



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL
DIVISION OF WATER RESOURCES
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

ENVIRONMENTAL LABORATORY
SECTION

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March 31, 2009

J. Chris Cleaver
DWR - Surface Water Discharge Section - NPDES
89 Kings Highway
Dover, DE 19901

Attention: J. Chris Cleaver

Attached you will find the following Laboratory Results:

Order Number: 0903028
Project Description: Pinnacle
Date Received: 03/17/2009
Time Received: 14:20

If you have any questions regarding this data, please contact me at the above telephone number.

Sincerely,

Kathy A. Knowles
Laboratory Manager

Delaware's good nature depends on you!



ANALYSIS REPORT

ELS Sample Number:	0903028-001	Matrix:	Waste Water			
Client Sample Description:	001	Sampling Method:	Grab			
Site ID:	001	Date and Time Collected:	03/17/2009 12:10			
<i>Test Parameter</i>	<i>Method</i>	<i>Result</i>	<i>Units</i>	<i>Qualifier</i>	<i>LOQ</i>	<i>Analysis Date</i>
Inorganic Nonmetallic Constituents						
Ammonia as N, Total	USEPA 350.1	0.024	mg/L		0.020	03/19/2009
Microbiological Examination						
Enterococcus	USEPA 1600	53	cfu/100ml		1	03/18/2009
Organic Aggregate Constituents						
BOD, 5-Day	APHA 5210-B	< 2.40	mg/L		2.40	03/19/2009
Physical and Aggregate Properties						
Residue, Nonfilterable (TSS)	APHA 2540-D	6	mg/L		2	03/18/2009



Qualifier Codes, Definitions, and Abbreviations

Qualifier/Flag

<	Sample value is below the method detection limit. The result is reported as < MDL.
>	Sample value is above the upper quantitation limit. The upper quantitation limit is reported.
AB	Air Bubble in DO bottle
B	Compound not detected substantially (10 times) above the level reported in the laboratory blanks (For Chlorophyll & Pheophytin, blank value is at or below amount detected in sample).
BT	Secchi disk ON BOTTOM. The reported result is the depth from the surface to the bottom.
C	See report narrative or comment line for observations concerning this result.
C V	Analysis performed after holding time expired.
D	Sample diluted for analysis.
EG	Value exceeds a theoretically equivalent or greater value (e.g. dissolved > total).
EW	Value exceeds a theoretically equal or greater value (e.g. dissolved > total). However, the difference is within the expected precision of the analytical techniques and is not statistically significant.
FZ	Samples frozen prior to analysis
I	The reported value is estimated due to the presence of interference.
IM	Instrument malfunctioned; No measurement taken.
J	Analyte present; reported value is estimated; concentration is below the range for accurate quantitation (greater than the MDL, but less than the LOQ).
J V	Analysis performed after holding time expired.
JH	Result is likely overestimated due to matrix effect.
JL	Result is likely underestimated due to matrix effect.
K	Sample not analyzed for the dissolved metal. The Total metal result is below the lower quantitation limit.
LOQ	Limit of Quantitation
MDL	Method Detection Limit
NA	Not Analyzed but required by project workplan or analytical request form.
NBF	No bottom measurement recorded in the field due to shallow water; Bottom records are those measurements recorded at surface.
NC	Sample not collected, but required by the project work plan.
ND	Not Detected.
NE	Field measurement not taken due to uncontrollable field sampling event or Natural Condition (Depth of water too deep/shallow).
NF	Sample collected, but not analyzed by the laboratory due to field error.
NO	None Observed
NR	No Result. See report narrative or comments for explanation.
NV#	Analytical result not valid.
O	Sample outsourced for analysis. Data will be reported separately.
P	Sample not properly preserved in field in accordance with preservation requirements. Data may be suspect.
PMM	Par Meter Malfunction
QC	Quality control value is outside acceptance limits.
QNS	Quantity not sufficient. Not enough sample to perform requested analyses.
S	Results will be reported in a separate report; See attached report.
SD	Sample discarded; Sample collected but not analyzed as per client request.
SNF	Site has no flow (i.e. a dry stream or a stream with no velocity)
STD	Stream too deep
STS	Site is too shallow to sample
U	Compound was analyzed but not detected. The method detection limit is reported.
UR	Nothing unusual was noted during the analysis of this sample. However, the test result differs from the norm to an extent that the laboratory considers it unreliable.
USGS	USGS Gauge
V	Analysis performed after holding time expired.
X	Results were not available at the time of the release of the report. Results will be reported when available.



Qualifier Codes, Definitions, and Abbreviations

Units

CFS	Cubic Feet per Second.
cfu/100mL	Colony forming units per 100 mL.
G	gram; there are 1000 g in 1 Kg.
GPM	Gallons per minute.
IN	Inches.
Kg	Kilogram.
L	Liter.
mg	milligram; there are 1000 mg in 1 g.
MGD	Millions of Gallons per Day.
ml	milliliter; there are 1000 ml in 1 L.
mpn/100mL	most probable number per 100 mL.
NTU	Nephelometric Turbidity Units. NTU is numerically equivalent to Formazin turbidity unit (FTU).
oC	Celsius.
pCi/L	Pico curie per liter.
ppb	Parts per billion=ug/Kg, ug/L.
ppm	Parts per million=mg/Kg, ug/g, mg/L, ug/ml; 1 ppm=1000 ppb.
su	Standard Units.
ug	microgram; there are 1000 ug in 1 mg.
uL	microliter; there are 1000 ul in 1 ml.
uMhos	Conductivity units for laboratory measurements.
uS	micro siemens; units used to measure conductivity in the field; same as uMhos.

FIELD CHAIN OF CUSTODY

(Compliance to HHS 1610.1)



Client : J. Chris Cleaver Report To : J. Chris Cleaver
 Address : 89 Kings Highway Invoice To : J. Chris Cleaver
 Dover, DE 19901 Account : NIDES
 Phone No.: 13027339-9346 ELS Order ID : 0963028

PROJECT NAME		DATE		TIME		RECEIVED BY: (signature)		ANALYSES		REMARKS
SAMPLERS (Please Print)		Sample Date	Sample Time	Station	Camp	Grab	No. of Containers			
<u>Pinhook (Mass)</u> <u>J. Chris Cleaver</u>		<u>09/17/09</u>	<u>12:10 PM</u>	<u>AW</u>		<input checked="" type="checkbox"/>	<u>2</u>	<u>1</u>	<u>1</u>	<u>TKS, BAD</u> <u>NH3</u> <u>ENTERO</u>
DIST (use Only) Lab Log No.		Client Sample Description								
<u>0963028-001</u>		<u>001</u>								
RELINQUISHED BY: (signature)		DATE								
<u>J. Chris Cleaver</u>		<u>09/17/09</u>								
COMMENTS:										
<u>MS, no CR</u>										

EW - drinking water
 ER - empty container
 GW - ground water
 Lab - lab water
 LW - liquid waste
 SF - sediment

SL - sludge
 SO - soil
 SW - surface water
 TL - tissue
 WS - solid waste
 WW - waste water

Is laboratory chain-of-custody required?
 Yes No

ELS USE ONLY
 Sample Conditions (check responses):
 1. Samples match COC? Yes/No 2. Bottles supplied by ELS? Yes/No 3. Samples received broken/leaking? Yes/No 4. Cooler temp bottle 2-6 degrees? Yes/No/NA
 5. Properly preserved? Yes/No 6. VOA/DQ containers free of headspace? Yes/No/NA 7. Holding times expired? Yes/No 8. Volume sufficient for analysis? Yes/No