Ohio EPA
40 years and moving forward
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Re: **Notice of Violation**
Campbell Soup Supply Co LLC
NPDES Permit 2IH00021/OH0003298
Compliance Sampling Inspection
Henry County

June 14, 2013

Mr. Randy Puckett
Manager, Services and Utilities
Campbell Soup Supply Company LLC
12-773 State Route 110
Napoleon, Ohio 43545

Dear Mr. Puckett:

On April 15, 2013, a Compliance Sampling Inspection was conducted at the Campbell Soup Supply Company LLC. Representatives of Campbells included Mr. Dan Junge, Mr. Aaron McCoy, and you, who provided information on operations and maintenance at the plant. An inspection of the spray fields was conducted on April 3, 2013. Representatives of Campbells included Mr. Aaron McCoy and Mr. Dan Junge, who provided information on operations and maintenance of the spray fields. Ms. Dana Martin-Hayden represented the Ohio EPA, Northwest District Office, Division of Surface Water for both inspection dates.

The purpose of the inspection was to evaluate compliance with the terms and conditions of your National Pollutant Discharge Elimination System (NPDES) permit and to evaluate the operation and maintenance of the plant. The final effluent discharging to the Maumee River was clear with very slight solids and no odor.

During our visit, all major treatment units were in operation. The final effluent discharging to the Maumee River was not visible from the river bank. A 24 hour composite sample was collected by Ohio EPA. Enclosed are the sample results.

A review of the discharge monitoring reports submitted between February 2012 to January 2013 indicates that there have been several NPDES permit effluent violations. The specific instances of non-compliance are enclosed on a separate sheet.

On May 15, 2013, Ohio EPA issued a revised draft NPDES permit renewal for Public Notice. Included in this draft permit renewal are revisions to the permit that address the overland flow spray irrigation system monitoring and operation. The revisions contained in the permit are intended to include all the proposed enhancements to the permit proposed by Ohio EPA and

you. On May 24, 2013, and June 5, 2013, additional meetings at the Ohio EPA were held to discuss possible changes to the language contained in this draft permit. On May 20, 2013, Ohio EPA became aware that seamless cans are manufactured at the Napoleon facility and we are evaluating the changes that will be required for the renewal draft NPDES permit.

It is our understanding that you are continuing to work with Poggemeyer Design Group to evaluate process, chemical, and operational and maintenance enhancements to the recently upgraded wastewater treatment plant (WWTP) to meet permit limits. In summary, changes or additions of chemicals to the DAF units, final settling tanks and the distribution box prior to post aeration are being evaluated for their effectiveness in reducing the pollutant loading.

If you have any questions or comments concerning the enclosed inspection report, please contact Dana Martin-Hayden at 419-373-3067 or e-mail at Dana.Martin-Hayden@epa.ohio.gov.

Sincerely,

Thomas Poffenbarger

Thomas Poffenbarger, P.E.
Water Quality Engineer II/Unit Supervisor
Division of Surface Water
Northwest District Office

DMH/jlm

Enclosures

ec: Dana Martin-Hayden, DSW, NWDO
Tom Poffenbarger, DSW, NWDO
Tracking

NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING				
Permit #	NPDES #	Inspection Type	Inspector	Facility Type
2IH00021	OH0003298	CSI	S	
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
1/1/1	10:30	3:00	Yes	Yes

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Campbell Soup Supply Co LLC 12-773 State Route 110 Napoleon, OH 43545	3/1/2004
	Permit Expiration Date
	7/31/2008
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Randy Puckett, Dan Junge, Aaron McCoy	
Name and Title of Responsible Official	Phone Number
Randy Puckett, Manager, Services and Utilities	(419) 599-6631

SECTION C: AREAS EVALUATED DURING INSPECTION		
Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated		
M	NPDES Compliance	Continued issues meeting permit limits,
M	Operations & Maintenance	Concerns regarding spray field O&M and monitoring
S	Facility Site Review	
M	Collection System	Issues with system handling high intensity rain events
S	Flow Measurement	
S	Receiving Waters	
N	Laboratory	

Comments:
Continued efforts are being made by the facility to enhance the WWTP's operation to meet the permitted effluent limits. Extensive communication between Campbells and Ohio EPA has been taking place to incorporate needed enhancements to monitoring, operations and maintenance of the spray fields. These efforts have been included in the draft NPDES permit that was issued in May, 2013. Recently, Ohio EPA became aware that seamless cans are manufactured at Napoleon facility and a review of the implications to the draft NPDES permit is taking place.

Signatures	
Dana Martin Hayden 6/12/13	Thomas Poffenbarger 6/13/13
Dana Martin Hayden, Inspector Date Compliance & Enforcement Division of Surface Water Northwest District Office	Thomas Poffenbarger, P.E., Reviewer Date Compliance & Enforcement Supervisor Division of Surface Water Northwest District Office

Compliance Data for Campbell Soup Supply Co LLC between 2/1/2012 to 1/1/2013

Summary

Permit Effluent Limit Violations: 22
Permit Effluent Code Violations: 0
Permit Effluent Frequency Violations: 0
Compliance Schedule Violations: 0

Limit Violations						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2012	001	CBOD 5 day	1D Conc	40	44.	2/8/2012
May 2012	001	Oxidants, Total Residu	1D Conc	0.01	.2	5/16/2012
May 2012	001	Oxidants, Total Residu	1D Qty	0.379	3.3308	5/16/2012
August 2012	001	Total Suspended Solids	1D Conc	45	66.	8/1/2012
August 2012	001	Total Suspended Solids	30D Conc	30	37.6666	8/1/2012
August 2012	001	CBOD 5 day	1D Conc	40	49.	8/1/2012
August 2012	001	CBOD 5 day	30D Conc	25	29.5555	8/1/2012
August 2012	001	Total Suspended Solids	1D Conc	45	48.	8/13/2012
August 2012	001	CBOD 5 day	1D Conc	40	42.	8/13/2012
August 2012	001	Total Suspended Solids	1D Conc	45	52.	8/15/2012
August 2012	001	CBOD 5 day	1D Conc	40	44.	8/15/2012
August 2012	006	CBOD 5 day	1D Conc	40	49.	8/22/2012
September 2012	001	Fecal Coliform	1D Conc	2000	5800.	9/5/2012
September 2012	008	Total Suspended Solids	1D Conc	45	124.	9/11/2012
September 2012	001	Fecal Coliform	1D Conc	2000	2700.	9/27/2012
October 2012	005	CBOD 5 day	1D Conc	40	41.	10/2/2012
October 2012	006	Total Suspended Solids	1D Conc	45	70.	10/30/2012
December 2012	001	CBOD 5 day	30D Conc	25	28.24	12/1/2012
December 2012	001	CBOD 5 day	1D Conc	40	47.	12/12/2012
December 2012	001	Total Suspended Solids	1D Conc	45	51.	12/17/2012
December 2012	001	CBOD 5 day	1D Conc	40	52.	12/17/2012
December 2012	001	CBOD 5 day	1D Conc	40	44.	12/19/2012

SECTION D: PERMIT VERIFICATION

(a) Correct name and mailing address of permittee ..... Y
(b) Correct name and location of receiving waters ..... Y
(c) Products and production rates conform with permit application ..... Y
(d) Flows and loadings conform with NPDES permit ..... Y
(e) Treatment processes are as described in permit application ..... N
(f) New treatment process added since last inspection ..... N
(g) Notification given to State of new, different or increased discharges ..... Y
(h) All discharges are permitted ..... Y
(i) Number and location of discharge points are as described in permit ..... Y

Comments:
f) need to include Napoleon Biogas
i) will be submitting PTI to combine station 004 with station 005

SECTION E: COMPLIANCE

(a) Any significant violations since the last inspection ..... Y
(b) Permittee is taking actions to resolve violations ..... Y
(c) Permittee has a compliance schedule ..... Y
(d) Permittee is meeting compliance schedule ..... Y

Comments: b) continuing to conduct studies on operation enhancements of WWTP after improvements, such as the addition of the final settling tanks was put in place. Consultant working on additional operation and treatment plant improvements aimed to achieve ammonia and other permit limits. Polymer was added to DAF tanks and seems to improving the loading on roughing towers and reducing the carry over of snails to settling tanks. New supplier for the Alum and Polymer for the settling tanks and the CBOD values have greatly improved in consistency and during different weather conditions. Planning to increase monitoring within the plant to provide much needed process unit data to operators. Recycling of Wastewater may include 1) primary settling tank back to front of the plant 2) trickling filter recycle within the primary 3) final settling tanks to front of the plant.
d) meeting compliance schedules in the consent order

SECTION F: OPERATION AND MAINTENANCE

(a) Standby power available ..... Y
If yes, what type? Outage of the whole plant.
(b) Adequate alarm system available for power or equipment failures ..... Y
(c) All treatment units in service other than backup units ..... Y
(d) Wastewater Treatment Works classification ..... Y
(e) Operator of Record holds unexpired license of class required by Permit ..
Class held: Dan Junge Class III, New Class IV Operator hired this week

(f) Copy of certificate of Operator of Record displayed on-site ..... N
(g) Minimum operator staffing requirements fulfilled ..... Y
(h) Routine and preventative maintenance scheduled and performed..... Y
(i) Any major equipment breakdown since last inspection ..... Y
(j) Operation and maintenance manual provided and maintained ..... Y
(k) Any plant bypasses since last inspection ..... NA
(l) Regulatory agency notified of bypasses ..... NA
By MOR ☐ and/or Spill Hotline (1-800-282-9378) ☐
(m) Any hydraulic or organic overloads since last inspection..... Y

Comments:
i) DAF unit was repaired
j) Ben from maintenance, coordinates pm operation changes from Poggemeyer Design Group to PM with system maintenance, new one in 4-5 months
m) on 2/13 the WWTP was hit with a very high concentration of strong fruit juice

SECTION G: RECORD KEEPING

a) Log book provided ..... Y
b) Format of log book (i.e. computer log, hard bound book)
__hard bound book_____
c) Log book(s) kept onsite in an area protected from weather..... Y
d) 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 operation and maintenance activities (including preventative maintenance, repairs and request for repairs) ..... Y
iv) Laboratory results (unless documented on bench sheets) ..... Y
v) Identification of person making log entries ..... Y
e) Has the Operator of Record submitted written notification to the permittee, Ohio EPA and any applicable local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred?.... NA

Comments:
d) ii add when in and out times
e) field application of greater than 0.7 inches per acre is more than allowed under spray field PTI approval

SECTION H: COLLECTION SYSTEM

a) Percent combined system: ..... NA
b) Any collection system overflows since last inspection ..... NA
CSO ☐ SSO ☐
c) Regulatory agency notified of overflows ..... NA
d) CSO O&M plan provided and implemented..... NA

e) CSOs monitored and reported in accordance with permit ..... NA
f) Portable pumps are used to relieve system..... NA
g) Lift station alarms provided and maintained ..... Y
h) Lift stations equipped with permanent standby power or equivalent ..... Y
i) Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection..... NA
j) Any complaints received since last inspection of basement flooding ..... NA
k) Are any portions of the sewer system at or near capacity ..... Y
l) Are operations changed during high-flow events?..... Y

Comments:
f) during high intensity rain events, if sump pump fails in the utility tunnel or the rate of inflow is greater than the sump pump can handle. There is one diesel back up pump which discharges back to a storm water catch basin that bypasses building 11 and goes directly to the WWTP.
k) yes, during high rainfall events
l) additional storm water would discharge to spray fields in summer or to WWTP in winter

SECTION I: SLUDGE MANAGEMENT

a) Sludge management plan (SMP) last audited by Ohio EPA:
Audit Date:
b) Sludge adequately disposed ..... Y
Method: Land Application
c) If sludge is incinerated, where is ash disposed of ..... NA
d) Is sludge disposal contracted ..... Y
Name: Soon it will be Napoleon Biogas – Duanne Miller Land Appl.
e) Has amount of sludge generated changed significantly ..... N
f) Adequate sludge storage provided at plant ..... Y
g) Records kept in accordance with State and Federal law..... Y
h) Any complaints received last year regarding sludge ..... N
i) Is sludge adequately processed (digestion, pathogen control)..... Y

Comments: b) Napoleon
i)Napoleon biogas scheduled to go on line 8/13
sludge holding lagoons #3 and #2 are close to being empty and they will be able to hold the WTP lime or the WWTP undigested sludge if Napoleon Biogas is in an emergency shut down or inoperable.

SECTION J: SELF-MONITORING PROGRAM

a) Primary flow measuring device operated and maintained ..... Y
Type of device: Parshall Flume Device location: effluent
b) Calibration frequency adequate..... Y
Date of last calibration: 1/year

c) Secondary instruments operated and maintained ..... Y
d) Flow measurements equipment adequate to handle full range of flows .... Y
e) Actual flow discharged is measured ..... Y
f) Flow measuring equipment inspection frequency ____2/shift_____ Y
g) Sampling location(s) are as specified by permit ..... Y
h) Parameters and sampling frequency agree with permit..... Y
i) 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:
f) Will start to log the flow measuring inspections and the temp of the isco sampler.

SECTION K: Laboratory

a) EPA applicable analytical testing procedures used (40 CFR 136.3) ..... Y
b) If alternate procedures are used, are they properly approved?..... NA
c) Analysis performed more frequency ..... Y
If yes, are results recorded in permittee's report? ..... Y
d) Commercial laboratory used:
Name: MASI, Alloway, IFM
Parameters analyzed: everything but pH
e) Quality assurance manual provided and maintained..... Y
f) Calibration and maintenance of instruments is satisfactory?..... Y
g) Results of last U.S. EPA quality assurance ..... Y
Date: The laboratories did the test and were satisfactory

Comments:

SECTION L: EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	NA	No	No	No	No	No	Clear	No Odor

Comments:

SECTION M: 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:

Form Approved
OMB No.

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

158-R0035

RATING CODES: **S** = Satisfactory; **U** = Unsatisfactory; **M** = Marginal; **IN** = In Operation; **OUT** = Out of Operation

	CONDITION OR APPEARANCE	RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection	S	Company has their own and operated water treatment plant
	Safety Features	S	
	Bypasses	---	
	Stormwater Overflows	---	
	Alternate Power Source	---	WWTP shuts down during power outage
Preliminary	Maintenance of Collection Systems	S	
	Pump Station	IN	3 Influent Pumps
	Ventilation	---	
	Bar Screen	IN	1 Unit
	Disposal of Screenings	S	Landfilled
	Comminutor	---	
	Grit Chamber	IN	1 Unit
	Disposal of Grit	S	Landfilled
Primary	Settling Tanks	IN	Greenish brown color – need to clean the weirs
	Scum Removal		
	Sludge Removal	IN	To Digester
	Effluent		
	Primary DAF's	IN	3 units, #1, #2, & #3, milky brown, changed addition of polymer in Jan '13
Sludge Disposal	Digesters	IN	2 Anaerobic; 1 Sludge Storage Tank
	Temperature and pH	S	
	Gas Production	IN	Study being done for the use of methane gas in the facility
	Heating Equipment	IN	
	Sludge Pumps	IN	6 into digester; 3 out to sludge holding tank or 5 sludge storage lagoons
	Drying Beds		
	Vacuum Filter		
	Disposal of Sludge	S	Land Apply; Lagoons have storage for 1 year
	Sludge Holding Tank	IN	1 unit
Other	Flow Meter and Recorder	IN	
	Records		
	Lab Controls	S	
	Chemical Treatment	IN	Cl added in distribution box prior to post aeration to reduce Ammonia conc.
	Divider box after trickling filters	IN	Monday(after weekend) see snails slough off from food starved trickling filters
Secondary-Tertiary List items as required	Roughing Towers	IN	2 units – 1 w/ 4 arms – less repairs and they may convert 2nd to 4 arms too
	Settling Tanks	IN	4 units-new supplier for same aluminum spec & CBOD values improved
	Trickling Filters	IN	2 primary units and 2 secondary units
	Aerated Lagoon	IN	May be used in future for storm water
	Final DAF's	IN	2 units #2 and #5
	Spray Irrigation	OUT	Used in summer during peak flow months for vegetable wash water and process water
Disinfection	Effluent	S	Clear but foamy after aeration
	Disinfection System	OUT	Chlorine Gas
	Effective Dosage		
	Contact Time		
	Contact Tank	OUT	
	Dechlorination	OUT	Sodium bisulfite

A Report on the Acute Toxicity of Campbell Soup Company
Outfall 001 Effluents to *Pimephales promelas* and *Ceriodaphnia dubia*

Bioassay Report Number:
13-4252-NW

Reviewed By
QA Staff

APR 23 2013

Ohio EPA - DES
Reviewer VD

Sample Number:
151734

Jonathan C. McLaughlin

Bioassay Section
Division of Environmental Services
Ohio Environmental Protection Agency

INTRODUCTION

Two grab samples and a composite sample of Campbell Soup Company outfall 001 effluents were collected by Benjamin Smith and Chris Riddle, DSW, NWDO, Ohio EPA for use in screening bioassays as part of a toxics evaluation in conjunction with permit reissuance. Grab samples were also collected from the receiving stream, the Maumee River, upstream from the discharge. The effluent grab samples were collected on 15 April 2013 at 0816 hours and on 16 April 2013 at 0857 hours. The composite sample was collected on 15-16 April 2013 between 0828-0813 hours. The Maumee River upstream water was collected on 15 April 2013 at 0852 hours. A mixing zone sample was manually prepared in the laboratory on 16 April 2013 at 0900 hours by combining equal aliquots of upstream water and effluent. The fathead minnow, *Pimephales promelas*, and *Ceriodaphnia dubia* were used as test organisms in these 48-hour screening bioassays.

PREVIOUS RESULTS

Bioassays of Campbell Soup Company outfall 001 effluents were previously conducted by the Ohio EPA within the last ten years in March and May 2007, and March 2013 (Bioassay Numbers 07-3646-NW, 07-3663-NW, and 13-4233-NW, respectively). The previously tested effluents were not acutely toxic to either *P. promelas* or *C. dubia* (Appendix 1).

RESULTS AND CONCLUSIONS

Details of the tests may be found on the attached bioassay report forms. The effluents were not acutely toxic. No mortality or adverse effects were observed in the ambient waters and effluents for either *P. promelas* or *C. dubia*. Survival in the laboratory controls was 100 percent for both species.

Screening bioassays are utilized to determine if an effluent is acutely toxic to the test organisms and to indicate if more extensive bioassays should be conducted to estimate median lethal concentrations or persistence of toxicity. The results of these and previous bioassays indicate that Campbell Soup Company outfall 001 effluents were not acutely toxic to either *P. promelas* or *C. dubia*. Additional bioassays should be conducted to further demonstrate that unacceptable toxic conditions are not associated with this discharge.

These tests did not address the possibility of chronic toxicity. Discharge data for Campbell Soup Company outfall 001 and the Maumee River should be evaluated to determine if chronic toxicity is of concern. Chronic tests may be required to adequately evaluate the possibility of toxicity in this discharge.

OHIO ENVIRONMENTAL PROTECTION AGENCY
Screening Bioassay Report Form

Report Date: 19 April 2013	**Bioassay Report Number:** 13-4252-NW

Investigators:	Jonathan C. McLaughlin

Effluent tested and source:	Campbell Soup Company, 12773 S.R. 110, Napoleon, Henry County, Ohio, outfall 001
NPDES Number:	OH0003298
Ohio EPA Permit Number:	2IH00021
Business/Process:	Food production
Collector(s):	Benjamin Smith and Chris Riddle, DSW, NWDO, Ohio EPA

Test Organisms:	Fathead minnow (*Pimephales promelas*) and *Ceriodaphnia dubia* from Ohio EPA Bioassay Section rearing units

Fathead Minnow Data:	Hatched: 5-6 April 2013; 10-11 days old at test initiation

Rearing unit water and reconstituted water were used in the controls for this static bioassay. Adverse effects measured in the test are death, immotility, and loss of equilibrium. Death is the cessation of all visible movement with no response to gentle prodding (fish) or to gentle test container agitation (*Ceriodaphnia*). An immotile organism is paralyzed or stunned with only occasional slight movements and cannot maintain its normal position in the water column. Loss of equilibrium is the organism's inability to maintain normal swimming posture in the water column and may be characterized by periods of quiescence followed by bursts of uncontrolled swimming. The effluent is considered to be acutely toxic if 20 percent, or more, of either species of test organism exhibits any combination of the adverse effects in the 100 percent effluent. Test results are invalid if more than ten percent of either species of test organism exhibits the adverse effects in the control.

Results of screening bioassays of Campbell Soup Company outfall 001 effluent

Bioassay Number: 13-4252-NW

Sample	Time Collected Date: Time: (hours)	Test Start Date: Time: (hours)	Cumulative percent mortality (plus those lethargic)			
			P. promelas Time (hours)		*C. dubia* Time (hours)	
			24	48	24	48
Maumee River Upstream*	15 April 2013 0852	16 April 2013 0915	0	0	0	0
Manual mixing zone (1:1)*	16 April 2013 0900	16 April 2013 0915	0	0	0	0
Grab 001	15 April 2013 0816	16 April 2013 0915	0	0	0	0
Rearing unit water control		16 April 2013 0915	0	0	-	-
Reconstituted water control		16 April 2013 0915	-	-	0	0
Grab 001	16 April 2013 0857	17 April 2013 0915	0	0	0	0
Composite 001	15-16 April 2013 0828-0813	17 April 2013 0915	0	0	0	0
Rearing unit water control		17 April 2013 0915	0	0	-	-
Reconstituted water control		17 April 2013 0915	-	-	0	0

* Due to turbidity, replicates had to be poured into a glass bottom culture dish in order to make fathead minnow observations.

Relevant information: A mixing zone sample was manually prepared in the laboratory by combining equal aliquots of upstream water and effluent. The Maumee River upstream water and manual mixing zone were opaque yellow/brown and contained settleable solids. Effluents were clear with a yellow tinge. Physicochemical parameters measured prior to test initiation and at test end are on the next page.

Results of screening bioassays of Campbell Soup Company outfall 001 effluent

Bioassay Number: 13-4252-NW

Relevant information (cont.): Physicochemical parameters recorded prior to test initiation were:

Sample	Temperature (°C)		Dissolved Oxygen (mg/L) Initial-Adjusted	pH (S.U.)	Conductivity (µmhos/cm)
	Upon Rcpt.	Test Init.			
Maumee River upstream	1.1	25.2	8.8	7.85	340
Manual mixing zone (1:1)	-	25.4	8.8	7.70	702
Grab 001, 15 April 2013	0.8	25.5	8.9	7.72	1050
Grab 001, 16 April 2013	3.7	24.9	8.0	7.81	1250
Composite 001	3.6	24.6	8.1	7.80	1290
Rearing unit water control	21.7	24.7	8.0	7.46	402
Reconstituted water control	24.4	24.4	8.0	8.51	560

Physicochemical values for the laboratory controls are the averages of two measurements.

Physicochemical parameters recorded at *P. promelas* (FHM) and *C. dubia* (CDU) test end were:

Sample	Temperature (°C)		Dissolved Oxygen (mg/L)		pH (S.U.)		Conductivity (µmhos/cm)	
	FHM	CDU	FHM	CDU	FHM	CDU	FHM	CDU
Maumee River upstream	-	-	-	-	-	-	-	-
Manual mixing zone (1:1)	-	-	-	-	-	-	-	-
Grab 001, 15 April 2013	-	-	-	-	-	-	-	-
Grab 001, 16 April 2013	-	-	-	-	-	-	-	-
Composite 001	-	-	-	-	-	-	-	-
Rearing unit water control	-	-	-	-	-	-	-	-
Reconstituted water control	-	-	-	-	-	-	-	-

Physicochemical values for the laboratory controls are the averages of two measurements.

Appendix 1.

Results of previous bioassays of Campbell Soup Company outfall 001 effluent

Screening Results

Bioassay Number	Date (mm/yy)	Acutely Toxic (Y/N)	*Pimephales promelas* mortality (plus/or exhibiting other adverse effects)			*Ceriodaphnia dubia* mortality (plus/or exhibiting other adverse effects)		
			Day 1 Grab	Day 2 Grab	Composite	Day 1 Grab	Day 2 Grab	Composite
07-3646-NW	03/07	N	0	0	5	0	0	0
07-3646-NW	05/07	N	0	0	0	0	0	0
13-4233-NW	03/13	N	0	5	0	0	0	0

* All previous results are available electronically upon request.

Definitive Results

Bioassay Number	*Pimephales promelas*			*Ceriodaphnia dubia*		
	LC50 (95 percent confidence limits)	EC50 (95 percent confidence limits)	LC50 TUa (EC50 TUa)	LC50 (95 percent confidence limits)	EC50 (95 percent confidence limits)	LC50 TUa (EC50 TUa)
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Definitions

- The LC50s and EC50s are reported as percent by volume effluent (%).
- The LC50 is the effluent concentration that is lethal to 50 percent of a species of test organism in a stated exposure period. The EC50 includes mortality plus data on other adverse effects. Both are usually obtained by statistical or graphical methods.
- The TUa is calculated by dividing 100 by the LC50 or EC50.

151734

OHIO EPA, DES, BIOASSAY SECTION, SAMPLE SUBMISSION FORM

Name of Entity and Outfall Tested: Campbell Soup Effluent, Outfall 001 OEPA Permit #: 2IH00021

Facility Address: 12773 State Route 110, Napoleon, Ohio NPDES#: OH0003298

Receiving Stream (R.M.) Maumee River @ RM 45.84 County: Henry

Collector(s)(Print Full Name): Benjamin Smith / Chris Riddle

Collector(s) Signature: Benjamin Smith CLR

Upstream control samples shall be collected upstream from any discharge/receiving stream interactions. Generally, acute (near field) samples should be collected in the center of the effluent plume 5 times the stream depth downstream from the outfall and chronic (far field) samples should be collected midplume, or if a plume no longer exists midstream 5 times the stream width downstream from the outfall. If atypical mixing characteristics exist, samples can be collected at closer distances than the above guidelines to insure the samples are within the effluent plume. If a mixing zone sample cannot be safely collected, one can be prepared using equal aliquots of the day 1 effluent grab and upstream dilution water (be sure to write "manual" in the "Location of Sample Collection" space provided below).

Sample Identification	Effluent-Day 1 Grab	Effluent-Day 2 Grab	Effluent-Composite	Upstream/Dilution-Grab	Acute Mixing Zone-Grab	Chronic Mixing Zone-Grab
Location of Sample Collection	@ Outfall 001			Maumee R @ Napoleon WTP Intake		
If Composite, Sample Volume and Frequency						
Collection Containers, Types and Number	(1) gallon cubi			(2) gallon cubi		
Volume Collected	1 gallon			2 gallons		
Date of Sample Collection	041513			041513		
Time of Sample Collection, beginning-Ending Time	0816			0852		
Flow (in MGD)						
Temperature (°C)	18.0			7.5		
Dissolved Oxygen (mg/L)	9.22			11.25		
pH (S.U.)	7.73			7.72		
Conductivity (umhos/cm)	875			214.3		
Specific conductivity	1010			321.9		
% Dissolved Oxygen	97.7			93.9		

Place a check mark next to all the appropriate characteristics of the outfall/mixing zone:

___ Turbulent Mixing ___ Onshore Pipe ___ Shore hugging Plume ___ Plume
___ Nonturbulent Mixing ___ Offshore Pipe ___ Rapid Complete Mixing ___ Diffuser

Notes: No mixing zone sample collected. Hard to observe effluent in the stream especially at higher flow. In addition, outfall has difficult access down a steep slope on the river bank.

Name and Title		YEAR	MONTH	DAY	HOUR	MINUTE
Received from:	[illegible]	13	04	15	15	30
Received by:	[illegible]	13	04	16	08	13
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						

In the vicinity of the discharge: Stream Depth _____ Stream Width _____

CHEMISTRY SAMPLE NUMBERS
151733

Location Map Drawing

Describe and map the upstream control and any mixing zone sampling sites so someone else could sample at the exact same points (include landmarks if possible). Stream depth should be recorded for any acute (near field) mixing zone sample and stream width for any chronic (far field) mixing zone sample. For the mixing zone sample location, delineate the distance downstream from the outfall and map the effluent plume. Be specific on discharge and receiving stream characteristics.

OHIO EPA, DES, BIOASSAY SECTION, SAMPLE SUBMISSION FORM

Name of Entity and Outfall Tested: Campbell Soup Effluent, Outfall 001 OEPA Permit #: 2IH00021

Facility Address: 12773 State Route 110, Napoleon, Ohio NPDES#: OH0003298

Receiving Stream (R.M.) Maumee River @ RM 45.84 County: Henry

Collector(s)(Print Full Name): Benjamin Smith / Chris Riddle

Collector(s) Signature: Benjamin Smith / [signature]

Upstream control samples shall be collected upstream from any discharge/receiving stream interactions. Generally, acute (near field) samples should be collected in the center of the effluent plume 5 times the stream depth downstream from the outfall and chronic (far field) samples should be collected midplume, or if a plume no longer exists midstream 5 times the stream width downstream from the outfall. If atypical mixing characteristics exist, samples can be collected at closer distances than the above guidelines to insure the samples are within the effluent plume. If a mixing zone sample cannot be safely collected, one can be prepared using equal aliquots of the day 1 effluent grab and upstream dilution water (be sure to write "manual" in the "Location of Sample Collection" space provided below).

Sample Identification	Effluent-Day 1 Grab	Effluent-Day 2 Grab	Effluent-Composite	Upstream/Dilution-Grab	Acute Mixing Zone-Grab	Chronic Mixing Zone-Grab
Location of Sample Collection		@ Outfall 001	@ Outfall 001			
If Composite, Sample Volume and Frequency			200ml/15min/24hrs.			
Collection Containers, Types and Number		(1) gallon cubi	(1) gallon cubi			
Volume Collected		1 gallon	1 gallon			
Date of Sample Collection		041613	041513 to 041613			
Time of Sample Collection, beginning-Ending Time		0857	0828 to 0813			
Flow (in MGD)			4.4 million			
Temperature (°C)		23.5				
Dissolved Oxygen (mg/L)		7.16				
pH (S.U.)		7.64				
Conductivity (µmhos/cm)		1175				
Specific conductivity		1210				
% Dissolved Oxygen		84.5				

Place a check mark next to all the appropriate characteristics of the outfall/mixing zone:

___ Turbulent Mixing ___ Onshore Pipe ___ Shore hugging Plume ___ Plume
___ Nonturbulent Mixing ___ Offshore Pipe ___ Rapid Complete Mixing ___ Diffuser

Notes: 24 hour flow=4.4 million gallons

Name and Title		YEAR	MONTH	DAY	HOUR	MINUTE
Received from:	Benjamin Smith	13	04	16	14	30
Received by:	John C. Wyatt	13	04	17	08	25
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						

In the vicinity of the discharge: Stream Depth _____ Stream Width _____

CHEMISTRY SAMPLE NUMBERS
151816-822

Location Map Drawing

Describe and map the upstream control and any mixing zone sampling sites so someone else could sample at the exact same points (include landmarks if possible). Stream depth should be recorded for any acute (near field) mixing zone sample and stream width for any chronic (far field) mixing zone sample. For the mixing zone sample location, delineate the distance downstream from the outfall and map the effluent plume. Be specific on discharge and receiving stream characteristics.

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	151816				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	04/15/2013 8:28 AM	04/16/2013 8:13 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0415
Client	DSW			**External ID**	97674
OEPA Division	DSW				
Location	3 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CBOD-5	CBOD5	P80082	14	2	mg/L	04/18/2013	
Solids_Diss	Total Dissolved Solids	P70300	750	10	mg/L	04/17/2013	
Solids_Susp	Total Suspended Solids	P530	31	5	mg/L	04/17/2013	
ICPMS_(WAT)	Arsenic	P1002	<2.0	2	ug/L	05/02/2013	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	05/02/2013	
ICPMS_(WAT)	Chromium	P1034	3.0	2	ug/L	05/02/2013	
ICPMS_(WAT)	Copper	P1042	3.8	2	ug/L	05/02/2013	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	05/02/2013	
ICPMS_(WAT)	Nickel	P1067	3.8	2	ug/L	05/02/2013	
ICPMS_(WAT)	Selenium	P1147	<2.0	2	ug/L	05/02/2013	
ICP_(WAT)	Aluminum	P1105	2980	200	ug/L	04/25/2013	
ICP_(WAT)	Barium	P1007	15	15	ug/L	04/25/2013	
ICP_(WAT)	Calcium	P916	70	2	mg/L	04/25/2013	
ICP_(WAT)	Hardness, Total	P900	204	10	mg/L	04/25/2013	
ICP_(WAT)	Iron	P1045	363	50	ug/L	04/25/2013	
ICP_(WAT)	Magnesium	P927	7	1	mg/L	04/25/2013	
ICP_(WAT)	Manganese	P1055	14	10	ug/L	04/25/2013	
ICP_(WAT)	Potassium	P937	29	2	mg/L	04/25/2013	
ICP_(WAT)	Sodium	P929	173	5	mg/L	04/25/2013	
ICP_(WAT)	Strontium	P1082	590	30	ug/L	04/25/2013	
ICP_(WAT)	Zinc	P1092	71	10	ug/L	04/25/2013	
Alkalinity	Alkalinity	P410	185	5	mg/L	04/18/2013	
Ammonia	Ammonia	P610	0.363	0.05	mg/L	04/18/2013	
COD	COD	P340	73	20	mg/L	04/25/2013	
Chloride	Chloride	P940	250	50	mg/L	04/17/2013	
Conductivity	Conductivity	P95	1320	2	umhos/cm	04/19/2013	
Nitrate	Nitrate+nitrite	P630	1.01	0.1	mg/L	04/18/2013	
TKN	TKN	P625	5.31	1	mg/L	04/22/2013	
TP	Total Phosphorus	P665	0.611	0.01	mg/L	04/18/2013	

Field Comments

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 05/16/2013

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	151817				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		04/16/2013 8:57 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0416
Client	DSW			**External ID**	97680
OEPA Division	DSW				
Location	1 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Oil&Grease	Oil & Grease	P556	<2.3	2.3	mg/L	05/06/2013	
Cyanide_Free	Cyanide, Free	P718	<5	5	ug/L	04/19/2013	

Field Comments Compliance

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 05/16/2013

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	151733				
Date Received	04/16/2013 8:43 AM	**Matrix**	SW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		04/15/2013 8:52 AM		**Station ID**	500200
Program	NWDO-DSW			**Customer ID**	13BS0415
Client	DSW			**External ID**	97679
OEPA Division	DSW				
Location	2 - MAUMEE R. AT NAPOLEON @ WATER WORKS INTAKE				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
ICP_(WAT)	Calcium	P916	44	2	mg/L	04/25/2013	
ICP_(WAT)	Hardness, Total	P900	163	10	mg/L	04/25/2013	
ICP_(WAT)	Magnesium	P927	13	1	mg/L	04/25/2013	

Field Comments Hardness

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 05/06/2013

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151818		
Date Received	04/17/2013 8:53 AM	**Matrix** WW	**Collected by** SMITH, BENJAMIN
	Begin	**End**	**Sample Type** COMPLIANCE
Date Collected	04/15/2013 8:28 AM	04/16/2013 8:13 AM	**Station ID** P09E01
Program	NWDO-DSW		**Customer ID** 13BS0416
Client	DSW		**External ID** 97687
OEPA Division	DSW		
Location	4 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)		

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	ug/L					
Acenaphthene		000083-32-9	<5.4	5.4	04/30/2013	
Acenaphthylene		000208-96-8	<5.4	5.4	04/30/2013	
Anthracene		000120-12-7	<2.2	2.2	04/30/2013	
Benzo[a]anthracene		000056-55-3	<2.2	2.2	04/30/2013	
Benzo[a]pyrene		000050-32-8	<2.2	2.2	04/30/2013	
Benzo[b]fluoranthene		000205-99-2	<2.2	2.2	04/30/2013	
Benzo[g,h,i]perylene		000191-24-2	<2.2	2.2	04/30/2013	
Benzo[k]fluoranthene		000207-08-9	<2.2	2.2	04/30/2013	
bis(2-Chloroethoxy)methane		000111-91-1	<5.4	5.4	04/30/2013	
bis(2-Chloroethyl)ether		000111-44-4	<2.2	2.2	04/30/2013	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.2	2.2	04/30/2013	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.9	10.9	04/30/2013	
4-Bromophenyl-phenylether		000101-55-3	<5.4	5.4	04/30/2013	
Butylbenzylphthalate		000085-68-7	<2.2	2.2	04/30/2013	
4-Chloro-3-methylphenol		000059-50-7	<10.9	10.9	04/30/2013	
2-Chloronaphthalene		000091-58-7	<5.4	5.4	04/30/2013	
2-Chlorophenol		000095-57-8	<2.2	2.2	04/30/2013	
4-Chlorophenyl-phenylether		007005-72-3	<2.2	2.2	04/30/2013	
Chrysene		000218-01-9	<2.2	2.2	04/30/2013	
Di-n-butylphthalate		000084-74-2	<5.4	5.4	04/30/2013	
Di-n-octylphthalate		000117-84-0	<2.2	2.2	04/30/2013	
Dibenz[a,h]anthracene		000053-70-3	<2.2	2.2	04/30/2013	
1,3-Dichlorobenzene		000541-73-1	<2.2	2.2	04/30/2013	
1,4-Dichlorobenzene		000106-46-7	<2.2	2.2	04/30/2013	
1,2-Dichlorobenzene		000095-50-1	<2.2	2.2	04/30/2013	
2,4-Dichlorophenol		000120-83-2	<2.2	2.2	04/30/2013	
Diethylphthalate		000084-66-2	<5.4	5.4	04/30/2013	
2,4-Dimethylphenol		000105-67-9	<10.9	10.9	04/30/2013	
Dimethylphthalate		000131-11-3	<5.4	5.4	04/30/2013	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.4	5.4	04/30/2013	
2,4-Dinitrophenol		000051-28-5	<21.7	21.7	04/30/2013	
2,6-Dinitrotoluene		000606-20-2	<2.2	2.2	04/30/2013	
2,4-Dinitrotoluene		000121-14-2	<2.2	2.2	04/30/2013	
Fluoranthene		000206-44-0	<2.2	2.2	04/30/2013	
Fluorene		000086-73-7	<2.2	2.2	04/30/2013	
Hexachlorobenzene		000118-74-1	<2.2	2.2	04/30/2013	
Hexachlorobutadiene		000087-68-3	<2.2	2.2	04/30/2013	
Hexachlorocyclopentadiene		000077-47-4	<2.2	2.2	04/30/2013	
Hexachloroethane		000067-72-1	<5.4	5.4	04/30/2013	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.2	2.2	04/30/2013	
Isophorone		000078-59-1	<2.2	2.2	04/30/2013	
N-Nitroso-di-n-propylamine		000621-64-7	<2.2	2.2	04/30/2013	
N-Nitrosodiphenylamine		000086-30-6	<5.4	5.4	04/30/2013	
Naphthalene		000091-20-3	<2.2	2.2	04/30/2013	
Nitrobenzene		000098-95-3	<2.2	2.2	04/30/2013	
2-Nitrophenol		000088-75-5	<2.2	2.2	04/30/2013	
4-Nitrophenol		000100-02-7	<21.7	21.7	04/30/2013	
Pentachlorophenol		000087-86-5	<10.9	10.9	04/30/2013	
Phenanthrene		000085-01-8	<2.2	2.2	04/30/2013	
Phenol		000108-95-2	<2.2	2.2	04/30/2013	
Pyrene		000129-00-0	<2.2	2.2	04/30/2013	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151818				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	04/15/2013 8:28 AM	04/16/2013 8:13 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0416
Client	DSW			**External ID**	97687
OEPA Division	DSW				
Location	4 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
1,2,4-Trichlorobenzene		000120-82-1	<2.2	2.2	04/30/2013	
2,4,6-Trichlorophenol		000088-06-2	<5.4	5.4	04/30/2013	

Field Comments BNA, 625

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 05/21/2013

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151819				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected			04/16/2013 8:57 AM	**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0415
Client	DSW			**External ID**	97689
OEPA Division	DSW				
Location	5 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624	ug/L					
Benzene		000071-43-2	<0.50	0.5	04/18/2013	
Bromobenzene		000108-86-1	<0.50	0.5	04/18/2013	
Bromochloromethane		000074-97-5	<0.50	0.5	04/18/2013	
Bromodichloromethane		000075-27-4	<0.50	0.5	04/18/2013	
Bromoform		000075-25-2	<0.50	0.5	04/18/2013	UJ
Bromomethane		000074-83-9	<0.50	0.5	04/18/2013	
n-Butylbenzene		000104-51-8	<0.50	0.5	04/18/2013	
sec-Butylbenzene		000135-98-8	<0.50	0.5	04/18/2013	
tert-Butylbenzene		000098-06-6	<0.50	0.5	04/18/2013	
Carbon tetrachloride		000056-23-5	<0.50	0.5	04/18/2013	
Chlorobenzene		000108-90-7	<0.50	0.5	04/18/2013	
Chloroethane		000075-00-3	<0.50	0.5	04/18/2013	
Chloroform		000067-66-3	<0.50	0.5	04/18/2013	
Chloromethane		000074-87-3	<0.50	0.5	04/18/2013	
2-Chlorotoluene		000095-49-8	<0.50	0.5	04/18/2013	
4-Chlorotoluene		000106-43-4	<0.50	0.5	04/18/2013	
Dibromochloromethane		000124-48-1	<0.50	0.5	04/18/2013	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	04/18/2013	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	04/18/2013	
Dibromomethane		000074-95-3	<0.50	0.5	04/18/2013	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	04/18/2013	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	04/18/2013	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	04/18/2013	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	04/18/2013	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	04/18/2013	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	04/18/2013	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	04/18/2013	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	04/18/2013	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	04/18/2013	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	04/18/2013	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	04/18/2013	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	04/18/2013	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	04/18/2013	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	04/18/2013	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	04/18/2013	
Ethylbenzene		000100-41-4	<0.50	0.5	04/18/2013	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	04/18/2013	
Isopropylbenzene		000098-82-8	<0.50	0.5	04/18/2013	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	04/18/2013	
Methylene chloride		000075-09-2	<0.50	0.5	04/18/2013	
Naphthalene		000091-20-3	<0.50	0.5	04/18/2013	
n-Propylbenzene		000103-65-1	<0.50	0.5	04/18/2013	
Styrene		000100-42-5	<0.50	0.5	04/18/2013	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	04/18/2013	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	04/18/2013	
Tetrachloroethene		000127-18-4	<0.50	0.5	04/18/2013	
Toluene		000108-88-3	1.16	0.5	04/18/2013	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	04/18/2013	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	04/18/2013	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	04/18/2013	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	04/18/2013	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151819				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		04/16/2013 8:57 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0415
Client	DSW			**External ID**	97689
OEPA Division	DSW				
Location	5 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624	**ug/L**					
Trichloroethene		000079-01-6	<0.50	0.5	04/18/2013	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	04/18/2013	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	04/18/2013	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	04/18/2013	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	04/18/2013	
Vinyl chloride		000075-01-4	<0.50	0.5	04/18/2013	
o-Xylene		000095-47-6	<0.50	0.5	04/18/2013	
Total m&p-xylenes		000108-38-3	<0.50	0.5	04/18/2013	

Field Comments VOC, 624

Lab Comments

QC / Sample Comments 624: bromoform estimated due to poor QC recovery.

Approved By VDESHMUKH **On** 05/21/2013

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151821				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	04/15/2013 8:28 AM	04/16/2013 8:13 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0415
Client	DSW			**External ID**	97691
OEPA Division	DSW				
Location	6 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.3	5.3	04/30/2013	
Acenaphthylene		000208-96-8	<5.3	5.3	04/30/2013	
Anthracene		000120-12-7	<2.1	2.1	04/30/2013	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	04/30/2013	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	04/30/2013	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	04/30/2013	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	04/30/2013	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	04/30/2013	
bis(2-Chloroethoxy)methane		000111-91-1	<5.3	5.3	04/30/2013	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	04/30/2013	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	04/30/2013	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.5	10.5	04/30/2013	
4-Bromophenyl-phenylether		000101-55-3	<5.3	5.3	04/30/2013	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	04/30/2013	
4-Chloro-3-methylphenol		000059-50-7	<10.5	10.5	04/30/2013	
2-Chloronaphthalene		000091-58-7	<5.3	5.3	04/30/2013	
2-Chlorophenol		000095-57-8	<2.1	2.1	04/30/2013	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	04/30/2013	
Chrysene		000218-01-9	<2.1	2.1	04/30/2013	
Di-n-butylphthalate		000084-74-2	<5.3	5.3	04/30/2013	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	04/30/2013	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	04/30/2013	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	04/30/2013	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	04/30/2013	
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	04/30/2013	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	04/30/2013	
Diethylphthalate		000084-66-2	<5.3	5.3	04/30/2013	
2,4-Dimethylphenol		000105-67-9	<10.5	10.5	04/30/2013	
Dimethylphthalate		000131-11-3	<5.3	5.3	04/30/2013	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.3	5.3	04/30/2013	
2,4-Dinitrophenol		000051-28-5	<21.1	21.1	04/30/2013	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	04/30/2013	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	04/30/2013	
Fluoranthene		000206-44-0	<2.1	2.1	04/30/2013	
Fluorene		000086-73-7	<2.1	2.1	04/30/2013	
Hexachlorobenzene		000118-74-1	<2.1	2.1	04/30/2013	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	04/30/2013	
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	04/30/2013	
Hexachloroethane		000067-72-1	<5.3	5.3	04/30/2013	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	04/30/2013	
Isophorone		000078-59-1	<2.1	2.1	04/30/2013	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	04/30/2013	
N-Nitrosodiphenylamine		000086-30-6	<5.3	5.3	04/30/2013	
Naphthalene		000091-20-3	<2.1	2.1	04/30/2013	
Nitrobenzene		000098-95-3	<2.1	2.1	04/30/2013	
2-Nitrophenol		000088-75-5	<2.1	2.1	04/30/2013	
4-Nitrophenol		000100-02-7	<21.1	21.1	04/30/2013	
Pentachlorophenol		000087-86-5	<10.5	10.5	04/30/2013	
Phenanthrene		000085-01-8	<2.1	2.1	04/30/2013	
Phenol		000108-95-2	<2.1	2.1	04/30/2013	
Pyrene		000129-00-0	<2.1	2.1	04/30/2013	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151821				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	04/15/2013 8:28 AM	04/16/2013 8:13 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0415
Client	DSW			**External ID**	97691
OEPA Division	DSW				
Location	6 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	ug/L					
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	04/30/2013	
2,4,6-Trichlorophenol		000088-06-2	<5.3	5.3	04/30/2013	

Field Comments BNA, 625

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 05/21/2013

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151822				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected			04/16/2013 8:57 AM	**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0416
Client	DSW			**External ID**	97686
OEPA Division	DSW				
Location	3 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624	**ug/L**					
Benzene		000071-43-2	<0.50	0.5	04/18/2013	
Bromobenzene		000108-86-1	<0.50	0.5	04/18/2013	
Bromochloromethane		000074-97-5	<0.50	0.5	04/18/2013	
Bromodichloromethane		000075-27-4	<0.50	0.5	04/18/2013	
Bromoform		000075-25-2	<0.50	0.5	04/18/2013	UJ
Bromomethane		000074-83-9	<0.50	0.5	04/18/2013	
n-Butylbenzene		000104-51-8	<0.50	0.5	04/18/2013	
sec-Butylbenzene		000135-98-8	<0.50	0.5	04/18/2013	
tert-Butylbenzene		000098-06-6	<0.50	0.5	04/18/2013	
Carbon tetrachloride		000056-23-5	<0.50	0.5	04/18/2013	
Chlorobenzene		000108-90-7	<0.50	0.5	04/18/2013	
Chloroethane		000075-00-3	<0.50	0.5	04/18/2013	
Chloroform		000067-66-3	0.51	0.5	04/18/2013	
Chloromethane		000074-87-3	<0.50	0.5	04/18/2013	
2-Chlorotoluene		000095-49-8	<0.50	0.5	04/18/2013	
4-Chlorotoluene		000106-43-4	<0.50	0.5	04/18/2013	
Dibromochloromethane		000124-48-1	<0.50	0.5	04/18/2013	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	04/18/2013	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	04/18/2013	
Dibromomethane		000074-95-3	<0.50	0.5	04/18/2013	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	04/18/2013	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	04/18/2013	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	04/18/2013	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	04/18/2013	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	04/18/2013	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	04/18/2013	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	04/18/2013	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	04/18/2013	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	04/18/2013	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	04/18/2013	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	04/18/2013	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	04/18/2013	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	04/18/2013	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	04/18/2013	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	04/18/2013	
Ethylbenzene		000100-41-4	<0.50	0.5	04/18/2013	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	04/18/2013	
Isopropylbenzene		000098-82-8	<0.50	0.5	04/18/2013	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	04/18/2013	
Methylene chloride		000075-09-2	<0.50	0.5	04/18/2013	
Naphthalene		000091-20-3	<0.50	0.5	04/18/2013	
n-Propylbenzene		000103-65-1	<0.50	0.5	04/18/2013	
Styrene		000100-42-5	<0.50	0.5	04/18/2013	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	04/18/2013	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	04/18/2013	
Tetrachloroethene		000127-18-4	<0.50	0.5	04/18/2013	
Toluene		000108-88-3	1.18	0.5	04/18/2013	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	04/18/2013	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	04/18/2013	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	04/18/2013	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	04/18/2013	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	151822				
Date Received	04/17/2013 8:53 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected			04/16/2013 8:57 AM	**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0416
Client	DSW			**External ID**	97686
OEPA Division	DSW				
Location	3 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624	**ug/L**					
Trichloroethene		000079-01-6	<0.50	0.5	04/18/2013	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	04/18/2013	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	04/18/2013	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	04/18/2013	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	04/18/2013	
Vinyl chloride		000075-01-4	<0.50	0.5	04/18/2013	
o-Xylene		000095-47-6	<0.50	0.5	04/18/2013	
Total m&p-xylenes		000108-38-3	<0.50	0.5	04/18/2013	

Field Comments VOC, 624

Lab Comments

QC / Sample Comments 624: bromoform estimated due to poor QC recovery.

Approved By VDESHMUKH **On** 05/21/2013

INTRODUCTION

Two grab samples and a composite sample of Campbell Soup Company outfall 001 effluents were collected by Benjamin Smith and Brent Kuenzli, DSW, NWDO, Ohio EPA for use in screening bioassays as part of a toxics evaluation in conjunction with permit reissuance. Grab samples were also collected from the receiving stream, the Maumee River, upstream from the discharge. The effluent grab samples were collected on 4 March 2013 at 0834 hours and on 5 March 2013 at 0853 hours. The composite sample was collected on 4-5 March 2013 between 0849-0834 hours. The Maumee River upstream water was collected on 4 March 2013 at 0924 hours. A mixing zone sample was manually prepared in the laboratory on 5 March 2013 at 0900 hours by combining equal aliquots of upstream water and effluent. The fathead minnow, *Pimephales promelas*, and *Ceriodaphnia dubia* were used as test organisms in these 48-hour screening bioassays.

PREVIOUS RESULTS

Bioassays of Campbell Soup Company outfall 001 effluents were previously conducted by the Ohio EPA within the last ten years in March and May 2007 (Bioassay Numbers 07-3646-NW and 07-3663-NW, respectively). The previously tested effluents were not acutely toxic to either *P. promelas* or *C. dubia* (Appendix 1).

RESULTS AND CONCLUSIONS

Details of the tests may be found on the attached bioassay report forms. The effluents were not acutely toxic. One fathead minnow died in the 5 March effluent grab. No other mortality or adverse effects were observed in the ambient waters and remaining effluents for either *P. promelas* or *C. dubia*. Survival in the laboratory controls was 95 percent or greater for both species.

Screening bioassays are utilized to determine if an effluent is acutely toxic to the test organisms and to indicate if more extensive bioassays should be conducted to estimate median lethal concentrations or persistence of toxicity. The results of these and previous bioassays indicate that Campbell Soup Company outfall 001 effluents were not acutely toxic to either *P. promelas* or *C. dubia*. Additional bioassays should be conducted to further demonstrate that unacceptable toxic conditions are not associated with this discharge.

These tests did not address the possibility of chronic toxicity. Discharge data for Campbell Soup Company outfall 001 and the Maumee River should be evaluated to determine if chronic toxicity is of concern. Chronic tests may be required to adequately evaluate the possibility of toxicity in this discharge.

OHIO ENVIRONMENTAL PROTECTION AGENCY
Screening Bioassay Report Form

Report Date: 8 March 2013	**Bioassay Report Number:** 13-4233-NW

Investigators:	Jonathan C. McLaughlin

Effluent tested and source:	Campbell Soup Company, 12773 S.R. 110, Napoleon, Henry County, Ohio, outfall 001
NPDES Number:	OH0003298
Ohio EPA Permit Number:	2IH00021
Business/Process:	Food production
Collector(s):	Benjamin Smith and Brent Kuenzli, DSW, NWDO, Ohio EPA

Test Organisms:	Fathead minnow (*Pimephales promelas*) and *Ceriodaphnia dubia* from Ohio EPA Bioassay Section rearing units

Fathead Minnow Data:	Hatched: 21-22 February 2013; 8-9 days old at test initiation

Rearing unit water and reconstituted water were used in the controls for this static bioassay. Adverse effects measured in the test are death, immotility, and loss of equilibrium. Death is the cessation of all visible movement with no response to gentle prodding (fish) or to gentle test container agitation (*Ceriodaphnia*). An immotile organism is paralyzed or stunned with only occasional slight movements and cannot maintain its normal position in the water column. Loss of equilibrium is the organism's inability to maintain normal swimming posture in the water column and may be characterized by periods of quiescence followed by bursts of uncontrolled swimming. The effluent is considered to be acutely toxic if 20 percent, or more, of either species of test organism exhibits any combination of the adverse effects in the 100 percent effluent. Test results are invalid if more than ten percent of either species of test organism exhibits the adverse effects in the control.

Results of screening bioassays of Campbell Soup Company outfall 001 effluent

Bioassay Number: 13-4233-NW

Sample	Time Collected Date: Time: (hours)	Test Start Date: Time: (hours)	Cumulative percent mortality (plus those lethargic)			
			P. promelas Time (hours)		*C. dubia* Time (hours)	
			24	48	24	48
Maumee River upstream	4 March 2013 0924	5 March 2013 0925	0	0	0	0
Manual mixing zone (1:1)	5 March 2013 0900	5 March 2013 0925	0	0	0	0
Grab 001	4 March 2013 0834	5 March 2013 0925	0	0	0	0
Rearing unit water control		5 March 2013 0925	0	0	-	-
Reconstituted water control		5 March 2013 0925	-	-	0	0
Grab 001	5 March 2013 0853	6 March 2013 0900	0	5	0	0
Composite 001	4-5 March 2013 0849-0834	6 March 2013 0900	0	0	0	0
Rearing unit water control		6 March 2013 0900	0	0	-	-
Reconstituted water control		6 March 2013 0900	-	-	0	5

Relevant information: A mixing zone sample was manually prepared in the laboratory by combining equal aliquots of upstream water and effluent. The Maumee River upstream water was opaque yellow. Manual mixing zone was clear yellow. Effluents were clear with a yellow tinge. After warming to the 25°C test temperature, the ambient waters and 4 March effluent grab were shaken vigorously for approximately 15 seconds to release supersaturated dissolved oxygen. Physicochemical parameters measured prior to test initiation and at test end are on the next page.

Results of screening bioassays of Campbell Soup Company outfall 001 effluent

Bioassay Number: 13-4233-NW

Relevant information (cont.): Physicochemical parameters recorded prior to test initiation were:

Sample	Temperature (°C) Upon Rcpt.	Temperature (°C) Test Init.	Dissolved Oxygen (mg/L) Initial-Adjusted	pH (S.U.)	Conductivity (µmhos/cm)
Maumee River upstream	1.3	24.9	11.3-8.2	8.10	503
Manual mixing zone (1:1)	-	25.1	11.3-8.2	8.04	732
Grab 001, 4 March 2013	0.9	25.1	10.5-8.0	7.93	959
Grab 001, 5 March 2013	3.7	24.8	8.5	7.56	1205
Composite 001	3.2	24.6	8.7	7.65	1161
Rearing unit water control	21.9	24.6	8.2	7.88	428
Reconstituted water control	25.4	25.4	7.8	8.52	566

Physicochemical values for the laboratory controls are the averages of two measurements.

Physicochemical parameters recorded at *P. promelas* (FHM) and *C. dubia* (CDU) test end were:

Sample	Temperature (°C) FHM	Temperature (°C) CDU	Dissolved Oxygen (mg/L) FHM	Dissolved Oxygen (mg/L) CDU	pH (S.U.) FHM	pH (S.U.) CDU	Conductivity (µmhos/cm) FHM	Conductivity (µmhos/cm) CDU
Maumee River upstream	-	-	-	-	-	-	-	-
Manual mixing zone (1:1)	-	-	-	-	-	-	-	-
Grab 001, 4 March 2013	-	-	-	-	-	-	-	-
Grab 001, 5 March 2013	-	-	-	-	-	-	-	-
Composite 001	-	-	-	-	-	-	-	-
Rearing unit water control	-	-	-	-	-	-	-	-
Reconstituted water control	-	-	-	-	-	-	-	-

Physicochemical values for the laboratory controls are the averages of two measurements.

Appendix 1.

Results of previous bioassays of Campbell Soup Company outfall 001 effluent

Screening Results

Bioassay Number	Date (mm/yy)	Acutely Toxic (Y/N)	*Pimephales promelas* mortality (plus/or exhibiting other adverse effects)			*Ceriodaphnia dubia* mortality (plus/or exhibiting other adverse effects)		
			Day 1 Grab	Day 2 Grab	Composite	Day 1 Grab	Day 2 Grab	Composite
07-3646-NW	03/07	N	0	0	5	0	0	0
07-3646-NW	05/07	N	0	0	0	0	0	0

* All previous results are available electronically upon request.

Definitive Results

Bioassay Number	*Pimephales promelas*			*Ceriodaphnia dubia*		
	LC50 (95 percent confidence limits)	EC50 (95 percent confidence limits)	LC50 TUa (EC50 TUa)	LC50 (95 percent confidence limits)	EC50 (95 percent confidence limits)	LC50 TUa (EC50 TUa)
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Definitions

- The **LC50s** and **EC50s** are reported as percent by volume effluent (%).
- The **LC50** is the effluent concentration that is lethal to 50 percent of a species of test organism in a stated exposure period. The **EC50** includes mortality plus data on other adverse effects. Both are usually obtained by statistical or graphical methods.
- The **TUa** is calculated by dividing 100 by the **LC50** or **EC50**.

150967

OHIO EPA, DES, BIOASSAY SECTION, SAMPLE SUBMISSION FORM

Name of Entity and Outfall Tested: Campbell Soup Effluent, Outfall 001 EPA Permit #: 2IH00021

Facility Address: 12773 State Route 110, Napoleon, Ohio NPDES#: OH0003298

Receiving Stream (R.M.): Maumee River (RM 45.84) County: Henry

Collector(s)[Print Full Name]: Benjamin Smith, Brent Kuenzli

Collector(s) Signature: Benjamin Smith, Brent Kuenzli

Upstream control samples shall be collected upstream from any discharge/receiving stream interactions. Generally, acute (near field) samples should be collected in the center of the effluent plume 5 times the stream depth downstream from the outfall and chronic (far field) samples should be collected midplume, or if a plume no longer exists midstream 5 times the stream width downstream from the outfall. If atypical mixing characteristics exist, samples can be collected at closer distances than the above guidelines to insure the samples are within the effluent plume. If a mixing zone sample cannot be safely collected, one can be prepared using equal aliquots of the day 1 effluent grab and upstream dilution water (be sure to write "manual" in the "Location of Sample Collection" space provided below).

Sample Identification	Effluent-Day 1 Grab	Effluent-Day 2 Grab	Effluent-Composite	Upstream/Dilution-Grab	Acute Mixing Zone-Grab	Chronic Mixing Zone-Grab
Location of Sample Collection	@ Outfall 001			Maumee R. @ Napoleon WTP Intake		
If Composite, Sample Volume and Frequency						
Collection Containers, Types and Number	(1) gallon cubi			(2) gallon cubies		
Volume Collected	1 gallon			2 gallons		
Date of Sample Collection	030413			030413		
Time of Sample Collection, beginning-Ending Time	0834 -			0924 -		
Flow (in MGD)						
Temperature (°C)	14.53			1.29		
Dissolved Oxygen (mg/L)	10.36			15.97		
pH (S.U.)	7.52			7.69		
Conductivity (umhos/cm)	734			265		
Specific conductivity	917			485		
% Dissolved Oxygen	102.0			113.4		

Place a check mark next to all the appropriate characteristics of the outfall/mixing zone:

___ Turbulent Mixing
___ Nonturbulent Mixing
___ Onshore Pipe
X Offshore Pipe
___ Shore hugging Plume
___ Rapid Complete Mixing
___ Plume
___ Diffuser

Notes: No mixing zone sample collected — Slope failure on river bank, water levels up → couldn't see discharge

Name and Title		YEAR	MONTH	DAY	HOUR	MINUTE
Received from:	Benjamin Smith	13	03	04	11	00
Received by:	[illegible]	13	03	04	08	40
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						

In the vicinity of the discharge: Stream Depth _____ Stream Width _____

	CHEMISTRY SAMPLE NUMBERS
[illegible]	150966

Location Map Drawing

Describe and map the upstream control and any mixing zone sampling sites so someone else could sample at the exact same points (include landmarks if possible). Stream depth should be recorded for any acute (near field) mixing zone sample and stream width for any chronic (far field) mixing zone sample. For the mixing zone sample location, delineate the distance downstream from the outfall and map the effluent plume. Be specific on discharge and receiving stream characteristics.

OHIO EPA, DES, BIOASSAY SECTION, SAMPLE SUBMISSION FORM

Name of Entity and Outfall Tested: Campbell Soup Effluent, Outfall 001 OEPA Permit #: 2IH00021

Facility Address: 12773 State Route 110, Napoleon, Ohio NPDES#: OH0003298

Receiving Stream (R.M.) Maumee River (RM 45.84 County: Henry

Collector(s)[Print Full Name]: Benjamin Smith, Brent Kuenzli

Collector(s) Signature: [illegible]

Upstream control samples shall be collected upstream from any discharge/receiving stream interactions. Generally, acute (near field) samples should be collected in the center of the effluent plume 5 times the stream depth downstream from the outfall and chronic (far field) samples should be collected midplume, or if a plume no longer exists midstream 5 times the stream width downstream from the outfall. If atypical mixing characteristics exist, samples can be collected at closer distances than the above guidelines to insure the samples are within the effluent plume. If a mixing zone sample cannot be safely collected, one can be prepared using equal aliquots of the day 1 effluent grab and upstream dilution water (be sure to write "manual" in the "Location of Sample Collection" space provided below).

Sample Identification	Effluent-Day 1 Grab	Effluent-Day 2 Grab	Effluent-Composite	Upstream/Dilution-Grab	Acute Mixing Zone-Grab	Chronic Mixing Zone-Grab
Location of Sample Collection		@ Outfall 001	@ Outfall 001			
If Composite, Sample Volume and Frequency			200ml/15min/24 hrs			
Collection Containers, Types and Number		(1) gallon cubi	(1) gallon cubi			
Volume Collected		1 gallon	1 gallon			
Date of Sample Collection		030513	030413 to 030513			
Time of Sample Collection, beginning-Ending Time		0853-	0849 to 0834			
Flow (in MGD)			4.8 MG			
Temperature (°C)		19.10				
Dissolved Oxygen (mg/L)		8.11				
pH (S.U.)		7.50				
Conductivity (µmhos/cm)		1034				
Specific conductivity		1165				
% Dissolved Oxygen		87.9				

Place a check mark next to all the appropriate characteristics of the outfall/mixing zone:

___ Turbulent Mixing
___ Nonturbulent Mixing
___ Onshore Pipe
✓ Offshore Pipe
___ Shore hugging Plume
___ Rapid Complete Mixing
___ Plume
___ Diffuser

Notes:

Name and Title		YEAR	MONTH	DAY	HOUR	MINUTE
Received from:	[illegible]	13	03	05	11	45
Received by:	[illegible]	13	03	0806	0844	45
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						
Received from:						
Received by:						

In the vicinity of the discharge: Stream Depth _____ Stream Width _____

CHEMISTRY SAMPLE NUMBERS
150977-981

Location Map Drawing

Describe and map the upstream control and any mixing zone sampling sites so someone else could sample at the exact same points (include landmarks if possible). Stream depth should be recorded for any acute (near field) mixing zone sample and stream width for any chronic (far field) mixing zone sample. For the mixing zone sample location, delineate the distance downstream from the outfall and map the effluent plume. Be specific on discharge and receiving stream characteristics.

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	150977				
Date Received	03/06/2013 8:23 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	03/04/2013 8:49 AM	03/05/2013 8:34 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0304
Client	DSW			**External ID**	96920
OEPA Division	DSW				
Location	4 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
CBOD-5	CBOD5	P80082	25	2	mg/L	03/06/2013	
Solids_Diss	Total Dissolved Solids	P70300	702	10	mg/L	03/07/2013	
Solids_Susp	Total Suspended Solids	P530	29	10	mg/L	03/07/2013	
ICPMS_(WAT)	Arsenic	P1002	<2.0	2	ug/L	03/15/2013	
ICPMS_(WAT)	Cadmium	P1027	<0.20	0.2	ug/L	03/15/2013	
ICPMS_(WAT)	Chromium	P1034	<2.0	2	ug/L	03/15/2013	
ICPMS_(WAT)	Copper	P1042	3.4	2	ug/L	03/15/2013	
ICPMS_(WAT)	Lead	P1051	<2.0	2	ug/L	03/15/2013	
ICPMS_(WAT)	Nickel	P1067	4.1	2	ug/L	03/15/2013	
ICPMS_(WAT)	Selenium	P1147	<2.0	2	ug/L	03/15/2013	
ICP_(WAT)	Aluminum	P1105	2960	200	ug/L	03/13/2013	
ICP_(WAT)	Barium	P1007	<15	15	ug/L	03/13/2013	
ICP_(WAT)	Calcium	P916	57	2	mg/L	03/13/2013	
ICP_(WAT)	Hardness, Total	P900	171	10	mg/L	03/13/2013	
ICP_(WAT)	Iron	P1045	281	50	ug/L	03/13/2013	
ICP_(WAT)	Magnesium	P927	7	1	mg/L	03/13/2013	
ICP_(WAT)	Manganese	P1055	15	10	ug/L	03/13/2013	
ICP_(WAT)	Potassium	P937	33	2	mg/L	03/13/2013	
ICP_(WAT)	Sodium	P929	154	5	mg/L	03/13/2013	
ICP_(WAT)	Strontium	P1082	495	30	ug/L	03/13/2013	
ICP_(WAT)	Zinc	P1092	62	10	ug/L	03/13/2013	
Alkalinity	Alkalinity	P410	168	5	mg/L	03/12/2013	
Ammonia	Ammonia	P610	2.29	0.05	mg/L	03/07/2013	
COD	COD	P340	100	20	mg/L	03/15/2013	
Chloride	Chloride	P940	176	5	mg/L	03/08/2013	
Conductivity	Conductivity	P95	1180	2	umhos/cm	03/08/2013	
Nitrate	Nitrate+nitrite	P630	0.61	0.1	mg/L	03/07/2013	
TKN	TKN	P625	9.68	1	mg/L	03/18/2013	
TP	Total Phosphorus	P665	0.583	0.01	mg/L	03/18/2013	

Field Comments

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 03/21/2013

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	150978				
Date Received	03/06/2013 8:23 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		03/05/2013 8:53 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0305
Client	DSW			**External ID**	96926
OEPA Division	DSW				
Location	1 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
Oil&Grease	Oil & Grease	P556	<2.1	2.1	mg/L	03/18/2013	
Cyanide_Free	Cyanide, Free	P718	<5	5	ug/L	03/08/2013	

Field Comments Compliance

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 03/21/2013

OhioEPA Division of Environmental Services

Laboratory Inorganic Analysis Data Report

Sample	150966				
Date Received	03/05/2013 8:50 AM	**Matrix**	SW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		03/04/2013 9:24 AM		**Station ID**	500200
Program	NWDO-DSW			**Customer ID**	13BS0304
Client	DSW			**External ID**	96925
OEPA Division	DSW				
Location	2 - MAUMEE R. AT NAPOLEON @ WATER WORKS INTAKE				

Analysis	Parameter	Storet	Result	RL	Units	Date	Qualifier
ICP_(WAT)	Calcium	P916	64	2	mg/L	03/13/2013	
ICP_(WAT)	Hardness, Total	P900	234	10	mg/L	03/13/2013	
ICP_(WAT)	Magnesium	P927	18	1	mg/L	03/13/2013	

Field Comments hardness

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 03/21/2013

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	150979				
Date Received	03/06/2013 8:23 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	03/04/2013 8:49 AM	03/05/2013 8:34 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0305
Client	DSW			**External ID**	96933
OEPA Division	DSW				
Location	4 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	**ug/L**					
Acenaphthene		000083-32-9	<5.3	5.3	03/11/2013	
Acenaphthylene		000208-96-8	<5.3	5.3	03/11/2013	
Anthracene		000120-12-7	<2.1	2.1	03/11/2013	
Benzo[a]anthracene		000056-55-3	<2.1	2.1	03/11/2013	
Benzo[a]pyrene		000050-32-8	<2.1	2.1	03/11/2013	
Benzo[b]fluoranthene		000205-99-2	<2.1	2.1	03/11/2013	
Benzo[g,h,i]perylene		000191-24-2	<2.1	2.1	03/11/2013	
Benzo[k]fluoranthene		000207-08-9	<2.1	2.1	03/11/2013	
bis(2-Chloroethoxy)methane		000111-91-1	<5.3	5.3	03/11/2013	
bis(2-Chloroethyl)ether		000111-44-4	<2.1	2.1	03/11/2013	
bis(2-Chloroisopropyl)ether		000108-60-1	<2.1	2.1	03/11/2013	
bis(2-Ethylhexyl)phthalate		000117-81-7	<10.5	10.5	03/11/2013	
4-Bromophenyl-phenylether		000101-55-3	<5.3	5.3	03/11/2013	
Butylbenzylphthalate		000085-68-7	<2.1	2.1	03/11/2013	
4-Chloro-3-methylphenol		000059-50-7	<10.5	10.5	03/11/2013	
2-Chloronaphthalene		000091-58-7	<5.3	5.3	03/11/2013	
2-Chlorophenol		000095-57-8	<2.1	2.1	03/11/2013	
4-Chlorophenyl-phenylether		007005-72-3	<2.1	2.1	03/11/2013	
Chrysene		000218-01-9	<2.1	2.1	03/11/2013	
Di-n-butylphthalate		000084-74-2	<5.3	5.3	03/11/2013	
Di-n-octylphthalate		000117-84-0	<2.1	2.1	03/11/2013	
Dibenz[a,h]anthracene		000053-70-3	<2.1	2.1	03/11/2013	
1,3-Dichlorobenzene		000541-73-1	<2.1	2.1	03/11/2013	
1,4-Dichlorobenzene		000106-46-7	<2.1	2.1	03/11/2013	
1,2-Dichlorobenzene		000095-50-1	<2.1	2.1	03/11/2013	
2,4-Dichlorophenol		000120-83-2	<2.1	2.1	03/11/2013	
Diethylphthalate		000084-66-2	<5.3	5.3	03/11/2013	
2,4-Dimethylphenol		000105-67-9	<10.5	10.5	03/11/2013	
Dimethylphthalate		000131-11-3	<5.3	5.3	03/11/2013	
4,6-Dinitro-2-methylphenol		000534-52-1	<5.3	5.3	03/11/2013	
2,4-Dinitrophenol		000051-28-5	<21.1	21.1	03/11/2013	
2,6-Dinitrotoluene		000606-20-2	<2.1	2.1	03/11/2013	
2,4-Dinitrotoluene		000121-14-2	<2.1	2.1	03/11/2013	
Fluoranthene		000206-44-0	<2.1	2.1	03/11/2013	
Fluorene		000086-73-7	<2.1	2.1	03/11/2013	
Hexachlorobenzene		000118-74-1	<2.1	2.1	03/11/2013	
Hexachlorobutadiene		000087-68-3	<2.1	2.1	03/11/2013	
Hexachlorocyclopentadiene		000077-47-4	<2.1	2.1	03/11/2013	
Hexachloroethane		000067-72-1	<5.3	5.3	03/11/2013	
Indeno[1,2,3-cd]pyrene		000193-39-5	<2.1	2.1	03/11/2013	
Isophorone		000078-59-1	<2.1	2.1	03/11/2013	
N-Nitroso-di-n-propylamine		000621-64-7	<2.1	2.1	03/11/2013	
N-Nitrosodiphenylamine		000086-30-6	<5.3	5.3	03/11/2013	
Naphthalene		000091-20-3	<2.1	2.1	03/11/2013	
Nitrobenzene		000098-95-3	<2.1	2.1	03/11/2013	
2-Nitrophenol		000088-75-5	<2.1	2.1	03/11/2013	
4-Nitrophenol		000100-02-7	<21.1	21.1	03/11/2013	
Pentachlorophenol		000087-86-5	<10.5	10.5	03/11/2013	
Phenanthrene		000085-01-8	<2.1	2.1	03/11/2013	
Phenol		000108-95-2	<2.1	2.1	03/11/2013	
Pyrene		000129-00-0	<2.1	2.1	03/11/2013	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	150979				
Date Received	03/06/2013 8:23 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected	03/04/2013 8:49 AM	03/05/2013 8:34 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0305
Client	DSW			**External ID**	96933
OEPA Division	DSW				
Location	4 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 625	ug/L					
1,2,4-Trichlorobenzene		000120-82-1	<2.1	2.1	03/11/2013	
2,4,6-Trichlorophenol		000088-06-2	<5.3	5.3	03/11/2013	

Field Comments BNA, 625

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 03/25/2013

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	150980				
Date Received	03/06/2013 8:23 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		03/05/2013 8:53 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0305
Client	DSW			**External ID**	96932
OEPA Division	DSW				
Location	3 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624	ug/L					
Benzene		000071-43-2	<0.50	0.5	03/12/2013	
Bromobenzene		000108-86-1	<0.50	0.5	03/12/2013	
Bromochloromethane		000074-97-5	<0.50	0.5	03/12/2013	
Bromodichloromethane		000075-27-4	<0.50	0.5	03/12/2013	
Bromoform		000075-25-2	<0.50	0.5	03/12/2013	
Bromomethane		000074-83-9	<0.50	0.5	03/12/2013	
n-Butylbenzene		000104-51-8	<0.50	0.5	03/12/2013	
sec-Butylbenzene		000135-98-8	<0.50	0.5	03/12/2013	
tert-Butylbenzene		000098-06-6	<0.50	0.5	03/12/2013	
Carbon tetrachloride		000056-23-5	<0.50	0.5	03/12/2013	
Chlorobenzene		000108-90-7	<0.50	0.5	03/12/2013	
Chloroethane		000075-00-3	<0.50	0.5	03/12/2013	
Chloroform		000067-66-3	<0.50	0.5	03/12/2013	
Chloromethane		000074-87-3	<0.50	0.5	03/12/2013	
2-Chlorotoluene		000095-49-8	<0.50	0.5	03/12/2013	
4-Chlorotoluene		000106-43-4	<0.50	0.5	03/12/2013	
Dibromochloromethane		000124-48-1	<0.50	0.5	03/12/2013	
1,2-Dibromo-3-chloropropane		000096-12-8	<0.50	0.5	03/12/2013	
1,2-Dibromoethane		000106-93-4	<0.50	0.5	03/12/2013	
Dibromomethane		000074-95-3	<0.50	0.5	03/12/2013	
1,2-Dichlorobenzene		000095-50-1	<0.50	0.5	03/12/2013	
1,3-Dichlorobenzene		000541-73-1	<0.50	0.5	03/12/2013	
1,4-Dichlorobenzene		000106-46-7	<0.50	0.5	03/12/2013	
Dichlorodifluoromethane		000075-71-8	<0.50	0.5	03/12/2013	
1,1-Dichloroethane		000075-34-3	<0.50	0.5	03/12/2013	
1,2-Dichloroethane		000107-06-2	<0.50	0.5	03/12/2013	
1,1-Dichloroethene		000075-35-4	<0.50	0.5	03/12/2013	
cis-1,2-Dichloroethene		000156-59-2	<0.50	0.5	03/12/2013	
trans-1,2-Dichloroethene		000156-60-5	<0.50	0.5	03/12/2013	
1,2-Dichloropropane		000078-87-5	<0.50	0.5	03/12/2013	
1,3-Dichloropropane		000142-28-9	<0.50	0.5	03/12/2013	
2,2-Dichloropropane		000594-20-7	<0.50	0.5	03/12/2013	
1,1-Dichloropropene		000563-58-6	<0.50	0.5	03/12/2013	
cis-1,3-Dichloropropene		010061-01-5	<0.50	0.5	03/12/2013	
trans-1,3-Dichloropropene		010061-02-6	<0.50	0.5	03/12/2013	
Ethylbenzene		000100-41-4	<0.50	0.5	03/12/2013	
Hexachlorobutadiene		000087-68-3	<0.50	0.5	03/12/2013	
Isopropylbenzene		000098-82-8	<0.50	0.5	03/12/2013	
4-Isopropyltoluene		000099-87-6	<0.50	0.5	03/12/2013	
Methylene chloride		000075-09-2	<0.50	0.5	03/12/2013	
Naphthalene		000091-20-3	<0.50	0.5	03/12/2013	
n-Propylbenzene		000103-65-1	<0.50	0.5	03/12/2013	
Styrene		000100-42-5	<0.50	0.5	03/12/2013	
1,1,1,2-Tetrachloroethane		000630-20-6	<0.50	0.5	03/12/2013	
1,1,2,2-Tetrachloroethane		000079-34-5	<0.50	0.5	03/12/2013	
Tetrachloroethene		000127-18-4	<0.50	0.5	03/12/2013	
Toluene		000108-88-3	<0.50	0.5	03/12/2013	
1,2,3-Trichlorobenzene		000087-61-6	<0.50	0.5	03/12/2013	
1,2,4-Trichlorobenzene		000120-82-1	<0.50	0.5	03/12/2013	
1,1,1-Trichloroethane		000071-55-6	<0.50	0.5	03/12/2013	
1,1,2-Trichloroethane		000079-00-5	<0.50	0.5	03/12/2013	

OhioEPA Division of Environmental Services

Laboratory Organic Analysis Data Report

Sample	150980				
Date Received	03/06/2013 8:23 AM	**Matrix**	WW	**Collected by**	SMITH, BENJAMIN
	Begin	**End**		**Sample Type**	COMPLIANCE
Date Collected		03/05/2013 8:53 AM		**Station ID**	P09E01
Program	NWDO-DSW			**Customer ID**	13BS0305
Client	DSW			**External ID**	96932
OEPA Division	DSW				
Location	3 - CAMPBELL SOUP 001 OUTFALL TO MAUMEE R. (EAST BANK)				

EPA Method Parameter	Units	Cas Number	Result	RL	Analyzed	Qualifier
USEPA 624	ug/L					
Trichloroethene		000079-01-6	<0.50	0.5	03/12/2013	
Trichlorofluoromethane		000075-69-4	<0.50	0.5	03/12/2013	
1,2,3-Trichloropropane		000096-18-4	<0.50	0.5	03/12/2013	
1,2,4-Trimethylbenzene		000095-63-6	<0.50	0.5	03/12/2013	
1,3,5-Trimethylbenzene		000108-67-8	<0.50	0.5	03/12/2013	
Vinyl chloride		000075-01-4	<0.50	0.5	03/12/2013	
o-Xylene		000095-47-6	<0.50	0.5	03/12/2013	
Total m&p-xylenes		000108-38-3	<0.50	0.5	03/12/2013	

Field Comments VOC, 624

Lab Comments

QC / Sample Comments

Approved By VDESHMUKH **On** 03/25/2013