



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: 6/6/2018

Subject: Review of Region 5 Data for Central Sands

To: Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

From: Francis Awanya, Chemist  
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Central Sands

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**Analyses included in this report:**

Solids, TDS



# Environmental Protection Agency Region 5

## Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370      Fax:(312)886-2591

Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-06-18 14:55

### Accredited Analyses included in this Report



**Method:** SM 2540 C in Water

**Analysis:** Solids, TDS

**Analyte**

**Certifications**

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Total Dissolved Solids

ISO/IEC 17025:2005

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Analytes not listed above are not accredited by ANAB.



# Environmental Protection Agency Region 5

## Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-06-18 14:55

### Analysis Case Narrative

#### General Information

Ninety-eight (98) water samples collected for the project were received at the Chicago Regional Laboratory (CRL) on May 2 and May 4, 2018. The samples were logged in the CRL LIMS under Work Order Number 1805005 and 1805007. Total Dissolved Solids (TDS) analysis was assigned to those samples. The samples were analyzed for TDS using Standard Operating Procedure (SOP) CRL Document # AIG017 Version # 5 (Based on SM 2540 C (APHA, AWWA, WEF)). The designated analyst is Francis Awanya. Francis can be reached at 312-886-3682. Other pertinent information is provided in the final analysis report.

The following samples could not be processed and analyzed within the holding time. The sample results were flagged "J"; The identification of the analyte is acceptable; the reported value is an estimate. The affected samples are 1805005-01 (Sample name: A1a), 1805005-02 (Sample name: A1b), 1805007-01 (Sample name: D5a), 1805007-02 (Sample name: D5b), 1805007-03 (Sample name: D6a), and 1805007-04 (Sample name: D6b), 1805007-05 (Sample name: D7 equip), 1805007-06 (Sample name: FB3), 1805007-07 (Sample name: D7a Dup), and 1805007-08 (Sample name: D7a), 1805007-09 (Sample name: D7b), and 1805007-10 (Sample name: D8A).

All supporting data are archived with Work Order Number 1805005.

#### Sample Analysis and Results

The data reported herein met the requirements of Standard Operating Procedure (SOP) CRL Document # AIG017 Version # 5 (Based on SM 2540 C (APHA, AWWA, WEF)) and any laboratory specifications contained in the sampling QAPP "*FINAL\_2018 GW Sampling Plan4\_27\_2018.pdf*". Exceptions are discussed above and in the Quality Control (QC) section.

#### Quality Control

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits with the following exceptions.

Duplicate audit: The reproducibility of 13% and 14% obtained for samples 1805005-15 (Sample name: B2b) and 1805005-21(Sample name: C1b) respectively exceeded the limit of 10% Relative. The absolute differences obtained for both samples were less than detection. No flags were applied to the two sample results.



# Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

## WORK ORDER

Printed: 5/3/2018 3:33:25PM

1805005

## US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: [none]

**Report To:**

Cheryl Burdett  
Water Division, WECA Region 5      77 West Jackson Boulevard  
Chicago, IL 60604      Phone: (312) 886-1463  
Fax: (312) 886-2001

Date Due: Jun-04-18 15:00 (32 day TAT)

Received By: Colin Breslin

Logged In By: Robert Snyder

Date Received: May-02-18 09:55

Date Logged In: May-03-18 09:30

Samples Received at:

Sample tags/labels

Yes

Seals Intact

Yes

Received on ice

Yes

Paperwork Included

Yes

**Work Order Comments:**

Anions: Chloride and nitrate as NO<sub>3</sub>

Full List metals

Sample ID: [1805005-01](#)

Sampled: [Apr-30-18 07:19](#) Matrix: [Water](#)

Sample Name: [A1a](#)

Sample Location/Comments: [1st Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 07:19	pH = 2
Anions by IC	28	May-28-18 07:19	pH = 7
Metals ICP-AES (w)	180	Oct-27-18 07:19	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 07:19	pH = 2
Solids, TDS	7	May-07-18 07:19	pH = 7
TKN DA	28	May-28-18 07:19	pH = 2
TOC	28	May-28-18 07:19	pH = 2
Total Phosphorus DA	28	May-28-18 07:19	pH = 2

Sample ID: [1805005-02](#)

Sampled: [Apr-30-18 07:32](#) Matrix: [Water](#)

Sample Name: [A1b](#)

Sample Location/Comments: [1st Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 07:32	pH = 2
Anions by IC	28	May-28-18 07:32	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 07:32	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 07:32	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-02](#)    **Sampled:** [Apr-30-18 07:32](#)    **Matrix:** [Water](#)

**Sample Name:** [A1b](#)

**Sample Location/Comments:** [1st Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	May-07-18 07:32	pH = 5
TKN DA	28	May-28-18 07:32	pH = 2
TOC	28	May-28-18 07:32	pH = 2
Total Phosphorus DA	28	May-28-18 07:32	pH = 2

**Sample ID:** [1805005-03](#)    **Sampled:** [Apr-30-18 08:15](#)    **Matrix:** [Water](#)

**Sample Name:** [A2a](#)

**Sample Location/Comments:** [22nd Avenue North](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 08:15	pH = 2
Anions by IC	28	May-28-18 08:15	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 08:15	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 08:15	pH = 2
Solids, TDS	7	May-07-18 08:15	pH = 6
TKN DA	28	May-28-18 08:15	pH = 2
TOC	28	May-28-18 08:15	pH = 2
Total Phosphorus DA	28	May-28-18 08:15	pH = 2

**Sample ID:** [1805005-04](#)    **Sampled:** [Apr-30-18 08:24](#)    **Matrix:** [Water](#)

**Sample Name:** [A2b](#)

**Sample Location/Comments:** [22nd Avenue North](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 08:24	pH = 2
Anions by IC	28	May-28-18 08:24	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 08:24	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 08:24	pH = 2
Solids, TDS	7	May-07-18 08:24	pH = 6
TKN DA	28	May-28-18 08:24	pH = 2
TOC	28	May-28-18 08:24	pH = 2
Total Phosphorus DA	28	May-28-18 08:24	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-05](#)    **Sampled:** [Apr-30-18 09:06](#)    **Matrix:** [Water](#)    [OC Source Sample MS/MSD](#)

**Sample Name:** [A3a](#)                                                          **Sample Location/Comments:** [2nd Street](#)

**Sample Comments:** [MS/MSD](#)

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:06	pH = 2
Anions by IC	28	May-28-18 09:06	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:06	pH = 2
Solids, TDS	7	May-07-18 09:06	pH = 6
TKN DA	28	May-28-18 09:06	pH = 2
TOC	28	May-28-18 09:06	pH = 2
Total Phosphorus DA	28	May-28-18 09:06	pH = 2

**Sample ID:** [1805005-06](#)    **Sampled:** [Apr-30-18 09:14](#)    **Matrix:** [Water](#)

**Sample Name:** [A3b](#)                                                          **Sample Location/Comments:** [2nd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:14	pH = 2
Anions by IC	28	May-28-18 09:14	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:14	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:14	pH = 2
Solids, TDS	7	May-07-18 09:14	pH = 6
TKN DA	28	May-28-18 09:14	pH = 2
TOC	28	May-28-18 09:14	pH = 2
Total Phosphorus DA	28	May-28-18 09:14	pH = 2

**Sample ID:** [1805005-07](#)    **Sampled:** [Apr-30-18 09:38](#)    **Matrix:** [Water](#)

**Sample Name:** [A4 Equip](#)                                                          **Sample Location/Comments:** [Cranberry Rock Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:38	pH = 2
Anions by IC	28	May-28-18 09:38	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 09:38	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:38	pH = 2
Solids, TDS	7	May-07-18 09:38	pH = 5
TKN DA	28	May-28-18 09:38	pH = 2
TOC	28	May-28-18 09:38	pH = 2

## WORK ORDER

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**1805005**

## US EPA Region 5 Chicago Regional Laboratory

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-07](#)    **Sampled:** [Apr-30-18 09:38](#)    **Matrix:** [Water](#)

**Sample Name:** [A4 Equip](#)                              **Sample Location/Comments:** [Cranberry Rock Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 09:38	pH = 2

**Sample ID:** [1805005-08](#)    **Sampled:** [Apr-30-18 09:06](#)    **Matrix:** [Water](#)

**Sample Name:** [A3a \(Dup\)](#)                              **Sample Location/Comments:** [2nd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:06	pH = 2
Anions by IC	28	May-28-18 09:06	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 09:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:06	pH = 2
Solids, TDS	7	May-07-18 09:06	pH = 6
TKN DA	28	May-28-18 09:06	pH = 2
TOC	28	May-28-18 09:06	pH = 2
Total Phosphorus DA	28	May-28-18 09:06	pH = 2

**Sample ID:** [1805005-09](#)    **Sampled:** [Apr-30-18 09:49](#)    **Matrix:** [Water](#)

**Sample Name:** [FB1](#)                              **Sample Location/Comments:** [Cranberry Rock Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:49	pH = 2
Anions by IC	28	May-28-18 09:49	pH = 4
Metals ICP-AES (w)	180	Oct-27-18 09:49	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:49	pH = 2
Solids, TDS	7	May-07-18 09:49	pH = 4
TKN DA	28	May-28-18 09:49	pH = 2
TOC	28	May-28-18 09:49	pH = 2
Total Phosphorus DA	28	May-28-18 09:49	pH = 2

**Sample ID:** [1805005-10](#)    **Sampled:** [Apr-30-18 09:58](#)    **Matrix:** [Water](#)

**Sample Name:** [A4a](#)                              **Sample Location/Comments:** [Cranberry Rock Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 09:58	pH = 2
Anions by IC	28	May-28-18 09:58	pH = 6

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-10](#)    **Sampled:** [Apr-30-18 09:58](#)    **Matrix:** [Water](#)

**Sample Name:** [A4a](#)

**Sample Location/Comments:** [Cranberry Rock Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-27-18 09:58	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 09:58	pH = 2
Solids, TDS	7	May-07-18 09:58	pH = 6
TKN DA	28	May-28-18 09:58	pH = 2
TOC	28	May-28-18 09:58	pH = 2
Total Phosphorus DA	28	May-28-18 09:58	pH = 2

**Sample ID:** [1805005-11](#)    **Sampled:** [Apr-30-18 10:09](#)    **Matrix:** [Water](#)

**Sample Name:** [A4b](#)

**Sample Location/Comments:** [Cranberry Rock Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:09	pH = 2
Anions by IC	28	May-28-18 10:09	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:09	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:09	pH = 2
Solids, TDS	7	May-07-18 10:09	pH = 5
TKN DA	28	May-28-18 10:09	pH = 2
TOC	28	May-28-18 10:09	pH = 2
Total Phosphorus DA	28	May-28-18 10:09	pH = 2

**Sample ID:** [1805005-12](#)    **Sampled:** [Apr-30-18 10:51](#)    **Matrix:** [Water](#)

**Sample Name:** [B1a](#)

**Sample Location/Comments:** [20th Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:51	pH = 3
Anions by IC	28	May-28-18 10:51	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:51	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:51	pH = 3
Solids, TDS	7	May-07-18 10:51	pH = 5
TKN DA	28	May-28-18 10:51	pH = 3
TOC	28	May-28-18 10:51	pH = 3
Total Phosphorus DA	28	May-28-18 10:51	pH = 3

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-13](#)    **Sampled:** [Apr-30-18 10:58](#)    **Matrix:** [Water](#)

**Sample Name:** [B1b](#)

**Sample Location/Comments:** [20th Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 10:58	pH = 2
Anions by IC	28	May-28-18 10:58	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 10:58	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 10:58	pH = 2
Solids, TDS	7	May-07-18 10:58	pH = 5
TKN DA	28	May-28-18 10:58	pH = 2
TOC	28	May-28-18 10:58	pH = 2
Total Phosphorus DA	28	May-28-18 10:58	pH = 2

**Sample ID:** [1805005-14](#)    **Sampled:** [Apr-30-18 11:40](#)    **Matrix:** [Water](#)

**Sample Name:** [B2a](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 11:40	pH = 2
Anions by IC	28	May-28-18 11:40	pH = 7
Metals ICP-AES (w)	180	Oct-27-18 11:40	pH = 4
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 11:40	pH = 2
Solids, TDS	7	May-07-18 11:40	pH = 7
TKN DA	28	May-28-18 11:40	pH = 2
TOC	28	May-28-18 11:40	pH = 2
Total Phosphorus DA	28	May-28-18 11:40	pH = 2

**Sample ID:** [1805005-15](#)    **Sampled:** [Apr-30-18 11:48](#)    **Matrix:** [Water](#)

**Sample Name:** [B2b](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 11:48	pH = 2
Anions by IC	28	May-28-18 11:48	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 11:48	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 11:48	pH = 2
Solids, TDS	7	May-07-18 11:48	pH = 5
TKN DA	28	May-28-18 11:48	pH = 2
TOC	28	May-28-18 11:48	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-15](#)    **Sampled:** [Apr-30-18 11:48](#)    **Matrix:** [Water](#)

**Sample Name:** [B2b](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 11:48	pH = 2

**Sample ID:** [1805005-16](#)    **Sampled:** [Apr-30-18 12:29](#)    **Matrix:** [Water](#)

**Sample Name:** [B3a](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 12:29	pH = 2
Anions by IC	28	May-28-18 12:29	pH = 6
Metals ICP-AES (w)	180	Oct-27-18 12:29	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 12:29	pH = 2
Solids, TDS	7	May-07-18 12:29	pH = 6
TKN DA	28	May-28-18 12:29	pH = 2
TOC	28	May-28-18 12:29	pH = 2
Total Phosphorus DA	28	May-28-18 12:29	pH = 2

**Sample ID:** [1805005-17](#)    **Sampled:** [Apr-30-18 12:36](#)    **Matrix:** [Water](#)

**Sample Name:** [B3b](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 12:36	pH = 2
Anions by IC	28	May-28-18 12:36	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 12:36	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 12:36	pH = 2
Solids, TDS	7	May-07-18 12:36	pH = 5
TKN DA	28	May-28-18 12:36	pH = 2
TOC	28	May-28-18 12:36	pH = 2
Total Phosphorus DA	28	May-28-18 12:36	pH = 2

**Sample ID:** [1805005-18](#)    **Sampled:** [Apr-30-18 13:10](#)    **Matrix:** [Water](#)

**Sample Name:** [B4a](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 13:10	pH = 2
Anions by IC	28	May-28-18 13:10	pH = 5

**WORK ORDER**

Printed: 5/3/2018 3:33:25PM

**1805005****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]**Sample ID:** 1805005-18    **Sampled:** Apr-30-18 13:10    **Matrix:** Water**Sample Name:** B4a**Sample Location/Comments:** 3rd Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-27-18 13:10	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 13:10	pH = 2
Solids, TDS	7	May-07-18 13:10	pH = 5
TKN DA	28	May-28-18 13:10	pH = 2
TOC	28	May-28-18 13:10	pH = 2
Total Phosphorus DA	28	May-28-18 13:10	pH = 2

**Sample ID:** 1805005-19    **Sampled:** Apr-30-18 13:41    **Matrix:** Water**Sample Name:** B4b**Sample Location/Comments:** 3rd Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 13:41	pH = 2
Anions by IC	28	May-28-18 13:41	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 13:41	pH = 4
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 13:41	pH = 2
Solids, TDS	7	May-07-18 13:41	pH = 5
TKN DA	28	May-28-18 13:41	pH = 2
TOC	28	May-28-18 13:41	pH = 2
Total Phosphorus DA	28	May-28-18 13:41	pH = 2

**Sample ID:** 1805005-20    **Sampled:** Apr-30-18 15:02    **Matrix:** Water**Sample Name:** C1a**Sample Location/Comments:** 2nd Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 15:02	pH = 2
Anions by IC	28	May-28-18 15:02	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 15:02	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 15:02	pH = 2
Solids, TDS	7	May-07-18 15:02	pH = 5
TKN DA	28	May-28-18 15:02	pH = 2
TOC	28	May-28-18 15:02	pH = 2
Total Phosphorus DA	28	May-28-18 15:02	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-21](#)    **Sampled:** [Apr-30-18 15:27](#)    **Matrix:** [Water](#)

**Sample Name:** [C1b](#)

**Sample Location/Comments:** [2nd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 15:27	pH = 2
Anions by IC	28	May-28-18 15:27	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 15:27	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 15:27	pH = 2
Solids, TDS	7	May-07-18 15:27	pH = 5
TKN DA	28	May-28-18 15:27	pH = 2
TOC	28	May-28-18 15:27	pH = 2
Total Phosphorus DA	28	May-28-18 15:27	pH = 2

**Sample ID:** [1805005-22](#)    **Sampled:** [Apr-30-18 16:06](#)    **Matrix:** [Water](#)

**Sample Name:** [C2a](#)

**Sample Location/Comments:** [Nelson Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 16:06	pH = 2
Anions by IC	28	May-28-18 16:06	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 16:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 16:06	pH = 2
Solids, TDS	7	May-07-18 16:06	pH = 5
TKN DA	28	May-28-18 16:06	pH = 2
TOC	28	May-28-18 16:06	pH = 2
Total Phosphorus DA	28	May-28-18 16:06	pH = 2

**Sample ID:** [1805005-23](#)    **Sampled:** [Apr-30-18 16:14](#)    **Matrix:** [Water](#)

**Sample Name:** [C2b](#)

**Sample Location/Comments:** [Nelson Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 16:14	pH = 2
Anions by IC	28	May-28-18 16:14	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 16:14	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 16:14	pH = 2
Solids, TDS	7	May-07-18 16:14	pH = 5
TKN DA	28	May-28-18 16:14	pH = 2
TOC	28	May-28-18 16:14	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-23](#)    **Sampled:** [Apr-30-18 16:14](#)    **Matrix:** [Water](#)

**Sample Name:** [C2b](#)

**Sample Location/Comments:** [Nelson Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-28-18 16:14	pH = 2

**Sample ID:** [1805005-24](#)    **Sampled:** [Apr-30-18 14:16](#)    **Matrix:** [Water](#)

**Sample Name:** [C3a](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 14:16	pH = 2
Anions by IC	28	May-28-18 14:16	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 14:16	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 14:16	pH = 2
Solids, TDS	7	May-07-18 14:16	pH = 5
TKN DA	28	May-28-18 14:16	pH = 2
TOC	28	May-28-18 14:16	pH = 2
Total Phosphorus DA	28	May-28-18 14:16	pH = 2

**Sample ID:** [1805005-25](#)    **Sampled:** [Apr-30-18 14:26](#)    **Matrix:** [Water](#)

**Sample Name:** [C3b](#)

**Sample Location/Comments:** [3rd Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-28-18 14:26	pH = 2
Anions by IC	28	May-28-18 14:26	pH = 5
Metals ICP-AES (w)	180	Oct-27-18 14:26	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-28-18 14:26	pH = 2
Solids, TDS	7	May-07-18 14:26	pH = 5
TKN DA	28	May-28-18 14:26	pH = 2
TOC	28	May-28-18 14:26	pH = 2
Total Phosphorus DA	28	May-28-18 14:26	pH = 2

**Sample ID:** [1805005-26](#)    **Sampled:** [May-01-18 06:29](#)    **Matrix:** [Water](#)

**Sample Name:** [C5Aa](#)

**Sample Location/Comments:** [CR G \(Nelson Road\)](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 06:29	pH = 2
Anions by IC	28	May-29-18 06:29	pH = 5

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-26](#)    **Sampled:** [May-01-18 06:29](#)    **Matrix:** [Water](#)

**Sample Name:** [C5Aa](#)

**Sample Location/Comments:** [CR G \(Nelson Road\)](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 06:29	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 06:29	pH = 2
Solids, TDS	7	May-08-18 06:29	pH = 5
TKN DA	28	May-29-18 06:29	pH = 2
TOC	28	May-29-18 06:29	pH = 2
Total Phosphorus DA	28	May-29-18 06:29	pH = 2

**Sample ID:** [1805005-27](#)    **Sampled:** [May-01-18 06:43](#)    **Matrix:** [Water](#)

**Sample Name:** [C5Ab](#)

**Sample Location/Comments:** [CR G \(Nelson Road\)](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 06:43	pH = 2
Anions by IC	28	May-29-18 06:43	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 06:43	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 06:43	pH = 2
Solids, TDS	7	May-08-18 06:43	pH = 5
TKN DA	28	May-29-18 06:43	pH = 2
TOC	28	May-29-18 06:43	pH = 2
Total Phosphorus DA	28	May-29-18 06:43	pH = 2

**Sample ID:** [1805005-28](#)    **Sampled:** [May-01-18 07:06](#)    **Matrix:** [Water](#)

**Sample Name:** [C6a](#)

**Sample Location/Comments:** [CR G \(Nelson Road\)](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:06	pH = 2
Anions by IC	28	May-29-18 07:06	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 07:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:06	pH = 2
Solids, TDS	7	May-08-18 07:06	pH = 6
TKN DA	28	May-29-18 07:06	pH = 2
TOC	28	May-29-18 07:06	pH = 2
Total Phosphorus DA	28	May-29-18 07:06	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-29](#)    **Sampled:** [May-01-18 07:15](#)    **Matrix:** [Water](#)

**Sample Name:** [C6b](#)

**Sample Location/Comments:** [CR G \(Nelson Road\)](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:15	pH = 3
Anions by IC	28	May-29-18 07:15	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 07:15	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:15	pH = 3
Solids, TDS	7	May-08-18 07:15	pH = 5
TKN DA	28	May-29-18 07:15	pH = 3
TOC	28	May-29-18 07:15	pH = 3
Total Phosphorus DA	28	May-29-18 07:15	pH = 3

**Sample ID:** [1805005-30](#)    **Sampled:** [May-01-18 07:48](#)    **Matrix:** [Water](#)

**Sample Name:** [C7a](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:48	pH = 2
Anions by IC	28	May-29-18 07:48	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 07:48	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:48	pH = 2
Solids, TDS	7	May-08-18 07:48	pH = 6
TKN DA	28	May-29-18 07:48	pH = 2
TOC	28	May-29-18 07:48	pH = 2
Total Phosphorus DA	28	May-29-18 07:48	pH = 2

**Sample ID:** [1805005-31](#)    **Sampled:** [May-01-18 08:02](#)    **Matrix:** [Water](#)

**Sample Name:** [C7b](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:02	pH = 2
Anions by IC	28	May-29-18 08:02	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 08:02	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:02	pH = 2
Solids, TDS	7	May-08-18 08:02	pH = 5
TKN DA	28	May-29-18 08:02	pH = 2
TOC	28	May-29-18 08:02	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-31](#)    **Sampled:** [May-01-18 08:02](#)    **Matrix:** [Water](#)

**Sample Name:** [C7b](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-29-18 08:02	pH = 2

**Sample ID:** [1805005-32](#)    **Sampled:** [May-01-18 07:39](#)    **Matrix:** [Water](#)

**Sample Name:** [FB2](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:39	pH = 2
Anions by IC	28	May-29-18 07:39	pH = 4
Metals ICP-AES (w)	180	Oct-28-18 07:39	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:39	pH = 2
Solids, TDS	7	May-08-18 07:39	pH = 4
TKN DA	28	May-29-18 07:39	pH = 2
TOC	28	May-29-18 07:39	pH = 2
Total Phosphorus DA	28	May-29-18 07:39	pH = 2

**Sample ID:** [1805005-33](#)    **Sampled:** [May-01-18 07:38](#)    **Matrix:** [Water](#)

**Sample Name:** [C7 equip](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 07:38	pH = 2
Anions by IC	28	May-29-18 07:38	pH = 4
Metals ICP-AES (w)	180	Oct-28-18 07:38	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 07:38	pH = 2
Solids, TDS	7	May-08-18 07:38	pH = 4
TKN DA	28	May-29-18 07:38	pH = 2
TOC	28	May-29-18 07:38	pH = 2
Total Phosphorus DA	28	May-29-18 07:38	pH = 2

**Sample ID:** [1805005-34](#)    **Sampled:** [May-01-18 08:02](#)    **Matrix:** [Water](#)

**Sample Name:** [C7 Dup](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:02	pH = 2
Anions by IC	28	May-29-18 08:02	pH = 5

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-34](#)    **Sampled:** [May-01-18 08:02](#)    **Matrix:** [Water](#)

**Sample Name:** [C7 Dup](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 08:02	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:02	pH = 2
Solids, TDS	7	May-08-18 08:02	pH = 5
TKN DA	28	May-29-18 08:02	pH = 2
TOC	28	May-29-18 08:02	pH = 2
Total Phosphorus DA	28	May-29-18 08:02	pH = 2

**Sample ID:** [1805005-35](#)    **Sampled:** [May-01-18 08:35](#)    **Matrix:** [Water](#)

**Sample Name:** [C8a](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:35	pH = 2
Anions by IC	28	May-29-18 08:35	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 08:35	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:35	pH = 2
Solids, TDS	7	May-08-18 08:35	pH = 5
TKN DA	28	May-29-18 08:35	pH = 2
TOC	28	May-29-18 08:35	pH = 2
Total Phosphorus DA	28	May-29-18 08:35	pH = 2

**Sample ID:** [1805005-36](#)    **Sampled:** [May-01-18 08:42](#)    **Matrix:** [Water](#)

**Sample Name:** [C8b](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 08:42	pH = 2
Anions by IC	28	May-29-18 08:42	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 08:42	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 08:42	pH = 2
Solids, TDS	7	May-08-18 08:42	pH = 5
TKN DA	28	May-29-18 08:42	pH = 2
TOC	28	May-29-18 08:42	pH = 2
Total Phosphorus DA	28	May-29-18 08:42	pH = 2

**WORK ORDER**

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**1805005****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]**Sample ID:** 1805005-37    **Sampled:** May-01-18 10:00    **Matrix:** Water**Sample Name:** C9a**Sample Location/Comments:** 4th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 10:00	pH = 2
Anions by IC	28	May-29-18 10:00	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 10:00	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 10:00	pH = 2
Solids, TDS	7	May-08-18 10:00	pH = 5
TKN DA	28	May-29-18 10:00	pH = 2
TOC	28	May-29-18 10:00	pH = 2
Total Phosphorus DA	28	May-29-18 10:00	pH = 2

**Sample ID:** 1805005-38    **Sampled:** May-01-18 10:21    **Matrix:** Water**Sample Name:** C9b**Sample Location/Comments:** 4th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 10:21	pH = 2
Anions by IC	28	May-29-18 10:21	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 10:21	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 10:21	pH = 2
Solids, TDS	7	May-08-18 10:21	pH = 5
TKN DA	28	May-29-18 10:21	pH = 2
TOC	28	May-29-18 10:21	pH = 2
Total Phosphorus DA	28	May-29-18 10:21	pH = 2

**Sample ID:** 1805005-39    **Sampled:** May-01-18 11:05    **Matrix:** Water**Sample Name:** C10a**Sample Location/Comments:** 4th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:05	pH = 2
Anions by IC	28	May-29-18 11:05	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 11:05	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:05	pH = 2
Solids, TDS	7	May-08-18 11:05	pH = 6
TKN DA	28	May-29-18 11:05	pH = 2
TOC	28	May-29-18 11:05	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-39](#)    **Sampled:** [May-01-18 11:05](#)    **Matrix:** [Water](#)

**Sample Name:** [C10a](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-29-18 11:05	pH = 2

**Sample ID:** [1805005-40](#)    **Sampled:** [May-01-18 11:12](#)    **Matrix:** [Water](#)

**Sample Name:** [C10b](#)

**Sample Location/Comments:** [4th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:12	pH = 2
Anions by IC	28	May-29-18 11:12	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 11:12	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:12	pH = 2
Solids, TDS	7	May-08-18 11:12	pH = 5
TKN DA	28	May-29-18 11:12	pH = 2
TOC	28	May-29-18 11:12	pH = 2
Total Phosphorus DA	28	May-29-18 11:12	pH = 2

**Sample ID:** [1805005-41](#)    **Sampled:** [May-01-18 11:46](#)    **Matrix:** [Water](#)

**Sample Name:** [C11a](#)

**Sample Location/Comments:** [20th Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:46	pH = 3
Anions by IC	28	May-29-18 11:46	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 11:46	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:46	pH = 3
Solids, TDS	7	May-08-18 11:46	pH = 6
TKN DA	28	May-29-18 11:46	pH = 3
TOC	28	May-29-18 11:46	pH = 3
Total Phosphorus DA	28	May-29-18 11:46	pH = 3

**Sample ID:** [1805005-42](#)    **Sampled:** [May-01-18 11:52](#)    **Matrix:** [Water](#)

**Sample Name:** [C11b](#)

**Sample Location/Comments:** [20th Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 11:52	pH = 2
Anions by IC	28	May-29-18 11:52	pH = 5

**WORK ORDER**

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**1805005****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]**Sample ID:** 1805005-42    **Sampled:** May-01-18 11:52    **Matrix:** Water**Sample Name:** C11b**Sample Location/Comments:** 20th Avenue**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 11:52	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 11:52	pH = 2
Solids, TDS	7	May-08-18 11:52	pH = 5
TKN DA	28	May-29-18 11:52	pH = 2
TOC	28	May-29-18 11:52	pH = 2
Total Phosphorus DA	28	May-29-18 11:52	pH = 2

**Sample ID:** 1805005-43    **Sampled:** May-01-18 12:41    **Matrix:** Water**Sample Name:** C12a**Sample Location/Comments:** 19th Avenue**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 12:41	pH = 2
Anions by IC	28	May-29-18 12:41	pH = 7
Metals ICP-AES (w)	180	Oct-28-18 12:41	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 12:41	pH = 2
Solids, TDS	7	May-08-18 12:41	pH = 7
TKN DA	28	May-29-18 12:41	pH = 2
TOC	28	May-29-18 12:41	pH = 2
Total Phosphorus DA	28	May-29-18 12:41	pH = 2

**Sample ID:** 1805005-44    **Sampled:** May-01-18 12:47    **Matrix:** Water**Sample Name:** C12b**Sample Location/Comments:** 19th Avenue**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 12:47	pH = 2
Anions by IC	28	May-29-18 12:47	pH = 7
Metals ICP-AES (w)	180	Oct-28-18 12:47	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 12:47	pH = 2
Solids, TDS	7	May-08-18 12:47	pH = 7
TKN DA	28	May-29-18 12:47	pH = 2
TOC	28	May-29-18 12:47	pH = 2
Total Phosphorus DA	28	May-29-18 12:47	pH = 2

**WORK ORDER**

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**1805005****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]**Sample ID:** 1805005-45    **Sampled:** May-01-18 13:30    **Matrix:** Water**Sample Name:** C13a**Sample Location/Comments:** 4th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 13:30	pH = 3
Anions by IC	28	May-29-18 13:30	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 13:30	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 13:30	pH = 3
Solids, TDS	7	May-08-18 13:30	pH = 6
TKN DA	28	May-29-18 13:30	pH = 3
TOC	28	May-29-18 13:30	pH = 3
Total Phosphorus DA	28	May-29-18 13:30	pH = 3

**Sample ID:** 1805005-46    **Sampled:** May-01-18 13:39    **Matrix:** Water**Sample Name:** C13b**Sample Location/Comments:** 4th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 13:39	pH = 2
Anions by IC	28	May-29-18 13:39	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 13:39	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 13:39	pH = 2
Solids, TDS	7	May-08-18 13:39	pH = 5
TKN DA	28	May-29-18 13:39	pH = 2
TOC	28	May-29-18 13:39	pH = 2
Total Phosphorus DA	28	May-29-18 13:39	pH = 2

**Sample ID:** 1805005-47    **Sampled:** May-01-18 14:19    **Matrix:** Water**Sample Name:** D1a**Sample Location/Comments:** 5th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 14:19	pH = 2
Anions by IC	28	May-29-18 14:19	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 14:19	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 14:19	pH = 2
Solids, TDS	7	May-08-18 14:19	pH = 6
TKN DA	28	May-29-18 14:19	pH = 2
TOC	28	May-29-18 14:19	pH = 2

## WORK ORDER

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**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-47](#)    **Sampled:** [May-01-18 14:19](#)    **Matrix:** [Water](#)

**Sample Name:** [D1a](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-29-18 14:19	pH = 2

**Sample ID:** [1805005-48](#)    **Sampled:** [May-01-18 14:26](#)    **Matrix:** [Water](#)

**Sample Name:** [D1b](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 14:26	pH = 3
Anions by IC	28	May-29-18 14:26	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 14:26	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 14:26	pH = 3
Solids, TDS	7	May-08-18 14:26	pH = 5
TKN DA	28	May-29-18 14:26	pH = 3
TOC	28	May-29-18 14:26	pH = 3
Total Phosphorus DA	28	May-29-18 14:26	pH = 3

**Sample ID:** [1805005-49](#)    **Sampled:** [May-01-18 15:00](#)    **Matrix:** [Water](#)

**Sample Name:** [D2a](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:00	pH = 3
Anions by IC	28	May-29-18 15:00	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 15:00	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:00	pH = 3
Solids, TDS	7	May-08-18 15:00	pH = 6
TKN DA	28	May-29-18 15:00	pH = 3
TOC	28	May-29-18 15:00	pH = 3
Total Phosphorus DA	28	May-29-18 15:00	pH = 3

**Sample ID:** [1805005-50](#)    **Sampled:** [May-01-18 15:06](#)    **Matrix:** [Water](#)

**Sample Name:** [D2b](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:06	pH = 2
Anions by IC	28	May-29-18 15:06	pH = 6

## WORK ORDER

Printed: 5/3/2018 3:33:25PM

**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-50](#)    **Sampled:** [May-01-18 15:06](#)    **Matrix:** [Water](#)

**Sample Name:** [D2b](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-28-18 15:06	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:06	pH = 2
Solids, TDS	7	May-08-18 15:06	pH = 6
TKN DA	28	May-29-18 15:06	pH = 2
TOC	28	May-29-18 15:06	pH = 2
Total Phosphorus DA	28	May-29-18 15:06	pH = 2

**Sample ID:** [1805005-51](#)    **Sampled:** [May-01-18 15:41](#)    **Matrix:** [Water](#)

**Sample Name:** [D3a](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:41	pH = 2
Anions by IC	28	May-29-18 15:41	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 15:41	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:41	pH = 2
Solids, TDS	7	May-08-18 15:41	pH = 6
TKN DA	28	May-29-18 15:41	pH = 2
TOC	28	May-29-18 15:41	pH = 2
Total Phosphorus DA	28	May-29-18 15:41	pH = 2

**Sample ID:** [1805005-52](#)    **Sampled:** [May-01-18 15:48](#)    **Matrix:** [Water](#)

**Sample Name:** [D3b](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 15:48	pH = 2
Anions by IC	28	May-29-18 15:48	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 15:48	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 15:48	pH = 2
Solids, TDS	7	May-08-18 15:48	pH = 5
TKN DA	28	May-29-18 15:48	pH = 2
TOC	28	May-29-18 15:48	pH = 2
Total Phosphorus DA	28	May-29-18 15:48	pH = 2

## WORK ORDER

Printed: 5/3/2018 3:33:25PM

**1805005****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** [none]

**Sample ID:** [1805005-53](#)    **Sampled:** [May-01-18 16:19](#)    **Matrix:** [Water](#)

**Sample Name:** [D4a](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 16:19	pH = 2
Anions by IC	28	May-29-18 16:19	pH = 6
Metals ICP-AES (w)	180	Oct-28-18 16:19	pH = 2
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 16:19	pH = 2
Solids, TDS	7	May-08-18 16:19	pH = 6
TKN DA	28	May-29-18 16:19	pH = 2
TOC	28	May-29-18 16:19	pH = 2
Total Phosphorus DA	28	May-29-18 16:19	pH = 2

**Sample ID:** [1805005-54](#)    **Sampled:** [May-01-18 16:26](#)    **Matrix:** [Water](#)

**Sample Name:** [D4b](#)

**Sample Location/Comments:** [5th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-29-18 16:26	pH = 2
Anions by IC	28	May-29-18 16:26	pH = 5
Metals ICP-AES (w)	180	Oct-28-18 16:26	pH = 3
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-29-18 16:26	pH = 2
Solids, TDS	7	May-08-18 16:26	pH = 5
TKN DA	28	May-29-18 16:26	pH = 2
TOC	28	May-29-18 16:26	pH = 2
Total Phosphorus DA	28	May-29-18 16:26	pH = 2

WORK ORDER MEMO: NCR 14118

PROJECT COMMENTS: Anions: Chloride, fluoride, bromide, sulfate.

Full List metals

**REVIEWED**

By Amanda Wroble at 3:35 pm, May 03, 2018



# Environmental Protection Agency Region 5

## Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

### WORK ORDER

Printed: 5/7/2018 9:53:28AM

1805007

### US EPA Region 5 Chicago Regional Laboratory

Client: Water Division, WECA Region 5  
Project: Central Sands

Project Manager: Angela Ockrassa Davis  
Project Number: CB022018

#### Report To:

Cheryl Burdett  
Water Division, WECA Region 5      77 West Jackson Boulevard  
Chicago, IL 60604      Phone: (312) 886-1463  
Fax: (312) 886-2001

Date Due: Jun-04-18 15:00 (30 day TAT)

Received By: Robert Snyder

Logged In By: Robert Snyder

Date Received: May-04-18 10:00

Date Logged In: May-07-18 07:38

#### Samples Received at:

Sample tags/labels

Yes

Seals Intact

Yes

Received on ice

Yes

Paperwork Included

Yes

#### Work Order Comments:

Copy/Relog from 1805005. Anions: Chloride and nitrate as NO<sub>3</sub>

Full List metals

pH paper used in SC 16H2601

Sample ID: 1805007-01

Sampled: May-02-18 06:38

Matrix: Water

Sample Name: D5a

Sample Location/Comments: 5th Street

#### Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 06:38	pH = 1
Anions by IC	28	May-30-18 06:38	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 06:38	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 06:38	pH = 1
Solids, TDS	7	May-09-18 06:38	pH = 6
TKN DA	28	May-30-18 06:38	pH = 1
TOC	28	May-30-18 06:38	pH = 1
Total Phosphorus DA	28	May-30-18 06:38	pH = 1

Sample ID: 1805007-02

Sampled: May-02-18 06:46

Matrix: Water

Sample Name: D5b

Sample Location/Comments: 5th Street

#### Sample Comments:

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 06:46	pH = 1
Anions by IC	28	May-30-18 06:46	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 06:46	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 06:46	pH = 1

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018**Sample ID:** 1805007-02      **Sampled:** May-02-18 06:46      **Matrix:** Water**Sample Name:** D5b      **Sample Location/Comments:** 5th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Solids, TDS	7	May-09-18 06:46	pH = 5
TKN DA	28	May-30-18 06:46	pH = 1
TOC	28	May-30-18 06:46	pH = 1
Total Phosphorus DA	28	May-30-18 06:46	pH = 1

**Sample ID:** 1805007-03      **Sampled:** May-02-18 07:17      **Matrix:** Water**Sample Name:** D6a      **Sample Location/Comments:** 5th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 07:17	pH = 1
Anions by IC	28	May-30-18 07:17	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 07:17	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 07:17	pH = 1
Solids, TDS	7	May-09-18 07:17	pH = 6
TKN DA	28	May-30-18 07:17	pH = 1
TOC	28	May-30-18 07:17	pH = 1
Total Phosphorus DA	28	May-30-18 07:17	pH = 1

**Sample ID:** 1805007-04      **Sampled:** May-02-18 07:29      **Matrix:** Water**Sample Name:** D6b      **Sample Location/Comments:** 5th Street**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 07:29	pH = 1
Anions by IC	28	May-30-18 07:29	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 07:29	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 07:29	pH = 1
Solids, TDS	7	May-09-18 07:29	pH = 6
TKN DA	28	May-30-18 07:29	pH = 1
TOC	28	May-30-18 07:29	pH = 1
Total Phosphorus DA	28	May-30-18 07:29	pH = 1

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-05](#)    **Sampled:** [May-02-18 08:01](#)    **Matrix:** [Water](#)

**Sample Name:** [D7 equip](#)                                  **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:01	pH = 1
Anions by IC	28	May-30-18 08:01	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 08:01	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:01	pH = 1
Solids, TDS	7	May-09-18 08:01	pH = 5
TKN DA	28	May-30-18 08:01	pH = 1
TOC	28	May-30-18 08:01	pH = 1
Total Phosphorus DA	28	May-30-18 08:01	pH = 1

**Sample ID:** [1805007-06](#)    **Sampled:** [May-02-18 08:03](#)    **Matrix:** [Water](#)

**Sample Name:** [FB3](#)                                  **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:03	pH = 1
Anions by IC	28	May-30-18 08:03	pH = 4
Metals ICP-AES (w)	180	Oct-29-18 08:03	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:03	pH = 1
Solids, TDS	7	May-09-18 08:03	pH = 4
TKN DA	28	May-30-18 08:03	pH = 1
TOC	28	May-30-18 08:03	pH = 1
Total Phosphorus DA	28	May-30-18 08:03	pH = 1

**Sample ID:** [1805007-07](#)    **Sampled:** [May-02-18 08:12](#)    **Matrix:** [Water](#)

**Sample Name:** [D7a Dup](#)                                  **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:12	pH = 1
Anions by IC	28	May-30-18 08:12	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 08:12	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:12	pH = 1
Solids, TDS	7	May-09-18 08:12	pH = 6
TKN DA	28	May-30-18 08:12	pH = 1
TOC	28	May-30-18 08:12	pH = 1

## WORK ORDER

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1805007

## US EPA Region 5 Chicago Regional Laboratory

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-07](#)      **Sampled:** [May-02-18 08:12](#)      **Matrix:** [Water](#)

**Sample Name:** [D7a Dup](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 08:12	pH = 1

**Sample ID:** [1805007-08](#)      **Sampled:** [May-02-18 08:12](#)      **Matrix:** [Water](#)      [QC Source Sample MS/MSD](#)

**Sample Name:** [D7a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:** [MS/MSD](#)

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:12	pH = 1
Anions by IC	28	May-30-18 08:12	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 08:12	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:12	pH = 1
Solids, TDS	7	May-09-18 08:12	pH = 6
TKN DA	28	May-30-18 08:12	pH = 1
TOC	28	May-30-18 08:12	pH = 1
Total Phosphorus DA	28	May-30-18 08:12	pH = 1

**Sample ID:** [1805007-09](#)      **Sampled:** [May-02-18 08:19](#)      **Matrix:** [Water](#)

**Sample Name:** [D7b](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:19	pH = 1
Anions by IC	28	May-30-18 08:19	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 08:19	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:19	pH = 1
Solids, TDS	7	May-09-18 08:19	pH = 5
TKN DA	28	May-30-18 08:19	pH = 1
TOC	28	May-30-18 08:19	pH = 1
Total Phosphorus DA	28	May-30-18 08:19	pH = 1

**Sample ID:** [1805007-10](#)      **Sampled:** [May-02-18 08:55](#)      **Matrix:** [Water](#)

**Sample Name:** [D8a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 08:55	pH = 1
Anions by IC	28	May-30-18 08:55	pH = 6

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-10](#)      **Sampled:** [May-02-18 08:55](#)      **Matrix:** [Water](#)

**Sample Name:** [D8a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 08:55	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 08:55	pH = 1
Solids, TDS	7	May-09-18 08:55	pH = 6
TKN DA	28	May-30-18 08:55	pH = 1
TOC	28	May-30-18 08:55	pH = 1
Total Phosphorus DA	28	May-30-18 08:55	pH = 1

**Sample ID:** [1805007-11](#)      **Sampled:** [May-02-18 09:11](#)      **Matrix:** [Water](#)

**Sample Name:** [D8b](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 09:11	pH = 1
Anions by IC	28	May-30-18 09:11	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 09:11	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 09:11	pH = 1
Solids, TDS	7	May-09-18 09:11	pH = 6
TKN DA	28	May-30-18 09:11	pH = 1
TOC	28	May-30-18 09:11	pH = 1
Total Phosphorus DA	28	May-30-18 09:11	pH = 1

**Sample ID:** [1805007-12](#)      **Sampled:** [May-02-18 09:45](#)      **Matrix:** [Water](#)

**Sample Name:** [D9a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 09:45	pH = 1
Anions by IC	28	May-30-18 09:45	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 09:45	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 09:45	pH = 1
Solids, TDS	7	May-09-18 09:45	pH = 6
TKN DA	28	May-30-18 09:45	pH = 1
TOC	28	May-30-18 09:45	pH = 1
Total Phosphorus DA	28	May-30-18 09:45	pH = 1

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018**Sample ID:** [1805007-13](#)      **Sampled:** [May-02-18 09:54](#)      **Matrix:** [Water](#)**Sample Name:** [D9b](#)      **Sample Location/Comments:** [23rd Avenue](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 09:54	pH = 1
Anions by IC	28	May-30-18 09:54	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 09:54	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 09:54	pH = 1
Solids, TDS	7	May-09-18 09:54	pH = 6
TKN DA	28	May-30-18 09:54	pH = 1
TOC	28	May-30-18 09:54	pH = 1
Total Phosphorus DA	28	May-30-18 09:54	pH = 1

**Sample ID:** [1805007-14](#)      **Sampled:** [May-02-18 10:29](#)      **Matrix:** [Water](#)**Sample Name:** [D10a](#)      **Sample Location/Comments:** [23rd Avenue](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:29	pH = 1
Anions by IC	28	May-30-18 10:29	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 10:29	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:29	pH = 1
Solids, TDS	7	May-09-18 10:29	pH = 6
TKN DA	28	May-30-18 10:29	pH = 1
TOC	28	May-30-18 10:29	pH = 1
Total Phosphorus DA	28	May-30-18 10:29	pH = 1

**Sample ID:** [1805007-15](#)      **Sampled:** [May-02-18 10:29](#)      **Matrix:** [Water](#)**Sample Name:** [D10a Dup](#)      **Sample Location/Comments:** [23rd Avenue](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:29	pH = 1
Anions by IC	28	May-30-18 10:29	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 10:29	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:29	pH = 1
Solids, TDS	7	May-09-18 10:29	pH = 6
TKN DA	28	May-30-18 10:29	pH = 1
TOC	28	May-30-18 10:29	pH = 1

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-15](#)      **Sampled:** [May-02-18 10:29](#)      **Matrix:** [Water](#)

**Sample Name:** [D10a Dup](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 10:29	pH = 1

**Sample ID:** [1805007-16](#)      **Sampled:** [May-02-18 10:41](#)      **Matrix:** [Water](#)

**Sample Name:** [D10b](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:41	pH = 1
Anions by IC	28	May-30-18 10:41	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 10:41	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:41	pH = 1
Solids, TDS	7	May-09-18 10:41	pH = 5
TKN DA	28	May-30-18 10:41	pH = 1
TOC	28	May-30-18 10:41	pH = 1
Total Phosphorus DA	28	May-30-18 10:41	pH = 1

**Sample ID:** [1805007-17](#)      **Sampled:** [May-02-18 10:41](#)      **Matrix:** [Water](#)

**Sample Name:** [D10b Dup](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 10:41	pH = 1
Anions by IC	28	May-30-18 10:41	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 10:41	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 10:41	pH = 1
Solids, TDS	7	May-09-18 10:41	pH = 5
TKN DA	28	May-30-18 10:41	pH = 1
TOC	28	May-30-18 10:41	pH = 1
Total Phosphorus DA	28	May-30-18 10:41	pH = 1

**Sample ID:** [1805007-18](#)      **Sampled:** [May-02-18 11:19](#)      **Matrix:** [Water](#)

**Sample Name:** [D11a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 11:19	pH = 1
Anions by IC	28	May-30-18 11:19	pH = 6

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-18](#)      **Sampled:** [May-02-18 11:19](#)      **Matrix:** [Water](#)

**Sample Name:** [D11a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 11:19	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 11:19	pH = 1
Solids, TDS	7	May-09-18 11:19	pH = 6
TKN DA	28	May-30-18 11:19	pH = 1
TOC	28	May-30-18 11:19	pH = 1
Total Phosphorus DA	28	May-30-18 11:19	pH = 1

**Sample ID:** [1805007-19](#)      **Sampled:** [May-02-18 11:42](#)      **Matrix:** [Water](#)

**Sample Name:** [D11b](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 11:42	pH = 1
Anions by IC	28	May-30-18 11:42	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 11:42	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 11:42	pH = 1
Solids, TDS	7	May-09-18 11:42	pH = 5
TKN DA	28	May-30-18 11:42	pH = 1
TOC	28	May-30-18 11:42	pH = 1
Total Phosphorus DA	28	May-30-18 11:42	pH = 1

**Sample ID:** [1805007-20](#)      **Sampled:** [May-02-18 12:41](#)      **Matrix:** [Water](#)

**Sample Name:** [E1a](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 12:41	pH = 1
Anions by IC	28	May-30-18 12:41	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 12:41	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 12:41	pH = 1
Solids, TDS	7	May-09-18 12:41	pH = 6
TKN DA	28	May-30-18 12:41	pH = 1
TOC	28	May-30-18 12:41	pH = 1
Total Phosphorus DA	28	May-30-18 12:41	pH = 1

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-21](#)      **Sampled:** [May-02-18 12:58](#)      **Matrix:** [Water](#)

**Sample Name:** [E1b](#)      **Sample Location/Comments:** [23rd Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 12:58	pH = 1
Anions by IC	28	May-30-18 12:58	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 12:58	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 12:58	pH = 1
Solids, TDS	7	May-09-18 12:58	pH = 6
TKN DA	28	May-30-18 12:58	pH = 1
TOC	28	May-30-18 12:58	pH = 1
Total Phosphorus DA	28	May-30-18 12:58	pH = 1

**Sample ID:** [1805007-22](#)      **Sampled:** [May-02-18 13:28](#)      **Matrix:** [Water](#)

**Sample Name:** [E2a](#)      **Sample Location/Comments:** [Porter Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:28	pH = 1
Anions by IC	28	May-30-18 13:28	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 13:28	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:28	pH = 1
Solids, TDS	7	May-09-18 13:28	pH = 6
TKN DA	28	May-30-18 13:28	pH = 1
TOC	28	May-30-18 13:28	pH = 1
Total Phosphorus DA	28	May-30-18 13:28	pH = 1

**Sample ID:** [1805007-23](#)      **Sampled:** [May-02-18 13:37](#)      **Matrix:** [Water](#)

**Sample Name:** [E2b](#)      **Sample Location/Comments:** [Porter Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:37	pH = 1
Anions by IC	28	May-30-18 13:37	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 13:37	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:37	pH = 1
Solids, TDS	7	May-09-18 13:37	pH = 5
TKN DA	28	May-30-18 13:37	pH = 1
TOC	28	May-30-18 13:37	pH = 1

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-23](#)      **Sampled:** [May-02-18 13:37](#)      **Matrix:** [Water](#)

**Sample Name:** [E2b](#)      **Sample Location/Comments:** [Porter Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 13:37	pH = 1

**Sample ID:** [1805007-24](#)      **Sampled:** [May-02-18 13:28](#)      **Matrix:** [Water](#)

**Sample Name:** [E2a Dup](#)      **Sample Location/Comments:** [Porter Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:28	pH = 1
Anions by IC	28	May-30-18 13:28	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 13:28	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:28	pH = 1
Solids, TDS	7	May-09-18 13:28	pH = 6
TKN DA	28	May-30-18 13:28	pH = 1
TOC	28	May-30-18 13:28	pH = 1
Total Phosphorus DA	28	May-30-18 13:28	pH = 1

**Sample ID:** [1805007-25](#)      **Sampled:** [May-02-18 13:37](#)      **Matrix:** [Water](#)

**Sample Name:** [E2b Dup](#)      **Sample Location/Comments:** [Porter Road](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 13:37	pH = 1
Anions by IC	28	May-30-18 13:37	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 13:37	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 13:37	pH = 1
Solids, TDS	7	May-09-18 13:37	pH = 5
TKN DA	28	May-30-18 13:37	pH = 1
TOC	28	May-30-18 13:37	pH = 1
Total Phosphorus DA	28	May-30-18 13:37	pH = 1

**Sample ID:** [1805007-26](#)      **Sampled:** [May-02-18 14:03](#)      **Matrix:** [Water](#)

**Sample Name:** [E3a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:03	pH = 1
Anions by IC	28	May-30-18 14:03	pH = 6

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-26](#)      **Sampled:** [May-02-18 14:03](#)      **Matrix:** [Water](#)

**Sample Name:** [E3a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 14:03	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:03	pH = 1
Solids, TDS	7	May-09-18 14:03	pH = 6
TKN DA	28	May-30-18 14:03	pH = 1
TOC	28	May-30-18 14:03	pH = 1
Total Phosphorus DA	28	May-30-18 14:03	pH = 1

**Sample ID:** [1805007-27](#)      **Sampled:** [May-02-18 14:09](#)      **Matrix:** [Water](#)

**Sample Name:** [E3b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:09	pH = 1
Anions by IC	28	May-30-18 14:09	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 14:09	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:09	pH = 1
Solids, TDS	7	May-09-18 14:09	pH = 6
TKN DA	28	May-30-18 14:09	pH = 1
TOC	28	May-30-18 14:09	pH = 1
Total Phosphorus DA	28	May-30-18 14:09	pH = 1

**Sample ID:** [1805007-28](#)      **Sampled:** [May-02-18 14:37](#)      **Matrix:** [Water](#)

**Sample Name:** [E4a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:37	pH = 1
Anions by IC	28	May-30-18 14:37	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 14:37	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:37	pH = 1
Solids, TDS	7	May-09-18 14:37	pH = 6
TKN DA	28	May-30-18 14:37	pH = 1
TOC	28	May-30-18 14:37	pH = 1
Total Phosphorus DA	28	May-30-18 14:37	pH = 1

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-29](#)      **Sampled:** [May-02-18 14:43](#)      **Matrix:** [Water](#)

**Sample Name:** [E4b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 14:43	pH = 1
Anions by IC	28	May-30-18 14:43	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 14:43	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 14:43	pH = 1
Solids, TDS	7	May-09-18 14:43	pH = 6
TKN DA	28	May-30-18 14:43	pH = 1
TOC	28	May-30-18 14:43	pH = 1
Total Phosphorus DA	28	May-30-18 14:43	pH = 1

**Sample ID:** [1805007-30](#)      **Sampled:** [May-02-18 15:08](#)      **Matrix:** [Water](#)

**Sample Name:** [E5a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:08	pH = 1
Anions by IC	28	May-30-18 15:08	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:08	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:08	pH = 1
Solids, TDS	7	May-09-18 15:08	pH = 6
TKN DA	28	May-30-18 15:08	pH = 1
TOC	28	May-30-18 15:08	pH = 1
Total Phosphorus DA	28	May-30-18 15:08	pH = 1

**Sample ID:** [1805007-31](#)      **Sampled:** [May-02-18 15:13](#)      **Matrix:** [Water](#)

**Sample Name:** [E5b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:13	pH = 1
Anions by IC	28	May-30-18 15:13	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:13	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:13	pH = 1
Solids, TDS	7	May-09-18 15:13	pH = 6
TKN DA	28	May-30-18 15:13	pH = 1
TOC	28	May-30-18 15:13	pH = 1

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-31](#)      **Sampled:** [May-02-18 15:13](#)      **Matrix:** [Water](#)

**Sample Name:** [E5b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-30-18 15:13	pH = 1

**Sample ID:** [1805007-32](#)      **Sampled:** [May-02-18 15:38](#)      **Matrix:** [Water](#)

**Sample Name:** [E6a](#)      **Sample Location/Comments:** [20th Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:38	pH = 1
Anions by IC	28	May-30-18 15:38	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:38	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:38	pH = 1
Solids, TDS	7	May-09-18 15:38	pH = 6
TKN DA	28	May-30-18 15:38	pH = 1
TOC	28	May-30-18 15:38	pH = 1
Total Phosphorus DA	28	May-30-18 15:38	pH = 1

**Sample ID:** [1805007-33](#)      **Sampled:** [May-02-18 15:44](#)      **Matrix:** [Water](#)

**Sample Name:** [E6b](#)      **Sample Location/Comments:** [20th Avenue](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 15:44	pH = 1
Anions by IC	28	May-30-18 15:44	pH = 6
Metals ICP-AES (w)	180	Oct-29-18 15:44	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 15:44	pH = 1
Solids, TDS	7	May-09-18 15:44	pH = 6
TKN DA	28	May-30-18 15:44	pH = 1
TOC	28	May-30-18 15:44	pH = 1
Total Phosphorus DA	28	May-30-18 15:44	pH = 1

**Sample ID:** [1805007-34](#)      **Sampled:** [May-02-18 16:09](#)      **Matrix:** [Water](#)

**Sample Name:** [E7a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 16:09	pH = 1
Anions by IC	28	May-30-18 16:09	pH = 5

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-34](#)      **Sampled:** [May-02-18 16:09](#)      **Matrix:** [Water](#)

**Sample Name:** [E7a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-29-18 16:09	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 16:09	pH = 1
Solids, TDS	7	May-09-18 16:09	pH = 5
TKN DA	28	May-30-18 16:09	pH = 1
TOC	28	May-30-18 16:09	pH = 1
Total Phosphorus DA	28	May-30-18 16:09	pH = 1

**Sample ID:** [1805007-35](#)      **Sampled:** [May-02-18 16:35](#)      **Matrix:** [Water](#)

**Sample Name:** [E7b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-30-18 16:35	pH = 1
Anions by IC	28	May-30-18 16:35	pH = 5
Metals ICP-AES (w)	180	Oct-29-18 16:35	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-30-18 16:35	pH = 1
Solids, TDS	7	May-09-18 16:35	pH = 5
TKN DA	28	May-30-18 16:35	pH = 1
TOC	28	May-30-18 16:35	pH = 1
Total Phosphorus DA	28	May-30-18 16:35	pH = 1

**Sample ID:** [1805007-36](#)      **Sampled:** [May-03-18 08:40](#)      **Matrix:** [Water](#)

**Sample Name:** [E8a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 08:40	pH = 1
Anions by IC	28	May-31-18 08:40	pH = 5
Metals ICP-AES (w)	180	Oct-30-18 08:40	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 08:40	pH = 1
Solids, TDS	7	May-10-18 08:40	pH = 5
TKN DA	28	May-31-18 08:40	pH = 1
TOC	28	May-31-18 08:40	pH = 1
Total Phosphorus DA	28	May-31-18 08:40	pH = 1

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-37](#)      **Sampled:** [May-03-18 08:48](#)      **Matrix:** [Water](#)

**Sample Name:** [E8b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 08:48	pH = 1
Anions by IC	28	May-31-18 08:48	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 08:48	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 08:48	pH = 1
Solids, TDS	7	May-10-18 08:48	pH = 6
TKN DA	28	May-31-18 08:48	pH = 1
TOC	28	May-31-18 08:48	pH = 1
Total Phosphorus DA	28	May-31-18 08:48	pH = 1

**Sample ID:** [1805007-38](#)      **Sampled:** [May-03-18 07:15](#)      **Matrix:** [Water](#)

**Sample Name:** [E10a](#)      **Sample Location/Comments:** [8th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:15	pH = 1
Anions by IC	28	May-31-18 07:15	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 07:15	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:15	pH = 1
Solids, TDS	7	May-10-18 07:15	pH = 6
TKN DA	28	May-31-18 07:15	pH = 1
TOC	28	May-31-18 07:15	pH = 1
Total Phosphorus DA	28	May-31-18 07:15	pH = 1

**Sample ID:** [1805007-39](#)      **Sampled:** [May-03-18 07:15](#)      **Matrix:** [Water](#)

**Sample Name:** [E10a Dup](#)      **Sample Location/Comments:** [8th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:15	pH = 1
Anions by IC	28	May-31-18 07:15	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 07:15	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:15	pH = 1
Solids, TDS	7	May-10-18 07:15	pH = 6
TKN DA	28	May-31-18 07:15	pH = 1
TOC	28	May-31-18 07:15	pH = 1

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018**Sample ID:** [1805007-39](#)      **Sampled:** [May-03-18 07:15](#)      **Matrix:** [Water](#)**Sample Name:** [E10a Dup](#)      **Sample Location/Comments:** [8th Street](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Total Phosphorus DA	28	May-31-18 07:15	pH = 1

**Sample ID:** [1805007-40](#)      **Sampled:** [May-03-18 07:27](#)      **Matrix:** [Water](#)**Sample Name:** [E10b](#)      **Sample Location/Comments:** [8th Street](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:27	pH = 1
Anions by IC	28	May-31-18 07:27	pH = 6
Metals ICP-AES (w)	180	Oct-30-18 07:27	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:27	pH = 1
Solids, TDS	7	May-10-18 07:27	pH = 6
TKN DA	28	May-31-18 07:27	pH = 1
TOC	28	May-31-18 07:27	pH = 1
Total Phosphorus DA	28	May-31-18 07:27	pH = 1

**Sample ID:** [1805007-41](#)      **Sampled:** [May-03-18 07:36](#)      **Matrix:** [Water](#)**Sample Name:** [FB4](#)      **Sample Location/Comments:** [8th Street](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:36	pH = 1
Anions by IC	28	May-31-18 07:36	pH = 4
Metals ICP-AES (w)	180	Oct-30-18 07:36	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:36	pH = 1
Solids, TDS	7	May-10-18 07:36	pH = 4
TKN DA	28	May-31-18 07:36	pH = 1
TOC	28	May-31-18 07:36	pH = 1
Total Phosphorus DA	28	May-31-18 07:36	pH = 1

**Sample ID:** [1805007-42](#)      **Sampled:** [May-03-18 07:13](#)      **Matrix:** [Water](#)**Sample Name:** [E10 Equip](#)      **Sample Location/Comments:** [8th Street](#)**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 07:13	pH = 1
Anions by IC	28	May-31-18 07:13	pH = 4

**WORK ORDER**

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**1805007****US EPA Region 5 Chicago Regional Laboratory**

**Client:** Water Division, WECA Region 5  
**Project:** Central Sands

**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

**Sample ID:** [1805007-42](#)      **Sampled:** [May-03-18 07:13](#)      **Matrix:** [Water](#)

**Sample Name:** [E10 Equip](#)      **Sample Location/Comments:** [8th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Metals ICP-AES (w)	180	Oct-30-18 07:13	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 07:13	pH = 1
Solids, TDS	7	May-10-18 07:13	pH = 4
TKN DA	28	May-31-18 07:13	pH = 1
TOC	28	May-31-18 07:13	pH = 1
Total Phosphorus DA	28	May-31-18 07:13	pH = 1

**Sample ID:** [1805007-43](#)      **Sampled:** [May-03-18 09:53](#)      **Matrix:** [Water](#)

**Sample Name:** [E9a](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 09:53	pH = 1
Anions by IC	28	May-31-18 09:53	pH = 5
Metals ICP-AES (w)	180	Oct-30-18 09:53	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 09:53	pH = 1
Solids, TDS	7	May-10-18 09:53	pH = 5
TKN DA	28	May-31-18 09:53	pH = 1
TOC	28	May-31-18 09:53	pH = 1
Total Phosphorus DA	28	May-31-18 09:53	pH = 1

**Sample ID:** [1805007-44](#)      **Sampled:** [May-03-18 10:02](#)      **Matrix:** [Water](#)

**Sample Name:** [E9b](#)      **Sample Location/Comments:** [7th Street](#)

**Sample Comments:**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	May-31-18 10:02	pH = 1
Anions by IC	28	May-31-18 10:02	pH = 5
Metals ICP-AES (w)	180	Oct-30-18 10:02	pH = 1
Nitrate-Nitrite N DA, Enzymatic reduction	28	May-31-18 10:02	pH = 1
Solids, TDS	7	May-10-18 10:02	pH = 5
TKN DA	28	May-31-18 10:02	pH = 1
TOC	28	May-31-18 10:02	pH = 1
Total Phosphorus DA	28	May-31-18 10:02	pH = 1

**WORK ORDER**

Printed: 5/7/2018 9:53:28AM

**1805007****US EPA Region 5 Chicago Regional Laboratory****Client:** Water Division, WECA Region 5  
**Project:** Central Sands**Project Manager:** Angela Ockrassa Davis  
**Project Number:** CB022018

PROJECT COMMENTS: Anions: Chloride, fluoride, bromide, sulfide.

Full List metals

**REVIEWED**

By Robert Thompson at 9:54 am, May 07, 2018























# Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

Water Division, WECA Region 5  
77 West Jackson Boulevard  
Chicago IL, 60604

Project: Central Sands  
Project Number: CB022018  
Project Manager: Cheryl Burdett

**Reported:**  
Jun-06-18 14:55

## Dissolved Solids, SM 2540C (modified)

### US EPA Region 5 Chicago Regional Laboratory

E3b (1805007-27)

Matrix: Water      Sampled: May-02-18 14:09      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	144			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E4a (1805007-28)

Matrix: Water      Sampled: May-02-18 14:37      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	340			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E4b (1805007-29)

Matrix: Water      Sampled: May-02-18 14:43      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	324			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E5a (1805007-30)

Matrix: Water      Sampled: May-02-18 15:08      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	416			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E5b (1805007-31)

Matrix: Water      Sampled: May-02-18 15:13      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	338			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E6a (1805007-32)

Matrix: Water      Sampled: May-02-18 15:38      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	86.0			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E6b (1805007-33)

Matrix: Water      Sampled: May-02-18 15:44      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	56.0			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E7a (1805007-34)

Matrix: Water      Sampled: May-02-18 16:09      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	282			20.0	mg/L	1	B18E020	May-09-18	May-09-18



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Project Manager: Cheryl Burdett

**Reported:**  
Jun-06-18 14:55

## Dissolved Solids, SM 2540C (modified)

### US EPA Region 5 Chicago Regional Laboratory

E7b (1805007-35)

Matrix: Water      Sampled: May-02-18 16:35      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	288			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E8a (1805007-36)

Matrix: Water      Sampled: May-03-18 08:40      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	332			20.0	mg/L	1	B18E020	May-09-18	May-09-18

E8b (1805007-37)

Matrix: Water      Sampled: May-03-18 08:48      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	352			20.0	mg/L	1	B18E021	May-10-18	May-11-18

E10a (1805007-38)

Matrix: Water      Sampled: May-03-18 07:15      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	94.0			20.0	mg/L	1	B18E021	May-10-18	May-11-18

E10a Dup (1805007-39)

Matrix: Water      Sampled: May-03-18 07:15      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	76.0			20.0	mg/L	1	B18E021	May-10-18	May-11-18

E10b (1805007-40)

Matrix: Water      Sampled: May-03-18 07:27      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	82.0			20.0	mg/L	1	B18E021	May-10-18	May-11-18

FB4 (1805007-41)

Matrix: Water      Sampled: May-03-18 07:36      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	U			20.0	mg/L	1	B18E021	May-10-18	May-11-18

E10 Equip (1805007-42)

Matrix: Water      Sampled: May-03-18 07:13      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	U			20.0	mg/L	1	B18E021	May-10-18	May-11-18



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**Reported:**  
Jun-06-18 14:55

## Dissolved Solids, SM 2540C (modified) US EPA Region 5 Chicago Regional Laboratory

E9a (1805007-43)

Matrix: Water      Sampled: May-03-18 09:53      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	308			20.0	mg/L	1	B18E021	May-10-18	May-11-18

E9b (1805007-44)

Matrix: Water      Sampled: May-03-18 10:02      Received: May-04-18 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	282			20.0	mg/L	1	B18E021	May-10-18	May-11-18



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Reported:  
Jun-06-18 14:55

## Dissolved Solids, SM 2540C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

### Batch B18E010 - General Preparation

#### Blank (B18E010-BLK1)

Prepared: May-07-18 Analyzed: May-08-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	U			20.0	mg/L						

#### Duplicate (B18E010-DUP1)

Source: 1805005-05

Prepared: May-07-18 Analyzed: May-08-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	96.0			20.0	mg/L		96.0			0	10

#### Duplicate (B18E010-DUP2)

Source: 1805005-15

Prepared: May-07-18 Analyzed: May-08-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	50.0	*, Q		20.0	mg/L		44.0			13	10

#### Duplicate (B18E010-DUP3)

Source: 1805005-21

Prepared: May-07-18 Analyzed: May-08-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	74.0	*, Q		20.0	mg/L		64.0			14	10

#### Reference (B18E010-SRM1)

Prepared: May-07-18 Analyzed: May-08-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	234			20.0	mg/L				84.5-110		

### Batch B18E011 - General Preparation

#### Blank (B18E011-BLK1)

Prepared: May-07-18 Analyzed: May-09-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	U			20.0	mg/L						

#### Blank (B18E011-BLK2)

Prepared: May-08-18 Analyzed: May-09-18

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Total Dissolved Solids	U			20.0	mg/L						







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**Reported:**  
Jun-06-18 14:55

### Dissolved Solids, SM 2540C (modified) - Quality Control

US EPA Region 5 Chicago Regional Laboratory

#### Batch B18E021 - General Preparation

Prepared: May-10-18 Analyzed: May-11-18									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	RPD
Total Dissolved Solids	234				mg/L	225.0		104%	84.5-110



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**Reported:**  
Jun-06-18 14:55

### Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.
- \* This Quality Control measure meets the requirements of the CRL SOP for this analyte.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded