# WEEKLY SUMMARY REPORT

**Week Ending: 08/29/2024 (Thursday)**
**Report No.: W-03-082924**


Civil & Environmental Consultants, Inc.

## PROJECT INFORMATION

| | | | |
|---|---|---|---|
| PROJECT NAME: | BYPASS BASIN RETROFIT CQA | | |
| LOCATION: | Powerton Generating Station | CEC PROJECT NO: | 343-014.0200 |
| PLANS AND SPECS: | S&L Bypass Basin Retrofit Project | WEATHER: | 0.7" of rain |
| ISSUED DATE: | 07/12/24 | TEMP. RANGE (°F) | 71-97 |

## PERSONNEL

| | | | |
|---|---|---|---|
| FIELD REP(S): | Derek Dorsz | CEC PROJ. MANAGER(S): | Dean Jones |
| CLIENT: | Midwest Generation | CLIENT CONTACT(S): | Joe Kotas |
| CONTRACTOR: | Bluff City Construction (BCC) | SUPERVISOR: | Larry Hunt |
| CONTRACTOR: | Clean Air and Water Systems (CAAWS) | SUPERVISOR: | Andy Khamarlorm |

## SAFETY MEETINGS AND PARTICIPATION

*Participation in Contractor's Tailgate Safety Meeting?* ☐ **Yes** ☒ **No** *Vehicle Check Performed?* ☒ **Yes or** ☐ **No**

Plan for the Day Required (WSM 200.25): ☐ Yes (CLICK LINK BELOW) ☒ No

## WORK PERFORMED SINCE CEC'S LAST VISIT(1)

*Work performed since CEC representative's last site visit?* (1) ☐ **Yes** ☒ **No**

*Date CEC representative was last onsite:* **Saturday, August 24, 2024**

(1) Critical work or work requiring continuous observation that has been completed without CEC representation being present onsite. CEC was not made aware that this work was being completed.

## SUMMARY OF WORK OBSERVED, LOCATION, AND CONTRACTOR PERFORMING WORK

- CAAWS completed geomembrane detail work and encompassed the site in the liner, including attaching liner to concrete structures.
- CAAWS silicon sealed the liner edge along inlet structure and existing marker posts.
- CAAWS began and completed deployment of drainage geocomposite liner across the basin.
- BCC completed excavation of anchor trench along the perimeter.
- BCC completed backfill of anchor trench.
- BCC installed upper sane cushion layer along the west and northwest corner of basin.
- BCC began installation of 12" sand filer layer at the ramp and southern half of basin.

## UNEXPECTED, UNUSUAL, OR NONCONFORMING OBSERVATIONS (NEW / RESOLVED)

Unexpected, unusual, or nonconforming work observed? ☐ **Yes** ☒ **No**

- N/A

## SUMMARY OF MEETINGS / DISCUSSIONS / PHONE CONVERSATIONS

- Geotextile is to be installed beneath the road surfacing aggregate within areas to have regular traffic.

## ATTACHMENTS

- Field Density Test Report and Sand Cone Test Reports.
- Flowable Fill test results.

## DESCRIPTION OF SAMPLES TAKEN OR MATERIALS DELIVERED TO LAB

- PBBR-Sand-1 collected and taken to lab.
- PBBR-AT-1 collected and taken to lab.

## PHOTOGRAPHS


**Photo 1:** shows deployment of drainage geocomposite and completion of geomembrane installation.


**Photo 2:** shows completion of drainage geocomposite installation.

* No representations or warranties are made regarding the accuracy of the information generated by the Theodolite application, which is stamped on the photo, or the suitability of that information for any; legal, engineering, surveying, or other use or purpose.


**Photo 3:** shows compaction of anchor trench backfill.


**Photo 4:** shows placement of sand filter layer.

## APPROVED BY

FIELD REP: Derek Dorsz DATE: 08/29/2024 CEC MANAGER: Dean Jones DATE: 09/04/2024

**This document is draft until reviewed and approved by a Project Manager**



* No representations or warranties are made regarding the accuracy of the information generated by the Theodolite application, which is stamped on the photo, or the suitability of that information for any; legal, engineering, surveying, or other use or purpose.

# DAILY FIELD REPORT

**Date: 08/27/2024 (Tuesday)**
**Report No.: 14-082724**


Civil & Environmental Consultants, Inc.

## NUCLEAR COMPACTION TEST DATA (ASTM D6938)

**PROJECT NAME:** Powerton Bypass Basin Retrofit
**PROJECT NUMBER:** 343-014
**CEC TECHNICIAN:** Derek Dorsz
**GAUGE NUMBER:** 27636
**CONTRACTOR:** Bluff City Construction

**STANDARD COUNTS:**

**DENSITY** 954 **%** **DEVIATION** 0.73 **±1% PASSING**
**MOISTURE** 613 **%** **DEVIATION** 0.33 **±2% PASSING**

| TEST NUMBER | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|
| LOCATION | N: 1411829.1<br>E: 2432881.7 | N: 1411992.6<br>E: 2432965.1 | N: 412100.8<br>E: 2432858.7 | N: 1411829.1<br>E: 2432881.7 | N: 1411992.6<br>E: 2432965.1 | N: 1412100.8<br>E: 2432858.7 |
| ELEVATION OR LIFT NUMBER | Lift 1<br>Z: 465.3 | Lift 1<br>Z: 465.6 | Lift 1<br>Z: 466.1 | Lift 2<br>Z: 465.8 | Lift 2<br>Z: 466.1 | Lift 2<br>Z: 466.6 |
| LIFT THICKNESS (in.) | 6 | 6 | 6 | 6 | 6 | 6 |
| NUMBER OF PASSES | 4 | 4 | 4 | 4 | 4 | 4 |
| PROBE DEPTH (in.) | 0 | 0 | 0 | 0 | 0 | 0 |
| FIELD WET DENSITY (pcf) | 131.0 | 131.6 | 131.5 | 130.2 | 131.5 | 132.0 |
| FIELD DRY DENSITY (pcf) | 113.0 | 113.5 | 114.2 | 114.3 | 114.6 | 114.7 |
| COMPACTION (%) | 95.1 | 95.5 | 96.1 | 96.2 | 96.5 | 96.5 |
| COMPACTION PASS/FAIL | PASS | PASS | PASS | PASS | PASS | PASS |
| FIELD MOISTURE (%) | 13.7 | 13.8 | 13.2 | 12.2 | 12.9 | 13.1 |
| MOISTURE PASS/FAIL | PASS | PASS | PASS | PASS | PASS | PASS |
| LAB PROCTOR MDD | 118.8 | 118.8 | 118.8 | 118.8 | 118.8 | 118.8 |
| PROCTOR TYPE (Mod./Stan.) | Modified | Modified | Modified | Modified | Modified | Modified |
| SPECIFIED MIN. COMPACTION (%) | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 | 95.0 |
| LABORATORY OMC (%) | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 |
| SPECIFIED MOISTURE RANGE | 10.0 – 16.0 | 10.0 – 16.0 | 10.0 – 16.0 | 10.0 – 16.0 | 10.0 – 16.0 | 10.0 – 16.0 |
| RETEST NUMBER | N/A | N/A | N/A | N/A | N/A | N/A |
| REMARKS | | | | | | |

# DAILY FIELD REPORT

**Date: 08/27/2024 (Tuesday)**
**Report No.: 14-082724**


Civil & Environmental Consultants, Inc.

| TEST NUMBER | 23 | 24 | 25 | | | |
|---|---|---|---|---|---|---|
| LOCATION | N: 1411829.1<br>E: 2432881.7 | N: 1411992.6<br>E: 2432965.1 | N: 1412100.8<br>E: 2432858.7 | | | |
| ELEVATION OR LIFT NUMBER | Lift 3<br>Z: 466.3 | Lift 3<br>Z: 466.6 | Lift 3<br>Z: 467.1 | | | |
| LIFT THICKNESS (in.) | 6 | 6 | 6 | | | |
| NUMBER OF PASSES | 4 | 4 | 4 | | | |
| PROBE DEPTH (in.) | 0 | 0 | 0 | | | |
| FIELD WET DENSITY (pcf) | 133.2 | 132.9 | 133.2 | | | |
| FIELD DRY DENSITY (pcf) | 115.2 | 114.8 | 115.2 | | | |
| COMPACTION (%) | 97.0 | 96.6 | 97.0 | | | |
| COMPACTION PASS/FAIL | PASS | PASS | PASS | | | |
| FIELD MOISTURE (%) | 13.5 | 13.6 | 13.5 | | | |
| MOISTURE PASS/FAIL | PASS | PASS | PASS | | | |
| LAB PROCTOR MDD | 118.8 | 118.8 | 118.8 | | | |
| PROCTOR TYPE (Mod./Stan.) | Modified | Modified | Modified | | | |
| SPECIFIED MIN. COMPACTION (%) | 95.0 | 95.0 | 95.0 | | | |
| LABORATORY OMC (%) | 13.0 | 13.0 | 13.0 | | | |
| SPECIFIED MOISTURE RANGE | 10.0 – 16.0 | 10.0 – 16.0 | 10.0 – 16.0 | | | |
| RETEST NUMBER | N/A | N/A | N/A | | | |
| REMARKS | | | | | | |

NOTES:
1. MDD denotes Maximum Dry Density.
2. OMC denotes Optimum Moisture Content.
3. Elevations and lift thicknesses are approximate.
4. N denote Northing, E denotes Easting, and Z denotes elevation. Coordinates given by Bluff City Construction.

# Powerton Bypass Basin Retrofit
# Sand Cone Test

Civil & Environmental Consultants, Inc.

## Sand Cone Analysis (Cannot be performed in soils with coarse aggregates)
## Date: 8/27/24 Test No: 25

This method is using balance scales measuring mass **to determine unit weight**. If you are using digital scales or scales with springs for the force-measuring mechanism, use the "Pounds-Force" Tab.

**Obtain Sample for Wet Density**

- Excavate hole with large metal spoon or garden trowel that is 3 to 4" in diameter and 3 to 4 inches deep in order to obtain a sample of at least 500 grams (1.1 lbs).

- Fill the cone on the apparatus with the sand from the sandcone to detemine the weight of the sand in the cone.

**-Weight of sand from full cone ($W_1$) in Pounds (grams) =** 1573.000 grams
**-Weight of cone/jar aperatus with sand = (W) in grams** 6597.000 grams
**-Enter pre-determined density of sand in jar =** 1.530 g/cm^3

-Place base plate over excavated hole with hole in base plate in ceter of excavated hole.

**-Weigh moist/wet soil from excavation Ws =** 1702.000 grams

- Place cone (attached to sand jar) over hole and open valve.
- Turn Valve off and remove cone and base plate. If excavation is not full, spread sand evenly in excavation and repeat last step.

**- Determine Volume of Hole Excavated.**

- Weigh jar and remaining sand **($W_2$)** 3820.000 grams + weight of sand in the full cone **($W_1$)** and subtract from weight of full jar **(W)**: **W - ($W_1$+$W_2$)** 1204.000 grams

**Volume of Excavation =** 786.928 cm^3

**Wet Density of Excavated Soil $W_W$ =** 2162.841 kg/m^3

**Dry Density of Soil**

- Place moist soil obtained from the excavation into pan for drying after weighing on the scale
- Place material in iron skillet over active burner and break apart the core so that it can be dried over the heat.
- Carefully remove dried material from skillet making sure to transfer all material into a tin or other aparatus to be weighed.

**- Obtain weight in grams of dry soil $W_D$ =** 1390.000 grams
**- Moisture Content of sample =** 18.331 %

**Soil Dry Density =** 1827.783 **kg/m^3**

***Soil Dry Unit Wt. = 114.05 **lb/ft^3** *** measured in force (lb/ft^3)

# DAILY FIELD REPORT

**Date: 08/28/2024 (Wednesday)**
**Report No.: 15-082824**


Civil & Environmental Consultants, Inc.

## NUCLEAR COMPACTION TEST DATA (ASTM D6938)

**PROJECT NAME:** Powerton Bypass Basin Retrofit
**PROJECT NUMBER:** 343-014
**CEC TECHNICIAN:** Derek Dorsz
**GAUGE NUMBER:** 27636
**CONTRACTOR:** Bluff City Construction

**STANDARD COUNTS:**

| | | | | | |
|---|---|---|---|---|---|
| **DENSITY** | 954 | **%** | **DEVIATION** | 0.73 | **±1% PASSING** |
| **MOISTURE** | 613 | **%** | **DEVIATION** | 0.33 | **±2% PASSING** |

| **TEST NUMBER** | 26 | 27 | 28 | | | |
|---|---|---|---|---|---|---|
| **LOCATION** | N: 1411942.7<br>E: 2432791.2 | N: 1411942.7<br>E: 2432791.2 | N: 1411942.7<br>E: 2432791.2 | | | |
| **ELEVATION OR LIFT NUMBER** | Lift 1<br>Z: 466.2 | Lift 2<br>Z: 466.7 | Lift 3<br>Z: 467.2 | | | |
| **LIFT THICKNESS (in.)** | 6 | 6 | 6 | | | |
| **NUMBER OF PASSES** | 4 | 4 | 4 | | | |
| **PROBE DEPTH (in.)** | 0 | 0 | 0 | | | |
| **FIELD WET DENSITY (pcf)** | 135.6 | 135.7 | 135.9 | | | |
| **FIELD DRY DENSITY (pcf)** | 115.6 | 114.9 | 114.5 | | | |
| **COMPACTION (%)** | 97.3 | 96.7 | 96.4 | | | |
| **COMPACTION PASS/FAIL** | PASS | PASS | PASS | | | |
| **FIELD MOISTURE (%)** | 14.7 | 15.3 | 15.7 | | | |
| **MOISTURE PASS/FAIL** | PASS | PASS | PASS | | | |
| **LAB PROCTOR MDD** | 118.8 | 118.8 | 118.8 | | | |
| **PROCTOR TYPE (Mod./Stan.)** | Modified | Modified | Modified | | | |
| **SPECIFIED MIN. COMPACTION (%)** | 95.0 | 95.0 | 95.0 | | | |
| **LABORATORY OMC (%)** | 13.0 | 13.0 | 13.0 | | | |
| **SPECIFIED MOISTURE RANGE** | 10.0 – 16.0 | 10.0 – 16.0 | 10.0 – 16.0 | | | |
| **RETEST NUMBER** | N/A | N/A | N/A | | | |
| **REMARKS** | | | | | | |

NOTES:
1. MDD denotes Maximum Dry Density.
2. OMC denotes Optimum Moisture Content.
3. Elevations and lift thicknesses are approximate.
4. N denote Northing, E denotes Easting, and Z denotes elevation. Coordinates given by Bluff City Construction.

# Powerton Bypass Basin Retrofit
# Sand Cone Test

Civil & Environmental Consultants, Inc.

## Sand Cone Analysis (Cannot be performed in soils with coarse aggregates)
## Date: 8/28/24  Test No: 28

This method is using balance scales measuring mass **to determine unit weight**. If you are using digital scales or scales with springs for the force-measuring mechanism, use the "Pounds-Force" Tab.

**Obtain Sample for Wet Density**

- Excavate hole with large metal spoon or garden trowel that is 3 to 4" in diameter and 3 to 4 inches deep in order to obtain a sample of at least 500 grams (1.1 lbs).

- Fill the cone on the apparatus with the sand from the sandcone to detemine the weight of the sand in the cone.

**-Weight of sand from full cone ($W_1$) in Pounds (grams) =** 1573.000 grams
**-Weight of cone/jar aperatus with sand = (W) in grams** 6384.000 grams
**-Enter pre-determined density of sand in jar =** 1.530 g/cm^3

-Place base plate over excavated hole with hole in base plate in ceter of excavated hole.
**-Weigh moist/wet soil from excavation Ws =** 1430.000 grams
- Place cone (attached to sand jar) over hole and open valve.
- Turn Valve off and remove cone and base plate.  If excavation is not full, spread sand evenly in excavation and repeat last step.

**- Determine Volume of Hole Excavated.**

- Weigh jar and remaining sand **($W_2$)** 3795.000 grams  + weight of sand in the full cone **($W_1$)** and subtract from weight of full jar **(W)**:  **W - ($W_1$+$W_2$)** 1016.000 grams

**Volume of Excavation =** 664.052 cm^3

**Wet Density of Excavated Soil $W_W$ =** 2153.445 kg/m^3

**Dry Density of Soil**

- Place moist soil obtained from the excavation into pan for drying after weighing on the scale
- Place material in iron skillet over active burner and break apart the core so that it can be dried over the heat.
- Carefully remove dried material from skillet making sure to transfer all material into a tin or other aparatus to be weighed.

**- Obtain weight in grams of dry soil $W_D$ =** 1198.000 grams
**- Moisture Content of sample =** 16.224 %

**Soil Dry Density =** 1852.844 **kg/m^3**

***Soil Dry Unit Wt. = 115.62 **lb/ft^3**  *** measured in force (lb/ft^3)

**Report On: Daily Field Activity - Concrete** **Lab No: 20142**

**Project No:** 2024-1313-04T **Cust No:**1313 **Page 1 of 1**

| | | | |
|---|---|---|---|
| **Client:** | Civil & Environmental Consultants, Inc. | **Report Date:** | 08/28/2024 |
| **Project:** | 13082 E Manito Rd., Pekin, IL | **Test Date:** | 08/22/2024 |
| **Report No:** | 001 | **Tested By:** | Charles Tomas |
| **Location:** | Floawble Fill | | |

NST representative was on site as scheduled and observed the flowable concrete fill placement. A total of 4 concrete loads were supplied by Roanoke, Pekin Plant . A total of 36 cubic yards of flowable concrete mix RSMFF03 were placed.

NST representative performed field concrete slump, air content and temperature tests on load 1. Slump, air content and temperature test results were consistent with the project specifications. A total of 1 set of 9 cylinders were cast as per project specifications from load 1 for laboratory curing and compressive strength testing. Test results are included on the Air Content and Slump report.

Remarks: No pictures taken.

Orig: Civil & Environmental Consultants, Inc.
Attn: Mr. Matthew D. Breitenbach
(1-ec copy)
1-cc Laboratory

Respectfully Submitted,

Umar I. Ahmad, PE

**Report On: Air Content & Slump** **Lab No: 20142-1**

**Project No:** 2024-1313-04T **Cust No:**1313 **Page 1 of 1**

**Client:** Civil & Environmental Consultants, Inc.
**Project:** 13082 E Manito Rd., Pekin, IL
**Report No:** 002
**Location:** Flowable Fill
**Material:** PCC

**Report Date:** 08/28/2024
**Test Date:** 08/22/2024
**Sampled By:** Charles Tomas

| Spec Nbr | Sampled At | Truck No | Total Yards | Ticket No | Water Added | Mix Code | Time Sampled | Amb Temp (°F) | Mix Temp (°F) | Slump (In.) | Air % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Truck | | 90 | 2064652 | No | RSMFF03 | 10:40 am | 72 | 70 | 9.00 | 5.50 |

Placement Location: Flowable Fill

Date Tested: 08/22/2024
Source: Roanoke Concrete
Plant: Pekin
Remarks:
Test Method (As Applicable): ASTM C143, C231, C172, C1064, C31

Orig: Civil & Environmental Consultants, Inc.
Attn: Mr. Matthew D. Breitenbach
(1-ec copy)
1-cc Laboratory

Respectfully Submitted,
Umar I. Ahmad, PE

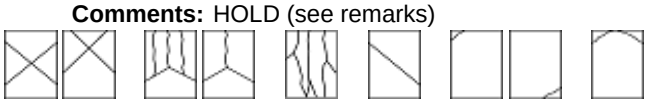
**Report On: Concrete Compression** **Lab No: 20142-2**

**Project No:** 2024-1313-04T **Cust No:**1313 **Page 1 of 1**

**Client:** Civil & Environmental Consultants, Inc.
**Project:** 13082 E Manito Rd., Pekin, IL
**Report No:** 003
**Location:** Flowable Fill

**Report Date:** 09/03/2024
**Test Date:** 08/22/2024
**Sampled By:** Charles Tomas

| Cylinder Marked | Age Tested (date : days) | Diameter (in) | Area (in²) | Max Load (lbs) | Break Type | Cure Loc | Compressive Strength (PSI) | Average Strength (PSI) | Tested By |
|---|---|---|---|---|---|---|---|---|---|
| A | 08/29/24 : 7 | 4.00 | 12.566 | 450 | Type 3 | Lab | 40 | | U. Ahmad |
| B | 08/29/24 : 7 | 4.00 | 12.566 | 470 | Type 3 | Lab | 40 | | U. Ahmad |
| C | 08/29/24 : 7 | 4.00 | 12.566 | 520 | Type 3 | Lab | 40 | 40 | U. Ahmad |
| D | 09/19/24 : 28 | 4.00 | 12.566 | | | Lab | | | |
| E | 09/19/24 : 28 | 4.00 | 12.566 | | | Lab | | | |
| F | 09/19/24 : 28 | 4.00 | 12.566 | | | Lab | | | |
| G | HOLD | | | | | | | | |
| **Comments:** HOLD (see remarks) | | | | | | | | | |
| H | HOLD | | | | | | | | |
| **Comments:** HOLD (see remarks) | | | | | | | | | |
| I | HOLD | | | | | | | | |
| **Comments:** HOLD (see remarks) | | | | | | | | | |



Type 1 Type 2 Type 3 Type 4 Type 5 Type 6

| | Measurement | Specification |
|---|---|---|
| **Temp.: Ambient:** | 72ºF | |
| **Mix:** | 70ºF | |
| **Slump:** | 9.0 | |
| **Air Content:** | 5.5 | |
| **Unit Weight:** | 61.8 lbs/ft³ | |

**Specification:**
**Source:** Roanoke Concrete Proc
**Plant:** Pekin
**Truck No:** NA
**Mix Code:**
**Ticket No:** 2064652
**Sampled At:** Truck

**Weather:**
**Transported By:**
**Placement Date:** 08/22/2024
**Time Batched:** 9:36 am
**Time Sampled:** 10:40 am
**Curing Method:** Standard

**Quantity Represented:** 9 cu. yds. at 9 cu. yds. placed of a 36 cu. yd. total placement
**Placement Location:**
**Sample Location:** Flowable Fill
**Remarks:** CLSM
**Test Method (As Applicable):** Unless noted, concrete was sampled and tested in accordance with ASTM C172, C143, C231 or C173, C1054 and C138. Compressive strength tests per ASTM C39.

Orig: Civil & Environmental Consultants, Inc.
Attn: Mr. Matthew D. Breitenbach
(1-ec copy)
1-cc Laboratory

Respectfully Submitted,
Umar T. Ahmad, PE