



Environmental
Protection Agency

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

March 2, 2011

Mr. Mark Ferguson
Formica Corporation
10155 Reading Road
Cincinnati, Ohio 45241-4805

**Re: Formica Corporation - OH0009296;1IQ00000*GD -- CEI/Pre-Permit
Inspection - NOTICE OF VIOLATION**

Dear Mr. Ferguson:

On February 9, 2011, I met with Mike Runyan and Holly Padovani to conduct a NPDES compliance evaluation inspection (CEI) and a pre-permit inspection at the Formica Corporation in Cincinnati. The purpose of the inspection was to evaluate compliance with the terms of the NPDES permit, and to update information for the renewal of your NPDES permit. Please note that the report, by its format, tends to highlight negative areas.

As indicated in the attached inspection report, all areas that were rated received a satisfactory rating except for Self-Monitoring which received a marginal.

Thank you and your staff the time extended during the inspection. If you have any questions, feel free to contact me at 937.285.6108.

Sincerely,

Marianne Piekutowski
Environmental Specialist 2
Division of Surface Water

Enclosures

cc: Mike Runyan, Formica
Holly Padovani, EHS Technology Group



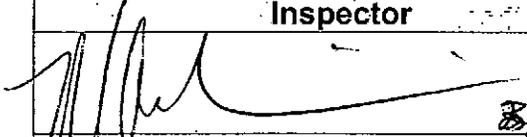
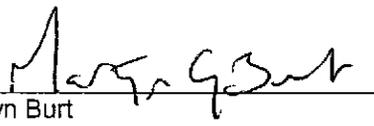
State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
11Q00000*GD	OH0009296	2/9/2011	C	S	2

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Formica Corporation 10155 Reading Road Cincinnati, Ohio 45241-4805	10:00 am	6/1/2006
	Exit Time	Permit Expiration Date
	12:30 pm	5/31/2011
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Mike Runyan, Facility Engineer Holly Padovani, Consultant	513.786.3159 937.865.3869	
Name, Address and Title of Responsible Official	Phone Number	
Mark Ferguson, Plant Manager Formica Corporation 10155 Reading Road Cincinnati, Ohio 45241-4805	513.786.3568	

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

Section D: Summary of Findings (Attach additional sheets if necessary)	
See attached report.	
Inspector	Reviewer
 Marianne Piekutowski Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
8/2/11 Date	3/2/11 Date

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

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
 - (b) Correct name and location of receiving waters..... Y
 - (c) Do Categorical Standards apply?...If yes, list applicable standards.. N
- NA – Process wastewater discharged to MSD**
- (d) Product(s) and production rates conform with permit application (Industries)..... NA
 - (e) Flows and loadings conform with NPDES permit..... N
 - (f) Treatment processes are as described in permit application... Y
 - (g) All discharges are permitted..... Y
 - (h) Number and location of discharge points are as described in permit..... Y
 - (i) Storm water discharges properly permitted..... Y

Comments/Status:

e) It appears that contaminated stormwater that was in the past discharged to 001 has been changed. The lines to the cooling pond have been blanked, and now only discharge to MSD.
 f) Flows may be up from the permit, but the average is close to the permit.
 i) The facility has coverage under the general industrial stormwater permit (1GR00089*DG).

Section F: Compliance

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

Comments/Status:

The facility has some permit exceedences, frequency and code violation, but nothing significant. Formica has not had a violation since 1/10/2010.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available.....generator or dual feed NA
 - i. What does the back-up power source operate.....

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

NA

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

NA

- (c) All treatment units in service other than backup units..... NA
- (d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

NA
- (e) Any major equipment breakdown since last inspection..... NA
- (f) Operation and maintenance manual provided and maintained..... NA
- (g) Any plant bypasses since last inspection..... NA
- (h) Any plant upsets since last inspection..... NA

Comments/Status:

The facility has a cooling pond. There is the ability to add water from Southwestern Ohio Water to meet the temperature limit as needed. There is no active treatment system.

Section H: Sludge Management

(a) Method of Sludge Disposal...

- Land Application
- Haul to Another NPDES Permittee
- Haul to a Mixed Solid Waste Landfill

NA

*if one of the selected methods is land application, complete applicable charts.

Class A - Exception Quality Sewage Sludge (monitoring station 584)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options							
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 - Aerobic Bench Scale Analysis	Option 4 - Specific Oxygen Uptake Rate	Option 5 - Aerobic Time and Temperature	Option 6 - Alkali Addition	Option 7 - >75% Percent Solids without Unstabilized Solids	Option 8 - >75% Percent Solids with Unstabilized Solids
Alternative 1 - Time and Temperature Regime (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - High pH and High Temperature (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Other Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 4 - Unknown Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Composting (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Drying (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Treatment (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Thermophilic Aerobic Digestion (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Beta Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Gamma ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Pasteurization (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 6 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Class B Sewage Sludge (monitoring station 581)

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

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

Comments/Status:

NA. No sludge generated.

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices operated and maintained..... Y
Type of device (e.g. weir with ultrasonic level sensor):

Weir at the end of the cooling pond.

- (b) Calibration frequency adequate Y
(Date of last calibration: 2/8/11) Quarterly by ICS.
- (c) 24-hour recording instruments operated and maintained.....Y
- (d) Flow measurement equipment adequate to handle full range of flows..... Y
- (e) Actual flow discharged is measured..... Y
- (f) Flow measuring equipment inspection frequency
Daily Weekly monthly other

Comments/Status:

There is a circle chart recorder for the temperature. The highest temperature is noted on the chart.

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

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
(see GLC page)
- (d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e. continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments/Status:

Cardinal Laboratories collects the samples for both the NPDES and MSD sampling.

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

Laboratory:

General

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... N
- (b) Do SOP's include the following if applicable..... N
 - Title
 - Scope and Application
 - Summary
 - Sample Handling and Preservation
 - Interferences
 - Apparatus and Materials
 - Reagents
 - Procedure
 - Calculations
 - Quality Control
 - Maintenance
 - Corrective Action
 - Reference (Parent Method)

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

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (d) If alternate analytical procedures are used, proper approval has been obtained..... Y
- (e) Analyses being performed more frequently than required by permit. Y
- (f) If (e) is yes, are results in permittee's self-monitoring report..... Y
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y (see score from GLC page)
- (h) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: **Phenolics, Cd, Cr, Pb, pH**
Lab name: **Cardinal Laboratories**

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance sampling..... NE
Date:
- (b) Were any parameters "Unsatisfactory"..... NE
- (c) Reasons for "Unsatisfactory" parameters.....
NE

Comments/Status:

Cardinal Laboratories does this for the facility. Temperature is only parameter done on-site.
Vand flow readings are 4M

Section J: Effluent/Receiving Water Observations

Outfall # 001

Outfall Description: Final outfall from non-contact cooling water pond. The outfall was clear and free from color and turbidity. No odor noted.

Receiving Stream: Mill Creek

Receiving Stream Description: Warmwater habitat, industrial & agricultural water supply, primary contact.

Comments/Status:

There is a concrete basin that collects stormwater from the parts of the facility where the outside tanks for chemical storage are. This has been permanently re-routed to the sanitary sewer so no contact stormwater discharges through outfall 001.

Section K: Multimedia Observations

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

If any of the above are observed, ask the following questions:

- (1) What is the cause of the condition?
- (2) Is the observed condition or source a waste product?
- (3) Where is the suspected contaminant normally disposed?
- (4) Is this disposal permitted?
- (5) How long has the condition existed and when did it begin?

Comments/Status:

Permit # : 11Q00000*GD
NPDES # : OH0009296

● General Lab Criteria ●

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance		Acceptable?		NA
• Standard Weights	• Either NIST Class 1 or ASTM/ANSI Class 1 weights ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used. ³	<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 ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments :

Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)		Acceptable?		NA
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2} . Correction factor posted on thermometer / equipment ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature accurate to 0.5° Celsius ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° C ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments :

General Lab Criteria

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

Comments: : **Contract lab does this parameter.**

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

Comments:

● General Lab Criteria ●

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

Comments :

Criteria	Standard Methods Requirement		Rating
Refrigerator	Acceptable?		
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.5 Celsius). ⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	NA
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Thermometer held in water bath. ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Refrigerator temperature ≤6° Celsius. ¹³	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages. ¹⁴	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Chlorine Meter	Acceptable?		
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	NA
	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification ¹⁶	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Standards used for calibration not expired	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained. ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: : <i>Contract lab does this parameter.</i>			

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

● General Lab Criteria ●

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

Comments: *Contract lab does this for the facility.*

Criteria	Standard Methods Requirement		Rating
Desiccator	Acceptable?		NA
• General criteria	• Properly working seals.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Desiccant fresh (blue color)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Documentation	• Log book being maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement		Rating
Bench sheets	Acceptable?		NA
• General criteria	• Date(s) ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Analyst initials ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Blue or black ink pen ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Calibration information ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Equations, calculations, units for all measurements, notations, and results present ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Corrections, single line through, initialed and dated ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments:

General Lab Criteria

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

NA

Comments:

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

NA

Comments:

● General Lab Criteria ●

Criteria	Standard Methods Requirement	Acceptable?	Rating								
Final Effluent Temperature Monitoring		<input type="checkbox"/> Yes <input type="checkbox"/> No	NR								
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
	• Thermometer accurate to 0.1° Celsius ⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No									
	• Log book being maintained ²	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									
<p>Comments: <i>The facility must develop an SOP for final effluent temperature monitoring. ICS does a quarterly calibration and provides a certificate of calibration. A two point temperature check is done with ice and the ambient temperature. Check out to 0.1 degrees F during calibration.</i></p>											
Number of Criteria Rated:			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Acceptable</td> <td style="width: 20%; text-align: center;">0</td> </tr> <tr> <td>Marginal</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Unacceptable</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Total Number of Areas Rated</td> <td style="text-align: center;">0</td> </tr> </table>	Acceptable	0	Marginal	0	Unacceptable	0	Total Number of Areas Rated	0
Acceptable	0										
Marginal	0										
Unacceptable	0										
Total Number of Areas Rated	0										
<p>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).</p>											
<p>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).</p>											
<p>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).</p>											
<p>Consider recommending PAI Audit from DES when:</p>		<p>>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable</p>									

Notation of Referenced Method

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 Method 9020-B, Item 3 2 Method 1020-A, Item 1 3 Method 1020-B, Item 10 4 Method 2540-B, Item 2 5 Method 2550-B, Item 1 6 Method 1020-A, Item 1 7 Method 4500-H B, Item 4 8 Method 4500-H B, Item 2 9 Method 1020-B, Item 2 10 Method 4500-O B, Item 3 11 Method 4500-O G, Item 3 12 Method 5210-B, Item 5 13 CFR 136.3, Table II | <ul style="list-style-type: none"> 14 Method 1060A, Item 1 15 Method 4500-CI I, Item 2 16 Method 4500-CI I, Item 4 17 Method 4500-NH3 D, Item 4 18 Method 4500-NH3 D, Item 2 19 Method 1060-B, Item 2 20 Method 1060-B, Item 1 21 Method 9222D, Item 1 22 Method 9223 B, Item 2 23 Method 9223 B, Item 3 24 Method 1603, Item 2 25 Method 9030-B, Item 3 26 Method 9020 B, Table IV |
|--|--|

General Lab Criteria

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
NH ₃ -N	P, G	500	G, C	Analyze as soon as possible or add H ₂ 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 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 H ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

Approved Standard Methods

CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH ₃ 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

FORMICA CORPORATION
NPDES COMPLIANCE EVALUATION/PRE-PERMIT INSPECTION
DATE OF INSPECTION: February 9, 2011

ITEMS OF DISCUSSION FOR INSPECTION:

The facility has submitted its NPDES permit renewal application. Original signatures were needed. These were obtained during the inspection. The facility submitted a Form 2E this year instead of a Form 2C since they are only discharging non-contact cooling water. The reasons the 2C had been submitted in the past weren't clear. However, a basin with the possibility of discharging contaminated stormwater has been repiped so it only discharges to MSD of Greater Cincinnati. There is some stormwater from the parking lots and roads that discharges to this non-contact cooling water pond. The facility has coverage under the general industrial stormwater permit so there is no need for Parts IV, V and VI in the individual NPDES permit. Any non-contact cooling water with the potential to contain chlorine is discharged to MSD of Greater Cincinnati. This would be determined by the source water. If it is from the Cincinnati Water Works, then it is discharge to MSD. If it is from Southwestern Ohio Water, then it is discharged via the NPDES permit.

COMPLIANCE EVALUATION:

The facility has had the following exceedences and violations at its NPDES outfall. This letter will also serve as the Notice of Violation for these exceedences and reporting violations at Outfall 11Q00000001.

EFFLUENT LIMIT VIOLATIONS

Date	Parameter	Code	Permit Limit	Reported Value
05/05/2009	Temperature	00010	30°C	30.6 °C
06/08/2009	Temperature	00010	30°C	31.1 °C

The following frequency violations were noted:

Reporting Period	Violation Date	Parameter	Sample Frequency	Expected	Reported
Nov. 2007	11/22/07	Phenolic 4AAP	1/Week	1	0
Nov. 2007	11/22/07	pH	1/Week	1	0
Aug. 2008	8/1/08	Cadmium	1/Quarter	1	0
Aug. 2008	8/1/08	Chromium	1/Quarter	1	0
Aug. 2008	8/1/08	Lead	1/Quarter	1	0
Dec. 2009	12/22/09	pH	1/Week	1	0
Dec. 2009	12/22/09	Phenolic 4AAP	1/Week	1	0

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The following code violations were noted:

<u>Reporting Period</u>	<u>Violation Date</u>	<u>Outfall</u>	<u>Parameter</u>	<u>Code Used</u>
September 2008	9/15/2008	001	Water Temperature	AD
September 2008	9/15/2008	001	Flow Rate	AD
September 2008	9/16/2008	001	Flow Rate	AD
September 2008	9/17/2008	001	Flow Rate	AD
September 2008	9/18/2008	001	Flow Rate	AD
September 2008	9/19/2008	001	Flow Rate	AD
September 2008	9/20/2008	001	Flow Rate	AD
August 2009	8/04/2009	001	Water Temperature	AD

The facility has since returned to compliance. There have been no additional violations since January 10, 2010. This is one of the two reasons why the "Self-Monitoring" was rated as "Marginal".

OBSERVATIONS:

Formica Corporation manufactures decorative laminates for counter tops, furniture and cabinets. Sheets of the laminate are also sold. The facility uses paper, phenolic resin, and amalamine resin. The two types of resins are used for different purposes. The phenolic resin and kraft paper are used to make the filler layers. The top layer uses the paper with the pattern/design and the amalamine resin. The top layer receives a double coat of resin. The top layer has more grit to protect the surface while the bottom does not need the grit since it will be bonded to the filler layers. The various layers are layed up (bottom to bottom with a release in between the final layer), and steel plates are used to provide a texture. These lay ups are then placed into a press and cured. The non-contact cooling water is generated from the cooling of the presses. The facility is now working on a new simulated granite product. After the sheets have been cured and cooled, they are then cut to the customer requested size. The edges are sanded to smooth the edges, and the release is sanded from the bottom of the sheet. This also provides a rough surface for the adhesive in future steps to bond to. The sawdust from this sander is collected and used for fuel the facility's wood-fired boilers. These units have air permits.

In the past, the facility had the capability of using inks to manufacture various designs and colors. These inking operations have not been used in the last 20 years, and the equipment was removed from the plant two or three years ago. Now, the paper with the designs is received on rolls.

There are currently four presses that generate non-contact cooling water. All of the non-contact water discharged to the pond is from Southwestern Ohio Water. There is

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no chlorine in this water. There is also compressor cooling water. This is discharged to MSD of Greater Cincinnati because of the additives. Any of the drains in the compressor area discharge to MSD of Greater Cincinnati. Any of the non-contact cooling water using Cincinnati Water Works as a source is discharged to MSD of Greater Cincinnati. This is to eliminate it as a source of chlorine in the discharge to Mill Creek.

The facility takes flow readings and temperature readings. All of the other sampling for the NPDES permit and MSD is done by Cardinal Labs. There are no written standard operating procedures (SOPs) for the collection of the flow and temperature readings. This is the other reason for the "Marginal" rating for "Self-Monitoring". This needs to be completed. The facility may also want to determine what type of SOPs and QA/QC is being done by its contract laboratory.

REQUIRED ACTION

Formica Corporation must develop standard operating procedures (SOPs) for the temperature and flow readings. This must be submitted to this office by April 15, 2011. Please refer to Section 1(b) of the attached inspection form for the minimum SOP requirements.

RECOMMENDED ACTION

Formica Corporation should consider reviewing the SOPs and QA/QC procedures at its contract laboratory, or submitting known standards as a quality check on the analytical methods.