



State of Ohio Environmental Protection Agency

**Southeast District Office**

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Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

October 20, 2010

**Re:** Guernsey County  
Salt Fork State Park  
Compliance Inspections  
Correspondence (PWW)

Mr. Chuck Ainsco  
ODNR, Salt Fork State Park  
14755 Cadiz Road  
Lore City, Ohio 43755

Dear Mr. Ainsco:

On October 13, 2010, I conducted Compliance Evaluation Inspections (CEI) at the six NPDES permitted facilities at the Salt Fork State Park. The purpose of the inspections was to determine each facility's compliance status with the terms and conditions of their individual NPDES permits. The six facilities inspected were the Service Center building treatment plant, Sugartree Marina plant, the Lodge plant, the Campground plant, the Marina plant, and the Beach plant. I was accompanied during all inspections with you and Mr. Larry Paden.

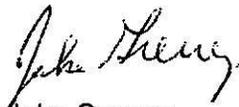
As a result of my inspection, the following observations were made.

1. Inspection of the Sugartree Marina wastewater treatment plant showed minimal scum on the surface of the settling tank and the weir to be free of any substantial solids. The two filters beds were also clean and the small retention pond with the pump for the spray field had approximately two feet of treated wastewater. The treated water was observed to be relatively clear and the spray field was found to be clearly marked and well maintained. Inspection of all the sprinkler heads found all units to be properly functioning and the adjacent ground area to be dry.
2. The main wastewater treatment facility serving the lodge and cabins appeared to be well maintained and providing effective treatment. The settling tank was found to be clear and the weir trough clean and free of any solids. At the time of my inspection the effluent was clear and the facility was in substantial compliance with the terms and conditions of the permit.
3. The campground wastewater treatment plant was found to be well maintained with all treatment units in operation except the one aeration tank and clarifier train. The treatment trains are typically rotated each year due to the extra treatment capacity provided at the plant. The two sand filters in use was clean with only minimal vegetative growth and the other two beds were dry and free of any weed growth. Inspections of the chlorination and dechlorination chambers were found to contain adequate amount of tablets to provide disinfection.

4. The Salt Fork Marina wastewater treatment plant was found to be in good condition as the surface of the settling tank was clean and the weir was free of any algae or scum. The storage lagoon for the treated wastewater was observed dry with no discharge over the weir to the lake. Inspection of the pond dam area showed all areas to be stable with no signs of erosion or varmint holes.
5. The beach facility was inspected and minimal flow was observed into the plant as it serves only a single restroom facility at the public beach. The facility is drastically oversized as average daily flows are approximately one percent of the design flow. Due to the low flows only one treatment train consisting of an extended aeration tank and clarifier are used. The treated effluent discharges to a dry one-acre lagoon containing cattails and small shrubbery. Maintenance and cleaning of the lagoon should continue to prevent the growth of any large shrubs or trees. At the time of my inspection, the bottom of the lagoon was dry and no discharge was observed.
6. Inspection of the service center treatment plant revealed the aeration tank to be leaking. The state park is currently making final connections to a duplex lift station near the existing plant to pump sanitary waste to the nearby campground plant. According to Mr. Paden, all sections of the force main to the campground plant have been installed and final installation consists of diverting the flow into the new lift station following installation of the pumps. The current package plant serving the maintenance building was providing effective treatment although due to the low flows and leaks in the aeration tank insignificant flow is received to produce a discharge from the sand beds. Final installation and connection of the lift station should be completed as soon as possible and then proper abandonment of the service station package plant can occur. Upon receiving notification of the connection into the new lift station an official "No Permit Required" letter will be issued to revoke this NPDES permit.

Enclosed is a copy of my detailed inspection reports for each facility. In addition to the attached inspection reports I have also attached the single lab inspection page for my review of the field chemistry analysis conducted. According to Mr. Paden all wastewater analysis is contracted with Mayim laboratories and only field water chemistry is conducted. Review of instrument calibration procedures revealed proper procedures are being followed although instrument logbooks should be kept on site. If you have any questions, please call me at (740) 380-5416.

Sincerely,



Jake Greuey  
District Representative  
Division of Surface Water

JJG/dh

Enclosure

c: Tara Lee, ODNR- Division of Engineering

**NPDES**  
Compliance Inspection Report

**A. NATIONAL DATA SYSTEM CODING**

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
0PP00028*DD	OH0037834	October 13, 2010	C	S	1

**B. FACILITY DATA**

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
ODNR- Campground Wastewater Plant Salt Fork State Park Lore City, Ohio	8:45 a.m.	April 1, 2007
	Exit Time	Permit Expiration Date
	9:20 a.m.	March 31, 2012

Name(s) and Title(s) of On-Site Representative(s)	Phone Number(s)
Mr. Chuck Ainsco, Operator	(740) 432-1507
Name, Address and Title of Responsible Official	Phone Number
Mr. Chuck Ainsco ODNR- Salt Fork State Park 14755 Cadiz Road Lore City, Ohio 43755	

**C. AREAS EVALUATED DURING INSPECTION**

- |                                      |                                       |                                     |
|--------------------------------------|---------------------------------------|-------------------------------------|
| <u>  </u> S Permit                   | <u>  </u> S Flow Measurement          | <u>  </u> N/A Pretreatment          |
| <u>  </u> S Records/Reports          | <u>  </u> S Laboratory                | <u>  </u> S Compliance Schedules    |
| <u>  </u> S Operations & Maintenance | <u>  </u> S Effluent/Receiving Waters | <u>  </u> S Self-Monitoring Program |
| <u>  </u> S Facility Site Review     | <u>  </u> S Sludge Storage/Disposal   | <u>  </u> Other                     |
| <u>  </u> S Collection System        |                                       |                                     |

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

**D. SUMMARY OF FINDINGS/COMMENTS (attach additional sheets if necessary)**

See attached letter.

Jake Greuy  
Jake Greuy, Inspector, Ohio EPA, Southeast District Office

10/20/10  
Date

Timothy M. Campbell  
Timothy M. Campbell, Reviewer, Ohio EPA, Southeast District Office

10/20/10  
Date

# General Lab Criteria

Facility: Salt Fork State Park Facilities

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Balance</b>			
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights <sup>1,2</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency /Documentation	• Calibration verification required at least once each day the balance is used. <sup>3</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum <sup>1</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) <sup>1</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams <sup>4</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: N/A			

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Drying Oven (Suspended Solids)</b>			
• Temperature Recordkeeping	• Temperature recorded with each use <sup>4</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency /Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup> . Correction factor posted on thermometer / equipment <sup>1</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.1° C increments <sup>5</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° F <sup>4</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: N/A			

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>pH Meter</b>			
• 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) <sup>3</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A
	• Logbook maintained <sup>9</sup>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result <sup>7</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet <sup>2</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Instrument manual available	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing <sup>8</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: Need to maintain instrument logbooks.			

Criteria	Standard Methods Requirement	Acceptable?	Rating
<b>Dissolved Oxygen Meter</b>			
• Calibration Method	• Air or known DO calibration method <sup>10</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A
	• Calibration per manufacturer specification <sup>10</sup>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency	• Logbook maintained <sup>9</sup>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

## General Lab Criteria

/ Documentation	<ul style="list-style-type: none"> <li>Calibration verification required at least once each day the meter is used.<sup>3</sup></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> <li>Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil)<sup>11</sup></li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>Instrument manual available</li> </ul>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Chlorine Meter</b>				
• Calibration Frequency / Documentation	<ul style="list-style-type: none"> <li>pH / millivolt meter read to 0.1 mV<sup>15</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
	<ul style="list-style-type: none"> <li>Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples)<sup>3</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	<ul style="list-style-type: none"> <li>Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification<sup>16</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>Standards used for calibration not expired</li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	<ul style="list-style-type: none"> <li>Calibration curve (acceptable slope)</li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	<ul style="list-style-type: none"> <li>Electrode free of deposits and foreign material</li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>Log book being maintained.<sup>9</sup></li> <li>Instrument manual available</li> </ul>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

Comments: A HACH pocket colorimeter is used so the above questions are non-applicable to the use of the HACH residual chlorine meter used. Proper use of the instrument was verified by my field inspection.

<b>Number of Criteria Rated:</b>	<b>Acceptable</b>	3
	<b>Marginal</b>	
	<b>Unacceptable</b>	
	<b>Total Number of Areas Rated</b>	

**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

# General Lab Criteria

## Notation of Referenced Method

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

## **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 $\leq 6^{\circ}\text{C}$	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	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 $\text{H}_2\text{SO}_4$ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	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 $\text{HNO}_3$ to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G; P (Sterilized)	100	G	Refrigerate $\leq 10^{\circ}\text{C}$ 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 $\text{H}_2\text{SO}_4$ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

## General Lab Criteria

<b>Approved Standard Methods</b>	
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