Ohio | Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

April 25, 2012

Mr. Chris Clark, Utilities Director
City of Sidney
201 West Poplar Street
Sidney, Ohio 45365

RE: Sidney WWTP – NPDES No. 1PD00009*OD/OH0027421
Compliance Evaluation Inspection –Shelby County

Dear Mr. Clark:

On April 17, 2012, Sandra Leibfritz conducted an inspection at Sidney's WWTP located at 1091 Childrens Home Road, Sidney, Ohio. Brian Schultz, Barry Zerkle, Brian Clark and Gregg Mitchell were representing the facility. All areas were rated as satisfactory except flow measurement. Details of the inspection may be obtained from the enclosed inspection report.

The flow measurement area was rated as marginal because the flow for the bypass is based on pump run times. Ohio EPA considers this to be estimated flow value instead of continuous flow monitoring as required by your NPDES permit. Please provide a timeline for providing continuous flow monitoring at your final outfall that includes the bypass.

If you should have any questions about the inspection, please call Ms. Leibfritz at (937) 285-6104 or me at (937) 285-6034.

Sincerely,

Martyn G. Burt
Environmental Supervisor
Division of Surface Water

Enclosure

ec: Shelby County Health Department
bschultz@sidneyoh.com

MGB\bp

Southwest District Office
401 East Fifth Street
Dayton, OH 45402-2911

937 | 285 6357
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State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	**NPDES#**	**Month/Day/Year**	**Inspection Type**	**Inspector**	**Facility Type**
1PD00009*OD	OH0027421	04/17/2011	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	**Entry Time**	**Permit Effective Date**
City of Sidney WWTP 201 West Poplar Street Sidney, OH 45365	8:45 a.m.	August 1, 2011
	Exit Time	**Permit Expiration Date**
	11:45 p.m.	January 31, 2016
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
Brian Schultz, WWTP Superintendent (Class IV)	(937) 498-8721	
Barry Zerkle, WWTP Assistant Superintendent (Class IV)	(937) 498-8720	
Biran Clark, Class III operator		
Gregg Mitchell, Lab, Class III operator		
Name, Address and Title of Responsible Official	**Phone Number**	
Chris Clark, Public Works Director 201 West Poplar Street Sidney, OH 45365	(937) 498-8141	

Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	M	Flow Measurement	N	Pretreatment
S	Records/Reports	S	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	S	Other
S	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
Inspector	**Reviewer**
Sandra D Leibfritz 4/25/2012	Martyn G Burt 4/26/12
Sandra D. Leibfritz — Date Division of Surface Water Southwest District Office	Martyn Burt — Date Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

State of Ohio Environmental Protection Agency
Southwest District Office

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S	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)

Inspector	Reviewer
Sandra D. Leibfritz Date Division of Surface Water Southwest District Office	Martyn Burt Date Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

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Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

(a) Correct name and mailing address of permittee	Y
(b) Flows and loadings conform with NPDES permit.....	Y
(c) Treatment processes are as described in permit application...	Y
(d) All discharges are permitted.....	Y
(e) Number and location of discharge points are as described in permit.....	Y
(f) Storm water discharges properly permitted.....	Y

Comments/Status:

The WWTP is designed to serve an average daily hydraulic flow of 7 MG. During the period from January 2011 through December 2011, the WWTP discharged an average daily flow of 6.4 MG. Bypasses occur when flow exceeds 13.5 MGD and are monitored via outfall 602.

The wet stream process consists of influent pumping station, channel grinder and bar screens, equalization, fine screen, grit removal, primary clarification, conventional activated sludge, secondary clarification, chlorination, dechlorination and cascade aeration.

The catch basins surrounding the treatment processes are connected to the head of the plant. Sidney has received a No Exposure Certification for the remaining catch basins.

Section F: Compliance

(a) Any significant violations since the last inspection.....	N
(b) Appropriate Non-compliance notification of violations.....	N/A
(c) Permittee is taking actions to resolve violations.....	N/A
(d) Permittee has a compliance schedule.....	Y
(e) Compliance schedule contained in... NPDES Permit Compliance Schedule	
(f) Permitt ee is in compliance with schedule.....	Y
(g) Has biomonitoring shown toxicity in discharge since last inspection	N

Comments/Status:

-Sidney has provided a status report for ammonia as per the Schedule of Compliance Part I.C.4.b.
-Sidney has provided a status report for the NFA as per the Schedule of Compliance Part 1.C.1.b.

During the period from March 2011 through March 2012, Sidney reported one violation for chlorine at 0.08 mg/l in June 2011.

Section F: Compliance

Treatment Works:

Treatment facility properly operated and maintained

(a) Standby power available.....generator ☒ or dual feed ☐..... Y

i. What does the back-up power source operate.....

-The generator operates the raw pumps, chlorination system, sludge centrifuge and administration building.
-Sidney has a "6 month service contract" for the generator. It was last checked on March 8, 2012.

ii. How often is the generator tested under load.....

The last test was conducted on March 17, 2011. It will be put under load in the fall of 2012. It was delayed due to the weather. The generator is put under load on an annual basis.

(b) Which components have an alarm system available for power or equipment failures.....

raw pumps, blowers, wet well level, aeration effluent D.O., influent pH, influent flow, final effluent D.O., combined RAS flow – see "Alarm Setpoints" handout in file for additional information

(c) All treatment units in service other than backup units..... Y

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

SCADA tracks run hours on equipment. PM is determined by the personnel at the plant and the run hours on the equipment.

(e) Any major equipment breakdown since last inspection..... Y

(f) Operatio n and maintenance manual provided and maintained..... Y

(g) Any plant bypasses since last inspection..... Y

(h) Any plant upsets since last inspection..... Y

Comments/Status:

The channel grinder has been repaired and has been put on a 3 year core replacement cycle.

The blower (No. 1) for the aeration tanks is out-of-service. Sidney is evaluating their options of fixing or replacing it during the NFA analysis. Operations of the plant is not impacted by this blower being out-of-service.

The joints of the EQ basin were rehabilitated by spraying on SpectraShield (epoxide resin).

The OM manual was updated during the last expansion in 2001. All the equipment manuals are located on a dedicated drive that the operators have access to.

Section G: Operation & Maintenance

Record Keeping/Operator of Record:

(a) Wastewater Treatment Works classification (OAC 3745-7)..... IV
(b) Operator of Record holds unexpired license of class required by Permit..... Y
(c) Copy of certificate of Operator of Record displayed on-site..... Y
(d) Has the Operator of Record submitted an ORC Notification form.. Y
(e) Minimum operator staffing requirements fulfilled (OAC 3745-7).... Y
(f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met.....Y
(g) Operator of Record log book provided..... Y
(h) Format of log book (e.g. computer log, hard bound book)

The log book is hardbound. Log entries are initialed by the operators.

(i) Log book kept onsite (in an area protected from weather)..... Y
(j) Log book contains the following:
  I. Identification of treatment works..... Y
  II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... Y
  iii. Daily record of operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.)..... Y
  iv. Laboratory results (unless documented on bench sheets)... Y
  v. Identification of person making entries..... Y
(k) Has the Operator of Record submitted written notifications to the permittee, Ohio EPA and, if applicable, any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y

Comments/Status:

Chris Clark, Brian Shultz and Barry Zerkle have their Class IV license. Gregg Mitchell, Brian Clark and Rob Gusinger have their Class III license. Mike Coy has his Class II.

A staffing plan for reducting the number of hours that an operator is required to be physically present at the plant has been approved for Sidney.

Sidney uses an electronic key card to record time in and out of the plant for operators with a wastewater license. This is sent to the computer and can be printed out.

Laboratory results are not kept in the log book, but are recorded on bench sheets that are kept in laboratory.

Sidney completes noncompliance notification forms, SSO forms and records bypass events via outfall 602 in accordance with their NPDES permits.

Section G: Operation & Maintenance con't

Collection System:

(a) Are there pump stations in the collection system..... Y
- i. How many publicly-owned pump stations equipped with permanent standby power or equivalent..... 3
  How many pump stations have telemetered alarms..... 4
- ii. How many pump stations have operable alarms..... 7

(b) Any chronic collection system overflows since last inspection..... N
(c) Regulatory agency notified of all overflows..... N/A
(d) Are there CSOs in the collection system..... N/A
if so, what is the LTCP status.....

N/A

(e) How are CSOs monitored (chalk, block, level sensor, etc.).....

N/A

(f) Portabl e pumps available for collection system maintenance..... Y
(g) RDII Program established and active..... Y
(h) Any WIB complaint received since last inspection..... Y
(i) Is there a WIB response plan..... Y
(j) Is any portion of the collection system at or near dry weather capacity..... N

Comments/Status:

There are 7 lift stations.
There are two portable pumps that serve the remaining lift stations.
Sidney has just completed an I/I project that involved rehabilitating 33 manhole s.
Sidney has just purchased 11 more meters for monitoring flow in their storm sewers.
Sidney is looking at expanding I/I to include private property laterals.

Section H: Sludge Management

(a) Method of Sludge Disposal... ☒ Land Application
☐ Haul to Another NPDES Permitee
☐ Haul to a Mixed Solid Waste Landfill

Pathogen Reduction Alternative	Vector Attraction Reduction Options (84370)									
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 – >75% Percent Solids without Unstabilized Solids	Option 8 - >75% Percent Solids with	Option 9 – Land Injection	Option 10 – Immediate Incorporation
Alternative 1 - Geometric Mean of Seven Fecal Samples (84369)	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Aerobic Digestion (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Air Drying (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Anaerobic Digestion (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 – Composting (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Lime Treatment (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 3 – Approved Equivalent Process	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Class B Sewage Sludge (monitoring station 581)

(b) Has amount of sludge generated changed significantly since the last inspection..... N
(c) How much sludge storage is provided at the plant..... 180 days
(d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y
(e) Any complaints received in last year regarding sludge..... N
(f) 5/8" scr een at headworks for facilities that land apply sludge..... Y
(g) Are sludge application sites inspected to verify compliance with NPDES permit..... Y
(h) Is a contractor used for sludge disposal..... Y
If so, what is the name of the contractor..... Mid Ohio

Comments/Status:

-The building can store 200 dry tons and the pad can store 400 dry ton. The Annual Sewage Sludge Report form for 2011 reported that 465 dry tons were land applied.
-Sidney has over 2,000 acres to land apply. The sites are inspected one week before land application, daily during land application and weekly for 30 days after land application.

Section I: Self-Monitoring Program

Flow Measurement:

(a) Primary/Secondary flow measuring devices (i.e., weir with ultrasonic level sensor):

weir with ultrasonic

(b) Flow meter calibrated annually ..... Y
(Date of last calibration: Calibrated quarterly by DJ Engineer)

(c) 24-hour recording instruments operated and maintained..... Y

(d) Flow measurement equipment adequate to handle full range of flows..... Y

(e) All discharged flow is measured..... Y

Comments/Status:

The flow meter for the final effluent measures 0-15 MGD and bypass is estimated based on pump run times. These two flows are added together for reporting on the DMR. As a check, the total flow is compared against the mag meter flow on the influent.

Sampling:

(a) Sampling location(s) are as specified by permit..... Y

(b) Parameters and sampling frequency agree with permit..... Y

(c) Permittee uses required sampling method..... Y
(see GLC page)

(d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments/Status:

Outfall 001 is monitored after the bypass recombines with the final effluent, but prior to discharge to the river.
Outfall 601 is monitored prior to the mechanical screen.
Outfall 602 is monitored prior to recombining with the final effluent.
Outfall 801 is monitored at the old steel truss bridge upstream of outfall 001.
Outfall 901 is monitored at bridge on Sulphur Heights Road.

Section I: Self-Monitoring Program (con't)

Laboratory:

General

(a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... Y

(b) Do SOP's include the following if applicable..... Y

- Title
- Scope and Application
- Summary
- Sample Handling and Preservation
- Interferences
- Apparatus and Materials
- Reagents
- Procedure
- Calculations
- Quality Control
- Maintenance
- Corrective Action
- Reference (Parent Method)

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of know precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

(c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y

(d) If alternate analytical procedures are used, proper approval has been obtained..... Y

(e) Analyses being performed more frequently than required by permit. N

(f) If (e) is yes, are results in permittee's self-monitoring report..... N/A

(g) Satisfactory calibration and maintenance of instruments/equipment. Y (see score from GLC page)

(h) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: metals, P, TKN, NO2/NO3, Hg
Lab name: Alloway

Discharge Monitoring Report Quality Assurance (DMRQA)

(a) Participation in latest USEPA quality assurance performance sampling..... Y
Date:

(b) Were any parameters "Unsatisfactory"..... N

(c) Reasons for "Unsatisfactory" parameters.....

Comments/Status:

All parameters rated acceptable for DMRQA (August 15, 2011)
Sidney uses Colilert-18 as an alternative test method for bacterial analysis. In a letter dated July 20, 2011, USEPA did approve this alternate test method.

Section J: Effluent/Receiving Water Observations

Outfall # 001
Outfall Description: Final effluent from WWTP after chlorine contact tank

Receiving Stream: Great Miami River
Receiving Stream Description: The river was turbid both upstream and downstram of the final outfall. Sidney's discharge was clear and odor free.

Comments/Status:

Section K: Multimedia Observations

(a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
(b) Do you notice staining or discoloration of soils, pavement or floors.. N
(c) Do you notice distressed (unhealthy, discolored, dead) vegetation.. N
(d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks..... N
(e) Do you notice any unusual odors or strong chemical smells..... N
(f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities..... N

If any of the above are observed, ask the following questions:
(1) What is the cause of the condition?
(2) Is the observed condition or source a waste product?
(3) Where is the suspected contaminant normally disposed?
(4) Is this disposal permitted?
(5) How long has the condition existed and when did it begin?

Comments/Status:

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement			Rating
Balance		Acceptable?		
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights [1,2]	☐ Yes	☐ No	**NR**
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used.[3]	☐ Yes	☐ No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum[1]	☐ Yes	☐ No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable)[1]	☐ Yes	☐ No	
	• Must be able to measure to 0.1 grams[4]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
	• Log book maintained[2]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement			Rating
Drying Oven (Suspended Solids)		Acceptable?		
• Temperature Recordkeeping	• Temperature recorded with each use[4]	☐ Yes	☐ No	**NR**
	• Log book maintained[2]	☐ Yes	☐ No	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]. Correction factor posted on thermometer / equipment[1]	☐ Yes	☐ No	
• Other	• Thermometer temperature accurate to 0.5° Celsius[5]	☐ Yes	☐ No	
	• Acceptable temperature range is 103° – 105° C [4]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	

Comments: :

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement			Rating
pH Meter		Acceptable?		
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples)[3]	☐ Yes	☐ No	**NR**
	• Logbook maintained[2]	☐ Yes	☐ No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result[7]	☐ Yes	☐ No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet[2]	☐ Yes	☐ No	
• Buffer Expiration Date	• Buffers must not be expired	☐ Yes	☐ No	
• Other	• Instrument manual available	☐ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing[8]	☐ Yes	☐ No	
Comments: :				

Criteria	Standard Methods Requirement			Rating
Dissolved Oxygen Meter		Acceptable?		
• Calibration Method	• Air or known DO calibration method[10]	☐ Yes	☐ No	**NR**
	• Calibration per manufacturer specification[10]	☐ Yes	☐ No	
• Calibration Frequency / Documentation	• Logbook maintained[2]	☐ Yes	☐ No	
	• Calibration verification required at least once each day the meter is used.[3]	☐ Yes	☐ No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil)[11]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
Comments:				

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement	Acceptable?		Rating
Incubator (CBOD/ E-Coli)				
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use[1] (E-Coli)	☐ Yes	☐ No	NR
	• Temperature checked / recorded daily[2] (CBOD)	☐ Yes	☐ No	
	• Acceptable temperature range (CBOD) is 20° C ±1.0°[12]	☐ Yes	☐ No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5°[22]	☐ Yes	☐ No	
	• Logbook maintained[2]	☐ Yes	☐ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1, 2]	☐ Yes	☐ No	
	• Temperature correction information posted on incubator[1]	☐ Yes	☐ No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb)[23]	☐ Yes	☐ No	
• Other	• Instrument manual available	☐ Yes	☐ No	
	• Temperature Log (thermometer accurate to 0.5 Celsius).[1]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator (two)				
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.5 Celsius).[5]	☐ Yes	☐ No	NR
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1, 2]	☐ Yes	☐ No	
• Other	• Thermometer held in water bath.[1]	☐ Yes	☐ No	
	• Refrigerator temperature ≤6° Celsius.[13]	☐ Yes	☐ No	
	• Do not store volatile solvents, food, or beverages.[14]	☐ Yes	☐ No	
Comments:				

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter – N/E				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV[15]	☒ Yes	☐ No	A
	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples)[3]	☒ Yes	☐ No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification[16]	☒ Yes	☐ No	
	• Standards used for calibration not expired	☒ Yes	☐ No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	☒ Yes	☐ No	
• Other	• Electrode free of deposits and foreign material	☒ Yes	☐ No	
	• Log book being maintained.[2]	☒ Yes	☐ No	
	• Instrument manual available	☒ Yes	☐ No	

Comments:
-Calibration is checked daily.
-The electrode is replaced on an annual basis.

Criteria	Standard Methods Requirement	Acceptable?		Rating
Ammonia Meter				
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples)[3]	☐ Yes	☐ No	NR
	• Log book being maintained[2]	☐ Yes	☐ No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	☐ Yes	☐ No	
• Calibration Method	• Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec.[17]	☐ Yes	☐ No	
	• Standards used for calibration not expired	☐ Yes	☐ No	
• Other	• Electrode free of deposits and foreign material	☐ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing[18]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	

Comments:

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement			Rating
Sample Collection/Handling		Acceptable?		
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed).[19]	☐ Yes	☐ No	**NR**
• Chain of Custody	• Chain of custody (description, date, time, signature).[19]	☐ Yes	☐ No	
• Other	• Composite samples refrigerated during sample collection[14]	☐ Yes	☐ No	
	• Equipment blanks utilized[14]	☐ Yes	☐ No	
	• SOP for cleaning of sampling equipment	☐ Yes	☐ No	
	• Logbook being maintained[2]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement			Rating
Desiccator		Acceptable?		
• General criteria	• Properly working seals.	☐ Yes	☐ No	**NR**
	• Desiccant fresh (blue color)	☐ Yes	☐ No	
• Documentation	• Log book being maintained[2]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement			Rating
Bench sheets		Acceptable?		
• General criteria	• Date(s)[2]	☒ Yes	☐ No	**A**
	• Analyst initials[2]	☒ Yes	☐ No	
	• Blue or black ink pen[2]	☒ Yes	☐ No	
	• Calibration information[2]	☒ Yes	☐ No	
	• Equations, calculations, units for all measurements, notations, and results present[2]	☒ Yes	☐ No	
	• Corrections, single line through, initialed and dated[2]	☒ Yes	☐ No	

Comments:

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement			Rating
Hot Water Bath (Fecal Coliform/E. Coli)		Acceptable?		
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.2° C)[21]	☐ Yes	☐ No	NR
	• Incubator temperature 44.5° C ± 0.2° [21/24]			
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer [1, 2]	☐ Yes	☐ No	
	• Log book being maintained [2]	☐ Yes	☐ No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) [1, 5]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement			Rating
Autoclaves/Steam Sterilizers		Acceptable?		
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C [25]	☒ Yes	☐ No	A
	• 10 to 30 minutes time based on material being sterilized[26]	☒ Yes	☐ No	
• Documentation	• Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust. [1]	☒ Yes	☐ No	
	• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used [1]	☒ Yes	☐ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer [1,2]	☒ Yes	☐ No	
	• Log book being maintained [2]	☒ Yes	☐ No	
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available *Geobacillus stearothermophilus* in spore strips, suspensions, or capsules [1]	☒ Yes	☐ No	

Comments:
-Spore capsules were last used on March 21, 2011. Testing needs to be done on a monthly basis when the autoclave is used.
-The autoclave's thermometer was sent to Alloway for calibrations (i.e., NIST traceable).

General Lab Criteria – Sidney WWTP (April 17, 2012)

Criteria	Standard Methods Requirement			Rating
Final Effluent Temperature Monitoring		Acceptable?		
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer [1,2]	☐ Yes	☐ No	**NR**
	• Thermometer accurate to 0.1° Celsius[5]	☐ Yes	☐ No	
	• Log book being maintained [2]	☐ Yes	☐ No	
Comments:				

Number of Criteria Rated:	**Acceptable**	**3**
	Marginal	**0**
	Unacceptable	**0**
	Total Number of Areas Rated	**3**

Acceptable Ratings – No action required (recommend SOP's written or updated, perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, written response not required).

Marginal Ratings – Improvements required, written response required (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response).

Unsatisfactory Rating - Improvements required, written response required, NOV issued (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).

Consider recommending PAI Audit from DES when:	>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable

Notation of Referenced Method

1 Method 9020-B, Item 3
2 Method 1020-A, Item 1
3 Method 1020-B, Item 10
4 Method 2540-B, Item 2
5 Method 2550-B, Item 1
6 Method 1020-A, Item 1
7 Method 4500-H B, Item 4
8 Method 4500-H B, Item 2
9 Method 1020-B, Item 2
10 Method 4500-O B, Item 3
11 Method 4500-O G, Item 3
12 Method 5210-B, Item 5
13 CFR 136.3, Table II
14 Method 1060A, Item 1
15 Method 4500-Cl I, Item 2
16 Method 4500-Cl I, Item 4
17 Method 4500-NH3 D, Item 4
18 Method 4500-NH3 D, Item 2
19 Method 1060-B, Item 2
20 Method 1060-B, Item 1
21 Method 9222D, Item 1
22 Method 9223 B, Item 2
23 Method 9223 B, Item 3
24 Method 1603, Item 2
25 Method 9030-B, Item 3
26 Method 9020 B, Table IV

Equipment Logbook Content - all maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

General Lab Criteria – Sidney WWTP (April 17, 2012)

Preservation and Holding Times

Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate ≤6° C	6h	48h
TSS	P, G	200	G, C	Refrigerate ≤6° C	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH3-N	P, G	500	G, C	Analyze as soon as possible or add H_2SO_4 to pH <2, Refrigerate ≤6° C	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO_3 to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH<2, Refrigerate ≤6° C	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate ≤6° C	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate ≤6° C	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate ≤10° C If chlorine present, add sodium thiosulfate tablet	6 hrs transport Start analysis within 2 hrs of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H_2SO_4 to pH <2, Refrigerate ≤6° C	28 d	28 d

Approved Standard Methods

CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH3 D
Total Residual Chlorine, DPD Colorimetric Method	Std Methods 4500-Cl G
Total Suspended Solids, Dried at 103-105 °C	Std Methods 2540-D
Dissolved Oxygen, Membrane Electrode Method	Std Method 4500-O G
pH, Electrometric Method	Std Methods 4500-H+ B
Fecal Coliform, Membrane Filter Procedure	Std Methods 9222D
Escherichia Coli, Enzyme Substrate Test	Std Method 9223B
Escherichia Coli Membrane Filtration Procedure	EPA Method 1603
Oil and Grease	USEPA 1664A or Std Methods 5520B
Metals, general	USEPA 200, Std Methods 3111B or C, or 3120B
Volatiles (Purgeables by purge and trap)	USEPA 6210, Std Methods 624
Semi-Volatiles (Base/Neutrals and acids)	USEPA 6410, Std Methods 625
Pesticides	USEPA 6410 and 6630, Std Methods 608