



**Consumers
Power
Company**

Dean L. Quemme
Site Manager
Midland Project

Midland Project: PO Box 1963, Midland, MI 48640 • (517) 631-8650

July 2, 1984

50-329
50-330

Mr John J Harrison, Chief
Midland Project Section
U S Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

PRINCIPAL STAFF		
RA	DRP	
D/RA	DRS	
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MIDLAND ENERGY CENTER PROJECT
MIDLAND DOCKET NOS 50-329, 50-330
REMEDIAL SOILS WORK AUTHORIZATION
FILE 0485.16, 0655 SERIAL CSC-7938

We are enclosing the proposed list of work in accordance with the "NRC and CPGO Work Authorization Procedure" for the period between July 1, 1984 and July 31, 1984. Please review this work list and authorize the specific work items as established in the procedure.

Also enclosed is a Supplemental Work Activity List for August, 1984. Your review, comments and authorization of the specific work items as in accordance with the procedure are similarly requested.

Dean L. Quemme

DLQ/AEB/klw

Attachment

CC Administrator, Region III
DSHood, NRR Project Manager, Washington
Midland Project Manager, Region III
Midland Resident Inspector, Midland

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PDR ADOCK 05000329
A PDR

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WORK ACTIVITY LIST FOR THE PERIOD BETWEEN JULY 1, 1984 and JULY 31, 1984
DEVELOPED IN COMPLIANCE WITH ASLB ORDER OF APRIL 30, 1982

NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
<u>GENERAL</u>			
<u>QUALITY PROGRAM</u>			
102351100	Approval of MPQP-2, Rev 1		A (10/22/82)
102351125	Approval of MPQP-1, Rev 7		A (09/27/83)
<u>AUXILIARY BUILDING & FIVP UNDERPINNING PROGRAM</u>			
<u>WEST FIVP</u>			
102150010	Install Anchor Bolts & Rods (includes hardness test on rods, drill concrete & steel and tensioning)		1 (08/12/82) A (08/13/82)
<u>EAST FIVP</u>			
112150010	Install Anchor Bolts & Rods (includes hardness tests on rods, drill concrete & steel, and tension)		1 (08/12/82) A (08/13/82)
<u>BUILDING MONITORING</u>			
132550027	Install strain gauges and terminate cables (includes testing and calibration)		A (07/28/83)
102050130	Rework Instrument Conduit and Cable for EX2 and EX3 per Disposition on NCRs S-00561 and S-00563		A (01/30/84)
102950125	Install vertical movement monitoring instruments in Control Tower Wall		A (02/28/84)
136050043	Maintain Instrument System		3 (08/12/82) A (08/12/82)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
	132550050	Install, wire conduit and raceway from pier to data room for Pier Instrumentation	2 (12/13/82) A (12/13/82)
	165052021	Terminate Cables in Data Room & Terminal Boxes & Pier Instrumentation	A (03/10/83)
	146050000	Maintain and monitor jacking load on installed piers and grillages ⁵	A (01/30/84)
		<u>GENERAL TEMPORARY DEWATERING</u>	
	125150050	Continue Monitoring Utility Protection Pits (4)	3 (08/12/82) A (08/12/82)
	115150020	Continue Operation of Freeze System & Wells	3 (08/12/82) A (08/12/82)
	522550020	Repair Six (6) Existing Observation Wells (WB-1, WP-2, COE-10, PD-18, W-2, PD-38)	1 (04/05/83) A (09/23/83)
		<u>CRACK MAPPING</u> (includes scaffolding platforms, ladders and extra-ordinary clean up)	
	142550100	Remove concrete surface as required for crack measurements.	A (01/24/84)
	102250200	EPA (East & West)	3 (08/12/82) A (08/12/82)
	102250105	FIVP (East & West)	3 (08/12/82) A (08/12/82)
	102250100	Control Tower & Remainder of Aux Bldg	3 (08/12/82) A (08/12/82)
		<u>GRILLAGE STRUCTURE AT PIER 8E</u>	
	155055010	Install & Load Grillage Structure at Pier 8E	1 (09/17/82) A (06/20/83)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
		<u>GRILLAGE STRUCTURE AT PIER 8W</u>	
	165055010	Install & Load Grillage Structure at Pier 8W	1 (09/17/82) A (06/20/83)
		<u>PIER E5 SUPPORT COLUMNS & GRILLAGE</u>	
	155055020	Excavate for & install support columns next to containment & install and load grillage structure at Pier E5. (Including Instrumentation)	A (03/30/84)
		<u>PIER W5 SUPPORT COLUMNS & GRILLAGE</u>	
	165055020	Excavate for & install support columns next to containment & install and load grillage structure at Pier W5. (Including Instrumentation)	A (03/30/84)
		<u>PIER E3</u>	
	155052135	Finger drift to, excavate, install and load Pier E3 ^{1,2,3}	A (06/15/84)
		<u>PIER W3</u>	
	165052135	Finger drift to, excavate, install and load Pier W3 ^{1,2,3}	A (06/15/84)
		<u>PIER E7</u>	
	155052115	Finger drift to, excavate, install and load Pier E7 ^{1,2,3}	A (06/05/84)
		<u>PIER W7</u>	
	165052115	Finger drift to, excavate, install and load Pier W7 ^{1,2,3}	A (06/05/84)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
		<u>PIER E17</u>	
	155055068	Excavate, Install and Load Redesigned E-17	A (03/14/84)
	155052075	Drift to Pier E17 from E16. Excavate, install and load Pier E17.	A (01/20/84)
		<u>PIER W17</u>	
	165055068	Excavate, install and load redesigned W17	A (05/16/84)
	165052075	Drift to Pier W17 from W16. Excavate, install and load Pier W17.	A (01/20/84)
		<u>PIER E15</u>	
	155052045	Drift to/access pit at Pier E15, excavate and install Pier E15.	A (04/16/84)
		<u>PIER W15</u>	
	165052045	Drift to/access pit at Pier W15, excavate and install Pier W15.	A (04/16/84)
		<u>PIER KC5</u>	
	165052340	Finger drift to, excavate, install & load Pier KC5 ^{1,2,3}	A (03/30/84)
		<u>PIER KC8</u>	
	155052340	Finger drift to, excavate, install & load Pier KC8 ^{1,2,3}	A (03/30/84)
		<u>PIER CT3</u>	
	165052080	Drift to, Excavate, Install & Load Pier CT3 ^{1,2,3}	1 (03/06/84) A (03/30/84)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
		<u>PIER CT10</u>	
	155052080	Drift to, Excavate, Install & Load Pier CT10 ^{1,2,3}	1 (03/06/84) A (03/30/84)
		<u>PIER CT5</u>	
	165052105	Drift to, Excavate, Install & Load Pier CT5 ^{1,2,3}	A (06/05/84)
		<u>PIER CT8</u>	
	155052105	Drift to, Excavate, Install & Load Pier CT8 ^{1,2,3}	A (06/05/84)
		<u>DOWELS AT FIVP</u>	
	155050325	Install dowels at east FIVP	1 (02/06/84) A (06/05/84) (Drill Only)
	165050325	Install dowels at west FIVP	1 (02/06/84) A (06/05/84) (Drill Only)
		<u>DOWELS AT EPA</u>	
*	155050320	Drill for and install anchor through bolts and vertical dowels in EPA	
*	155055421	Drill for and install permanent wall upper bearing plates	
		<u>LEVEL C WALES</u>	
	165055305	Install Level C Wales, West Side	A (08/29/83)
	155055305	Install Level C Wales, East Side	A (08/29/83)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
		<u>EXCAVATION ZONES</u>	
	155052070	Excavate/Lag Zone Y3	1 (02/06/84) A (03/14/84)
	165052070	Excavate/Lag Zone Z3	1 (02/06/84) A (03/14/84)
*	155056007	MASS Excavate Zone Y-4A	A (06/25/84)
*	165056007	MASS Excavate Zone Z-4A	A (06/25/84)
*	155056009	MASS Excavate Zone Y-4B	
*	165056009	MASS Excavate Zone Z-4B	
		<u>SUPPORT BRACKETS</u>	
	152555010	Install Temporary Support Bracket at E1	1 (11/16/83) A (03/14/84)
	162555010	Install Temporary Support Bracket at W1	1 (11/16/83) A (03/14/84)
	152555020	Install & Load Temporary Support Bracket @ Col KC-7	A (06/05/84)
	162555020	Install & Load Temporary Support Bracket @ Col KC-5.89 & KC-6	A (06/05/84)
		<u>BRACE/STRUT E10 & E11</u>	
	155055320	Install Brace/Strut E10 & 11	1 (02/06/84) A (03/14/84)
		<u>BRACE/STRUT W10 & W11</u>	
	165055320	Install Brace/Strut W10 & W11	1 (02/06/84) A (03/14/84)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
		<u>E8 & E9 TIEBACKS</u>	
**	155055480	Install Tiebacks and Struts at Piers E2 through E9	A (06/25/84)
		<u>W8 & W9 TIEBACKS</u>	
**	165055480	Install Tiebacks and Struts at Piers W2 through W9	A (06/25/84)
		<u>LONG DRIFTS</u>	
	165052375	Complete Drift KC4 to CT1 ¹	A (03/30/84)
	155052375	Complete Drift KC9 to CT12 ¹	A (03/30/84)
	155052320	Drift From KC3 to 13ft East of KC4 ¹	A (09/23/83)
	165052320	Drift From KC10 to 9ft West of KC9 ¹	A (09/23/83)
		<u>SERVICE WATER PUMP STRUCTURE UNDERPINNING PROGRAM</u>	
		<u>POST TENSIONING SYSTEM</u>	
	202555170	Post Tensioning Tendon inspection & maintenance	3 (12/07/82) A (12/07/82)
		<u>DEWATERING</u>	
	207050646	Continuing Monitoring & Repair of the CWIS-SWPS Hydraulic Seal	A (09/27/83)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
	207050387	Convert 7 Wells used on 72" pipe repair to support SWPS dewatering. (Includes install new ejectors, temporary headers, operate, & maintain)	1 (11/01/82) A (02/11/83)
	207050620	Activate, Operate and Maintain Dewatering System	1 (09/17/82) A (05/27/83)
		<u>ACCESS SHAFT & EXCAVATION</u>	
	200050005	SWPS Soils Stabilization	A (01/30/84)
	200054000	Concreting of SWPS north floor trench and core drilling of through anchor bolt holes.	A (05/16/84)
*	200054005	Exploratory chipping of SWPS Duct Bank crack	A (06/15/84)
	207050781	Excavate, lag, brace and install wales and struts in upper east section of SWPS access shaft (soldier piles 14 thru 30 - maximum excavation to EL 618'- $\frac{3}{4}$ " excluding localized excavation at pipe supports).	A (09/30/83)
	207050782	Excavate, lag, brace and install wales and struts in upper west section of SWPS access shaft (soldier Piles 1 thru 14 - maximum excavation to EL 624'- $\frac{9}{4}$ " excluding localized excavation at pipe supports).	A (09/30/83)
	207050783	Excavate, lag, brace and install wales and struts, pour and cure concrete mudmat in lower east section of SWPS access shaft ₄ (soldier piles 14 thru 30 - below elev 618'-3").	A (05/16/84)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
	207050784	Excavate, lag, brace and install wales and struts, pour and cure concrete mudmat in lower west section of SWPS access shaft, (soldier piles 1 thru 14 - below elev 624'-9"). <u>PIER 1</u>	A (05/16/84)
	207053005	Excavate Pier 1	A (06/15/84)
	207050005	Set-up & perform plate load test @ Pier 1	
*	207050015	Install and load Pier 1 <u>PIER 1A</u>	
	207053010	Excavate Pier 1A	A (06/15/84)
*	207054010	Install and load Pier 1A	
		<u>BUILDING MONITORING</u>	
	206050105	Crack Map SWPS	1 (09/17/82) A (03/10/83)
	206050101	Install Permanent Benchmark Covers	1 (09/17/82) A (04/20/83)
	206050104	Baseline, Operate, and Maintain Instrument System	A (09/01/83)
		<u>BORATED WATER STORAGE TANK FOUNDATION & TANK REPAIR PROGRAM</u>	
		<u>UNIT 1 TANK</u>	
	312150011	Construct New Ring Beam (set forms & place rebar, pour concrete)	1 (08/12/82) A (07/08/83)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
	312550019	Reinstall Electrical Ductbank	2 (09/17/82) A (04/06/83)
	312550100	Install Instruments (includes testing and calibration)	1 (11/01/82)
		<u>UNIT 2 TANK</u>	
	322150011	Construct New Ring Beam (set forms & place rebar, pour concrete)	1 (08/12/82) A (07/08/83)
	322550019	Reinstall Electrical Ductbank	2 (09/17/82) A (04/06/83)
	322550100	Install Instruments (includes testing and calibration)	1 (11/01/82)
		<u>CONSTRUCTION WORK IN SOIL MATERIAL PROGRAMS</u>	
		<u>DIESEL FUEL SUPPLY LINES</u>	
	722050001	Diesel Fuel Supply Lines-Install Missile Shielding	A (05/16/84)
	722050002	Excavate and backfill for DFO supply lines	1 (11/01/82) A (05/16/84)
		<u>CATHODIC PROTECTION</u>	
	752050001	Drill and replace annodes (as necessary)	1 (08/25/82) A (10/06/83)
	752050002	Drill and install new annodes	1 (11/01/82) A (10/06/83)
		<u>CONTAINMENT TENDON ACCESS VENT HVAC</u>	
	802550020	Excavate for, Install and Backfill Electrical Duct Bank and Equipment Pad for the Unit 2 HVAC Fan	1 (09/17/82) A (05/16/84)

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
		<u>DIKE MAINTENANCE</u>	
	812550010	Normal dike maintenance in Q areas	A (05/27/83)
		<u>PERMANENT DEWATERING PROGRAM</u>	
	522150005	Install Remaining Wells	1 (09/17/82)
	522550016	Install electrical equipment & conduit	1 (09/17/82)
	522550021	Excavate, install and backfill header piping, electrical conduit, and pumps (including equipment slabs and metering pits)	1 (09/17/82)
	522550026	Assemble and wire pump control panels	R
		<u>MISCELLANEOUS</u>	
	942450200	Remove (excavation) temporary uncontrolled fill located in Q areas (DWG C-45Q) as identified on NCRs and the OGSE action item logs, and backfill per Spec C-211Q	1 (07/05/83) A (09/27/83)
	202550195	Remove unacceptable backfill & casing and replace with controlled backfill (SWPS).	A (03/14/84)

SUPPLEMENTAL WORK ACTIVITY LIST FOR THE PERIOD BETWEEN AUGUST 1, 1984 AND AUGUST 31, 1984
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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
<u>AUXILIARY BUILDING & FIVP UNDERFINNING PROGRAM</u>			
		<u>PIER E6</u>	
*	155053085	Excavate, install and load Pier E6 ^{1,2,3}	
		<u>PIER W6</u>	
*	165053085	Excavate, install and load Pier W6 ^{1,2,3}	
		<u>PIER E4</u>	
*	155052120	Finger drift to, excavate, install and load Pier E4 ^{1,2,3}	
		<u>PIER W4</u>	
*	165052120	Finger drift to, excavate, install and load Pier W4 ^{1,2,3}	
		<u>PIER E2</u>	
*	155052379	Finger drift to, excavate and install Pier E2 ^{1,2,3}	
		<u>PIER W2</u>	
*	165052379	Finger drift to, excavate and install Pier W2 ^{1,2,3}	
		<u>PIER CT2</u>	
*	165053075	Excavate, install and load Pier CT2 ^{1,2,3}	
		<u>PIER CT11</u>	
*	155053075	Excavate, install and load Pier CT11 ^{1,2,3}	

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NEW OR REVISED ITEMS	ACTIVITY IDENTIFIER	PROGRAM, WORK AREA & ACTIVITY	PREVIOUS REGION III DESIGNATION
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EXCAVATION ZONES

*	155056303	Mass Excavate Zone Y-8	
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*	165056303	Mass Excavate Zone Z-8	
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SERVICE WATER PUMP STRUCTURE UNDERPINNING PROGRAM

PIER 2

*	207053015	Excavate approach, excavate, install and load Pier 2	
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PIER 2A

*	207053020	Excavate approach, excavate, install and load Pier 2A.	
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UNDERGROUND PIPE REPLACEMENT, REBEDDING AND MONITORING PROGRAM

SERVICE WATER PIPE REBEDDING

**	400050100	Install Sheeted Pits and Soldier Beams @ Area A	
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**	400050200	Install Sheeted Pits and Soldier Beams @ Area B	
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**	400050300	Install Sheeted Pits and Soldier Beams @ Area C (including 48" pipe repair)	
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**	400050400	Install Sheeted Pits and Soldier Beams @ Area D	
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CONSTRUCTION WORK IN SOIL MATERIAL PROGRAMS

MISCELLANEOUS

912450100	Excavate for, repair, backfill 12" condenser drain line		
832450100	Excavate and backfill for Nitrogen Seal Tank Unit 1		
832450200	Excavate and backfill for Nitrogen Seal Tank Unit 2		
622450100	Excavate and backfill for repair of Deep Q Duct Bank near Pit 4		
642450100	Backfill Utility Monitoring Pits 1, 2, 3 and 4		
*	9324500100	Install concrete slab at Oily Waste Building	

NOTES

A single asterisk (*) in left hand column indicates the work activity is a new item.

A double asterisk (**) in left hand column indicates the work activity description has been revised.

Designation 1 in the right hand column indicates additional information is required by NRC Region III on this critical activity.

Designation 2 in the right hand column indicates no additional information is required by NRC Region III on this critical activity.

Designation 3 in the right hand column indicates that the activity is not critical and work can proceed.

The date shown after the designation corresponds to the date of the NRC letter that provided the designation.

An "A" following the designation indicates that Region III has provided approval to proceed with the activity. The date following the "A" corresponds with the date of the NRC letter that provides authorization to proceed with the work activity.

A "R" in the right hand column indicates that previous designation or approval has been rescinded because of a significant revision to the work activity or 90 days has elapsed or is expected to elapse since the work was authorized without the work being initiated.

FOOTNOTES

¹ Drift Activity normally includes

1. fabricate steel sets
2. excavate
3. install steel sets (Hilti bolts as necessary)
4. remove concrete (as necessary)
5. localized dewatering (as necessary)
6. install wood lagging
7. place mudmat
8. stabilize soil (as necessary)
9. brace and/or rebrace
10. concrete invert
11. slope layback

² Excavate Pier activity normally includes

1. excavate
2. concrete removal (as necessary)
3. dewatering (as necessary)
4. fabricate steel lagging
5. install steel lagging
6. auger bottom of pit to determine hydrostatic water pressure & plug
7. place mudmat
8. stabilize soil (as necessary)

³ Install & load Pier activity normally includes

1. fab & install embeds
2. fab & install reinforcing steel
3. install telltales
4. install Carlson meters
5. place concrete
6. fab & install leveling & bearing plates, jackstands
7. install jacks
8. transfer load

⁴ Excavate Access Shaft Activity Normally Includes:

1. excavate
2. fabricate and install steel lagging
3. fabricate and install structural steel supports and bracing
4. place mudmat
5. stabilize soil (as necessary)
6. localized dewatering (as necessary)
7. support and protect utilities

⁵ Maintaining and Monitor Loading of Piers & Grillages

This one activity is to eliminate the numerous activities used for maintaining loads of installed piers and grillages