

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/19/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1600
Contractor(s):	Ryan Central Inc. Chesapeake	Contractor(s) Rep:	John Johnson (Ryan Central) Emiliano Saenz (Chesapeake)

SITE CONDITIONS	
Weather (AM): Mostly Cloudy	Temperature: 66
Weather (PM): Partly Cloudy	Temperature: 85
Precipitation: None	Wind: E 0-9 mph

EQUIPMENT ON SITE
1-Kubota RTV X112OD; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION																												
Work performed while Golder was onsite:																												
Ryan Central -1 Foreman, 3 Operators, 2 Laborers																												
<ul style="list-style-type: none"> Regrade of haul roads. Pumping standing water from west side of Pond 2 and hauled to southeast corner of Pond 2. 																												
Chesapeake – 1 Superintendent, 11 Technicians, 1 operator, 2 Laborers																												
<ul style="list-style-type: none"> Chesapeake continued deployment of geotextile in Pond 1. Chesapeake sewed all panels deployed today. Chesapeake made repairs to all defects on geotextile panels deployed. Chesapeake placed sandbags around the outside edges of all deployed geotextile. 																												
<u>Summary of Dewatering:</u>																												
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<u>Week 5</u> 06/03/19: 185,365 gal. 06/04/19: 409,662 gal. 06/05/19: 345,122 gal. 06/06/19: 311,007 gal. 06/07/19: 276,790 gal. 06/08/19: 65,064 gal.	<u>Week 6</u> 06/10/19: 175,022 gal. 06/11/19: 184,365 gal. 06/12/19: 178,934 gal. 06/13/19: 147,219 gal. 06/14/19: 13,156 gal. 06/15/19: 142,063 gal.	<u>Week 7</u> 06/17/2019: 247,813 gal. 06/18/2019: 68,510 gal. 06/19/2019: 215,872 gal. 06/20/2019: 207,117 gal. 06/21/2019: 200,874 gal. 06/22/2019: 102,207 gal.	<u>Week 8</u> 06/24/2019: 218,008 gal. 06/25/2019: 208,371 gal. 06/26/2019: 181,215 gal. 06/27/2019: 216,650 gal. 06/28/2019: 208,921 gal. 06/29/2019: 135,907 gal.
<u>Week 9</u> 07/01/19: 175,586 gal. 07/02/19: 129,459 gal. 07/03/19: 13,878 gal. 07/04/19: None 07/05/19: 137,112 gal. 07/06/19: 95,100 gal.	<u>Week 10</u> 07/08/19: 107,894 gal. 07/09/19: 44,007 gal. 07/10/19: 25,922 gal. 07/11/19: 27,943 gal. 07/12/19: 18,335 gal. 07/13/19: None	<u>Week 11</u> 07/15/19: None 07/16/19: 17,852 gal. 07/17/19: 20,293 gal. 07/18/19: None 07/19/19: 20,316 gal. 07/20/19: None	<u>Week 12</u> 07/22/19: 15,890 gal. 07/23/19: 15,310 gal. 07/24/19: 23,572 gal. 07/25/19: None 07/26/19: None 07/27/19: None
<u>Week 13</u> 07/29/19: None 07/30/19: 23,124 gal.	<u>Week 14</u> 08/16/19: 49,780 Total: 13,911,414 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Performed CQA oversight and documentation on geotextile installation.
- Performed CQA oversight and documentation on 8oz. geotextile installed today.
- Golder monitored deployment of 8oz. geotextile.
- Golder observed sewing of all deployed panels on Pond 1.
- Golder observed repairs to damage of geotextile by patch placed over defect by leistering of 8oz. textile patch over defect.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature: 

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Deployment of geotextile in Pond 1, looking northwest.



Sewing of geotextile panel seam, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Repaired and vacuum tested defect.



West side of Pond 2 after previous night's rain, looking south.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW

Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/20/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc. Chesapeake	Contractor(s) Rep:	John Johnson (Ryan Central) Emiliano Saenz (Chesapeake)

SITE CONDITIONS

Weather (AM): Partly Sunny	Temperature: 70
Weather (PM): Sunny	Temperature: 86
Precipitation: None	Wind: SE 0-6 mph

EQUIPMENT ON SITE

1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION

Work performed while Golder was onsite:

Ryan Central -1 Foreman, 3 Operators, 2 Laborers

- Continued placement of structural fill in Pond 2 in a single 11 to 12 inch loose lift.
- Continued compacting structural fill placed in Pond 2 with an 815 compactor.
- Visual inspection and rock removal for liner deployment in Pond 1.
- Rolled liner sub-grade in Pond 1 with smooth drum roller.
- Import structural fill.
- Pumping standing water from west side of Pond 2 and hauled to southeast corner of Pond 2.

Chesapeake – 1 Superintendent, 11 Technicians, 1 operator, 2 Laborers

- Chesapeake continued deployment of geomembrane in Pond 1.
- Chesapeake preformed trial welds for fusion and extrusion prior to any seaming or repairs.
- Chesapeake seamed all panels deployed today using the fusion method.
- Chesapeake preformed air pressure testing of all fusion seams performed today on deployed geomembrane.
- Chesapeake made repairs to all defects on panels P-23 thru P-25 deployed.
- Chesapeake continued vacuum testing of repairs.
- Chesapeake field tested destructs DS-34 thru DS-38 and DX-1.
- Chesapeake continued deployment of geotextile in Pond 1.
- Chesapeake sewed all panels deployed today.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

- Chesapeake made repairs to all defects on geotextile panels deployed.
- Chesapeake placed sandbags around the outside edges of all deployed geotextile.

Summary of Dewatering:

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05/06/19: 281,988 gal.	05/13/19: 399,021 gal.	05/20/19: 328,687 gal.	05/27/19: Holiday
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07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>	<u>Week 14</u>		
07/29/19: None	08/16/19: 49,780		
07/30/19: 23,124 gal.	Total: 13,911,414 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2, Cat D6T with GPS placed material in a single 11 to 12 inch loose lift. Cat 815 sheep foot was used to compact to 9 inches.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-66 thru 69 on 9-inch compacted structural fill lift 1 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.
- Performed CQA oversight and documentation on 40mil HDPE micro-spike geomembrane and 8oz. geotextile deployed today.
- Chesapeake installed approximately 47,520sf of geomembrane on Pond 1 today for a total of 381,150sf to date.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

- Golder monitored deployment of 40mil micro-spike geomembrane panels P-23 thru P-25 and 8oz. geotextile installed.
- Golder monitored and documented trial seams for fusion and extrusion in P.M. preformed prior to seaming or repair activities.
- Golder observed seaming of all deployed panels on Ponds by fusion seaming method using 3 wedges.
- Golder monitored non-destructive testing of all fusion seams by air pressure testing to a minimum of 30psi for 5 minutes with a loss of no more than 4psi in accordance to specifications.
- Golder observed repairs to defects by extrusion method.
- Golder monitored vacuum testing of repairs.
- Golder marked destructive test locations DS-34 thru DS-38 and DX-1 on geomembrane for removal by Chesapeake and destructive field testing onsite.
- Golder monitored field testing of destructs DS-34 thru DS-38 and DX-1 prior to shipping for third party testing.
- Golder monitored deployment of 8oz. geotextile.
- Golder observed sewing of all deployed panels on Pond 1.
- Golder observed repairs to damage of geotextile by patch placed over defect by leistering of 8oz. textile patch over defect.
- Golder shipped destructs DS-34 thru DS-38 and DX-1 to laboratory for testing.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS
--

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)
--

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES
--

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature: 
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Deployment of geotextile in Pond 1, looking northwest.



Sewing of geotextile panel seam, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Preparing trial weld.



Pressure testing of fusion seam.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Removing marked destruct for field testing.



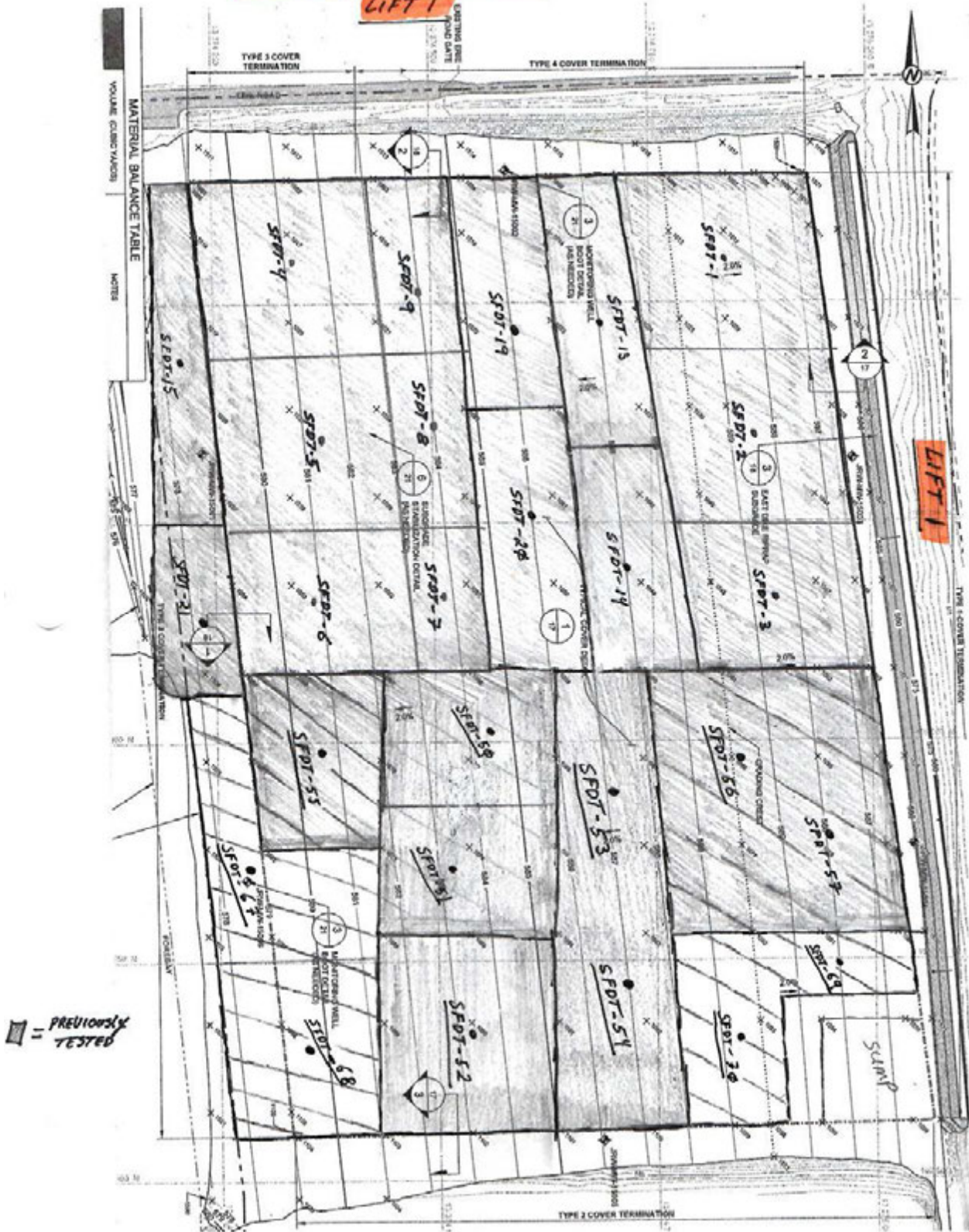
Seaming of geomembrane panels by fusion method.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

DENSITY TEST MAP
LIFT 1



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
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Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1800
Contractor(s):	Ryan Central Inc. Chesapeake	Contractor(s) Rep:	John Johnson (Ryan Central) Emiliano Saenz (Chesapeake)

SITE CONDITIONS	
Weather (AM): Sunny	Temperature: 70
Weather (PM): Sunny	Temperature: 80
Precipitation: None	Wind: W 0-5 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

SUMMARY OF CONSTRUCTION																												
Work performed while Golder was onsite:																												
Ryan Central -1 Foreman, 3 Operators, 2 Laborers																												
<ul style="list-style-type: none"> Continued placement of structural fill in Pond 2, material placed in stockpile. Import structural fill. Pumping standing water from west side of Pond 2 and hauled to southeast corner of Pond 2. Erie Road maintenance to allow standing water along road to flow to ditches. Mobilized Volvo A45G haul truck. 																												
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GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored stockpiling of structural fill in Pond 2
- Performed CQA oversight and documentation on 8oz. geotextile deployed today.
- Golder monitored deployment of 8oz. geotextile.
- Golder observed sewing of all deployed panels on Pond 1.
- Golder observed repairs to damage of geotextile by patch placed over defect by leistering of 8oz. textile patch over defect.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

Bi-Weekly construction meeting with CEC, Ryan and Golder.

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Overview of Pond 1, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Structural fill import, looking southwest.



Sewing geotextile seam, looking northeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/22/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc. ProAct	Contractor(s) Rep:	John Johnson (Ryan Central) Guillermo Arredondo (ProAct)

SITE CONDITIONS	
Weather (AM): Mostly Cloudy	Temperature: 68
Weather (PM): Partly Cloudy	Temperature: 77
Precipitation: None	Wind: E 3-15 mph

EQUIPMENT ON SITE
1-Kubota RTV X112OD; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

SUMMARY OF CONSTRUCTION																												
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 5</u> 06/03/19: 185,365 gal. 06/04/19: 409,662 gal. 06/05/19: 345,122 gal. 06/06/19: 311,007 gal. 06/07/19: 276,790 gal. 06/08/19: 65,064 gal.	<u>Week 6</u> 06/10/19: 175,022 gal. 06/11/19: 184,365 gal. 06/12/19: 178,934 gal. 06/13/19: 147,219 gal. 06/14/19: 13,156 gal. 06/15/19: 142,063 gal.	<u>Week 7</u> 06/17/2019: 247,813 gal. 06/18/2019: 68,510 gal. 06/19/2019: 215,872 gal. 06/20/2019: 207,117 gal. 06/21/2019: 200,874 gal. 06/22/2019: 102,207 gal.	<u>Week 8</u> 06/24/2019: 218,008 gal. 06/25/2019: 208,371 gal. 06/26/2019: 181,215 gal. 06/27/2019: 216,650 gal. 06/28/2019: 208,921 gal. 06/29/2019: 135,907 gal.
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<u>Week 13</u> 07/29/19: None 07/30/19: 23,124 gal.	<u>Week 14</u> 08/16/19: 49,780 Total: 13,911,414 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2 in a 10 to 12 inch loose lift for lift 2, no compaction today of placed material.
- Golder observed excavation along the Fore bay west of Pond 2, material was hauled to the southeast corner of Pond 2 and stockpile for later use in bridging layer.
- Golder monitored excavation of the trench running from soft spot in Pond 2 to sump used for dewatering. Stone was removed and a clay plug installed, compaction achieved using bucket of excavator tamping material in place.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Excavation of French Drain trench to remove drainage stone and install clay plug, looking west.



Installing clay plug in the French Drain trench, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Excavating along fore bay west of Pond 2, looking west.



Import of structural fill to Pond 2, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/23/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc. ProAct	Contractor(s) Rep:	John Johnson (Ryan Central) Guillermo Arredondo (ProAct)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 63
Weather (PM): Partly Sunny	Temperature: 75
Precipitation: None	Wind: NE 3-10 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

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ProAct Services – 1 Foreman																												
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

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GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2 in a 10 to 12 inch loose lift for lift 2.
- Golder observed compaction of placed structural fill in Pond 2 using a Cat 815 sheep foot compactor.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-70 thru 71 on 9-inch compacted structural fill lift 2 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.
- Golder observed excavation along the Fore bay west of Pond 2, material was hauled to the southeast corner of Pond 2 and stockpiled for use in bridging layer.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Cleaning out sand pots of filter system for demobilization, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Installing clay cap over cut west of Pond 2 along the fore bay, looking south.



Excavating along fore bay west of Pond 2, looking south.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Installing silt fence west of excavation along fore bay, looking south.



Southeast corner of Pond 2, looking east.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

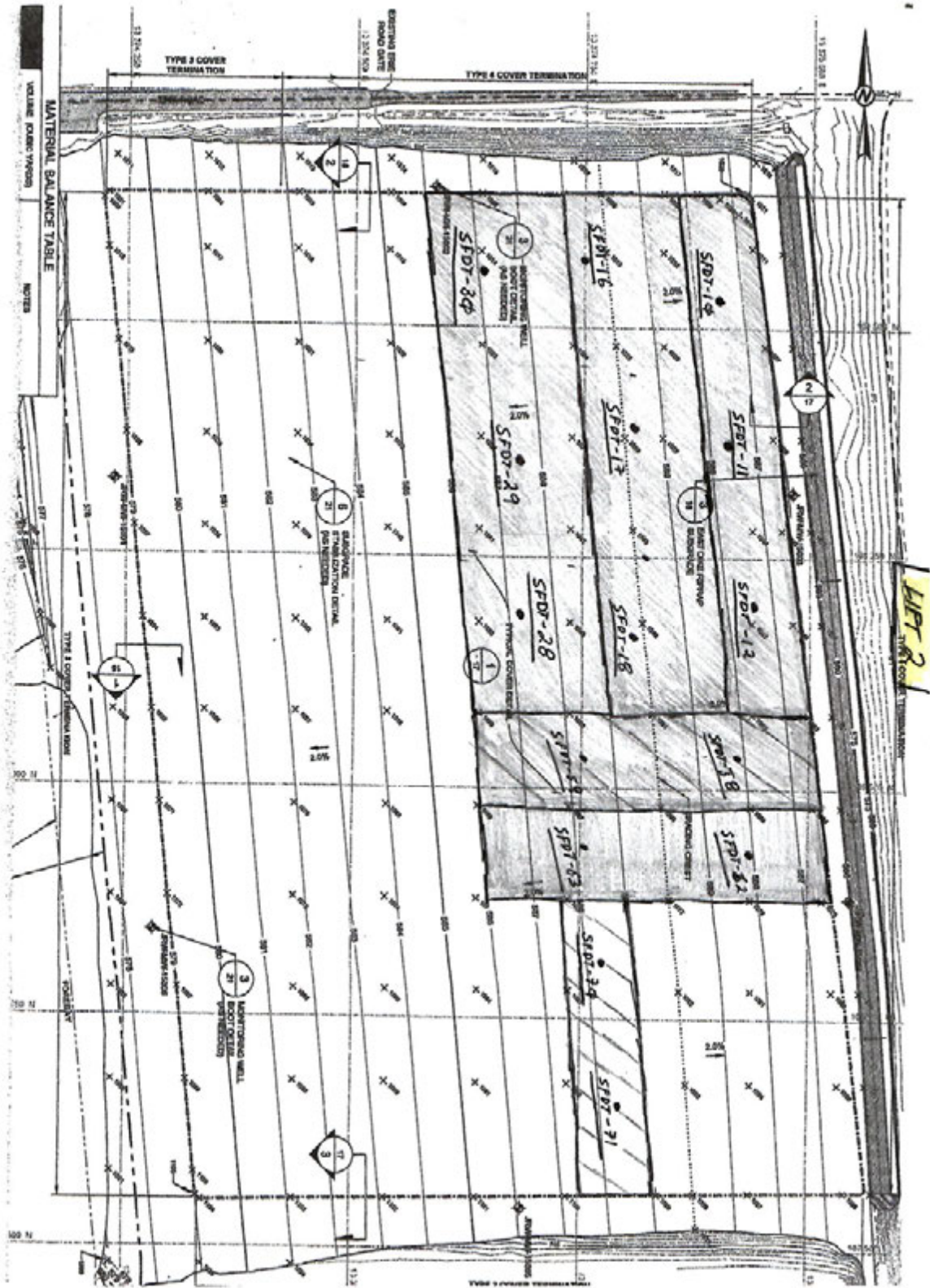


DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

DENSITY TEST MAP LIFT 2



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/26/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1700
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Cloudy	Temperature: 63
Weather (PM): Overcast	Temperature: 70
Precipitation: Rain	Wind: S 2-13 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
07/03/19: 13,878 gal.	07/10/19: 25,922 gal.	07/17/19: 20,293 gal.	07/24/19: 23,572 gal.
07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
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07/29/19: None	08/16/19: 49,780 gal.		
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	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2 in a 10 to 12 inch loose lift for lift 2.
- Golder observed compaction of placed structural fill in Pond 2 using a Cat 815 sheep foot compactor.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-72 thru 75 on 9-inch compacted structural fill lift 2 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Placing lift of structural fill in Pond 2.



Compacting placed lift of structural fill in Pond 2, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Sealing placed structural fill using towed box-blade with roller, looking south.



Southeast corner of Pond 2, looking north.

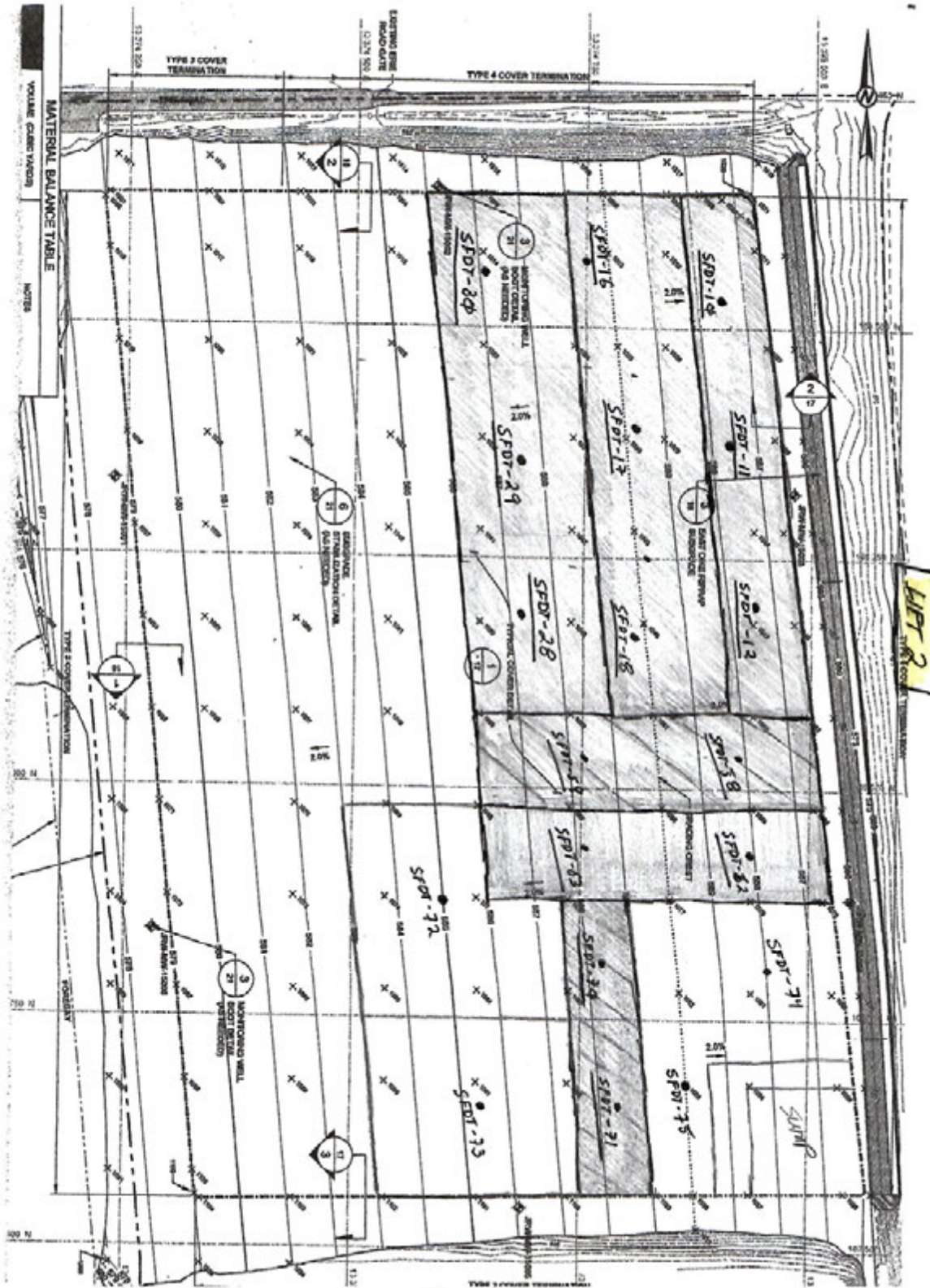
DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

S.F. LIFT MAP / LIFT 2



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

DENSITY TEST MAP LIFT 2



MATERIAL BALANCE TABLE

NOTES

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/28/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Sunny	Temperature: 63
Weather (PM): Partly Cloudy	Temperature: 80
Precipitation: None	Wind: W, 3-12 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

SUMMARY OF CONSTRUCTION																												
Work performed while Golder was onsite:																												
Ryan Central -1 Foreman, 3 Operators, 2 Laborers																												
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

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	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2 in a 10 to 12 inch loose lift for lift 2.
- Golder observed compaction of placed structural fill in Pond 2 using a Cat 815 sheep foot compactor.
- Golder observed placement of bridging layer in southeast corner of Pond 2.
- Golder monitored proof roll of bridging layer placed in southeast corner of Pond 2 (see proof roll map below).
- Golder observed excavation of CCR from between Pond 2 and Fore Bay down to sub-grade for structural fill placement, material hauled to the southeast corner of Pond 2 for placement in bridging layer.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Structural fill import to Pond 2.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Excavating CCR from area between Pond 2's southwest corner and Fore Bay, looking south.



Overview of Pond 2, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Sump in southeast corner of Pond 2, looking west.



Placing structural fill in Pond 2, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/29/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Sunny	Temperature: 61
Weather (PM): Sunny	Temperature: 78
Precipitation: None	Wind: W, 1-8 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

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GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2 in a 10 to 12 inch loose lift for lift 2.
- Golder observed compaction of placed structural fill in Pond 2 using a Cat 815 sheep foot compactor.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-76 thru 89 on 9-inch compacted structural fill lift 2 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.
- Golder observed excavation of south end of swale west of Pond 2, material removed hauled to southeast corner of Pond 2 for use in bridging layer.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Structural fill import to Pond 2, looking southeast.

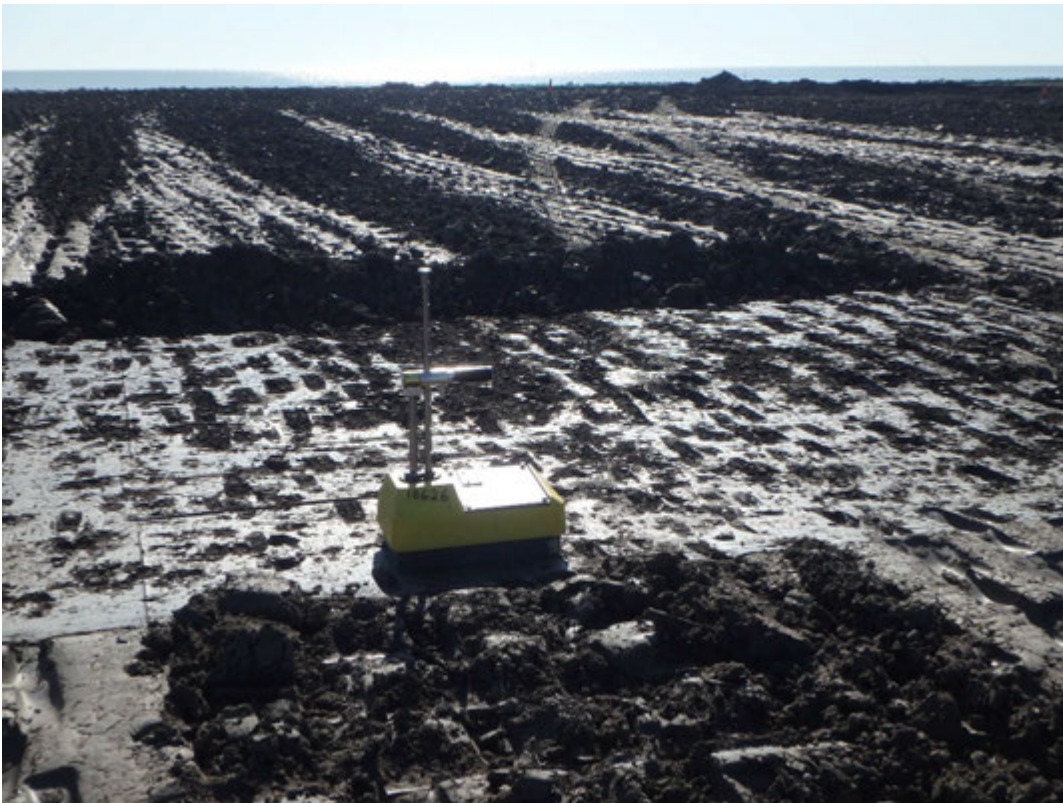


Compaction of structural fill lift in Pond 2, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Placement of structural fill in Pond 2, looking south.



Density testing of placed and compacted structural fill lift in Pond 2, looking east.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

S.F. LIFT MAP / LIFT 1



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

S.F. LIFT MAP / LIFT 2



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



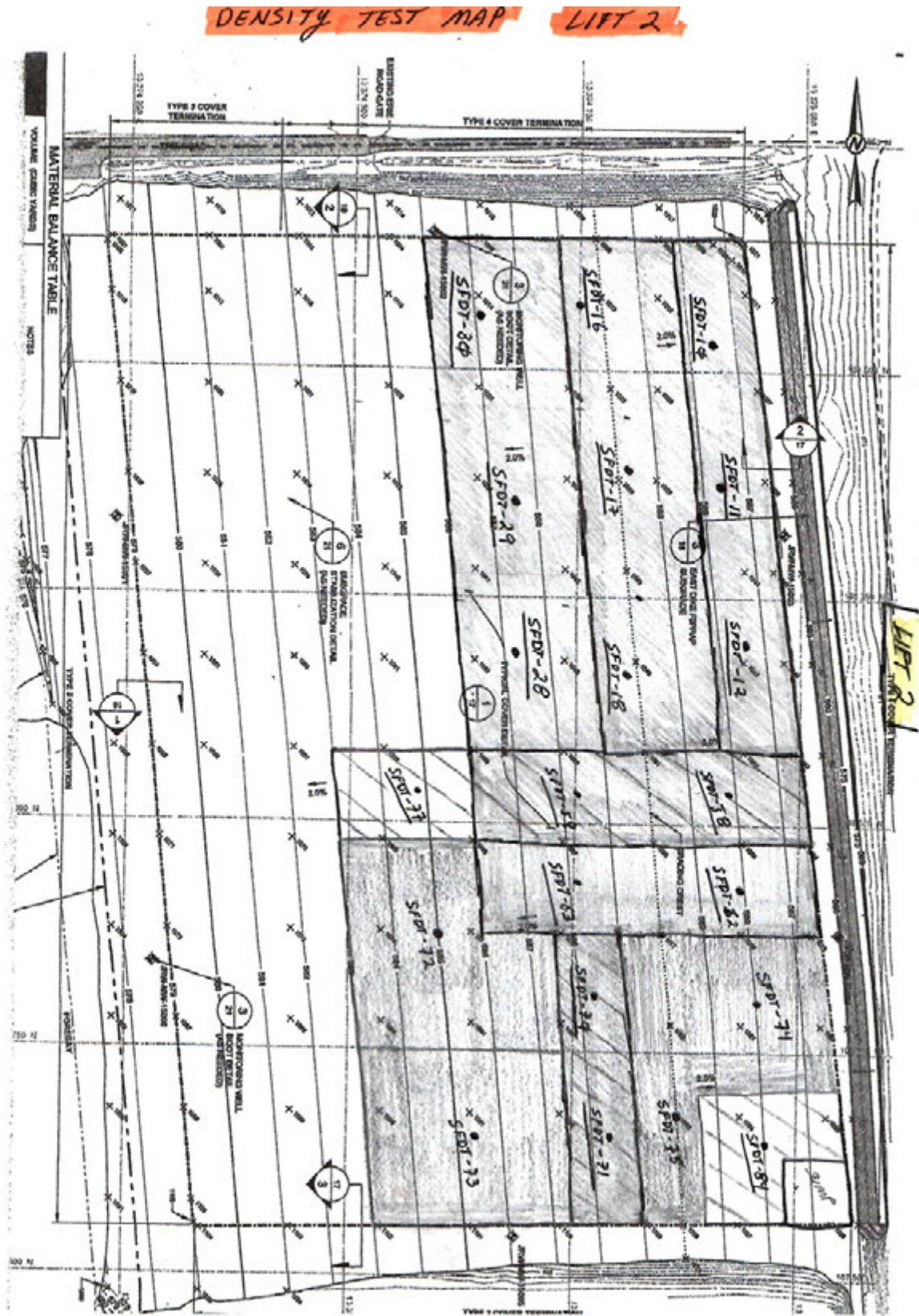
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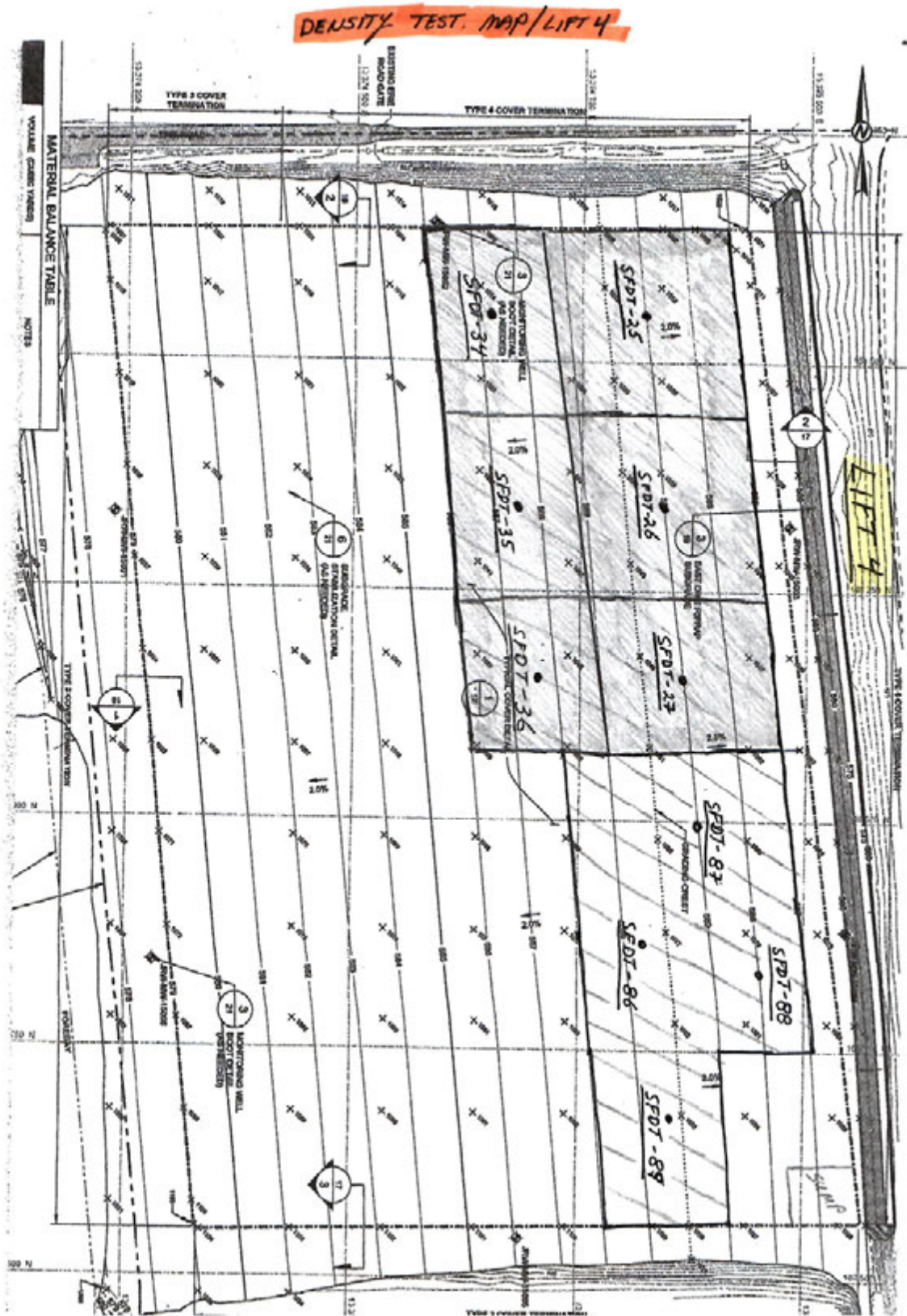
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 8/30/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 62
Weather (PM): Partly Cloudy	Temperature: 75
Precipitation: None	Wind: NW, 1-10 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, 1-Volvo A45G Haul Truck

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 3 Operators, 2 Laborers	
<ul style="list-style-type: none"> Continued placement of structural fill in Pond 2, material placed in a 10 to 12 inch loose lift. Continued compaction of structural fill using Cat 815 compactor. Continued bridging layer in southeast corner of Pond 2. Began removing excess CCR west of chemical ponds prior to grading for positive flow. Began placement of protective cover in Pond 1. Import structural fill. Water truck used for dust control and to maintain fill moisture. 	
<u>Summary of Dewatering:</u>	
<u>Week 1</u>	<u>Week 2</u>
05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
05/07/19: 387,165 gal.	05/14/19: 484,537 gal.
05/08/19: 405,104 gal.	05/15/19: 486,473 gal.
05/09/19: 404,705 gal.	05/16/19: 481,499 gal.
05/10/19: 410,498 gal.	05/17/19: 484,331 gal.
05/11/19: 64,691 gal.	05/18/19: 249,566 gal.
<u>Week 3</u>	<u>Week 4</u>
05/20/19: 328,687 gal.	05/27/19: Holiday
05/21/19: 402,720 gal.	05/28/19: 386,176 gal.
05/22/19: 487,716 gal.	05/29/19: 468,094 gal.
05/23/19: 408,516 gal.	05/30/19: 357,569 gal.
05/24/19: 484,613 gal.	05/31/19: 161,965 gal.
05/25/19: None	06/01/19: None
<u>Week 5</u>	<u>Week 6</u>
06/03/19: 185,365 gal.	06/10/19: 175,022 gal.
06/04/19: 409,662 gal.	06/11/19: 184,365 gal.
06/05/19: 345,122 gal.	06/12/19: 178,934 gal.
06/06/19: 311,007 gal.	06/13/19: 147,219 gal.
06/07/19: 276,790 gal.	06/14/19: 13,156 gal.
06/08/19: 65,064 gal.	06/15/19: 142,063 gal.
<u>Week 7</u>	<u>Week 8</u>
06/17/2019: 247,813 gal.	06/24/2019: 218,008 gal.
06/18/2019: 68,510 gal.	06/25/2019: 208,371 gal.
06/19/2019: 215,872 gal.	06/26/2019: 181,215 gal.
06/20/2019: 207,117 gal.	06/27/2019: 216,650 gal.
06/21/2019: 200,874 gal.	06/28/2019: 208,921 gal.
06/22/2019: 102,207 gal.	06/29/2019: 135,907 gal.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
07/03/19: 13,878 gal.	07/10/19: 25,922 gal.	07/17/19: 20,293 gal.	07/24/19: 23,572 gal.
07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>	<u>Week 14</u>		
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
Total: 14,006,131 gal.			

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of structural fill in Pond 2 in a 10 to 12 inch loose lift for lift 2.
- Golder observed compaction of placed structural fill in Pond 2 using a Cat 815 sheep foot compactor.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-90 thru 94 on 9-inch compacted structural fill lift 2 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.
- Golder observed placement of bridging layer in the southeast corner of Pond 2.
- Golder observed removal of CCR from area west of chemical ponds prior to grading remaining material for positive flow. CCR removed hauled to Pond 2 for use in bridging layer.
- Golder monitored placement of protective cover atop liner of Pond 1 working west to east.


SUMMARY OF SURVEYOR'S ACTIVITIES
None

SUMMARY OF PROBLEMS AND RESOLUTIONS
None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)
None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES
None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson Signature: 



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Placing lift of structural fill in Pond 2, looking south.



Placing bridging layer in Pond 2, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Removal of CCR from area west of chemical ponds, looking south.



Performing standard test on density gauge prior to testing, looking northwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Placement of protective cover in Pond 1, looking southwest.



Protective cover being placed atop geosynthetics in Pond 1, looking west.

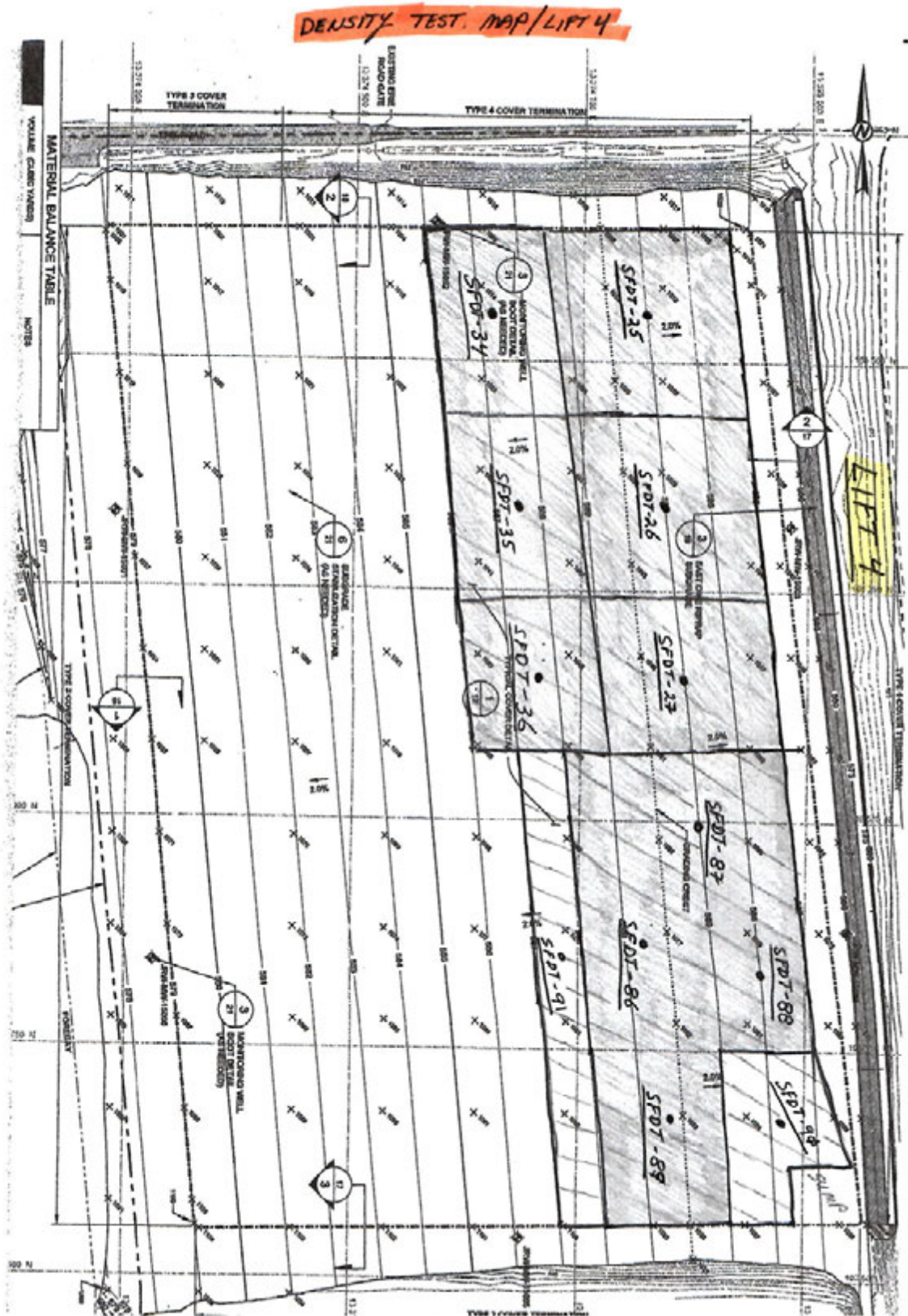
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/3/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 67
Weather (PM): Mostly Cloudy	Temperature: 82
Precipitation: None	Wind: SW, 5-12 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 3 Operators, 2 Laborers	
<ul style="list-style-type: none"> Continued bridging layer in southeast corner of Pond 2. Continued placement of protective cover in Pond 1. Began installing the above-cap drain pipe in Pond 1. Removed saturated CCR from southeast corner of Pond 2 and placed in thin lift for drying. Import protective cover. Water truck used for dust control and to maintain fill moisture. Demobilized Volvo A45G haul truck. 	
<u>Summary of Dewatering:</u>	
<u>Week 1</u>	<u>Week 2</u>
05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
05/07/19: 387,165 gal.	05/14/19: 484,537 gal.
05/08/19: 405,104 gal.	05/15/19: 486,473 gal.
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Placement of protective cover over Pond 1 geosynthetics, looking west.



Ramp built using protective cover over Pond 1 geosynthetics, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Overview of structural fill placed in Pond 2, looking northwest.



Saturated CCR removed from southeast corner of Pond 2, looking southeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

Performing standard test on density gauge prior to testing, looking northwest.



Above-cap drain pipe placed in Pond 1, looking east.



Above-cap drain pipe wye's in Pond 1.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/4/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 66
Weather (PM): Mostly Cloudy	Temperature: 73
Precipitation: None	Wind: NW, 3-9 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 4 Operators, 2 Laborers	
<ul style="list-style-type: none"> Continued placement of protective cover in Pond 1. Continued installing the above-cap drain pipe in Pond 1. Began finish grading of liner sub-grade in Pond 2. Import protective cover. Water truck used for dust control and to maintain fill moisture. 	
<u>Summary of Dewatering:</u>	
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05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
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06/22/2019: 102,207 gal.	06/29/2019: 135,907 gal.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Finish grading of Pond 2's liner sub-grade, looking south.



2nd ramp built using protective cover over Pond 1 geosynthetics, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Installation of the above-cap drain pipe in Pond 1, looking north.



Overview of Pond 1 with above-cap drain pipe, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/5/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Cloudy	Temperature: 60
Weather (PM): Partly Cloudy	Temperature: 72
Precipitation: None	Wind: E, 1-7 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

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<ul style="list-style-type: none"> Continued placement of protective cover in Pond 1. Continued installing the above-cap drain pipe in Pond 1. Continued finish grading of liner sub-grade in Pond 2. Placed 10oz. textile under Pond 1 non-perforated above-cap drain pipe Pumped standing water from southeast corner of Pond 2 into baker tank. Import protective cover and 6AA. Water truck used for dust control and to maintain fill moisture. 																																																								
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07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>	<u>Week 14</u>		
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of protective cover for haul road atop liner of Pond 1 working west to east. Protective cover was placed to a minimum thickness of 4 foot above liner to allow import trucks to drive over liner.
- Golder observed installation of the above-cap drain pipe using 4 inch non-perforated and perforated with sock ADS pipe.
- Golder observed finish grading of Pond 2's liner sub-grade working from west to east.
- Golder observed placement of 10oz. geotextile under northern run of solid ADS above-cap drain pipe in Pond 1.
- Golder observed pumping of standing water from the southeast corner of Pond 2 into baker tank using 3 inch pump.
- Golder collected protective cover sample PC-2 for gradation testing in accordance of specifications requiring a minimum of 1 sample per 3000cy placed.
- Golder collected sample of 6AA for conformance to MDOT 902.01.11.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Protective cover import to Pond 1, looking northwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Pumping water from the southeast corner of Pond 2, looking northeast.



Non-perforated ADS pipe connection on above-cap drain pipe in Pond 1.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Overview of Pond 2, looking southwest



Overview of Pond 2's southeast corner, looking southeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/6/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/2000
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Partly Cloudy	Temperature: 55
Weather (PM): Mostly Cloudy	Temperature: 74
Precipitation: None	Wind: SE, 1-6 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
07/03/19: 13,878 gal.	07/10/19: 25,922 gal.	07/17/19: 20,293 gal.	07/24/19: 23,572 gal.
07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
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07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
Total: 14,006,131 gal.			

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of protective cover for haul road atop liner of Pond 1 working west to east. Protective cover was placed to a minimum thickness of 4 foot above liner to allow import trucks to drive over liner.
- Golder collected protective cover sample PC-3 for gradation testing in accordance of specifications requiring a minimum of 1 sample per 3000cy placed.
- Golder observed removal of perimeter fence south and west of the chemical ponds.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)


None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature: 



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Placement of protective cover for construction of 4 foot haul road in Pond 1, looking west.



End caps on socked ADS perforated pipe, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Import of protective cover to Pond 1, looking southwest.



Overview of Pond 2's southeast corner, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/7/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1600
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Cloudy	Temperature: 61
Weather (PM): Partly Sunny	Temperature: 70
Precipitation: None	Wind: N, 0-6 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
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07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
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<u>Week 13</u>		<u>Week 14</u>	
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of protective cover for haul road atop liner of Pond 1 working west to east. Protective cover was placed to a minimum thickness of 4 foot above liner to allow import trucks to drive over liner.
- Golder observed removal of saturated CCR from the southeast of Pond 2 using excavator and spreading into 6 inch lift by dozer to dry.
- Golder observed removal of fencing south of chemical ponds.
- Golder observed pumping of standing water from southeast corner of Pond 2 into baker tank using 2 inch pump.
- Golder collected protective cover sample PC-4 for gradation testing in accordance of specifications requiring a minimum of 1 sample per 3000cy placed.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature: 

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Water truck for dust control and maintain fill moisture, looking west.



Removing saturated CCR from southeast corner of Pond 2, looking south.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Pumping standing water from southeast corner of Pond 2 into baker tank, looking west.



Placement of protective cover over geosynthetics in Pond 1, looking northwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/9/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1930
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Cloudy	Temperature: 60
Weather (PM): Mostly Sunny	Temperature: 72
Precipitation: None	Wind: E, 2-7 mph

EQUIPMENT ON SITE
1-Kubota RTV X112OD; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 3 Operators, 3 Laborers	
<ul style="list-style-type: none"> Continued placement of protective cover in Pond 1. Re-Worked CCR removed previous work day to assist in drying. Began covering above-cap perforated drain pipe with protective cover in Pond 1. Pumped water from southeast corner of Pond 2. Import protective cover. Water truck used for dust control and to maintain fill moisture. 	
<u>Summary of Dewatering:</u>	
<u>Week 1</u>	<u>Week 2</u>
05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
05/07/19: 387,165 gal.	05/14/19: 484,537 gal.
05/08/19: 405,104 gal.	05/15/19: 486,473 gal.
05/09/19: 404,705 gal.	05/16/19: 481,499 gal.
05/10/19: 410,498 gal.	05/17/19: 484,331 gal.
05/11/19: 64,691 gal.	05/18/19: 249,566 gal.
<u>Week 3</u>	<u>Week 4</u>
05/20/19: 328,687 gal.	05/27/19: Holiday
05/21/19: 402,720 gal.	05/28/19: 386,176 gal.
05/22/19: 487,716 gal.	05/29/19: 468,094 gal.
05/23/19: 408,516 gal.	05/30/19: 357,569 gal.
05/24/19: 484,613 gal.	05/31/19: 161,965 gal.
05/25/19: None	06/01/19: None
<u>Week 5</u>	<u>Week 6</u>
06/03/19: 185,365 gal.	06/10/19: 175,022 gal.
06/04/19: 409,662 gal.	06/11/19: 184,365 gal.
06/05/19: 345,122 gal.	06/12/19: 178,934 gal.
06/06/19: 311,007 gal.	06/13/19: 147,219 gal.
06/07/19: 276,790 gal.	06/14/19: 13,156 gal.
06/08/19: 65,064 gal.	06/15/19: 142,063 gal.
<u>Week 7</u>	<u>Week 8</u>
06/17/2019: 247,813 gal.	06/24/2019: 218,008 gal.
06/18/2019: 68,510 gal.	06/25/2019: 208,371 gal.
06/19/2019: 215,872 gal.	06/26/2019: 181,215 gal.
06/20/2019: 207,117 gal.	06/27/2019: 216,650 gal.
06/21/2019: 200,874 gal.	06/28/2019: 208,921 gal.
06/22/2019: 102,207 gal.	06/29/2019: 135,907 gal.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
07/03/19: 13,878 gal.	07/10/19: 25,922 gal.	07/17/19: 20,293 gal.	07/24/19: 23,572 gal.
07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>		<u>Week 14</u>	
07/29/19: None		08/16/19: 49,780 gal.	
07/30/19: 23,124 gal.		08/22/19: 94,717 gal.	
Total: 14,006,131 gal.			

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of protective cover for haul road atop liner of Pond 1 working west to east. Protective cover was placed to a minimum thickness of 4 foot above liner to allow import trucks to drive over liner.
- Golder observed re-working of saturated CCR removed from the southeast of Pond 2 on previous work day to facilitate drying.
- Golder monitored covering of the 4 inch ADS perforated pipe in Pond 1 with protective cover.
- Golder observed pumping of standing water from southeast corner of Pond 2 into baker tank using 2 inch pump.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Pumping of standing water from southeast corner of Pond 2 to baker tank, looking northeast.



Protective cover placed atop the 4 inch ADS perforated drain pipe in Pond 1, looking northeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Import of protective cover to Pond 1, looking north.



Placement of protective cover over geosynthetics in Pond 1, looking northwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/10/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1930
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 64
Weather (PM): Partly Cloudy	Temperature: 88
Precipitation: None	Wind: S, 2-10 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION																												
Work performed while Golder was onsite:																												
Ryan Central -1 Foreman, 4 Operators, 2 Laborers																												
<ul style="list-style-type: none"> Continued placement of protective cover in Pond 1. Re-Worked CCR removed last week to assist in drying. Continued covering above-cap perforated drain pipe with protective cover in Pond 1. Continue placement of CCR for bridging layer in Pond 2. Excavated two soft spots in Pond 2 bridging layer. Performed proof roll of bridging layer in Pond 2. Continued placement of structural fill in Pond 2. Pumped water from southeast corner of Pond 2. Pumped remaining baker tanks to tanker for transport offsite for disposal. Import protective cover. Import structural fill. Water truck used for dust control and to maintain fill moisture. Demobilized two of four baker tanks. 																												
<u>Summary of Dewatering:</u>																												
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 5</u> 06/03/19: 185,365 gal. 06/04/19: 409,662 gal. 06/05/19: 345,122 gal. 06/06/19: 311,007 gal. 06/07/19: 276,790 gal. 06/08/19: 65,064 gal.	<u>Week 6</u> 06/10/19: 175,022 gal. 06/11/19: 184,365 gal. 06/12/19: 178,934 gal. 06/13/19: 147,219 gal. 06/14/19: 13,156 gal. 06/15/19: 142,063 gal.	<u>Week 7</u> 06/17/2019: 247,813 gal. 06/18/2019: 68,510 gal. 06/19/2019: 215,872 gal. 06/20/2019: 207,117 gal. 06/21/2019: 200,874 gal. 06/22/2019: 102,207 gal.	<u>Week 8</u> 06/24/2019: 218,008 gal. 06/25/2019: 208,371 gal. 06/26/2019: 181,215 gal. 06/27/2019: 216,650 gal. 06/28/2019: 208,921 gal. 06/29/2019: 135,907 gal.
<u>Week 9</u> 07/01/19: 175,586 gal. 07/02/19: 129,459 gal. 07/03/19: 13,878 gal. 07/04/19: None 07/05/19: 137,112 gal. 07/06/19: 95,100 gal.	<u>Week 10</u> 07/08/19: 107,894 gal. 07/09/19: 44,007 gal. 07/10/19: 25,922 gal. 07/11/19: 27,943 gal. 07/12/19: 18,335 gal. 07/13/19: None	<u>Week 11</u> 07/15/19: None 07/16/19: 17,852 gal. 07/17/19: 20,293 gal. 07/18/19: None 07/19/19: 20,316 gal. 07/20/19: None	<u>Week 12</u> 07/22/19: 15,890 gal. 07/23/19: 15,310 gal. 07/24/19: 23,572 gal. 07/25/19: None 07/26/19: None 07/27/19: None
<u>Week 13</u> 07/29/19: None 07/30/19: 23,124 gal.	<u>Week 14</u> 08/16/19: 49,780 gal. 08/22/19: 94,717 gal. Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of protective cover for haul road atop liner of Pond 1 working west to east. Protective cover was placed to a minimum thickness of 4 foot above liner to allow import trucks to drive over liner.
- Golder observed re-working of saturated CCR removed from the southeast of Pond 2 last week to facilitate drying.
- Golder monitored covering of the 4 inch ADS perforated pipe in Pond 1 with protective cover.
- Golder observed placement of bridging layer in southeast corner of Pond 2 using CCR.
- Golder observed excavation of two soft spots in southeast corner of Pond 2.
- Golder monitored proof roll of bridging layer in southeast corner of Pond 2 using empty Volvo water truck.
- Golder monitored placement of single 12 inch loose lift of structural fill in southeast corner of Pond 2. No compaction of placed loose lift today.
- Golder observed pumping of waster from baker tanks into a tanker for transport to waste water treatment plant.
- Golder observed pumping of standing water from southeast corner of Pond 2 into baker tank using 2 inch pump.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)
--

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES
--

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Demobilization of Baker Tank from Pond 2, looking south.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Tanker used to transport contact water from Pond 2 to treatment facility, looking east.



Soft spot excavated in Pond 2 bridging layer, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Removing temp ramp atop liner tie-in along south side into Pond 1, looking west.



Overview of Pond 1, looking east.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/11/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1800
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 67
Weather (PM): Mostly Cloudy	Temperature: 86
Precipitation: Rain	Wind: S, 2-15 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 4 Operators, 2 Laborers	
<ul style="list-style-type: none"> Continued placement of structural fill in Pond 2. Compacted structural fill placed in Pond 2. Pumped water from southeast corner of Pond 2. Pumped remaining baker tanks to tanker for transport offsite for disposal. Import structural fill. Water truck used for dust control and to maintain fill moisture. 	
<u>Summary of Dewatering:</u>	
<u>Week 1</u>	<u>Week 2</u>
05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
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07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>	<u>Week 14</u>		
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder monitored placement of single 12 inch loose lift of structural fill in southeast corner of Pond 2 and compaction using Cat 815 compactor.
- Golder observed pumping of waster from baker tanks into a tanker for transport to waste water treatment plant.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-95 and SFDT-96 on 9-inch compacted structural fill lift 6 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.
- Golder observed pumping of standing water from southeast corner of Pond 2 into baker tank using 2 inch pump.

SUMMARY OF SURVEYOR'S ACTIVITIES

Rowe onsite, shot outside edges of Pond 1 liner, top of pipe on MW-150001 thru MW-15006 and Pond 2 certification points; 1070 thru 1074, 1086 thru 1090, 1102 thru 1106, 1501, 1502 and 1505.

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature: 

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Pumping baker tanks into tanker for transport to treatment facility, looking east.



Import and placement of structural fill in Pond 2, looking east.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Compaction of placed structural fill in Pond 2, looking north.

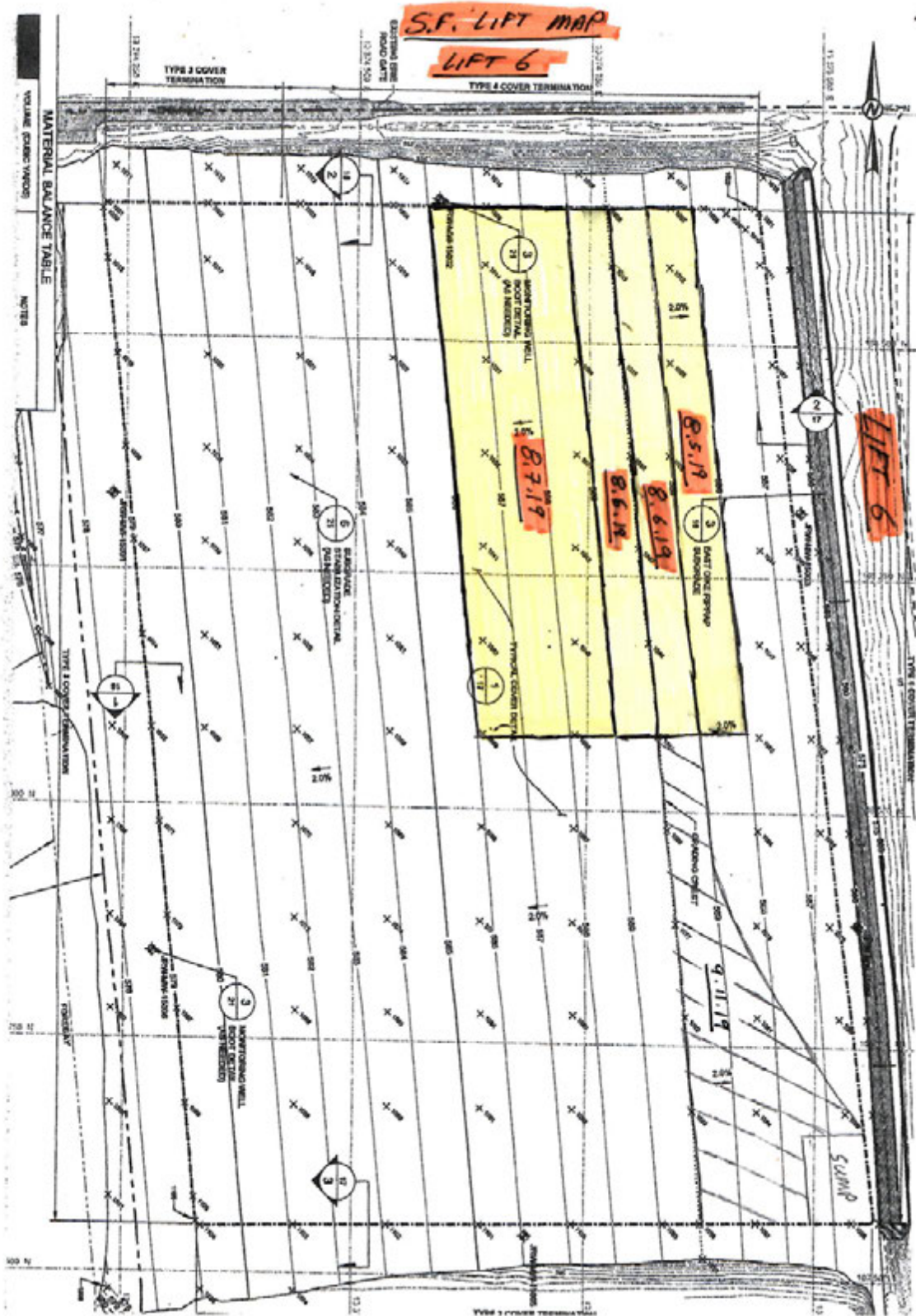


Rowe surveyor shooting sub-grade certification points in Pond 2, looking east.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/16/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1930
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Cloudy	Temperature: 68
Weather (PM): Partly Sunny	Temperature: 75
Precipitation: None	Wind: N, 0-6 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, Cat 326F Excavator

SUMMARY OF CONSTRUCTION																																												
Work performed while Golder was onsite:																																												
Ryan Central -1 Foreman, 4 Operators, 2 Laborers																																												
<ul style="list-style-type: none"> Continued finish grading of structural fill in Pond 2. Began placement of imported structural fill in Chemical Ponds. Compacted structural fill placed in Chemical Ponds. Excavated saturated CCR from the sump area in Pond 2. Continued placement of bridging layer in the sump area of Pond 2. Pumped remaining baker tanks to tanker for transport offsite for disposal. Import structural fill. Water truck used for dust control and to maintain fill moisture. Mobilized a Cat 326F excavator. 																																												
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

06/06/19: 311,007 gal.	06/13/19: 147,219 gal.	06/20/2019: 207,117 gal.	06/27/2019: 216,650 gal.
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<u>Week 9</u>		<u>Week 10</u>	
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
07/03/19: 13,878 gal.	07/10/19: 25,922 gal.	07/17/19: 20,293 gal.	07/24/19: 23,572 gal.
07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>		<u>Week 14</u>	
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
Total: 14,006,131 gal.			

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder observed finish grading of the geomembrane sub-grade in Pond 2.
- Golder observed removal of saturated CCR from the sump area of Pond 2, material placed in thin lift adjacent to sump for drying.
- Golder monitored placement of dry CCR material for bridging layer in the sump area of Pond 2.
- Golder monitored placement of structural fill in the Chemical Pond work area, fill placed in 12 inch loose lifts and compacted using a Cat 815 compactor.
- Golder observed pumping of waster from baker tanks into a tanker for transport to waste water treatment plant.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Finish grading of structural fill in Pond 2, looking north.



Saturated CCR removed from the sump area of Pond 2, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Placing CCR in sump area of Pond 2 for bridging layer, looking northwest.



Structural fill being placed in the Chemical Ponds work area, looking south.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/17/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1530
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Cloudy	Temperature: 64
Weather (PM): Mostly Sunny	Temperature: 78
Precipitation: None	Wind: E, 2-8 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT 349F Excavator; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers, 1-John Deere 9520 Tractor, 1-Cat TL1055D Tele-Handler, Cat 326F Excavator

SUMMARY OF CONSTRUCTION																																																								
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
07/03/19: 13,878 gal.	07/10/19: 25,922 gal.	07/17/19: 20,293 gal.	07/24/19: 23,572 gal.
07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>	<u>Week 14</u>		
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
Total: 14,006,131 gal.			

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder observed finish grading of the geomembrane sub-grade in Pond 2.
- Golder monitored placement of structural fill in the Chemical Pond work area, fill placed in 12 inch loose lifts and compacted using a Cat 815 compactor.
- Golder collected sample 6AA-2 from stockpile offsite for gradation testing, sample shipped to lab for testing.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Finish grading of structural fill in Pond 2, looking South.



Overview of Pond 2, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/18/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1930
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Sunny	Temperature: 68
Weather (PM): Sunny	Temperature: 74
Precipitation: None	Wind: E, 4-10 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers; 1-John Deere 9520 Tractor; Cat 326F Excavator

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 3 Operators, 1 Laborers	
<ul style="list-style-type: none"> Continued finish grading of structural fill in Pond 2. Completed placement of imported structural fill in Chemical Ponds. Compacted structural fill placed in Chemical Ponds. Continued bridging layer in southeast corner of Pond 2. Proof roll of bridging layer in southeast corner of Pond 2. Excavated bridging layer and saturated material in area of Pond 2's southeast corner that failed proof roll to allow material to dry. Import structural fill. Water truck used for dust control and to maintain fill moisture. Demobilized Cat 349F Excavator. 	
<u>Summary of Dewatering:</u>	
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05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

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GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder observed finish grading of the geomembrane sub-grade in Pond 2.
- Golder monitored placement of structural fill in the Chemical Pond work area, fill placed in 12 inch loose lifts and compacted using a Cat 815 compactor.
- Golder observed placement of bridging layer in southeast corner of Pond 2 using imported structural fill.
- Golder monitored proof roll of bridging layer placed in southeast corner of Pond 2 using empty water truck, proof roll failed in a 25 foot wide strip running northwest to southeast of area filled.
- Golder observed excavation of bridging layer and saturated material from the area that failed proof roll in the southeast corner of Pond 2. Saturated material spread in thin lift adjacent to excavation to dry for reuse in bridging layer.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

Bi-Weekly construction meeting with CEC, Ryan and Golder.

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Overview of Pond 2's geomembrane sub-grade ready for survey, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Finish grading of geomembrane sub-grade in Pond 2, looking west.



Placement of bridging layer in southeast corner of Pond 2, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Water truck used for proof roll of bridging layer in Pond 2, looking east.



Excavating area of bridging layer in Pond 2 that failed proof roll, looking southeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/19/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1530
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Mostly Sunny	Temperature: 64
Weather (PM): Mostly Sunny	Temperature: 73
Precipitation: None	Wind: SE, 3-12 mph

EQUIPMENT ON SITE
1-Kubota RTV X112OD; 1-CAT Water Truck; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers; 1-John Deere 9520 Tractor; Cat 326F Excavator

SUMMARY OF CONSTRUCTION	
Work performed while Golder was onsite:	
Ryan Central -1 Foreman, 3 Operators, 1 Laborers	
<ul style="list-style-type: none"> Continued finish grading of structural fill in Pond 2. Continued placement of structural fill outside Pond 2's south liner limits. Continued placement of protective cover in Pond 1. Import structural fill. Import protective cover. Water truck used for dust control and to maintain fill moisture. 	
<u>Summary of Dewatering:</u>	
<u>Week 1</u>	<u>Week 2</u>
05/06/19: 281,988 gal.	05/13/19: 399,021 gal.
05/07/19: 387,165 gal.	05/14/19: 484,537 gal.
05/08/19: 405,104 gal.	05/15/19: 486,473 gal.
05/09/19: 404,705 gal.	05/16/19: 481,499 gal.
05/10/19: 410,498 gal.	05/17/19: 484,331 gal.
05/11/19: 64,691 gal.	05/18/19: 249,566 gal.
<u>Week 3</u>	<u>Week 4</u>
05/20/19: 328,687 gal.	05/27/19: Holiday
05/21/19: 402,720 gal.	05/28/19: 386,176 gal.
05/22/19: 487,716 gal.	05/29/19: 468,094 gal.
05/23/19: 408,516 gal.	05/30/19: 357,569 gal.
05/24/19: 484,613 gal.	05/31/19: 161,965 gal.
05/25/19: None	06/01/19: None
<u>Week 5</u>	<u>Week 6</u>
06/03/19: 185,365 gal.	06/10/19: 175,022 gal.
06/04/19: 409,662 gal.	06/11/19: 184,365 gal.
06/05/19: 345,122 gal.	06/12/19: 178,934 gal.
06/06/19: 311,007 gal.	06/13/19: 147,219 gal.
06/07/19: 276,790 gal.	06/14/19: 13,156 gal.
06/08/19: 65,064 gal.	06/15/19: 142,063 gal.
<u>Week 7</u>	<u>Week 8</u>
06/17/2019: 247,813 gal.	06/24/2019: 218,008 gal.
06/18/2019: 68,510 gal.	06/25/2019: 208,371 gal.
06/19/2019: 215,872 gal.	06/26/2019: 181,215 gal.
06/20/2019: 207,117 gal.	06/27/2019: 216,650 gal.
06/21/2019: 200,874 gal.	06/28/2019: 208,921 gal.
06/22/2019: 102,207 gal.	06/29/2019: 135,907 gal.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

<u>Week 9</u>	<u>Week 10</u>	<u>Week 11</u>	<u>Week 12</u>
07/01/19: 175,586 gal.	07/08/19: 107,894 gal.	07/15/19: None	07/22/19: 15,890 gal.
07/02/19: 129,459 gal.	07/09/19: 44,007 gal.	07/16/19: 17,852 gal.	07/23/19: 15,310 gal.
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07/04/19: None	07/11/19: 27,943 gal.	07/18/19: None	07/25/19: None
07/05/19: 137,112 gal.	07/12/19: 18,335 gal.	07/19/19: 20,316 gal.	07/26/19: None
07/06/19: 95,100 gal.	07/13/19: None	07/20/19: None	07/27/19: None
<u>Week 13</u>	<u>Week 14</u>		
07/29/19: None	08/16/19: 49,780 gal.		
07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder observed finish grading of the geomembrane sub-grade in Pond 2.
- Golder observed placement of structural fill outside Pond 2's south liner limits and compacted with 815 compactor.
- Golder observed placement of protective cover in Pond 1 in minimum 18 inch loose lift using D6T LGP dozer.
- Golder observed Rowe surveyor shoot Pond 1 above-cap drain pipe every 100 feet and Pond 2 certification points 1064 thru 1087.

SUMMARY OF SURVEYOR'S ACTIVITIES

Rowe onsite to shoot the above-cap drain pipe in Pond 1 and certification points in Pond 2. Rowe also shot MW-15006 top of well casing.

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature: 

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PHOTOGRAPHS



Trench excavated in southeast corner of Pond 2's bridging layer, looking southeast.



Placement of structural fill outside Pond 2 liner limits, looking southwest.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Import of structural fill to Pond 2, looking southeast.



Finish grading of liner sub-grade in Pond 2, looking east.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Water truck used for dust control and moisture conditioning of prepared sub-grade, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/20/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1930
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Sunny	Temperature: 66
Weather (PM): Mostly Sunny	Temperature: 80
Precipitation: None	Wind: S, 1-6 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers; 1-John Deere 9520 Tractor; 1-Cat 326F Excavator; 1-Cat 299D Skid Steer; 1-JLG 10054 Sky-Trak.

SUMMARY OF CONSTRUCTION																												
Work performed while Golder was onsite:																												
Ryan Central -1 Foreman, 3 Operators, 2 Laborers																												
<ul style="list-style-type: none"> Continued finish grading of structural fill in Pond 2. Continued placement of protective cover in Pond 1. Backfilled trench in the southeast corner of Pond 2 using 1x3 inch stone, CCR and structural fill. Import protective cover. Import structural. Water truck used for dust control and to maintain fill moisture. Mobilized one Cat 299D skid steer and one JLG 10054 Sky-Trak. 																												
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DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

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GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder observed finish grading of the geomembrane sub-grade in Pond 2.
- Golder observed placement of protective cover in Pond 1 in minimum 18 inch loose lift using D6T LGP dozer.
- Golder monitored backfill of the trench excavated in the bridging layer at the southeast corner of Pond 2. Ryan placed 10oz. textile across bottom of trench then placed 2 feet of 1x3 inch stone atop of the textile, second sheet of textile placed atop of the stone to encase. Ryan completed backfill of trench using CCR removed during excavation and capped with 6 inch lift of structural fill to cap. Ryan used box blade to seal area, proof roll to be done following week.
- Golder collected protective cover sample PC-5 and PC-6 for gradation testing in accordance of specifications requiring a minimum of 1 sample per 3000cy placed.

SUMMARY OF SURVEYOR'S ACTIVITIES

None

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Protective cover import to Pond 1, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Placement of protective cover in Pond 1, looking northwest.



Placing 1x3 inch stone in trench excavated in southeast corner of Pond 2's bridging layer, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Backfilling trench in southeast corner of Pond 2, looking north.



Overview of liner sub-grade in Pond 2, looking west.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/23/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1630
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Partly Sunny	Temperature: 70
Weather (PM): Mostly Sunny	Temperature: 78
Precipitation: None	Wind: S, 3-9 mph

EQUIPMENT ON SITE
1-Kubota RTV X1120D; 1-CAT Water Truck; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers; 1-John Deere 9520 Tractor; 1-Cat 326F Excavator; 1-Cat 299D Skid Steer; 1-JLG 10054 Sky-Trak.

SUMMARY OF CONSTRUCTION																																																								
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<ul style="list-style-type: none"> Completed placement of structural fill in Pond 2. Continued placement and compaction of protective cover in Pond 1. Backfilled trench in the southeast corner of Pond 2 using 1x3 inch stone, CCR and structural fill. Removed 24 inch pipe southeast of Pond 2 running toward the southeast. Import structural and protective cover. Water truck used for dust control and to maintain fill moisture. 																																																								
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07/30/19: 23,124 gal.	08/22/19: 94,717 gal.		
	Total: 14,006,131 gal.		

GAI CQA ACTIVITIES AND TEST RESULTS

Construction:

- Golder onsite documenting the construction progress.
- Golder observed placement of protective cover in Pond 1 in minimum 18 inch loose lift using D6T LGP dozer.
- Golder observed placement of structural fill in southeast corner of Pond 2 in single lift and compacted using Cat 815.
- Golder performed Standard test on Troxler 3440 prior to density testing.
- Performed density test's SFDT-97 on 9-inch compacted structural fill lift 1 placed in Pond 2 using a Troxler 3440 Nuclear Gauge (see density test map). Compacted and tested structural fill met all specifications.
- Golder observed removal of a 30 foot section of 24 inch pipe found outside of Pond 2's southeast corner running from northwest to southeast. Pipe removed and trench backfilled with material removed during excavation, no further pipe sections found at either end of removed section.
- Golder observed survey of certification points in Pond 2 and structural fill in Chemical Ponds.

SUMMARY OF SURVEYOR'S ACTIVITIES

Rowe shot remaining certification points in Pond 2 within liner limits, Rowe also shot Chemical Ponds structural fill.

SUMMARY OF PROBLEMS AND RESOLUTIONS

None

SUMMARY OF MEETINGS/DISCUSSIONS HELD (ATTENDEES AND ISSUES)

None

SUMMARY OF INCIDENTS / ACCIDENTS / HEALTH AND SAFETY ISSUES

None

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

SUBMITTED BY GOLDER:

CQA Field Manager: David Hutchinson

Signature:



PHOTOGRAPHS



Protective cover import and placement in Pond 1, looking north.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Removal of 24 inch pipe southeast of Pond 2, looking southeast.



Proof roll of bridging layer in southeast corner of Pond 2, looking northeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



Rip-Rap along shoreline east of Pond 2, looking south.



Overview of liner sub-grade in Pond 2, looking southeast.

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

S.F. LIFT MAP / LIFT 1



DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

DENSITY TEST MAP
LIFT 1



MATERIAL BALANCE TABLE
VOLUME (CUBIC YARDS)
NOTES

☐ = PREVIOUSLY TESTED

DAILY FIELD FORM – J.R. Whiting Ponds 1 and 2 Closure

PROJECT OVERVIEW			
Project Title:	J.R. Whiting Ponds 1 and 2 Closure CQA	Project Number: 1788523	Date: 9/24/2019
Client:	Consumers Energy	Site/Location:	Erie, MI
GAI Personnel:	David Hutchinson	Arrival/Departure Time:	0630/1300
Contractor(s):	Ryan Central Inc.	Contractor(s) Rep:	John Johnson (Ryan Central)

SITE CONDITIONS	
Weather (AM): Sunny	Temperature: 57
Weather (PM): Sunny	Temperature: 70
Precipitation: None	Wind: W, 4-12 mph

EQUIPMENT ON SITE
1-Kubota RTV X112OD; 1-CAT Water Truck; 1-CAT A200 LGP Dozer; 1-John Deere 644G Loader; 1-Cat CS56B Smooth Drum Roller; 1-Cat D6T Dozers; 1-John Deere 9520 Tractor; 1-Cat 326F Excavator; 1-Cat 299D Skid Steer; 1-JLG 10054 Sky-Trak.

SUMMARY OF CONSTRUCTION																												
Work performed while Golder was onsite:																												
Ryan Central -1 Foreman, 3 Operators, 2 Laborers																												
<ul style="list-style-type: none"> Continued placement of protective cover in Pond 1. Placed structural fill outside of Pond 2. Began placement of topsoil in Chemical Ponds. Import structural. Import protective cover. Import topsoil. Water truck used for dust control and to maintain fill moisture. 																												
<u>Summary of Dewatering:</u>																												
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