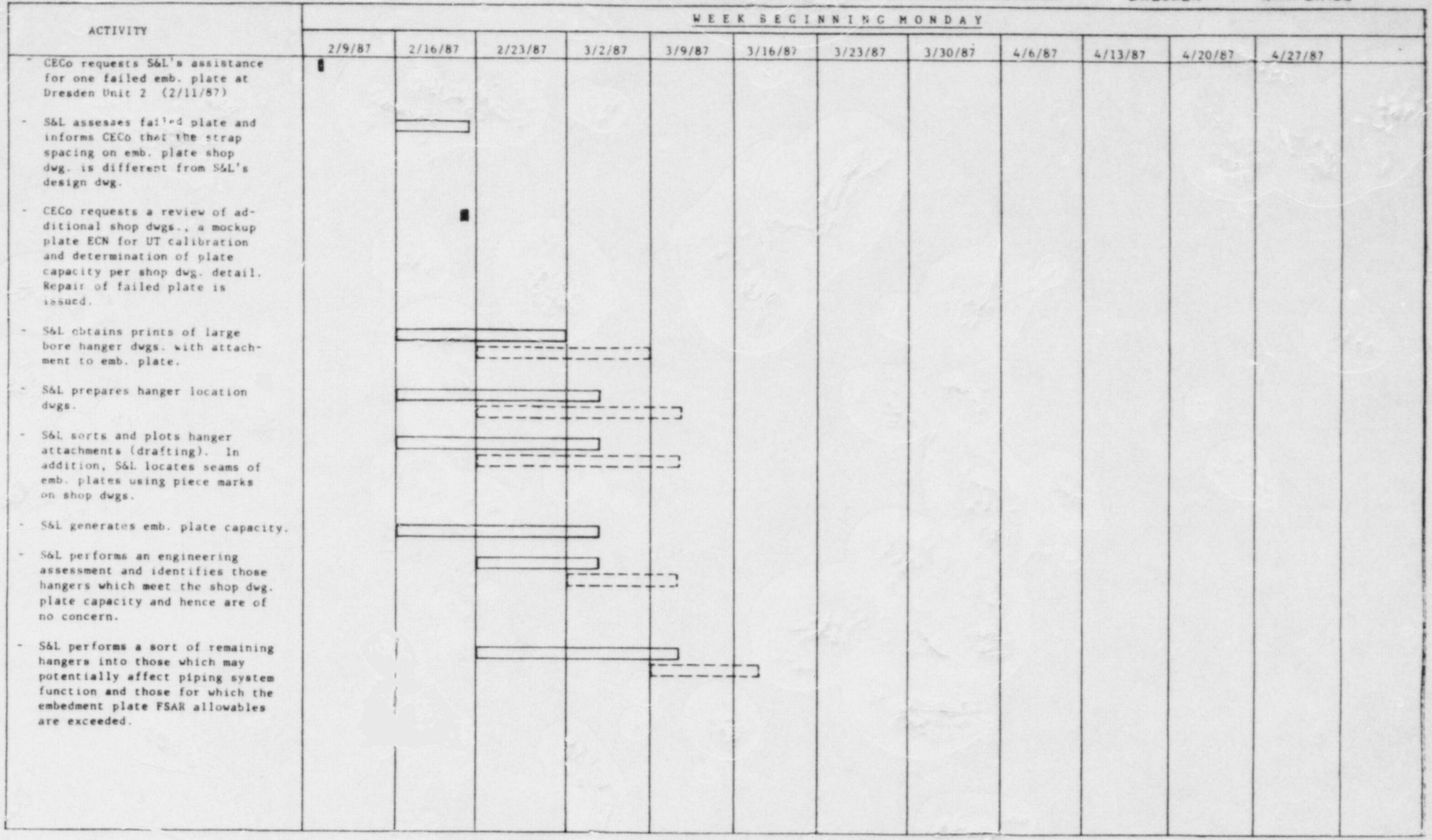
DETAIL PER SHOP DWG. - 18" ON CENTER STAGGERED STRAP SPACING

Attachment 1

Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

DRESDEN — QUAD CITIES



Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

ACTIVITY	WEEK BEGINNING MONDAY											
	2/9/87	2/16/87	2/23/87	3/2/87	3/9/87	3/16/87	3/23/87	3/30/87	4/6/87	4/13/87	4/20/87	4/27/87
- S&L/CECo performs a walkdown for those hangers which may potentially affect piping system analysis and determine attachment location relative to edges of emb. plate and strap. If necessary, CECo performs UT for strap location.					□ → CONTINUING							
- S&L utilizes walkdown data to perform a sort of these hangers to identify those hangers which still may potentially affect piping system analysis.						[ ] → CONTINUING						
- S&L/CECo perform a walkdown for those hangers which may potentially cause embedment plate FSAR allowables to be exceeded.												
- Assess these hangers based on walkdown data and issue repairs as necessary.												

Atttachment 2A

Status Summary

Dresden

DESCRIPTION	APPROXIMATE NUMBER OF LARGE BORE PIPE HANGERS ON EMBEDDED PLATES									
	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR	
Large bore hangers collected for follow-up work	2230	1060	1170	750	1480	1460	770	-	-	
Result of first sort using generic 2½" x 2½" attachment size allowable limits (number of hangers requiring follow-up work)	440	230	210	170	270	380	60	250	190	
Results of second sort using generic larger attachment size allowable limits where applicable (number of hangers requiring follow-up work)	288	182	106	108	180	288	0	154	134	See Note 1
Result of walkdown and evaluation for hangers with loads > allowable upper limits (number of hangers requiring follow-up work)										
- Phase i - Visual data obtained from floor										
- Phase ii - Utilizing UT data for strap location										
Result of walkdown and evaluation for hangers with load > allowable FSAR limits (number of hangers requiring follow-up work)										
- Phase i - Visual data obtained from floor										
- Phase ii - Utilizing UT data for strap location										

The table above describes the results of large bore hanger drawing collection, plotting and sorting. Numerical values represent number of hangers and are approximate numbers.

Note 1: The second sort reduced the hangers requiring follow-up work to 288 from 440. During the week beginning March 9, 1987, it was decided that non-safety related large bore hangers over safety-related equipment in Turbine Building should also be assessed. The changes in the hanger numbers presented on this line due to this will be included in the next weekly report.

Attachment 2B

Status Summary

Quad Cities

DESCRIPTION	APPROXIMATE NUMBER OF LARGE BORE PIPE HANGERS ON EMBEDDED PLATES								
	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR
Large bore hangers collected for follow-up work									
Result of first sort using generic 2½" x 2½" attachment size allowable limits (number of hangers requiring follow-up work)									
Results of second sort using generic larger attachment size allowable limits where applicable (number of hangers requiring follow-up work)									
Result of walkdown and evaluation for hangers with loads > allowable upper limits (number of hangers requiring follow-up work)									
- Phase i - Visual data obtained from floor									
- Phase ii - Utilizing UT data for strap location									
Result of walkdown and evaluation for hangers with load > allowable FSAR limits (number of hangers requiring follow-up work)									
- Phase i - Visual data obtained from floor									
- Phase ii - Utilizing UT data for strap location									

Numbers will be provided/ updated in the following Weekly Status Reports.

The table above describes the results of large bore hanger drawing collection, plotting and sorting. Numerical values represent number of hangers and are approximate numbers.

Attachment #3A

Number of Embedded Plates

Dresden

The following table shows a breakdown of number of embedded plates with large bore pipe hangers attached to them. The numbers indicated are approximate.

Bldg - Unit	Unit #2	Unit #3	Total
Reactor Building	360	470	830
Turbine Building	90	100	190
Total	450	570	1020

Attachment #3B

Number of Embedded Plates

Quad Cities

The following table shows a breakdown of number of embedded plates with large bore pipe hangers attached to them. The numbers indicated are approximate.

Bldg - Unit	Unit #1	Unit #2	Total
Reactor Building	Numbers will be provided/ updated in the following Weekly Status Reports.		
Turbine Building			
Total			

Weekly Status Report

Assessment of Embedment Plates

Status as of March 8, 1987

Commonwealth Edison Company
Dresden Station - Units 2 and 3
Quad Cities Station - Units 1 and 2

March 12, 1987

I. Introduction

This is the first of a series of weekly reports which address the effort to resolve the issue regarding the embedment plates which were constructed with 18 in. strap anchor spacing. The purpose of this report is to update the Nuclear Regulatory Commission, Region III regarding the status for this effort. This first week report provides a brief background of the issue and a plan of action for its resolution. Also included are attachments which will be updated on a weekly basis and provide statistics regarding the number of hangers which are affected and information regarding these hangers. A milestone schedule providing start and completion dates for the major items of work is also included.

II. Background

On February 11, 1987, Commonwealth Edison Company (CECo) notified Sargent & Lundy (S&L) that the embedment plate which supports pipe hanger M-1150D-62 at Dresden Unit 2 had been found to be deformed. Pipe hanger M-1150D-62 consists of a rear-end bracket connected to a rigid strut that supports a 12 inch diameter core spray line. Commonwealth Edison Company asked S&L to investigate this plate and to provide a repair.

In the course of the investigation, S&L found that the strap anchor spacing shown on shop drawings for this embedment plate did not conform to the strap anchor spacing shown on the design drawing. The design drawing required a strap anchor spacing of 9 inches on center staggered, while the shop drawing showed a strap anchor spacing of 18 inches on center staggered (See sketch). A larger strap anchor spacing means that the embedment plate would have a lower load carrying capacity than originally intended.

The repair for the embedment plate supporting hanger M-1150D-62 was issued on February 20, 1987 and has been completed in the field. The cause of the deformation of this plate is being investigated.

III. Immediate Action

To resolve the discrepancy between design drawings and shop drawings, CECo has implemented two actions in parallel.

1) Perform ultrasonic inspection on some existing embedment plates at Dresden and Quad Cities Stations. The purpose of the inspection is to verify the strap anchor spacing. A mockup of an embedment plate with

strap anchors was constructed and used to calibrate the ultrasonic test equipment. Using this UT equipment, two plates at Dresden have been ultrasonically examined and the strap spacing matches the shop drawing. A number of additional in-place embedment plates are being ultrasonically examined at both Dresden and Quad Cities Stations.

In addition, CECo had reported that there was a loose embedment plate with no hangers attached at Quad Cities. This plate has been examined and the strap spacing matches that shown on shop drawing. No further action on this plate is required.

2) The second action performed in parallel to verifying the strap anchor spacing is to collect large bore pipe hanger drawings showing attachments to embedment plates and perform an engineering assessment as described below.

IV. Data Collection and Engineering Assessment

Assuming that the UT examination will confirm 18" strap anchor spacing, a program of data collection and an engineering assessment of the embedment plates using the shop drawing configuration has been initiated. This assessment is described below.

1) Large bore pipe ($\geq$4" in diameter) hanger drawings showing attachment to embedment plates in the Reactor Buildings and portions of the Turbine Buildings at Dresden and Quad Cities were collected. These pipe hangers along with the embedment plate locations have been plotted on plan drawings for future use. The location of the embedment plate seams were also plotted. The data collected so far includes hanger drawings which are in S&L's possession. Other AEs are being contacted in order to confirm that S&L has all applicable hanger drawings.

Support drawings for conduit, cable tray, HVAC and small bore piping were not collected. Loading from these supports is relatively light compared to that from large bore supports.

2) Generic embedment plate allowable loads have been developed. Originally conservative hand calculations were used to develop the embedment plate allowable loads. For this assessment a refined analysis using a finite element computer program has determined the OBE, SSE and upper limit allowable loads. The allowable loads are dependent on attachment size and attachment location relative to edges of the plate and strap anchors. The allowable loads were

based on a conservative (worst) location of the hanger attachment and a conservative (small) size of the hanger attachment. Based on the computer program, load deflection curves were developed for both the interior and exterior regions of the embedment plates. These load deflection curves were used to develop the above mentioned allowable loads.

3) Using the embedment plate allowable loads discussed in Item IV-2, the pipe hangers were sorted into two categories as follows:

   a) Pipe hangers whose loads were within the allowable loads for the embedment plate and require no further action, and

   b) Pipe hangers whose loads were outside the allowable loads for the embedment plate. This second category was broken down further into the following:

      i) Pipe hanger loads which are greater than the embedment plate upper limit.

      (ii) Pipe hanger loads which are less than the embedment plate upper limit but greater than the embedment plate FSAR limits.

4) Based on the sort of hangers discussed in Item IV-3, a walkdown of pipe hangers whose loads exceed the embedment plates upper limit will be performed immediately and is in process at Dresden. A second walkdown of pipe hangers whose loads exceed the embedment plate FSAR limit will be performed at a later date. Each walkdown and resulting assessment will consist of the following phases:

   a) Perform a walkdown to confirm the visible as-built information such as attachment size and attachment location relative to the edges of embedment plates which could vary due to installation tolerances. In addition, the presence of other attachments in the vicinity of the attachment being walked down will be documented and this data will be included in further analysis.

   b) Based on the information collected during the walkdown, a review will be performed to determine if further field investigation is necessary or if the loading on the embedment plate is acceptable.

c) If the hanger load still exceeds the embedment plate allowables, the strap anchor spacing and plate orientation will be determined by using ultrasonic testing.

d) Using the strap anchor locations another analysis will be performed. During this analysis it may be possible to take advantage of the relative location of the strap anchors with respect to the location of the hanger load, i.e., if a load is located directly over or close to a strap anchor, sufficient embedment plate capacity probably exists. Those hanger loads which exceed the allowable loads derived from this second analysis will require further action.

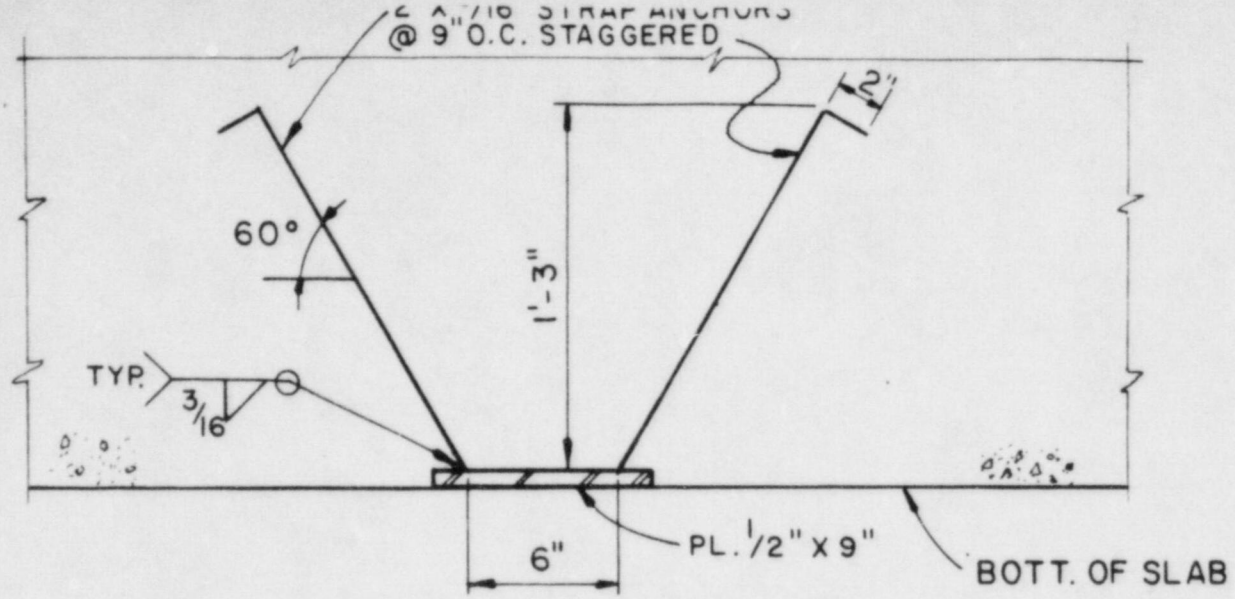
V. Attachments

The following attachments are included for your information:

1. Milestone bar chart - Dresden and Quad Cities

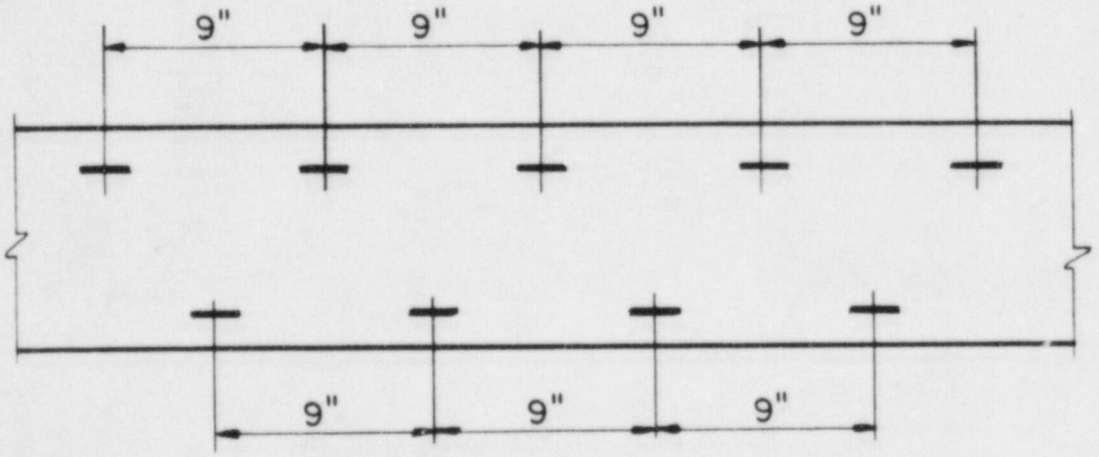
2. Summary Status - 2A Dresden
   2B Quad Cities

3. Number of embedded plates - 3A Dresden
   3B Quad Cities

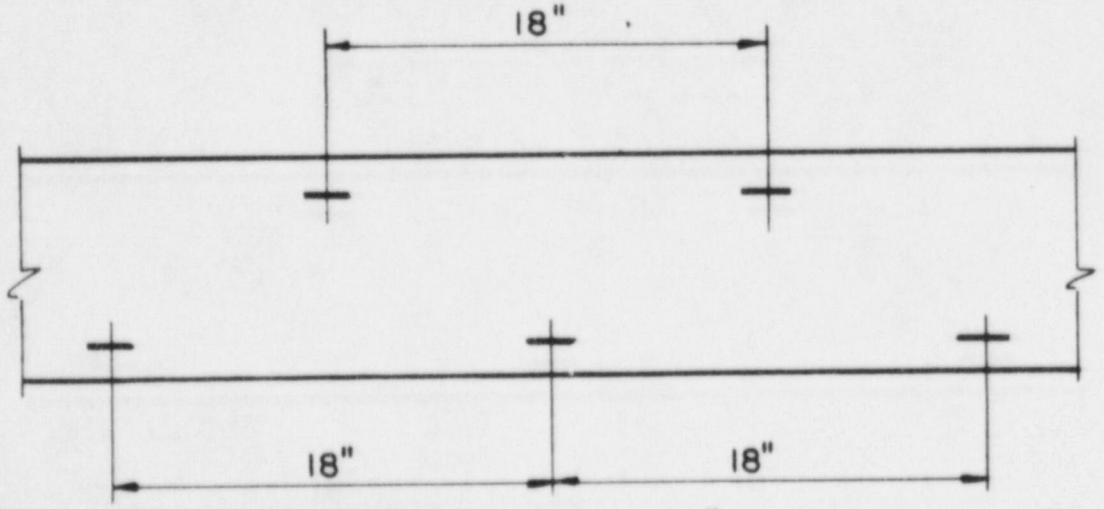


DETAIL K

PER S & L DESIGN DWG. (B-260)



PLAN VIEW - 9" ON CENTER STAGGERED STRAP SPACING



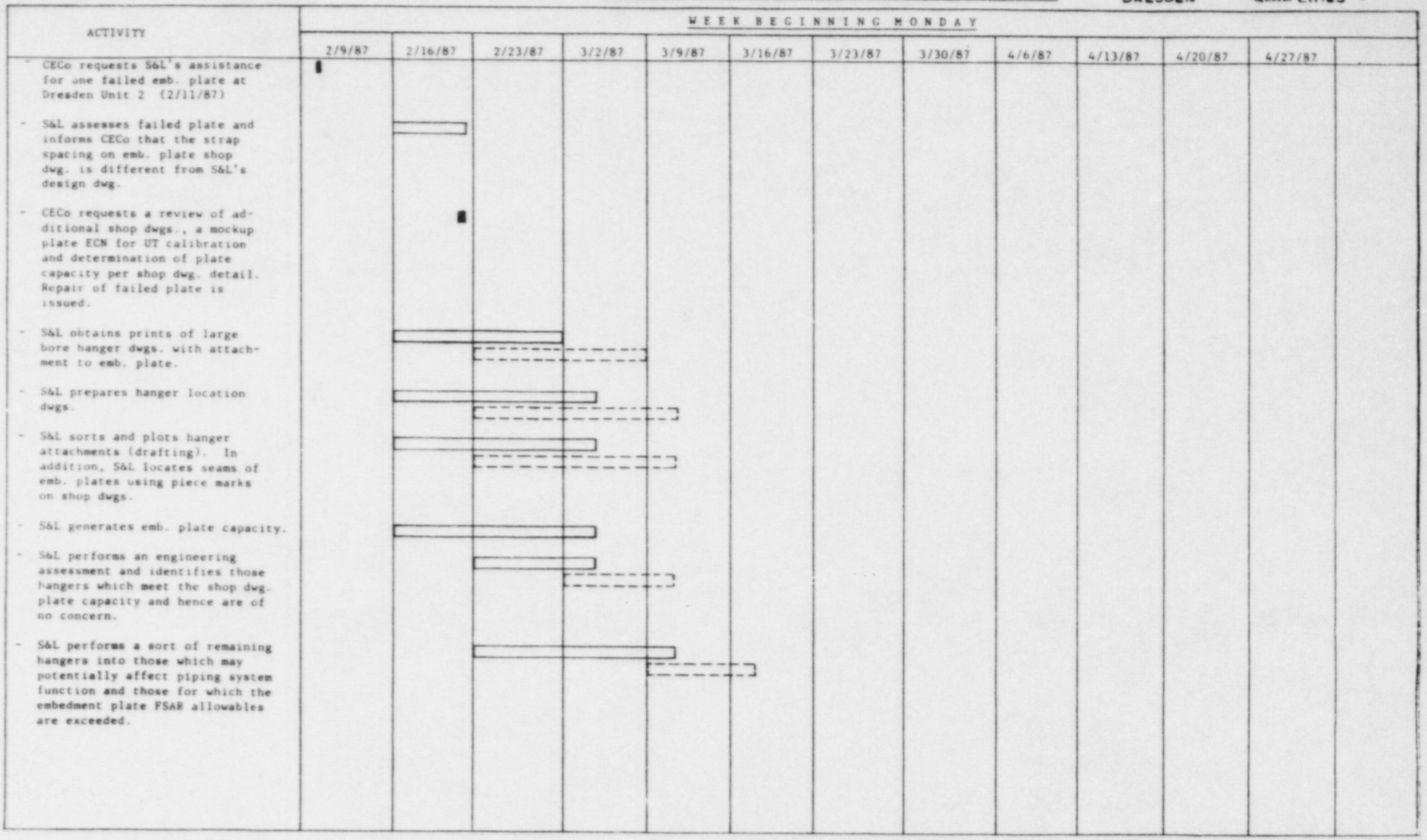
DETAIL PER SHOP DWG. - 18" ON CENTER STAGGERED STRAP SPACING

Attachment 1

Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

DRESDEN — QUAD CITIES



Attachment 1 (Continued)

Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

ACTIVITY	WEEK BEGINNING MONDAY											
	2/9/87	2/16/87	2/23/87	3/2/87	3/9/87	3/16/87	3/23/87	3/30/87	4/6/87	4/13/87	4/20/87	4/27/87
- S&L/CECo performs a walkdown for those hangers which may potentially affect piping system analysis and determine attachment location relative to edges of emb. plate and strap. If necessary, CECo performs UT for strap location.					□ → CONTINUING							
- S&L utilizes walkdown data to perform a sort of these hangers to identify those hangers which still may potentially affect piping system analysis.						[ ] → CONTINUING						
- S&L/CECo perform a walkdown for those hangers which may potentially cause embedment plate FSAR allowables to be exceeded.												
- Assess these hangers based on walkdown data and issue repairs as necessary.												

Atttachment 2A

Status Summary

Dresden

DESCRIPTION	APPROXIMATE NUMBER OF LARGE BORE PIPE HANGERS ON EMBEDDED PLATES									
	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR	
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Result of walkdown and evaluation for hangers with loads > allowable upper limits (number of hangers requiring follow-up work)										
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Note 1: The second sort reduced the hangers requiring follow-up work to 288 from 440. During the week beginning March 9, 1987, it was decided that non-safety related large bore hangers over safety-related equipment in Turbine Building should also be assessed. The changes in the hanger numbers presented on this line due to this will be included in the next weekly report.

Attachment 2B

Status Summary

Quad Cities

DESCRIPTION	APPROXIMATE NUMBER OF LARGE BORE PIPE HANGERS ON EMBEDDED PLATES								
	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR
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Attachment #3A

Number of Embedded Plates

Dresden

The following table shows a breakdown of number of embedded plates with large bore pipe hangers attached to them. The numbers indicated are approximate.

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Attachment #3B

Number of Embedded Plates

Quad Cities

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Bldg - Unit	Unit #1	Unit #2	Total
Reactor Building	Numbers will be provided/ updated in the following Weekly Status Reports.		
Turbine Building			
Total			

Weekly Status Report

Assessment of Embedment Plates

Status as of March 8, 1987

Commonwealth Edison Company
Dresden Station - Units 2 and 3
Quad Cities Station - Units 1 and 2

March 12, 1987

I. Introduction

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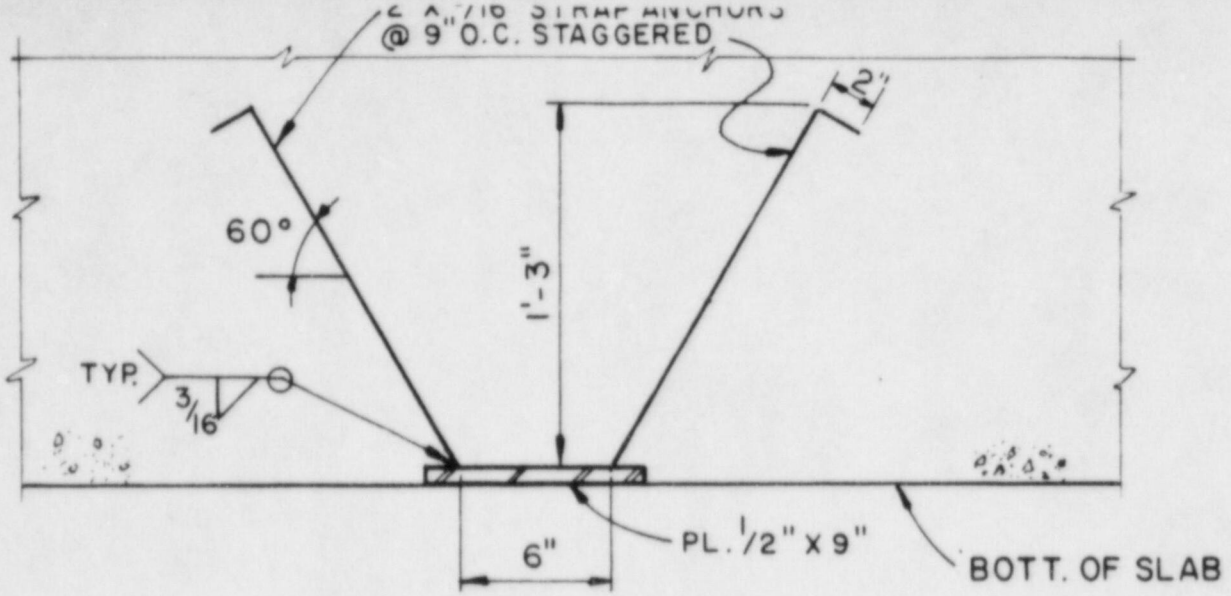
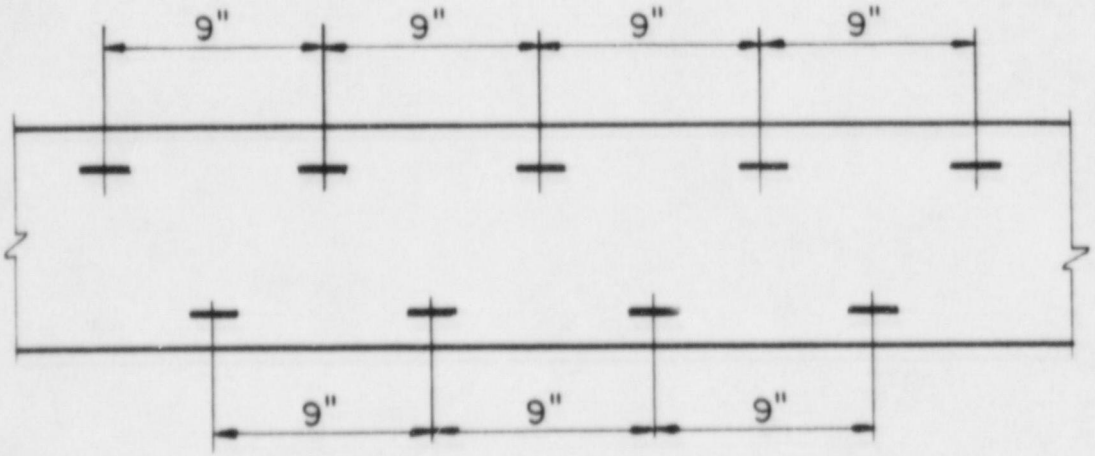
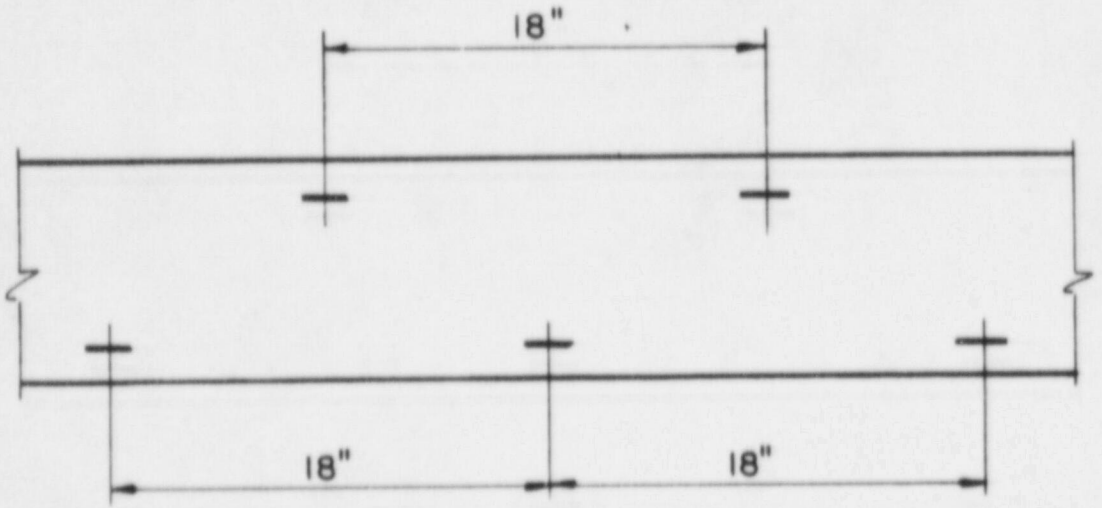


DETAIL K

PER S & L DESIGN DWG. (B-260)



PLAN VIEW - 9" ON CENTER STAGGERED STRAP SPACING



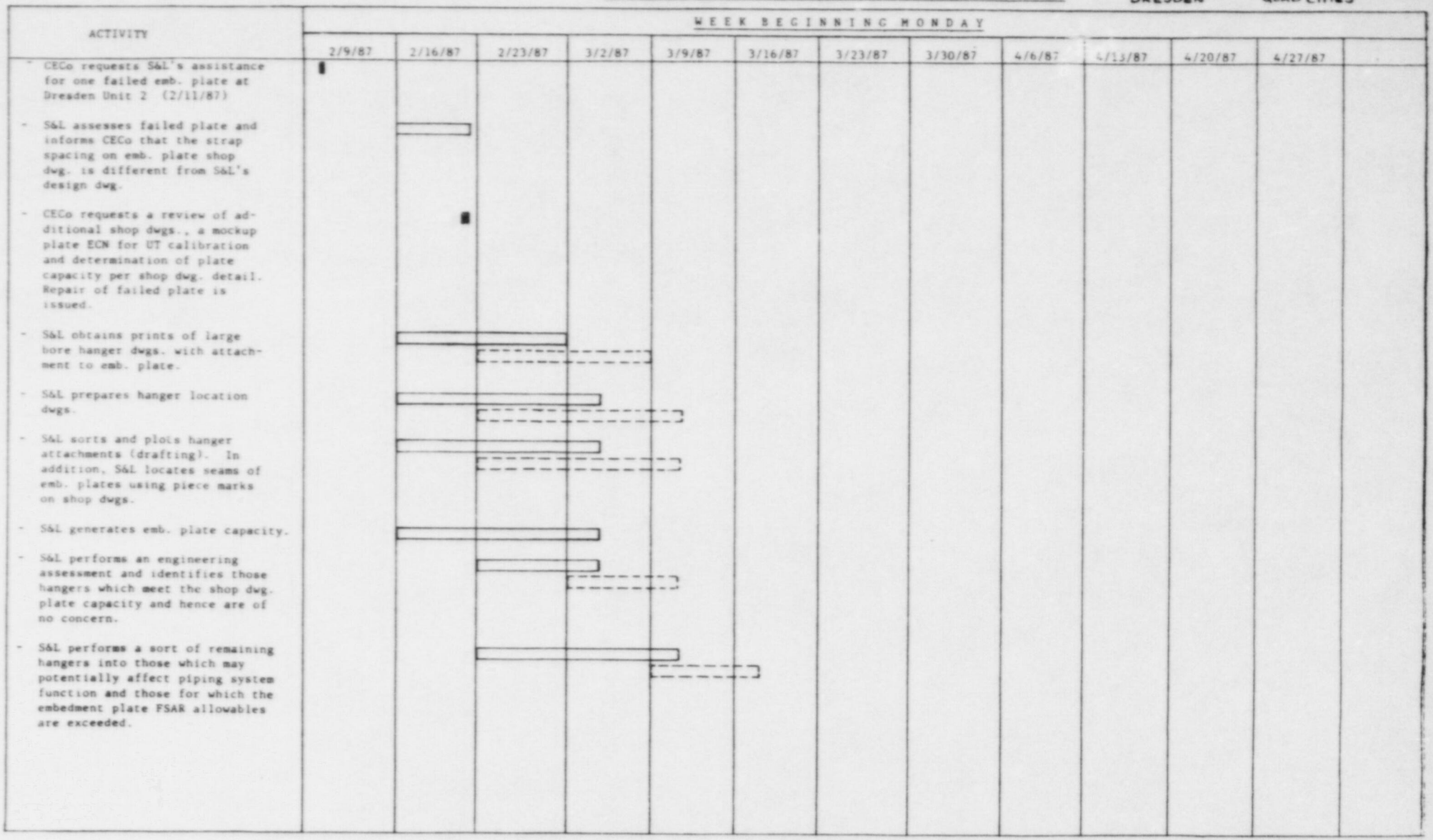
DETAIL PER SHOP DWG. - 18" ON CENTER STAGGERED STRAP SPACING

Attachment 1

Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

DRESDEN — QUAD CITIES



Dresden 2&3 Bar Chart for Embedment Plate Issue Resolution

Quad Cities 1&2 Bar Chart for Embedment Plate Issue Resolution

ACTIVITY	WEEK BEGINNING MONDAY											
	2/9/87	2/16/87	2/23/87	3/2/87	3/9/87	3/16/87	3/23/87	3/30/87	4/6/87	4/13/87	4/20/87	4/27/87
- S&L/CECo performs a walkdown for those hangers which may potentially affect piping system analysis and determine attachment location relative to edges of emb. plate and strap. If necessary, CECo performs UT for strap location.					□ → CONTINUING							
- S&L utilizes walkdown data to perform a sort of these hangers to identify those hangers which still may potentially affect piping system analysis.						[ ] → CONTINUING						
- S&L/CECo perform a walkdown for those hangers which may potentially cause embedment plate FSAR allowables to be exceeded.												
- Assess these hangers based on walkdown data and issue repairs as necessary.												

Atttachment 2A

Status Summary

Dresden

DESCRIPTION	APPROXIMATE NUMBER OF LARGE BORE PIPE HANGERS ON EMBEDDED PLATES									
	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads> Upper Limit	Loads> FSAR	
Large bore hangers collected for follow-up work	2230	1060	1170	750	1480	1460	770	-	-	
Result of first sort using generic 2½" x 2½" attachment size allowable limits (number of hangers requiring follow-up work)	440	230	210	170	270	380	60	250	190	
Results of second sort using generic larger attachment size allowable limits where applicable (number of hangers requiring follow-up work)	288	182	106	108	180	288	0	154	134	See Note 1
Result of walkdown and evaluation for hangers with loads > allowable upper limits (number of hangers requiring follow-up work)										
- Phase I - Visual data obtained from floor										
- Phase II - Utilizing UT data for strap location										
Result of walkdown and evaluation for hangers with load > allowable FSAR limits (number of hangers requiring follow-up work)										
- Phase I - Visual data obtained from floor										
- Phase II - Utilizing UT data for strap location										

The table above describes the results of large bore hanger drawing collection, plotting and sorting. Numerical values represent number of hangers and are approximate numbers.

Note 1: The second sort reduced the hangers requiring follow-up work to 288 from 440. During the week beginning March 9, 1981, it was decided that non-safety related large bore hangers over safety-related equipment in Turbine Building should also be assessed. The changes in the hanger numbers presented on this line due to this will be included in the next weekly report.

Attachment 2B

Status Summary

Quad Cities

DESCRIPTION	APPROXIMATE NUMBER OF LARGE BORE PIPE HANGERS ON EMBEDDED PLATES								
	Total	In Unit #2	In Unit #3	Safety Related	Nonsafety Related	Reactor Bldg.	Turbine Bldg.	Loads > Upper Limit	Loads > FSAR
Large bore hangers collected for follow-up work									
Result of first sort using generic 2½" x 7½" attachment size allowable limits (number of hangers requiring follow-up work)									
Results of second sort using generic larger attachment size allowable limits where applicable (number of hangers requiring follow-up work)									
Result of walkdown and evaluation for hangers with loads > allowable upper limits (number of hangers requiring follow-up work)									
- Phase i - Visual data obtained from floor									
- Phase ii - Utilizing UT data for strap location									
Result of walkdown and evaluation for hangers with load > allowable FSAR limits (number of hangers requiring follow-up work)									
- Phase i - Visual data obtained from floor									
- Phase ii - Utilizing UT data for strap location									

Numbers will be provided/ updated in the following Weekly Status Reports.

The table above describes the results of large bore hanger drawing collection, plotting and sorting. Numerical values represent number of hangers and are approximate numbers.

Attachment #3A

Number of Embedded Plates

Dresden

The following table shows a breakdown of number of embedded plates with large bore pipe hangers attached to them. The numbers indicated are approximate.

Bldg - Unit	Unit #2	Unit #3	Total
Reactor Building	360	470	830
Turbine Building	90	100	190
Total	450	570	1020

Attachment #3B

Number of Embedded Plates

Quad Cities

The following table shows a breakdown of number of embedded plates with large bore pipe hangers attached to them. The numbers indicated are approximate.

Bldg - Unit	Unit #1	Unit #2	Total
Reactor Building	Numbers will be provided/ updated in the following Weekly Status Reports.		
Turbine Building			
Total			